

Southeast Conservation Blueprint Summary

for Mississippi

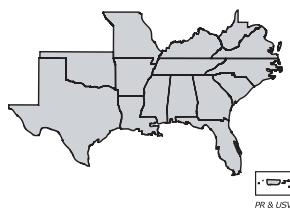
Created 04/04/2023

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The Southeast
Conservation
Adaptation Strategy

SECAS



The Southeast Conservation Blueprint 2022

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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](#)

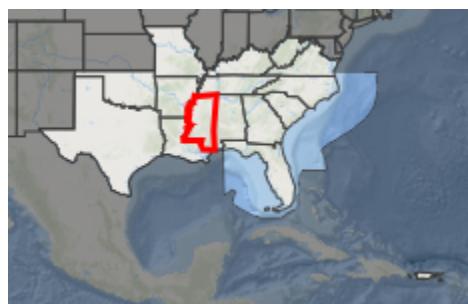
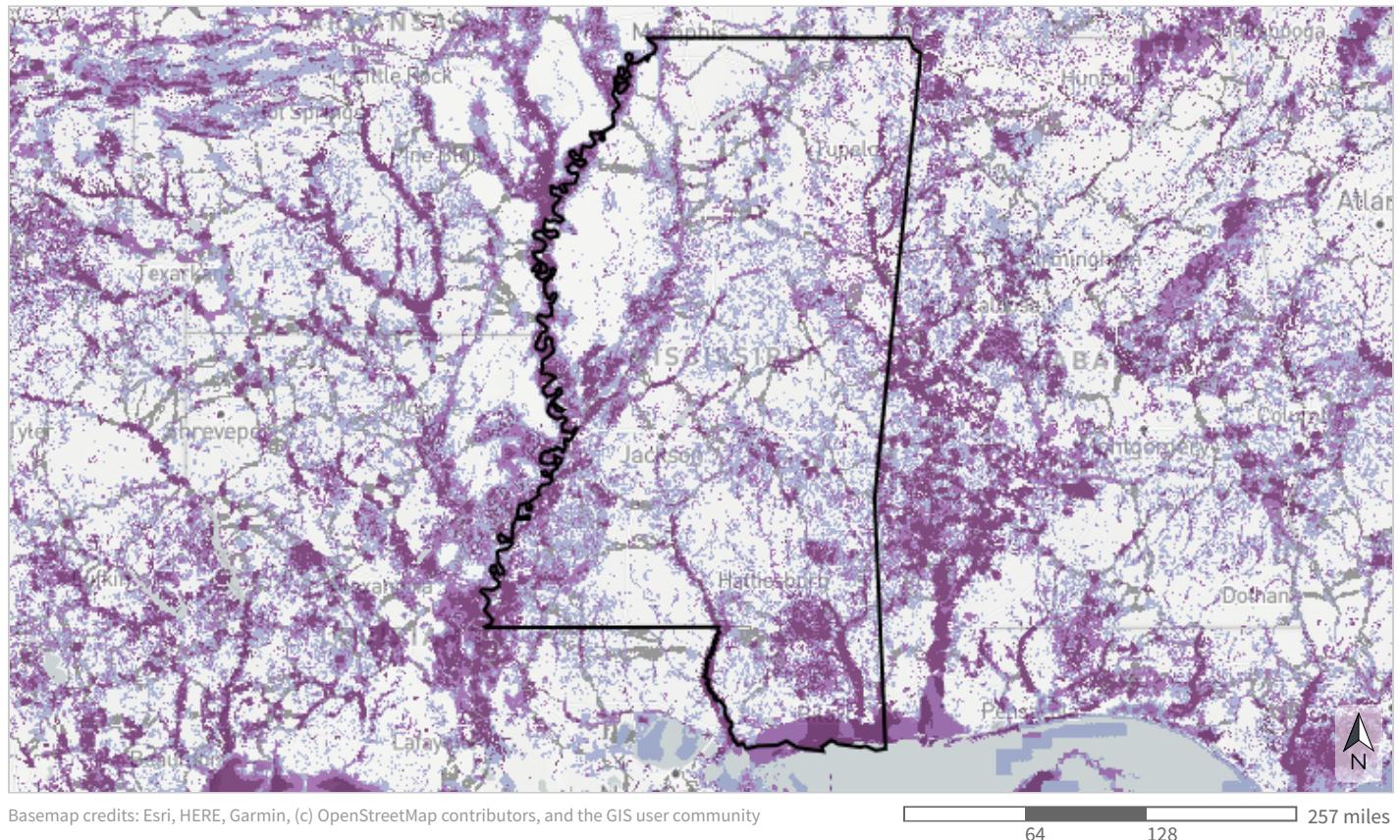
We're here to help!

- 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



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.

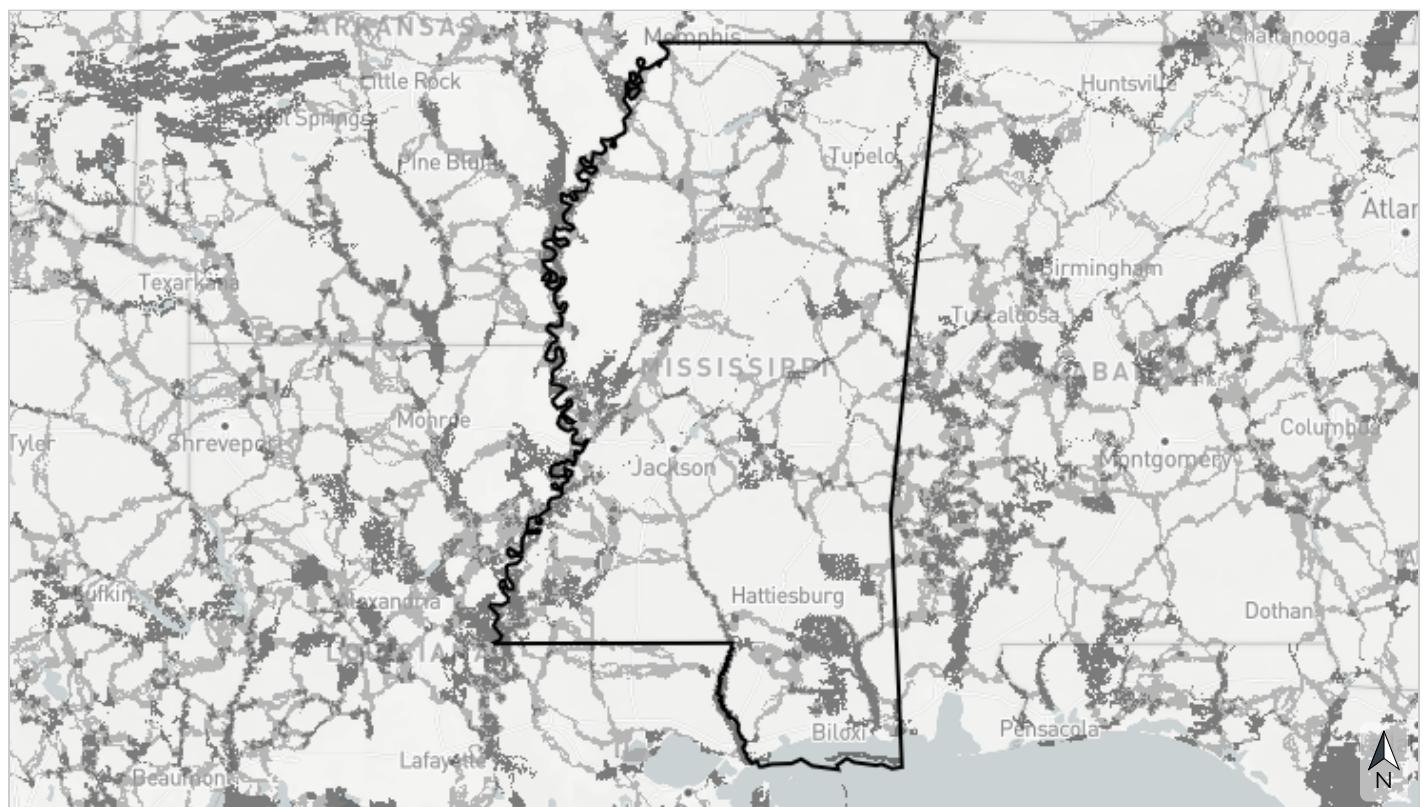
Table 1: Extent of each Blueprint priority category.

Priority Category	Acres	Percent of Area
Highest priority	2,757,453	8.9%
High priority	4,566,057	14.7%
Medium priority	6,792,011	21.9%
Priority connections	1,362,727	4.4%
Lower priority	15,520,282	50.1%
<i>Outside Southeast Blueprint</i>	355	<0.1%
Total area	30,998,884	100%

Hubs and Corridors

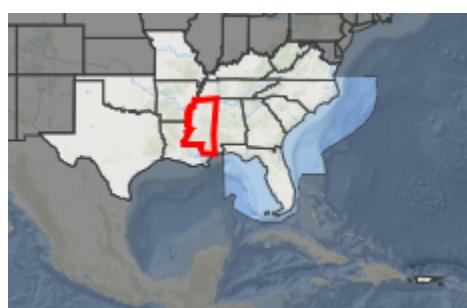
The Blueprint uses a least-cost path connectivity analysis to identify corridors that link hubs across the shortest distance possible, while also routing through as much Blueprint priority as possible.

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.



Basemap credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

64 128 257 miles



- [Dark Gray Box] Inland hubs
- [Medium Gray Box] Inland corridors
- [Dark Blue Box] Marine & estuarine hubs
- [Light Blue Box] Marine & estuarine corridors
- [White Box] Not a hub or corridor

Table 2: Extent of hubs and corridors.

Type	Acres	Percent of Area
Inland hubs	3,065,717	9.9%
Inland corridors	4,815,385	15.5%
Not a hub or corridor	23,117,428	74.6%
<i>Outside Southeast Blueprint</i>	355	<0.1%
Total area	30,998,884	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	-
<u>Imperiled aquatic species</u>	✓
West Virginia imperiled aquatic species	-
<u>Natural landcover in floodplains</u>	✓
<u>Network complexity</u>	✓
<u>Permeable surface</u>	✓

Table 5: Coastal & marine indicators.

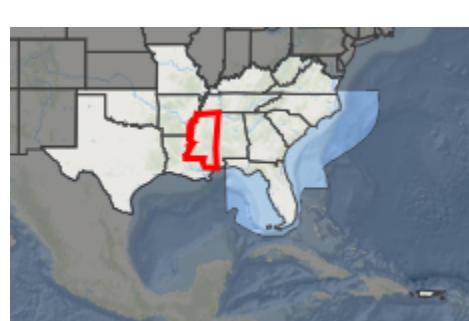
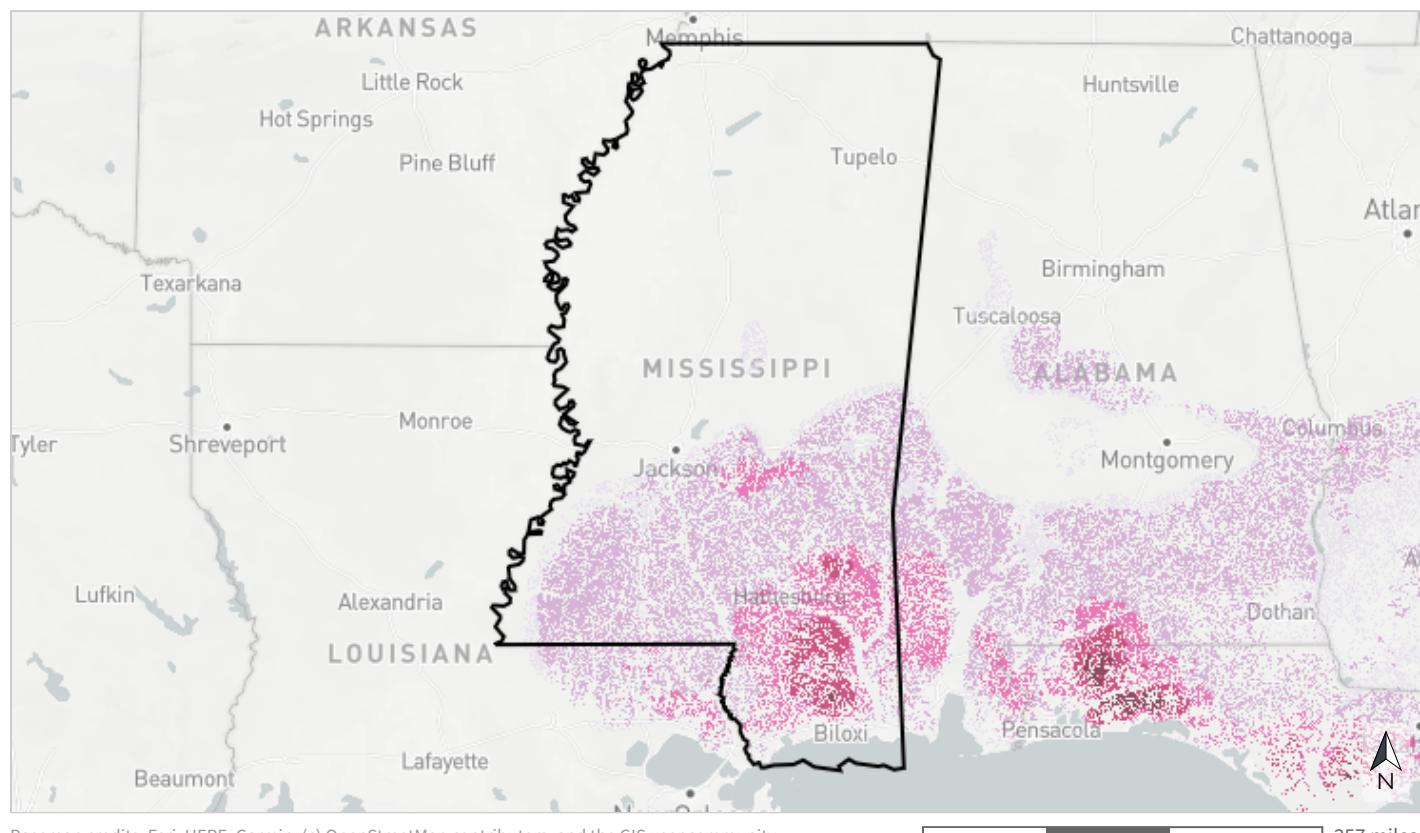
Indicator	Present
Atlantic estuarine fish habitat	-
<u>Coastal shoreline condition</u>	✓
<u>Estuarine coastal condition</u>	✓
<u>Islands</u>	✓
<u>Resilient coastal sites</u>	✓
<u>Seagrasses</u>	✓
South Atlantic beach birds	-
South Atlantic hardbottom & deep-sea coral	-
South Atlantic marine mammals	-
South Atlantic marine birds	-
South Atlantic maritime forest	-
<u>Stable coastal wetlands</u>	✓



Terrestrial

East Coastal Plain open pine birds

This indicator identifies areas within the historic longleaf pine range east of the Mississippi River where creating or maintaining open pine habitat would most benefit six focal species of birds (Bachman's sparrow, red-cockaded woodpecker, Henslow's sparrow, red-headed woodpecker, Northern bobwhite, brown-headed nuthatch). It prioritizes areas for open pine conservation based on suitability for longleaf pine, feasibility of prescribed burning, proximity to protected lands, habitat suitability for focal bird species, and proximity to source bird populations. It originates from the East Gulf Coastal Plain Joint Venture's prioritization of areas for open pine ecosystem restoration.



- █ High priority for open pine conservation for focal bird species (Bachman's sparrow, red-cockaded woodpecker, Henslow's sparrow, red-headed woodpecker, Northern bobwhite, and brown-headed nuthatch) (score >80-100)
- █ Medium-high priority (score >60-80)
- █ Medium priority (score >40-60)
- █ Medium-low priority (score >20-40)
- █ Low priority for open pine conservation for focal bird species (score 0-20)

Table 6: Indicator values for East Coastal Plain open pine birds in this area. A good condition threshold is not yet defined for this indicator.

	Indicator Values	Acres	Percent of Area
↑ High	High priority for open pine conservation for focal bird species (Bachman's sparrow, red-cockaded woodpecker, Henslow's sparrow, red-headed woodpecker, Northern bobwhite, and brown-headed nuthatch) (score >80-100)	7,318	<0.1%
	Medium-high priority (score >60-80)	423,081	1.4%
	Medium priority (score >40-60)	1,140,979	3.7%
	Medium-low priority (score >20-40)	3,694,783	11.9%
↓ Low	Low priority for open pine conservation for focal bird species (score 0-20)	485,453	1.6%
	<i>Area not evaluated for this indicator</i>	25,246,916	81.4%
	<i>Outside Southeast Blueprint</i>	355	<0.1%
	Total area	30,998,884	100%

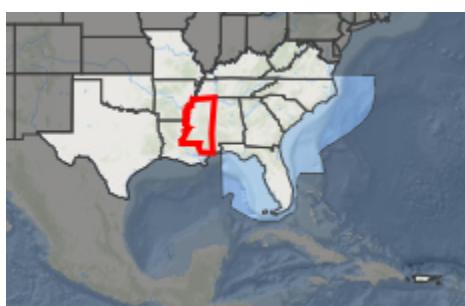
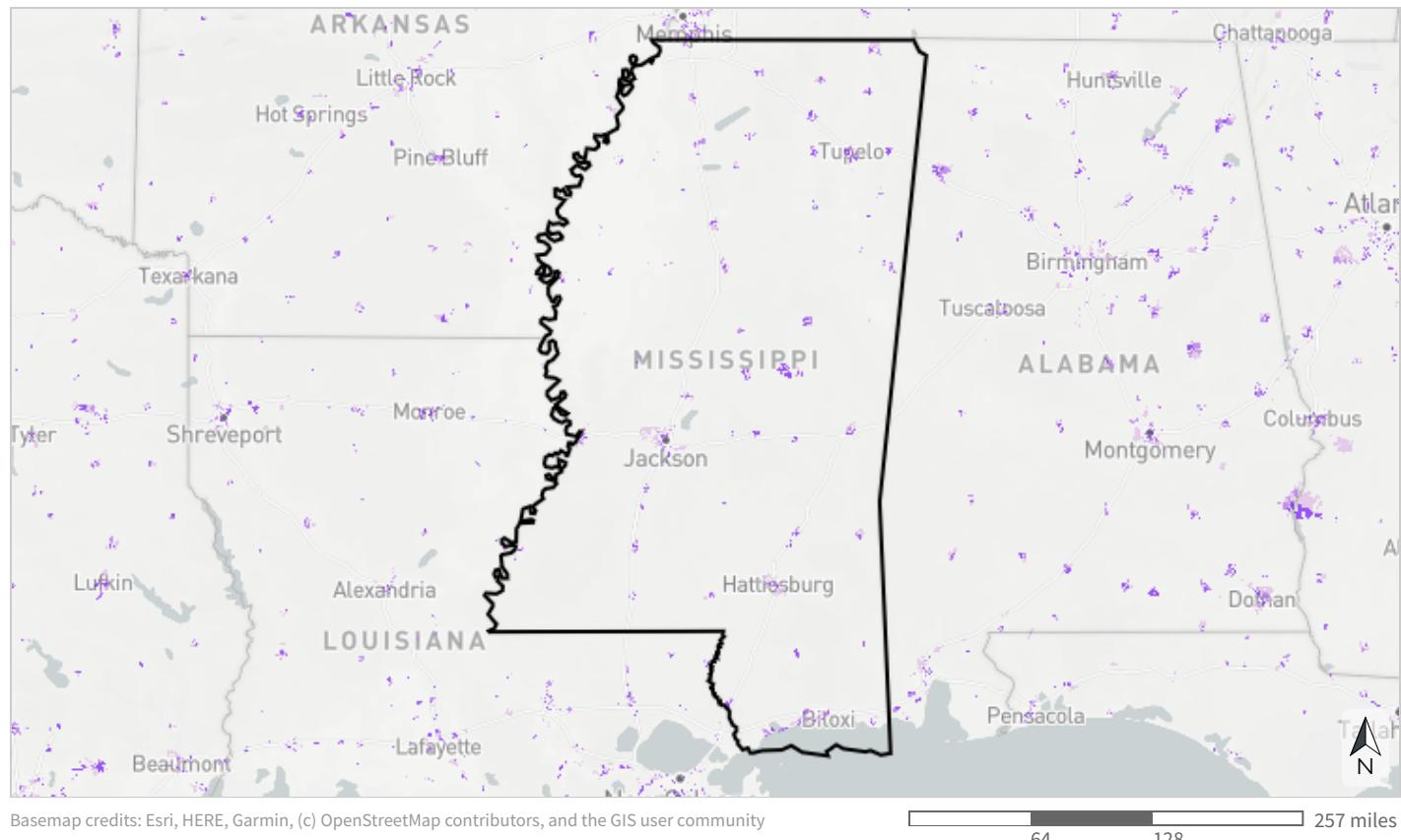
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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.



- 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 7: 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	112,412	0.4%
	High priority for a new park that would create nearby equitable access	120,909	0.4%
↓ Low	Moderate priority for a new park that would create nearby equitable access	135,534	0.4%
	<i>Area not evaluated for this indicator</i>	30,629,674	98.8%
	<i>Outside Southeast Blueprint</i>	355	<0.1%
	Total area	30,998,884	100%

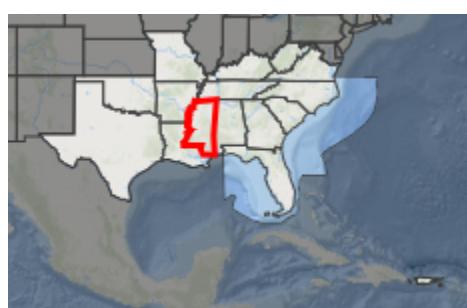
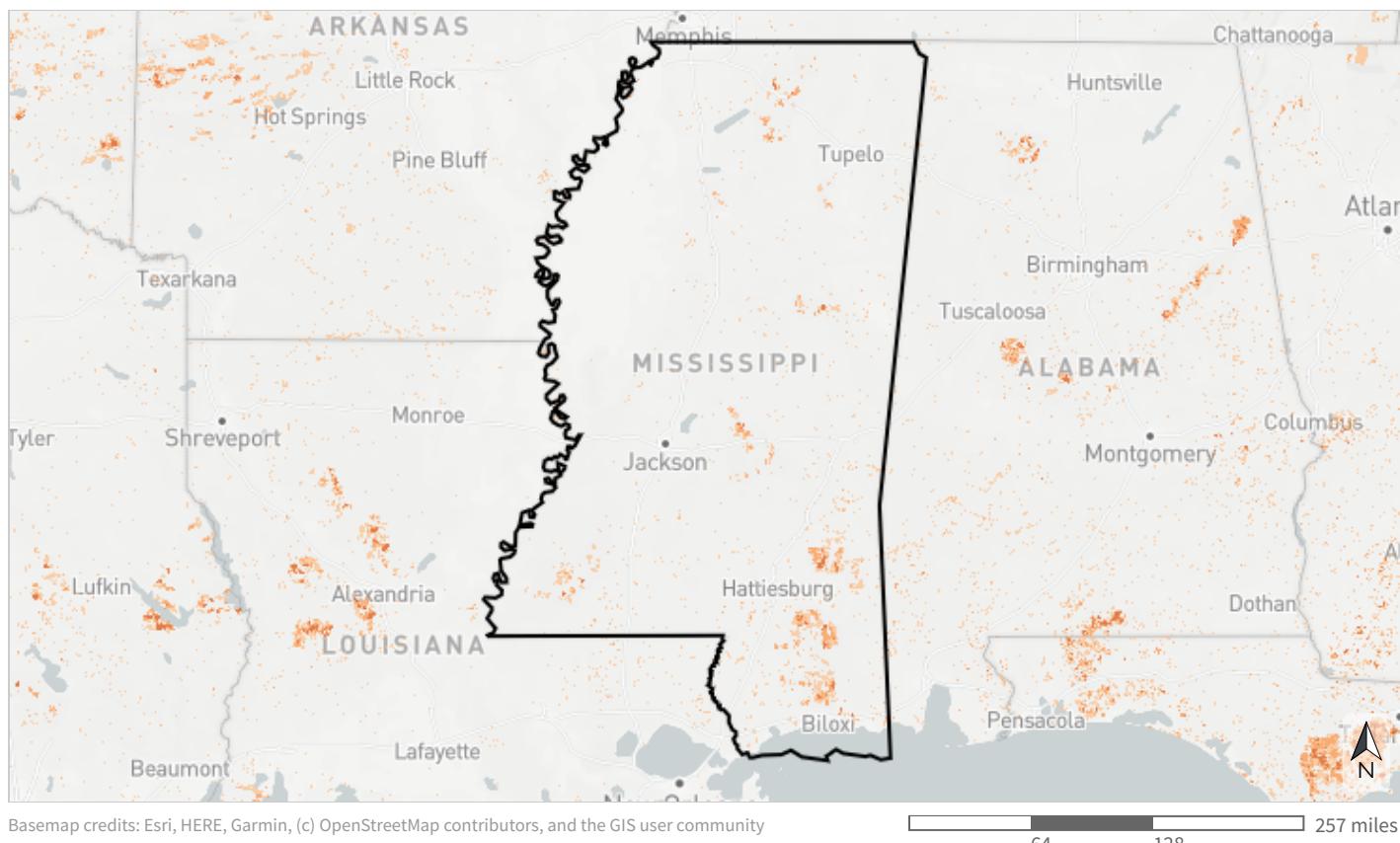
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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.



- 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 8: 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	41,094	0.1%
	Burned 2 times from 2013-2021	179,578	0.6%
	Burned 1 time from 2013-2021	717,719	2.3%
↓ Low	Not burned from 2013-2021 or row crop	30,060,139	97.0%
	<i>Outside Southeast Blueprint</i>	355	<0.1%
Total area		30,998,884	100%

↑ In good condition

↓ Not in good condition

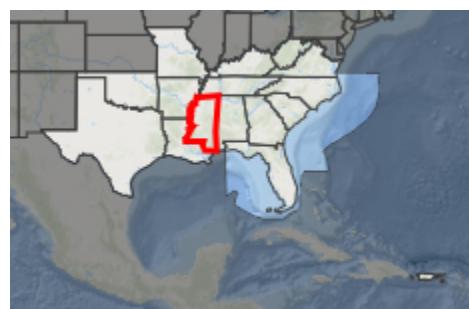
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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.



- 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 9: 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	600	<0.1%
	Mostly natural and connected for 5 to <40 km or partly natural and connected for ≥ 40 km	1,553	<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	513	<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	376	<0.1%
	Partly natural and connected for <1.9 km or developed and connected for 1.9 to <5 km	331	<0.1%
	Developed and connected for <1.9 km	99	<0.1%
↓ Low	Sidewalk or other path	12,550	<0.1%
	<i>Area not evaluated for this indicator</i>	30,982,507	99.9%
	<i>Outside Southeast Blueprint</i>	355	<0.1%
Total area		30,998,884	100%

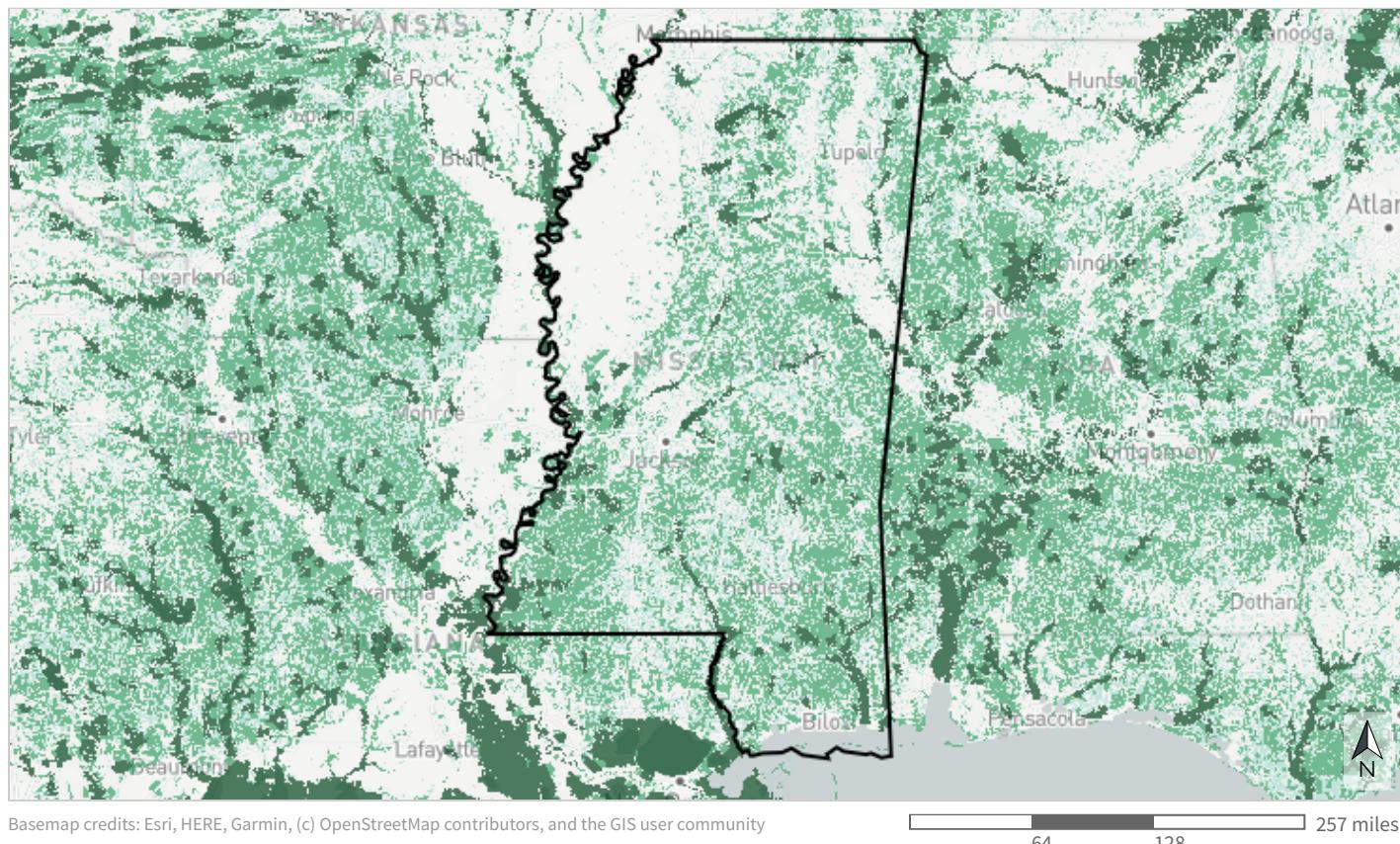
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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.



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

Table 10: 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)	2,225,459	7.2%
	Medium core (>1,000-10,000 acres)	9,591,899	30.9%
	Small core (>100-1,000 acres)	4,135,208	13.3%
↓ Low	Not a core	15,045,964	48.5%
	<i>Outside Southeast Blueprint</i>	355	<0.1%
Total area		30,998,884	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.



- 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 11: 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	5,127	<0.1%
	Known grassland buffer	63,479	0.2%
	Potentially compatible management within grassland geology (undeveloped powerline right-of-way or perennial forbs and grasses)	407,620	1.3%
	Potentially compatible management outside of grassland geology (undeveloped powerline right-of-way or perennial forbs and grasses)	2,497,569	8.1%
↓ Low	Grassland geology	2,140,779	6.9%
	Grassland less likely	20,903,980	67.4%
	<i>Area not evaluated for this indicator</i>	4,979,976	16.1%
	<i>Outside Southeast Blueprint</i>	355	<0.1%
Total area		30,998,884	100%

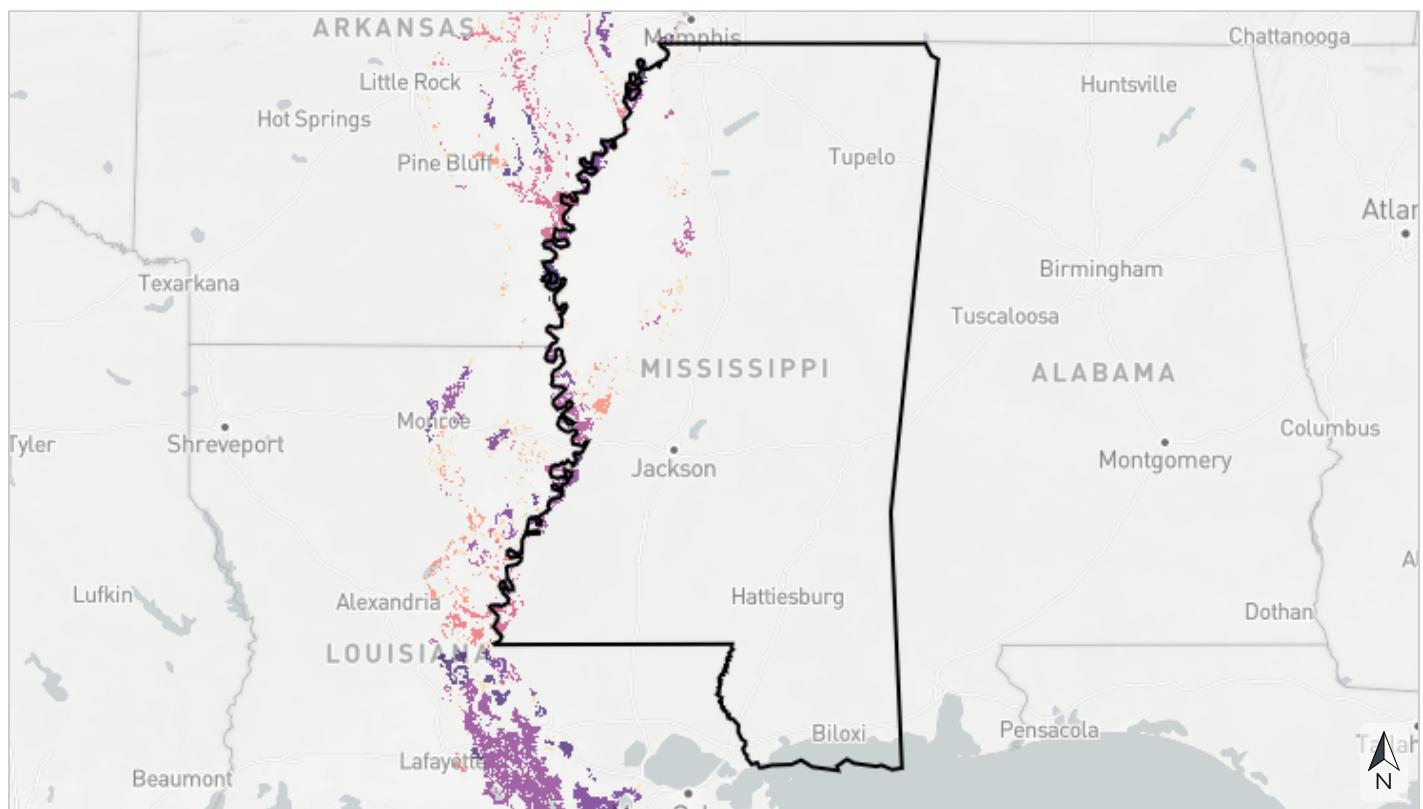
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 (LMJV). This indicator originates from the LMJV's MAV forest breeding bird protection priorities.



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 12: 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)	44,895	0.1%
	Score >80-90	65,238	0.2%
	Score >70-80	103,104	0.3%
	Score >60-70	133,932	0.4%
	Score >50-60	70,223	0.2%
	Score >40-50	8,733	<0.1%
	Score >30-40	40,858	0.1%
	Score >20-30	3,667	<0.1%
	Score >10-20	54,106	0.2%
	Score 0-10 (lowest priority)	1,164	<0.1%
↓ Low	<i>Area not evaluated for this indicator</i>	30,472,611	98.3%
	<i>Outside Southeast Blueprint</i>	355	<0.1%
Total area		30,998,884	100%

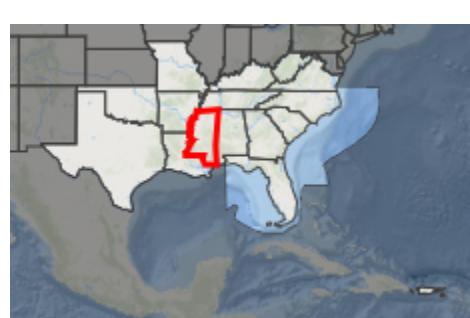
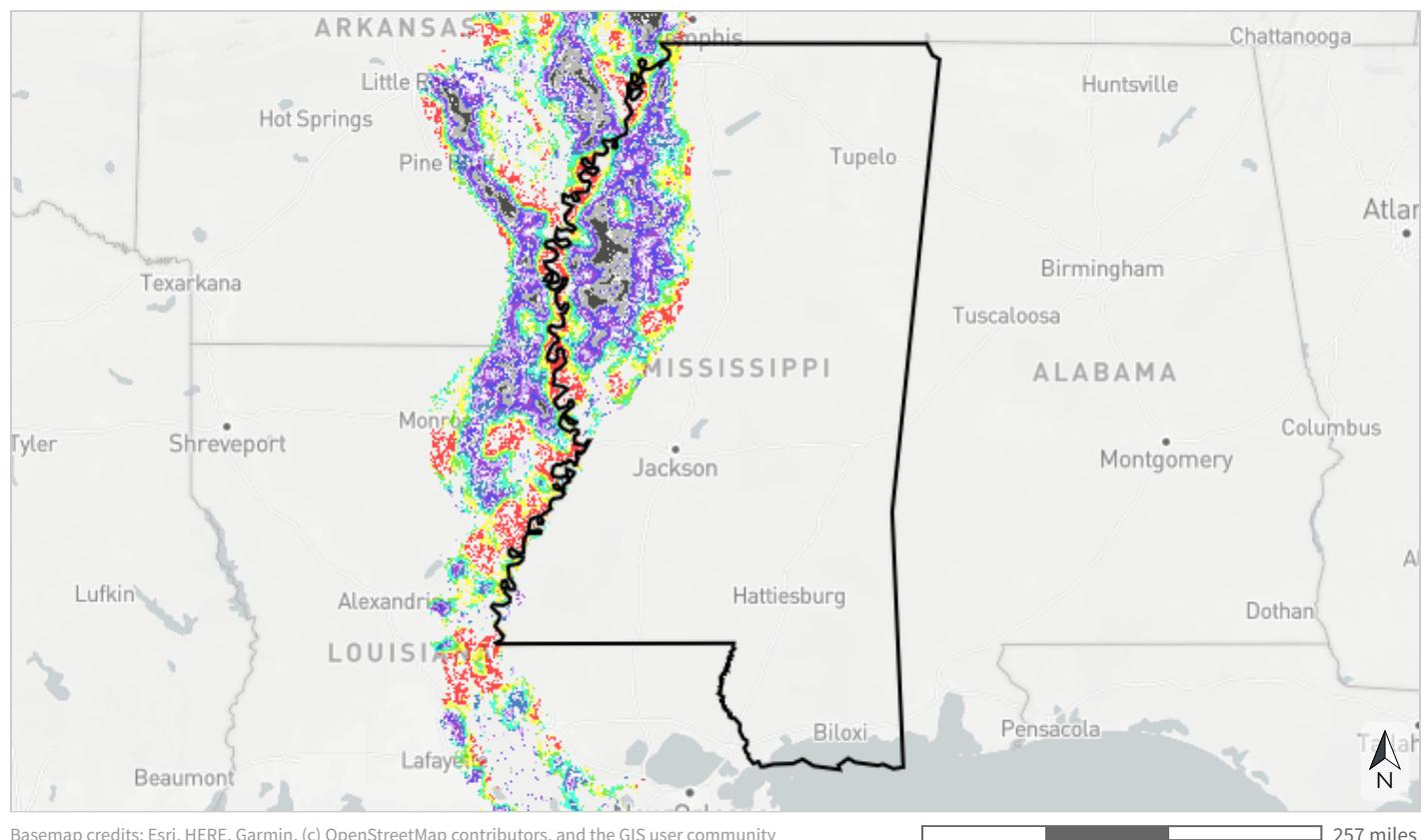
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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.



Likelihood that reforestation will contribute to forest breeding bird habitat needs

- █ Most likely ($\geq 90^{\text{th}}$ percentile)
- █ Most likely (80 $^{\text{th}}$ to <90 $^{\text{th}}$ percentile)
- █ More likely (70 $^{\text{th}}$ to <80 $^{\text{th}}$ percentile)
- █ Less likely (60 $^{\text{th}}$ to <70 $^{\text{th}}$ percentile)
- █ Least likely (50 $^{\text{th}}$ to <60 $^{\text{th}}$ percentile)
- █ Least likely (40 $^{\text{th}}$ to <50 $^{\text{th}}$ percentile)
- █ Least likely (30 $^{\text{th}}$ to <40 $^{\text{th}}$ percentile)
- █ Least likely (20 $^{\text{th}}$ to <30 $^{\text{th}}$ percentile)
- █ Least likely (10 $^{\text{th}}$ to <20 $^{\text{th}}$ percentile)
- █ Least likely (<10 $^{\text{th}}$ percentile)

Table 13: 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 (\geq 90th percentile)	289,349	0.9%
	Most likely (80th to <90th percentile)	344,987	1.1%
	More likely (70th to <80th percentile)	302,276	1.0%
	Less likely (60th to <70th percentile)	305,452	1.0%
	Least likely (50th to <60th percentile)	329,681	1.1%
	Least likely (40th to <50th percentile)	352,069	1.1%
	Least likely (30th to <40th percentile)	398,325	1.3%
	Least likely (20th to <30th percentile)	357,566	1.2%
	Least likely (10th to <20th percentile)	413,571	1.3%
	Least likely (<10th percentile)	153,476	0.5%
↓ Low	<i>Area not evaluated for this indicator</i>	27,751,778	89.5%
	<i>Outside Southeast Blueprint</i>	355	<0.1%
Total area		30,998,884	100%

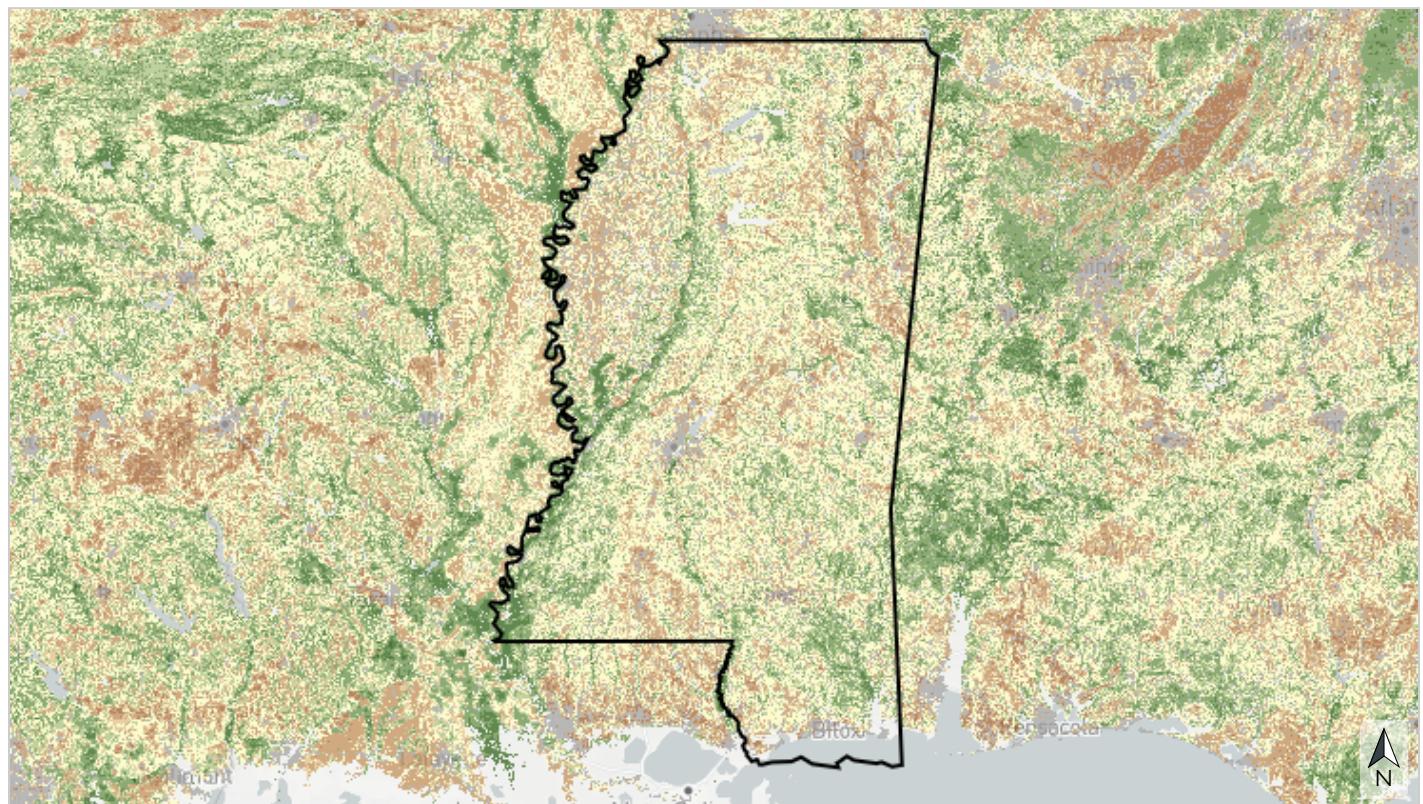
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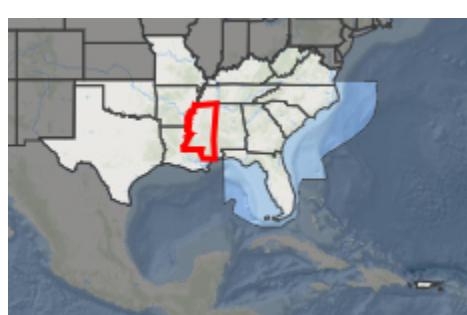
Terrestrial

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.



Basemap credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community



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

Table 14: 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	715,648	2.3%
	More resilient	3,283,838	10.6%
	Slightly more resilient	4,390,063	14.2%
	Average/median resilience	11,302,832	36.5%
	Slightly less resilient	3,829,088	12.4%
	Less resilient	2,857,403	9.2%
	Least resilient	291,226	0.9%
	Developed	2,723,510	8.8%
↓ Low	<i>Area not evaluated for this indicator</i>	1,604,919	5.2%
	<i>Outside Southeast Blueprint</i>	355	<0.1%
	Total area	30,998,884	100%

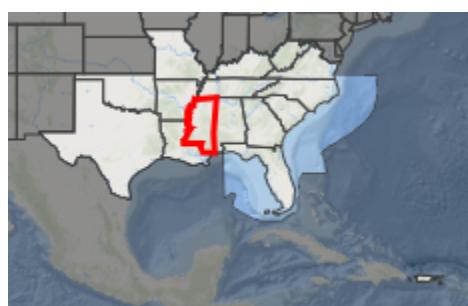
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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.



- >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 15: 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	54,264	0.2%	
	>50-75 acre urban park	1,833	<0.1%	
	>30-50 acre urban park	1,691	<0.1%	
	>10-30 acre urban park	2,252	<0.1%	
↓ Low	5-10 acre urban park	842	<0.1%	
	<i>Area not evaluated for this indicator</i>	30,937,648	99.8%	
	<i>Outside Southeast Blueprint</i>	355	<0.1%	
		Total area	30,998,884	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.



- 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 16: 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	448,114	1.4%
	7 aquatic SGCN observed	146,869	0.5%
	6 aquatic SGCN observed	214,266	0.7%
	5 aquatic SGCN observed	153,925	0.5%
	4 aquatic SGCN observed	154,491	0.5%
	3 aquatic SGCN observed	365,850	1.2%
	2 aquatic SGCN observed	866,740	2.8%
	1 aquatic SGCN observed	1,122,028	3.6%
	No aquatic SGCN observed	3,070,547	9.9%
	<i>Area not evaluated for this indicator</i>	24,455,698	78.9%
↓ Low	<i>Outside Southeast Blueprint</i>	355	<0.1%
	Total area	30,998,884	100%

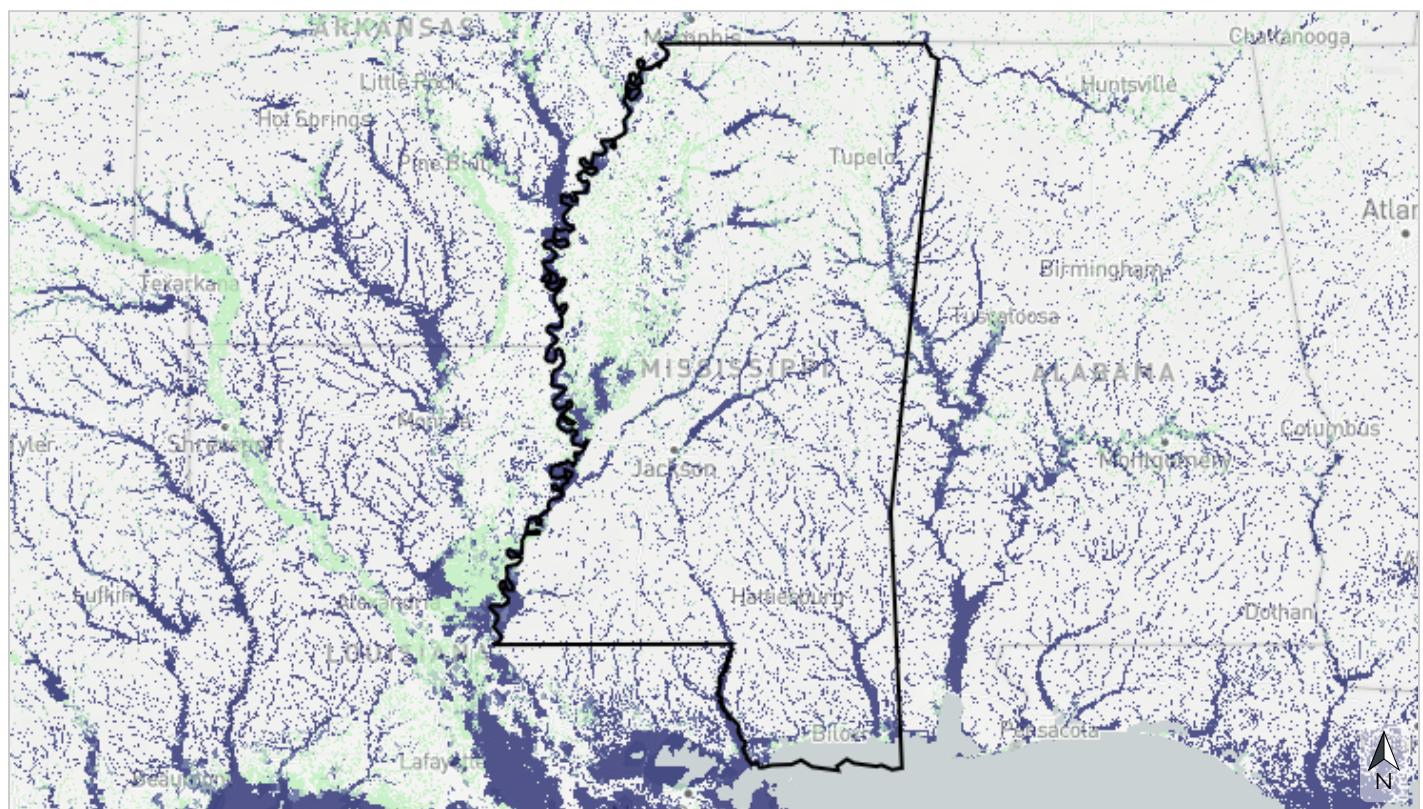
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



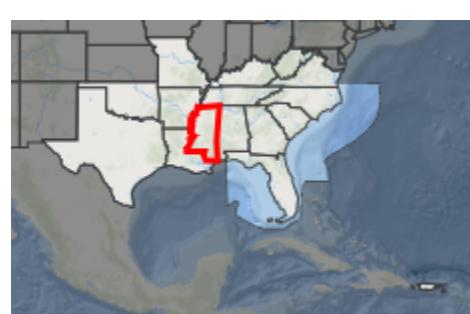
Freshwater

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: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community



- >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 17: 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	3,214,224	10.4%
	>80-90%	745,734	2.4%
	>70-80%	464,583	1.5%
	>60-70%	361,547	1.2%
↓ Low	≤60% natural habitat within the estimated floodplain, by catchment	1,756,721	5.7%
	<i>Area not evaluated for this indicator</i>	24,455,721	78.9%
	<i>Outside Southeast Blueprint</i>	355	<0.1%
	Total area	30,998,884	100%

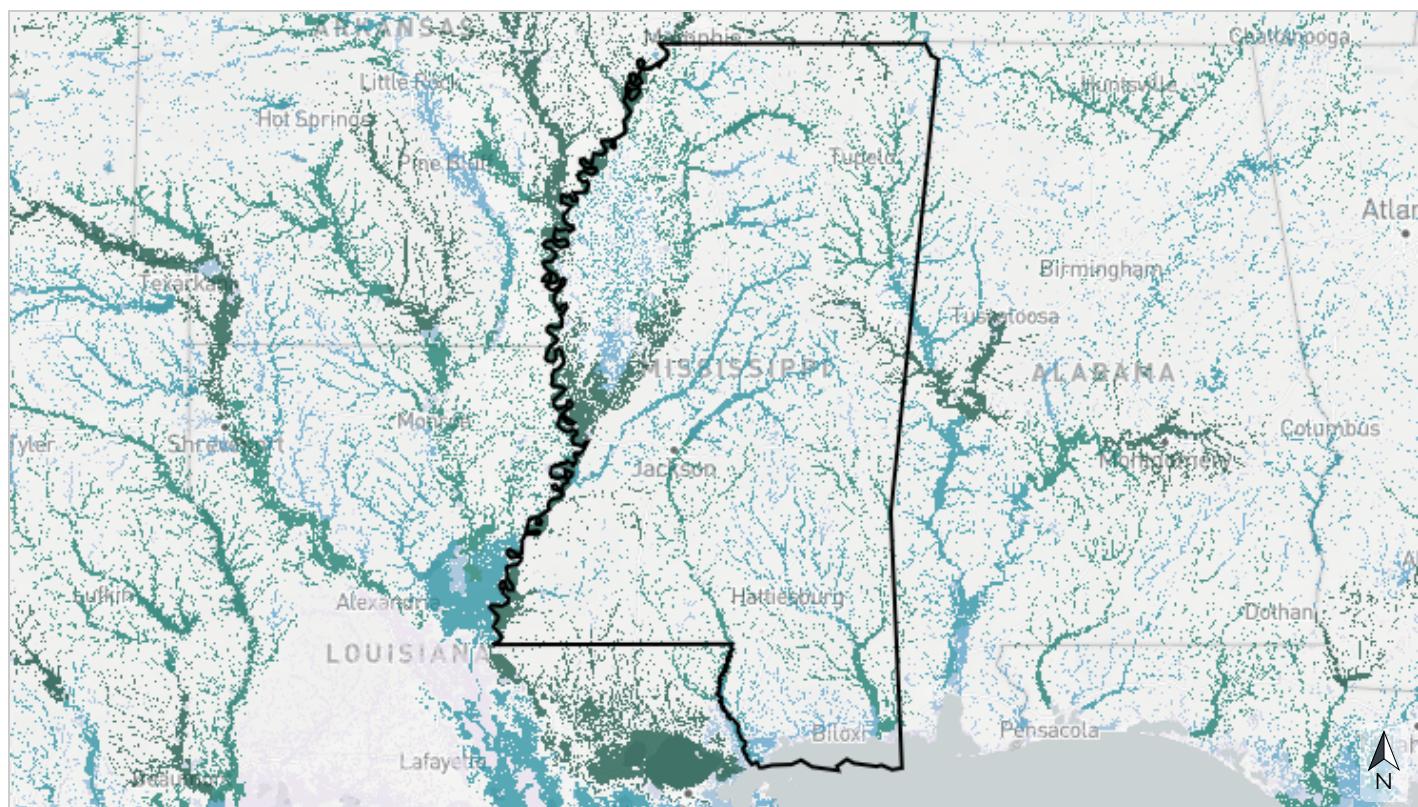
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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.



- 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 18: 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	1,474,491	4.8%
	6 connected stream classes	1,968,051	6.3%
	5 connected stream classes	1,907,026	6.2%
	4 connected stream classes	547,818	1.8%
	3 connected stream classes	164,672	0.5%
	2 connected stream classes	232,633	0.8%
	1 connected stream class	170,166	0.5%
	<i>Area not evaluated for this indicator</i>	24,533,673	79.1%
↓ Low	<i>Outside Southeast Blueprint</i>	355	<0.1%
	Total area	30,998,884	100%

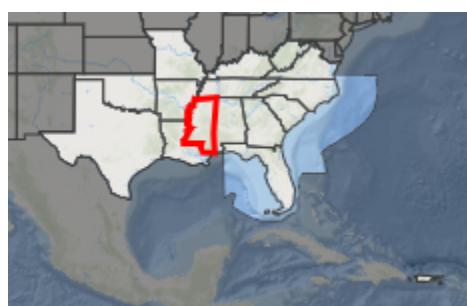
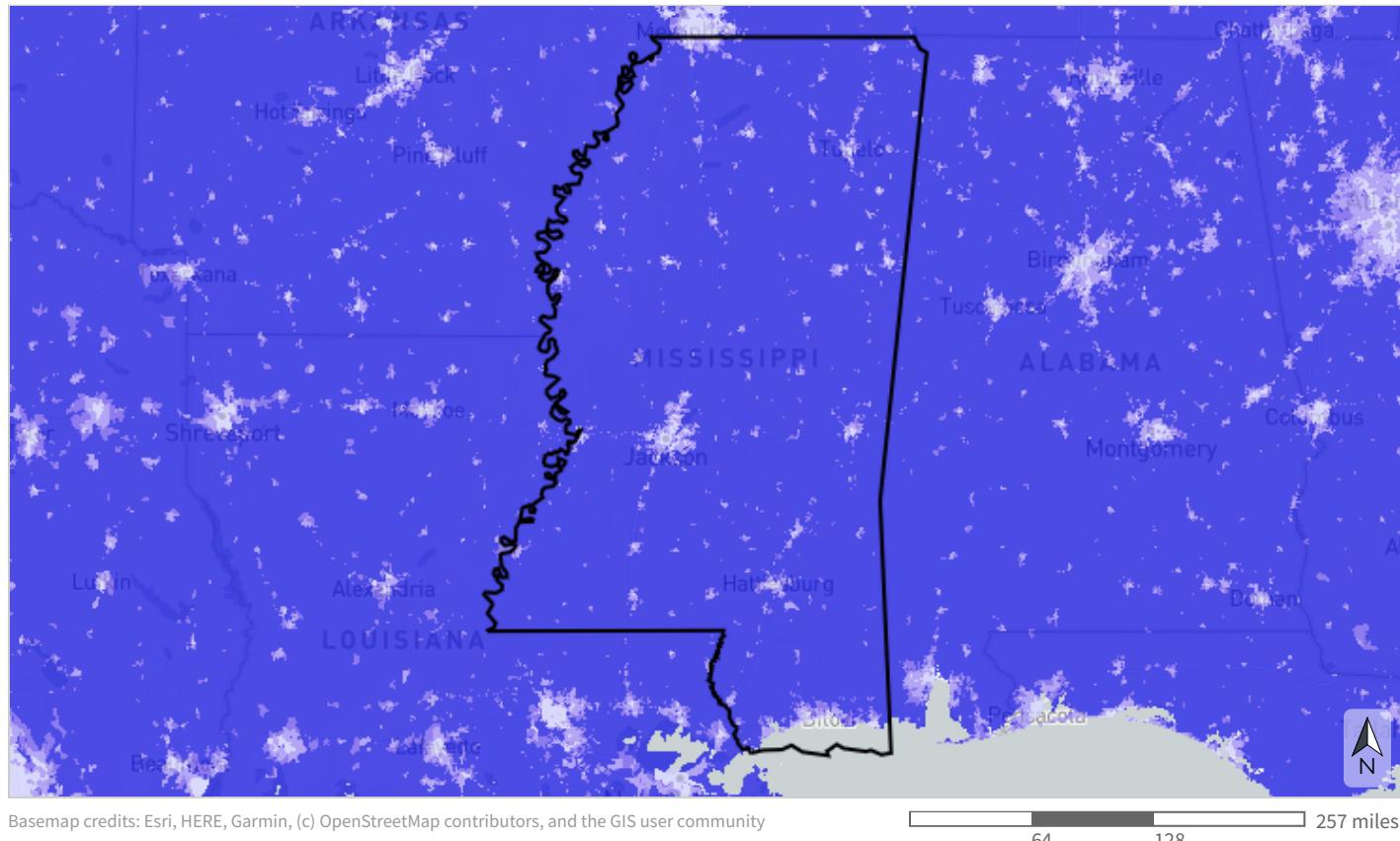
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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.



- >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 19: 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)	28,825,672	93.0%	↑ In good condition
	>90-95% of catchment permeable (likely declining water quality and supporting most aquatic species)	759,461	2.4%	
↓ Low	>70-90% of catchment permeable (likely degraded water quality and not supporting many aquatic species)	730,883	2.4%	↓ Not in good condition
	≤70% of catchment permeable (likely degraded instream flow, water quality, and aquatic species communities)	182,513	0.6%	
<i>Area not evaluated for this indicator</i>		500,001	1.6%	
<i>Outside Southeast Blueprint</i>		355	<0.1%	
Total area		30,998,884	100%	

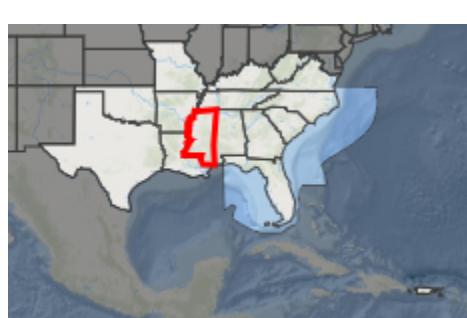
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Coastal & marine

Coastal shoreline condition

This indicator assesses shoreline condition based on the presence of hardened structures like jetties, groins, and riprap, as well as other human development. By restricting the natural movement of sediment, shoreline armoring increases erosion, prevents the inland migration of coastal ecosystems in response to sea-level rise, and degrades habitat for birds, sea turtles, fish, plants, and other species both on and offshore. Natural shorelines in harder-to-develop coastal areas receive the highest shoreline condition scores, while hardened shorelines receive the lowest scores. This indicator originates from the National Oceanic and Atmospheric Administration's Environmental Sensitivity Index dataset.



- Natural and harder to develop
- Natural
- Partially armored and harder to develop
- Partially armored
- Armored

Table 20: Indicator values for coastal shoreline condition 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	Natural and harder to develop	1,727	<0.1%
	Natural	19,259	<0.1%
	Partially armored and harder to develop	6.2	<0.1%
↓ Low	Partially armored	343	<0.1%
	Armored	2,438	<0.1%
	<i>Area not evaluated for this indicator</i>	30,974,756	99.9%
	<i>Outside Southeast Blueprint</i>	355	<0.1%
Total area		30,998,884	100%

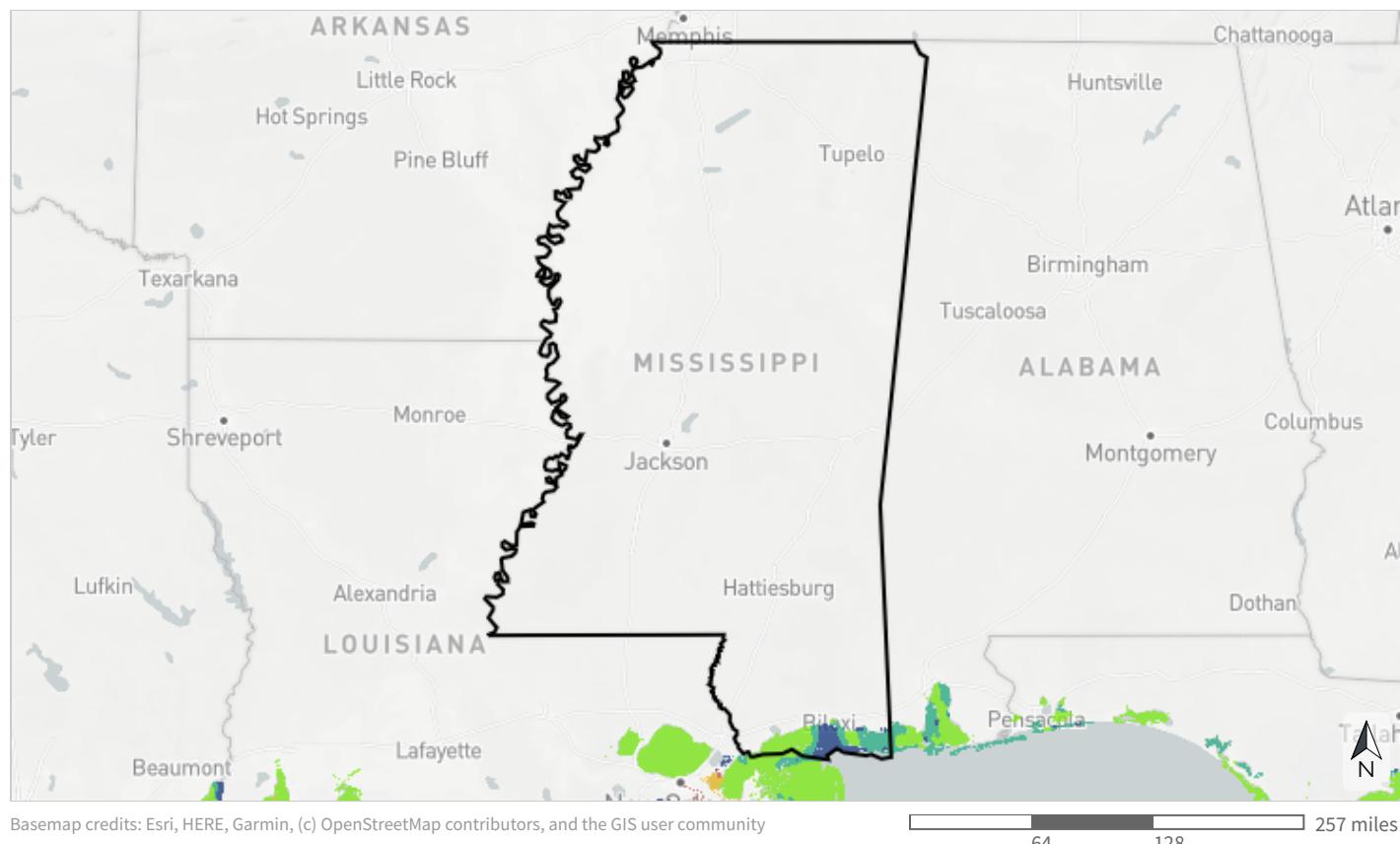
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Coastal & marine

Estuarine coastal condition

This indicator combines measures of water quality, sediment quality, contaminants in fish tissue, and benthic community condition to create an overall index of coastal estuarine condition. Estuaries serve as important nursery habitat for wildlife, including many species of fish and shellfish eaten as seafood. They also improve water quality by filtering out sediments and pollutants, provide recreational opportunities, and support coastal economies. This indicator originates from the Environmental Protection Agency's National Coastal Condition Assessment data.



- Good
- Good to fair
- Fair
- Fair to poor
- Poor

Table 21: Indicator values for estuarine coastal condition in this area. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.

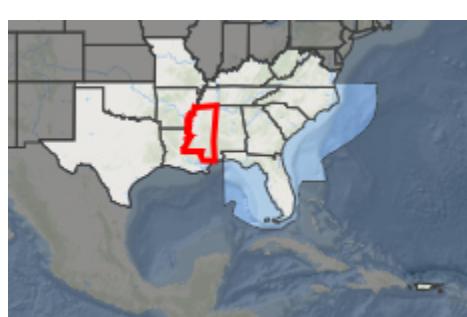
	Indicator Values	Acres	Percent of Area
↑ High	Good	127,502	0.4%
	Good to fair	155,026	0.5%
	Fair	167,175	0.5%
↓ Low	Fair to poor	0	0%
	Poor	0	0%
	<i>Area not evaluated for this indicator</i>	30,548,826	98.5%
<i>Outside Southeast Blueprint</i>		355	<0.1%
Total area		30,998,884	100%

To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Coastal & marine Islands

This indicator represents important habitat for island-dependent species across the Southeast. Because the isolation of islands can make them ecologically unique and protect them from disturbance and mainland predators, they often serve as important habitat for many species of mammals, plants, and insects, as well as breeding coastal birds and sea turtles. The highest scores go to island critical habitat for six threatened and endangered animal and plant species: piping plover, loggerhead sea turtle, Cape Sable thoroughwort, Florida semaphore cactus, silver rice rat, and Bartram's hairstreak butterfly. This indicator originates from U.S. Fish and Wildlife Service critical habitat data and island boundaries from the U.S. Geological Survey and Esri.



- Island critical habitat for any of six threatened and endangered species (piping plover, loggerhead sea turtle, Cape Sable thoroughwort, Florida semaphore cactus, silver rice rat, or Bartram's hairstreak butterfly)
- Island

Table 22: Indicator values for islands in this area. A good condition threshold is not yet defined for this indicator.

	Indicator Values	Acres	Percent of Area
↑ High	Island critical habitat for any of six threatened and endangered species (piping plover, loggerhead sea turtle, Cape Sable thoroughwort, Florida semaphore cactus, silver rice rat, or Bartram's hairstreak butterfly)	7,736	<0.1%
↓ Low	Island	4,801	<0.1%
	<i>Area not evaluated for this indicator</i>	30,985,992	100.0%
	<i>Outside Southeast Blueprint</i>	355	<0.1%
	Total area	30,998,884	100%

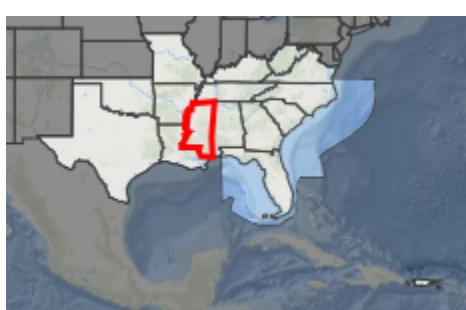
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Coastal & marine

Resilient coastal sites

This indicator depicts the capacity of coastal habitats to migrate to adjacent lowlands in order to sustain biodiversity and natural services under increasing inundation from sea-level rise. It is based on the physical and condition characteristics of current tidal complexes, their predicted migration space, and surrounding buffer areas. These characteristics include marsh complex size, shared edge with migration space, sediment balance, water quality, natural landcover, landform diversity, and many others. This indicator originates from The Nature Conservancy's Resilient Coastal Sites project.



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

Table 23: Indicator values for resilient coastal sites in this area. A good condition threshold is not yet defined for this indicator.

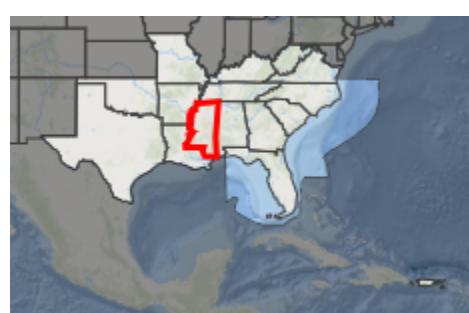
	Indicator Values	Acres	Percent of Area
↑ High	Most resilient	0	0%
	More resilient	107,757	0.3%
	Slightly more resilient	51,625	0.2%
	Average/median resilience	15,309	<0.1%
	Slightly less resilient	441	<0.1%
	Less resilient	267	<0.1%
	Least resilient	139	<0.1%
	<i>Area not evaluated for this indicator</i>	30,822,991	99.4%
<i>Outside Southeast Blueprint</i>		355	<0.1%
Total area		30,998,884	100%

To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Coastal & marine **Seagrasses**

This indicator represents the presence of seagrass in the Atlantic Ocean and Gulf of Mexico. Seagrasses provide food and habitat for a range of marine and estuarine wildlife, including fish, sea turtles, shrimp, crabs, oysters, and more. They also produce oxygen, filter water, control erosion, and buffer storms. Seagrasses serve as an important indicator of the overall health of coastal ecosystems because they are sensitive to water quality and require sufficiently clear water for sunlight to penetrate. This indicator originates from the National Oceanic and Atmospheric Administration's Marine Cadastre.



 Seagrasses present

Table 24: Indicator values for seagrasses in this area. A good condition threshold is not yet defined for this indicator.

	Indicator Values	Acres	Percent of Area
↑ High	Seagrasses present	339	<0.1%
	Area not evaluated for this indicator	30,998,190	100.0%
	Outside Southeast Blueprint	355	<0.1%
	Total area	30,998,884	100%

To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Coastal & marine

Stable coastal wetlands

This indicator uses remote sensing to calculate the unvegetated-vegetated ratio of tidal wetlands, which compares how much of a wetland is not covered by plants (e.g., sediment, rocks, open water) to how much is covered by plants. This ratio, and how it changes over time, is a good surrogate for salt marsh degradation processes like sediment loss and conversion to open water. It helps differentiate between stable marshes that are more resilient, and declining marshes that are more vulnerable to threats like sea-level rise, erosion, and coastal development. This indicator originates from a U.S. Geological Survey project on an unvegetated to vegetated ratio for coastal wetlands.

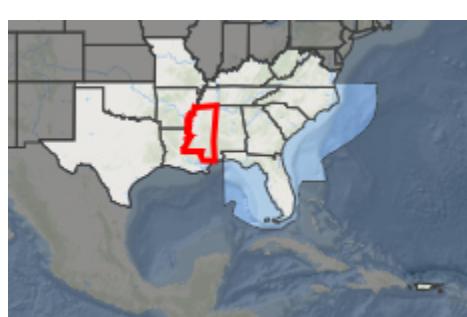


Table 25: Indicator values for stable coastal wetlands in this area. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.

	Indicator Values	Acres	Percent of Area	
↑ High	Stable coastal wetlands	70,413	0.2%	↑ In good condition
	<i>Area not evaluated for this indicator</i>	30,928,117	99.8%	
	<i>Outside Southeast Blueprint</i>	355	<0.1%	
	Total area	30,998,884	100%	

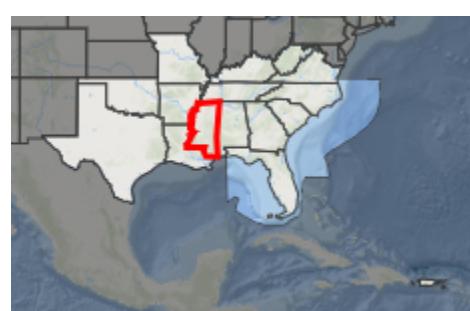
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).

Threats

Sea-level rise

NOAA's sea-level rise (SLR) inundation models represent areas likely to experience flooding at high tide based on each foot of inundation depth above current levels. These inundation depth models are not linked to a future timeframe; see the projections below. NOAA calculates the inundation depth at "mean higher high water", or the average highest daily tide. The area covered by each inundation depth level includes areas projected to be inundated at lower levels. For example, areas inundated by 4 ft of SLR also includes areas inundated by 3 ft, 2 ft, 1 ft, and current inundation levels.

To explore additional SLR information, please see NOAA's [Sea Level Rise Viewer](#).



Flooding extent by projected sea-level rise (ft)



Table 26: Extent of flooding by projected average highest daily tide due to sea level rise in this area. Values from the [NOAA sea-level rise inundation data](#).

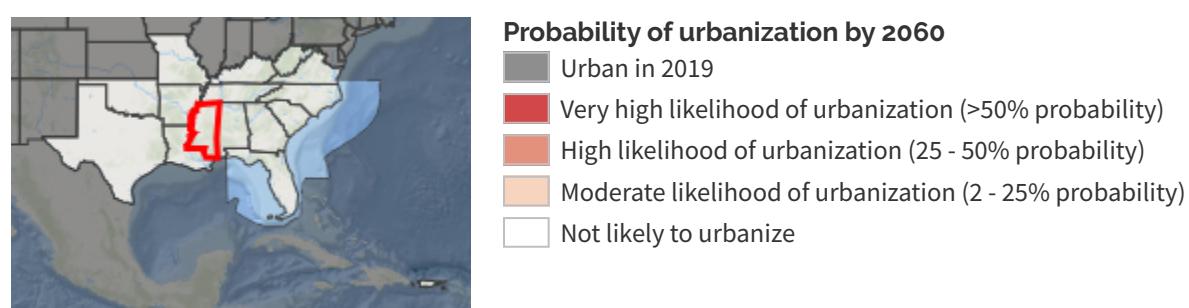
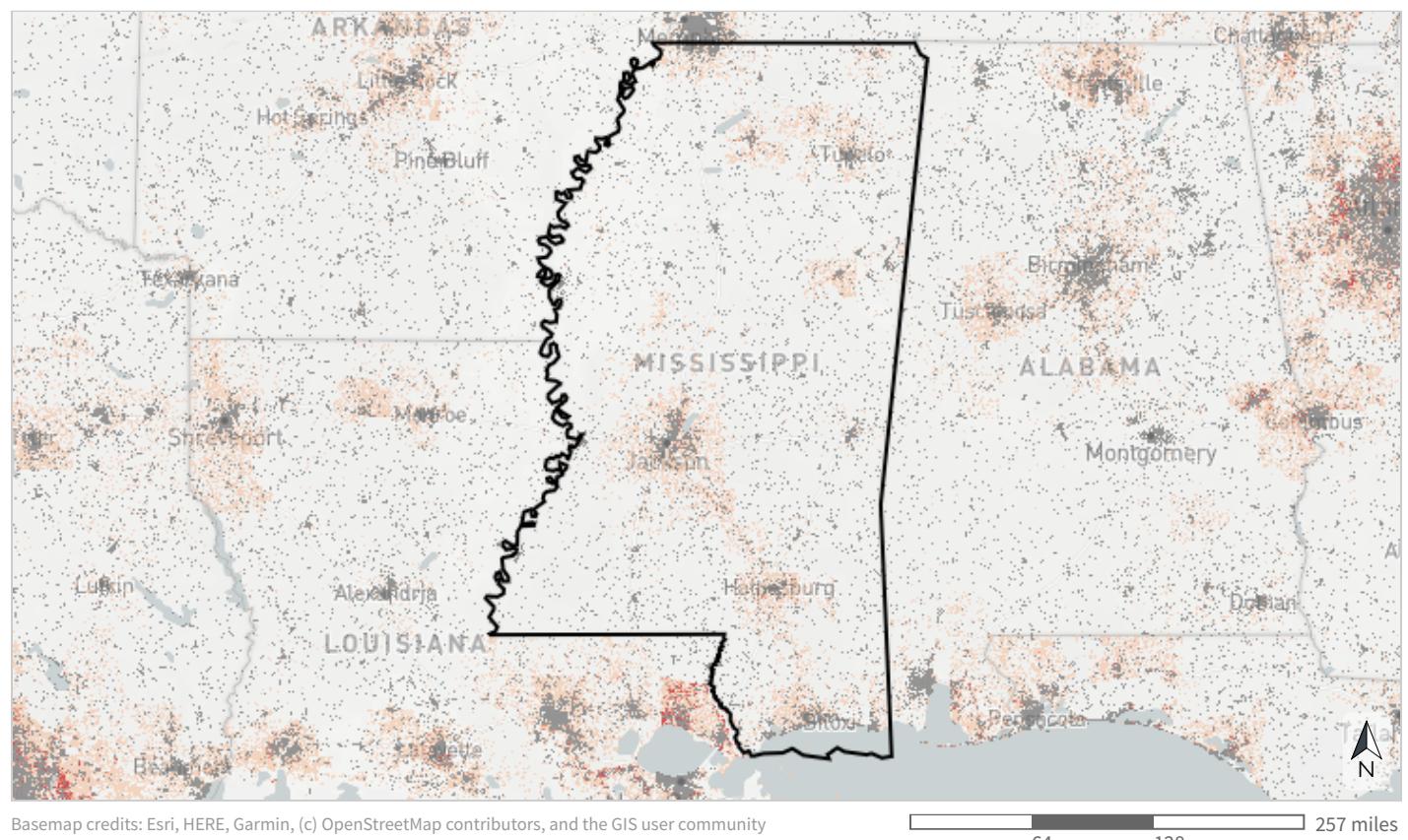
Feet of sea-level rise	Acres	Percent of Area
0 feet	534,923	1.7%
1 foot	572,046	1.8%
2 feet	597,123	1.9%
3 feet	612,861	2.0%
4 feet	626,062	2.0%
5 feet	639,518	2.1%
6 feet	654,516	2.1%
7 feet	667,453	2.2%
8 feet	682,670	2.2%
9 feet	700,955	2.3%
10 feet	719,098	2.3%
<i>Not projected to be inundated by up to 10 feet</i>	939,228	3.0%
<i>Sea-level rise unlikely to be a threat (inland counties)</i>	29,334,712	94.6%
<i>Sea-level rise data unavailable</i>	5,491	<0.1%
<i>Outside Southeast Blueprint</i>	355	<0.1%
Total area	30,998,884	100%

Table 27: Projected sea level rise by decade in this area. Values are based on area-weighted averages of decadal projections for 1-degree grid cells that overlap this area based on [NOAA's 2022 Sea Level Rise Report](#). 2060 corresponds to the [SECAS goal](#): a 10% or greater improvement in the health, function, and connectivity of Southeastern ecosystems by 2060.

SLR Scenario	2020 (ft)	2030 (ft)	2040 (ft)	2050 (ft)	2060 (ft)	2070 (ft)	2080 (ft)	2090 (ft)	2100 (ft)
Low	0.42	0.64	0.87	1.1	1.3	1.4	1.6	1.7	1.9
Intermediate-low	0.45	0.7	0.97	1.2	1.5	1.7	2	2.3	2.5
Intermediate	0.45	0.72	1	1.3	1.7	2.1	2.6	3.3	4
Intermediate-high	0.45	0.76	1.1	1.5	2.1	2.8	3.6	4.5	5.5
High	0.45	0.77	1.2	1.7	2.5	3.5	4.6	5.9	7.2

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.



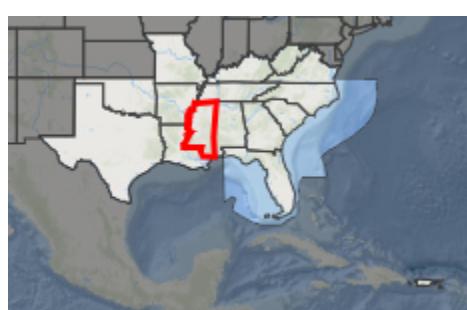
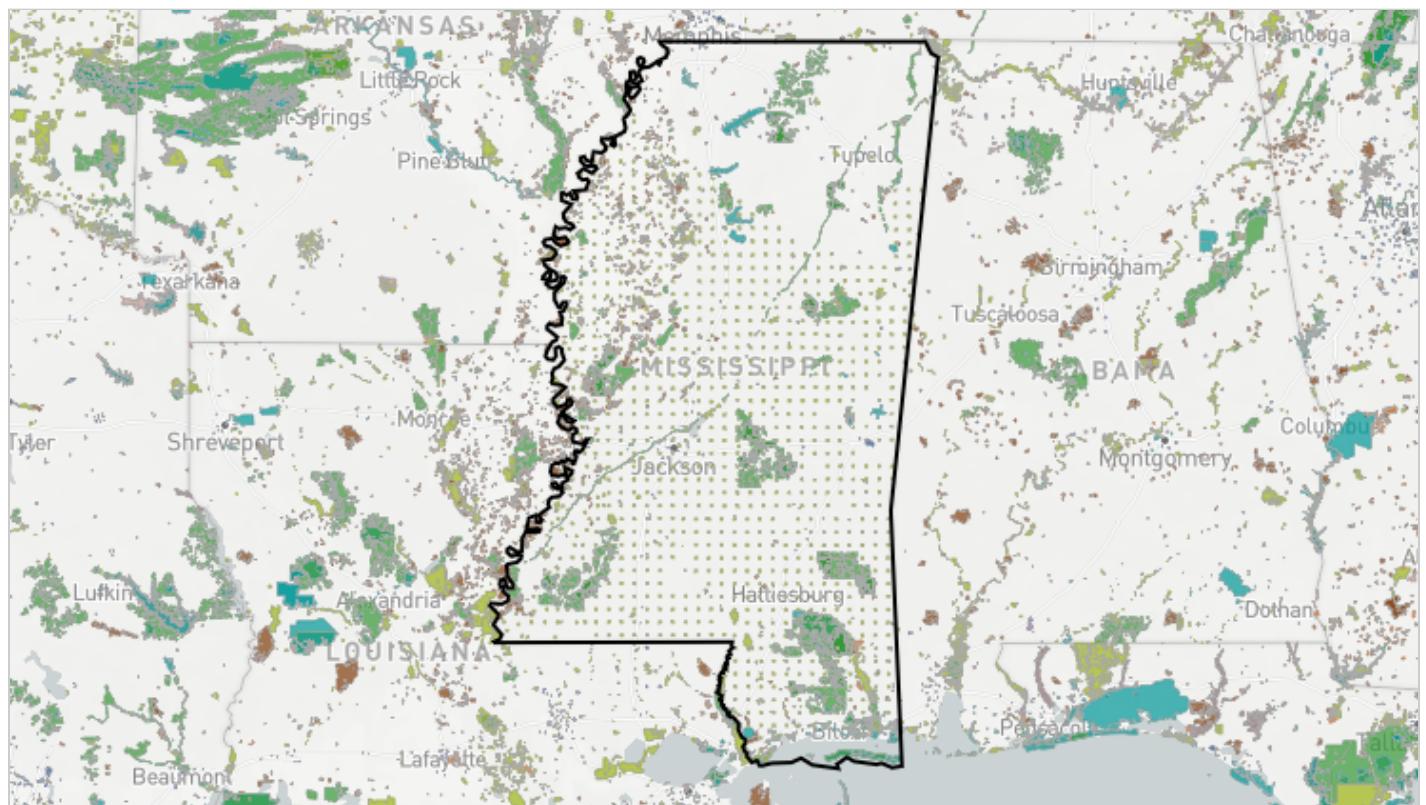
6.4% of this area is already urban in 2019, and an additional 7.2% has at least a moderate probability of urbanizing by 2060.

Table 28: 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	1,994,789	6.4%
2020 projected extent	2,019,079	6.5%
2030 projected extent	2,050,360	6.6%
2040 projected extent	2,072,240	6.7%
2050 projected extent	2,086,394	6.7%
2060 projected extent	2,098,193	6.8%
2070 projected extent	2,105,588	6.8%
2080 projected extent	2,110,748	6.8%
2090 projected extent	2,113,857	6.8%
2100 projected extent	2,115,550	6.8%
<i>Not projected to urbanize by 2100</i>	26,605,044	85.8%
<i>Outside Southeast Blueprint</i>	355	<0.1%
Total area	30,998,884	100%

Ownership and Partners

Conserved lands ownership



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

Table 29: 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	2,450,705	7.9%
State/province	883,331	2.8%
Regional	394	<0.1%
Local	12,254	<0.1%
Private non-profit conserved lands	14,978	<0.1%
Private conservation land	403,176	1.3%
Designation	496,761	1.6%
Ownership unknown	19,496	<0.1%
<i>Not conserved</i>	26,717,806	86.2%
Total area	30,998,898	100%

Land protection status

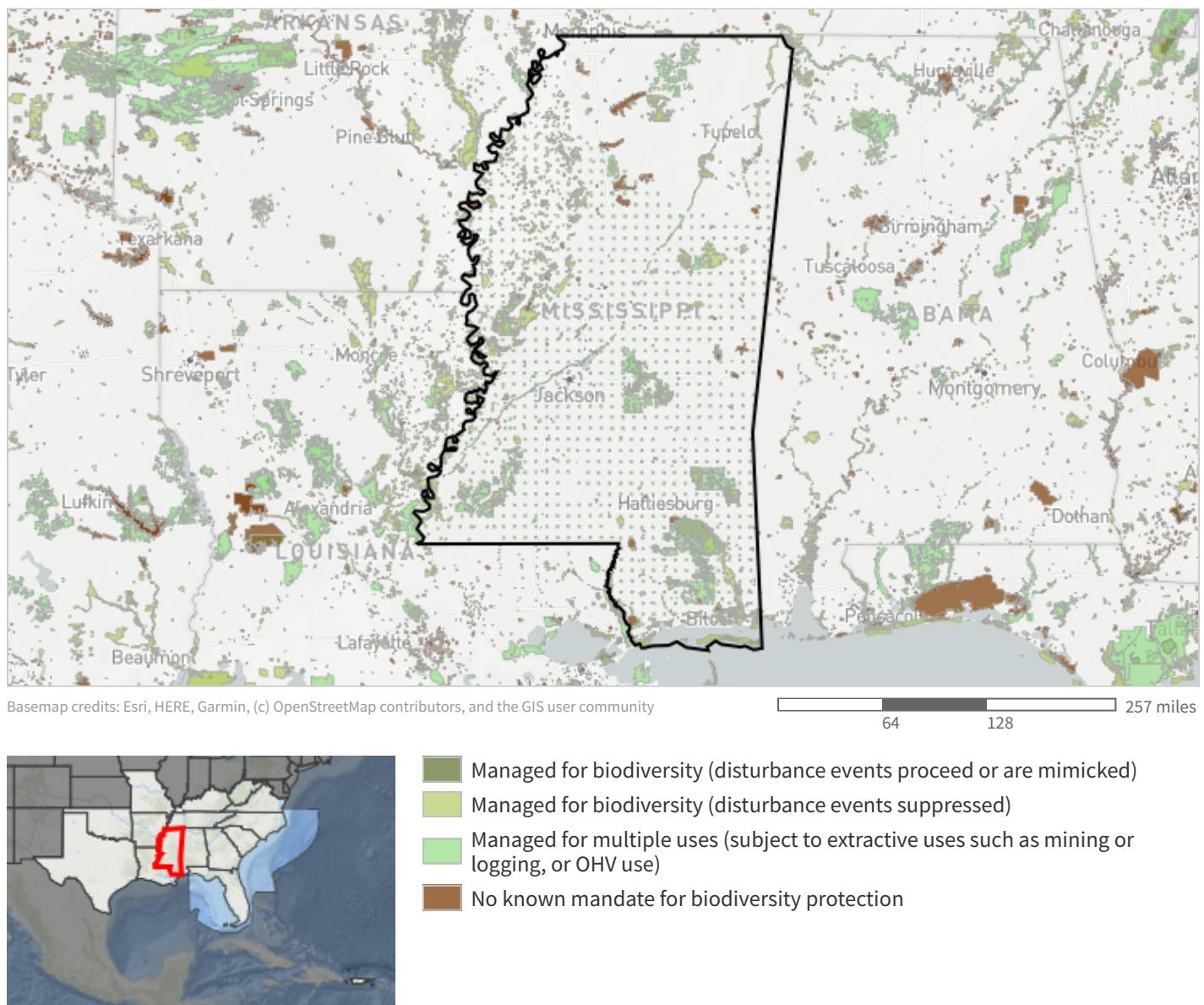


Table 30: Extent of land protection status in this area. Protected areas are derived from the [Protected Areas Database of the United States](#) (PAD-US v3.0). Note: areas are based on the polygon boundary of this area compared to protected area polygons, rather than pixel-level analyses used elsewhere in this report.

Land Protection Status	Acres	Percent of Area
Managed for biodiversity (disturbance events proceed or are mimicked)	46,778	0.2%
Managed for biodiversity (disturbance events suppressed)	1,854,253	6.0%
Managed for multiple uses (subject to extractive uses such as mining or logging, or OHV use)	1,990,734	6.4%
No known mandate for biodiversity protection	389,327	1.3%
<i>Not conserved</i>	26,717,806	86.2%
Total area	30,998,898	100%

Protected Areas

- National Forests in Mississippi (USDA FOREST SERVICE; 1,191,169 acres)
- 16th Section Land (Unknown; 646,178 acres)
- Camp Shelby (138,435 acres)
- SUNFLOWER WMA (Unknown; 119,307 acres)
- UPPER SARDIS WMA (Unknown; 95,484 acres)
- LEAF RIVER WMA (Unknown; 82,836 acres)
- Gulf Islands National Seashore (Unknown; 58,525 acres)
- CHICKASAWHAY WMA (Unknown; 58,110 acres)
- GUIS (NPS; 57,793 acres)
- CANEY CREEK WMA (Unknown; 56,894 acres)
- CASTON CREEK WMA (Unknown; 56,576 acres)
- TALLAHALA WMA (Unknown; 55,090 acres)
- CHICKASAW WMA (Unknown; 53,604 acres)
- BIENVILLE WMA (Unknown; 53,540 acres)
- MASON CREEK WMA (Unknown; 52,154 acres)
- SAM D. HAMILTON NOXUBEE NATIONAL WILDLIFE REFUGE (Fee; 48,330 acres)
- RED CREEK WMA (Unknown; 45,567 acres)

- CHOCTAW WMA (Unknown; 42,950 acres)
- Sardis Lake (39,413 acres)
- PASCAGOULA WMA (MDWFP; 37,758 acres)
- SANDY CREEK WMA (Unknown; 33,966 acres)
- PANTHER SWAMP NATIONAL WILDLIFE REFUGE (Fee; 33,156 acres)
- NATR (NPS; 31,527 acres)
- CANAL SECTION WMA (COE; 29,295 acres)
- LITTLE BILOXI WMA (Unknown; 28,832 acres)
- ... and 914 more protected areas ...

Nearby land trusts

[Click here](#) to search for land trusts within 250 miles of this area on the Land Trust Alliance website.

Credits

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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).