

# Southeast Conservation Blueprint Summary

for Mississippi

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Created 10/02/2024

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[The Southeast Conservation Blueprint 2024](#)



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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.

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.

For more information:

- Visit the [Blueprint webpage](#)
- Review the [Blueprint 2024 Development Process](#)
- View and download the Blueprint data and make maps on the [Blueprint page of the SECAS Atlas](#)

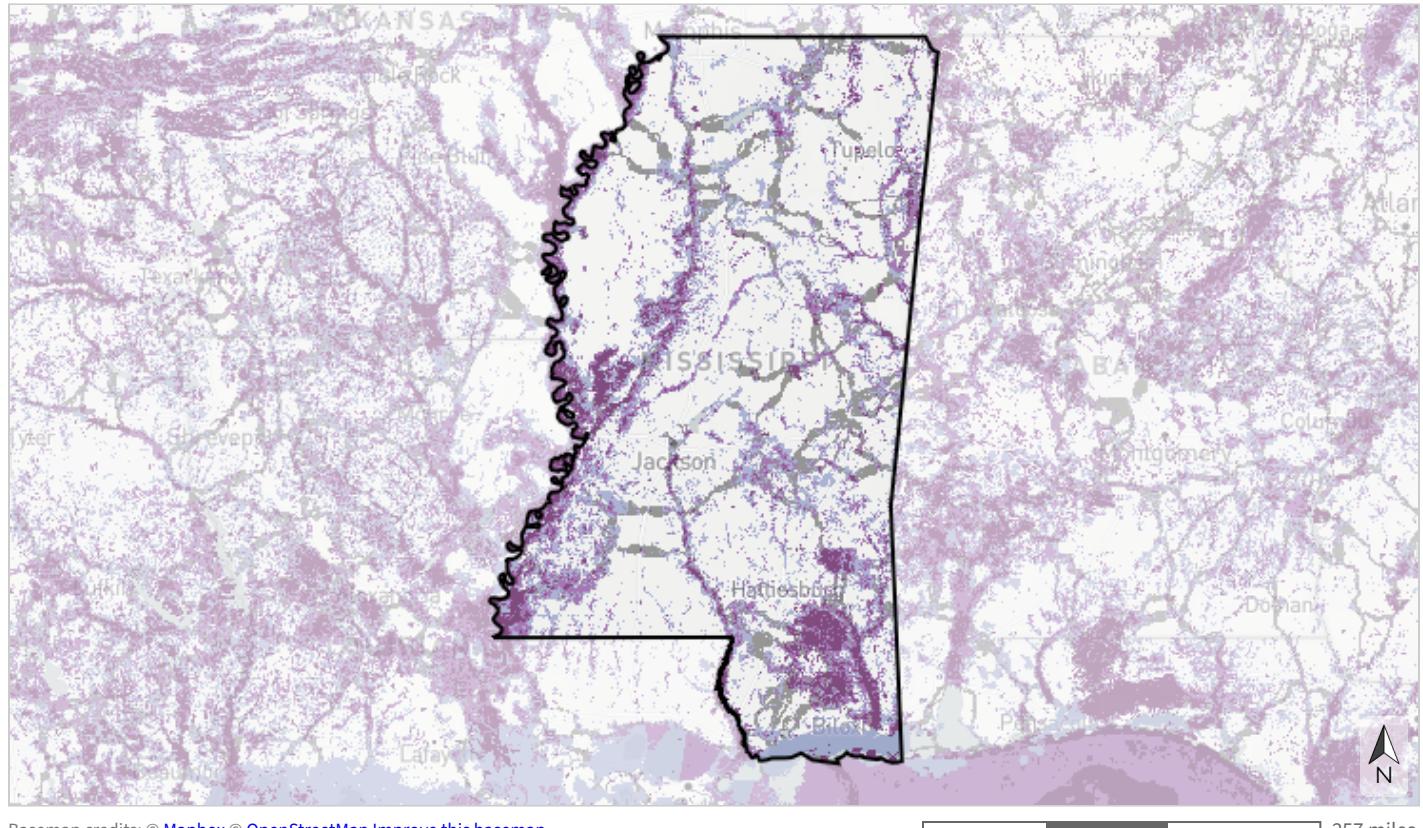
### We're here to help!

- 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 Blueprint Explorer interface?

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

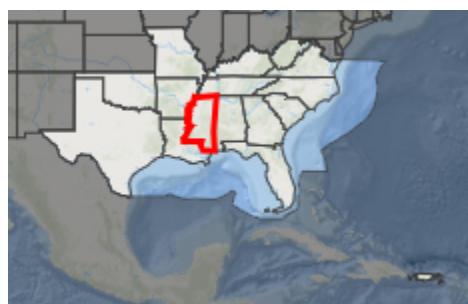
We're here to support you. We really mean it. It's what we do!

# Southeast Blueprint Priorities



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64 128 257 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.

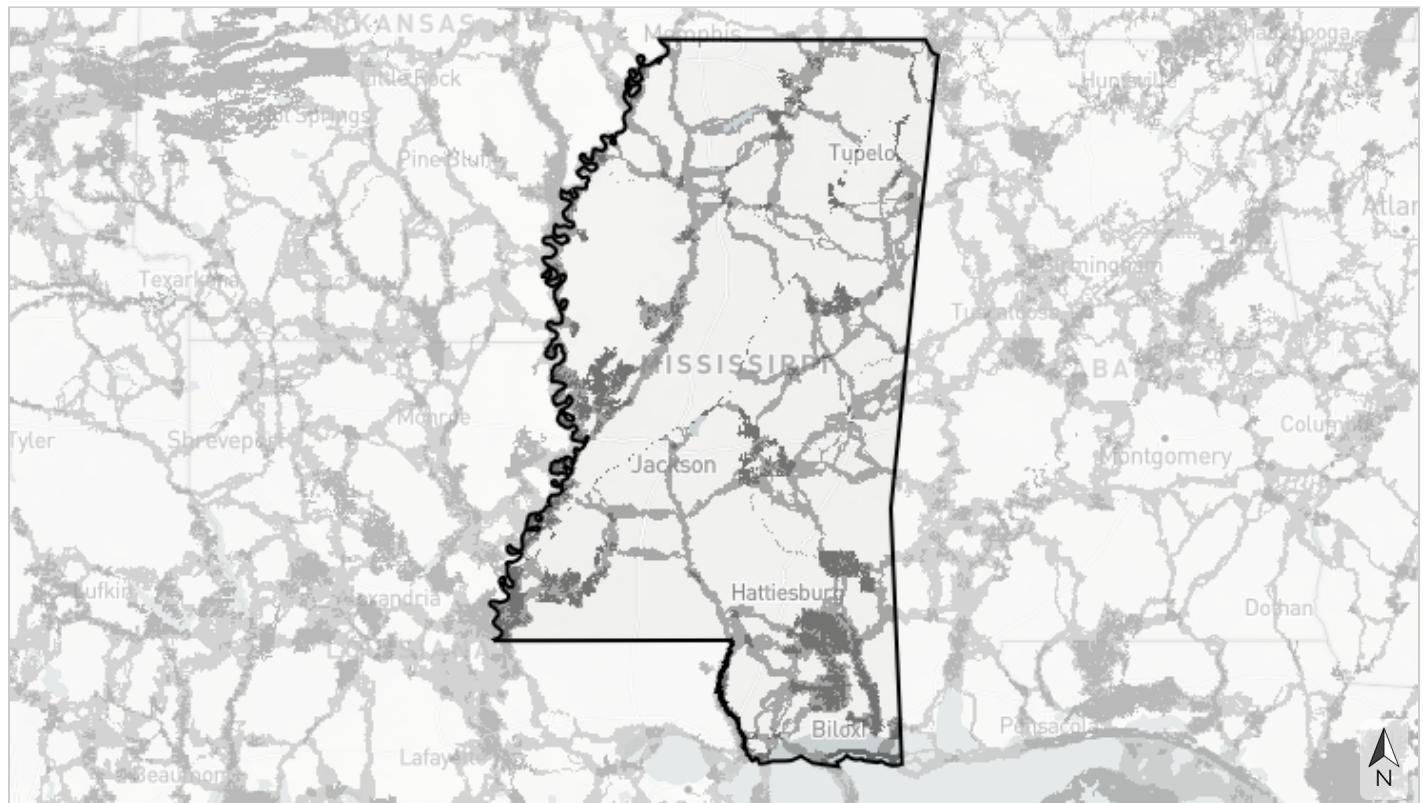
Table 1: Extent of each Blueprint priority category within Mississippi.

Priority Category	Acres	Percent of Area
Highest priority	1,968,526	6.4%
High priority	3,248,906	10.5%
Medium priority	5,650,734	18.2%
Priority connections	2,299,145	7.4%
Lower priority	17,831,573	57.5%
<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>

## 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.

In the continental Southeast, hubs are large patches (~5,000+ acres) of highest priority Blueprint areas and/or protected lands.



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Hubs  
 Corridors

*Table 2: Extent of hubs and corridors within Mississippi.*

Type	Acres	Percent of Area
Hubs	2,525,819	8.1%
Corridors	5,902,466	19.0%
Not a hub or corridor	22,570,600	72.8%
<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>

# Indicator Summary

Table 3: Terrestrial indicators.

Indicator	Present
<a href="#">Amphibian &amp; reptile areas</a>	✓
<a href="#">East Coastal Plain open pine birds</a>	✓
<a href="#">Equitable access to potential parks</a>	✓
<a href="#">Fire frequency</a>	✓
<a href="#">Grasslands and savannas</a>	✓
<a href="#">Greenways &amp; trails</a>	✓
<a href="#">Intact habitat cores</a>	✓
<a href="#">Landscape condition</a>	✓
<a href="#">Mississippi Alluvial Valley forest birds - protection</a>	✓
<a href="#">Mississippi Alluvial Valley forest birds - reforestation</a>	✓
<a href="#">Resilient terrestrial sites</a>	✓
<a href="#">Urban park size</a>	✓
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
<a href="#">Gulf migratory fish connectivity</a>	✓
<a href="#">Imperiled aquatic species</a>	✓
<a href="#">Natural landcover in floodplains</a>	✓
<a href="#">Network complexity</a>	✓
<a href="#">Permeable surface</a>	✓

Table 5: Coastal &amp; marine indicators.

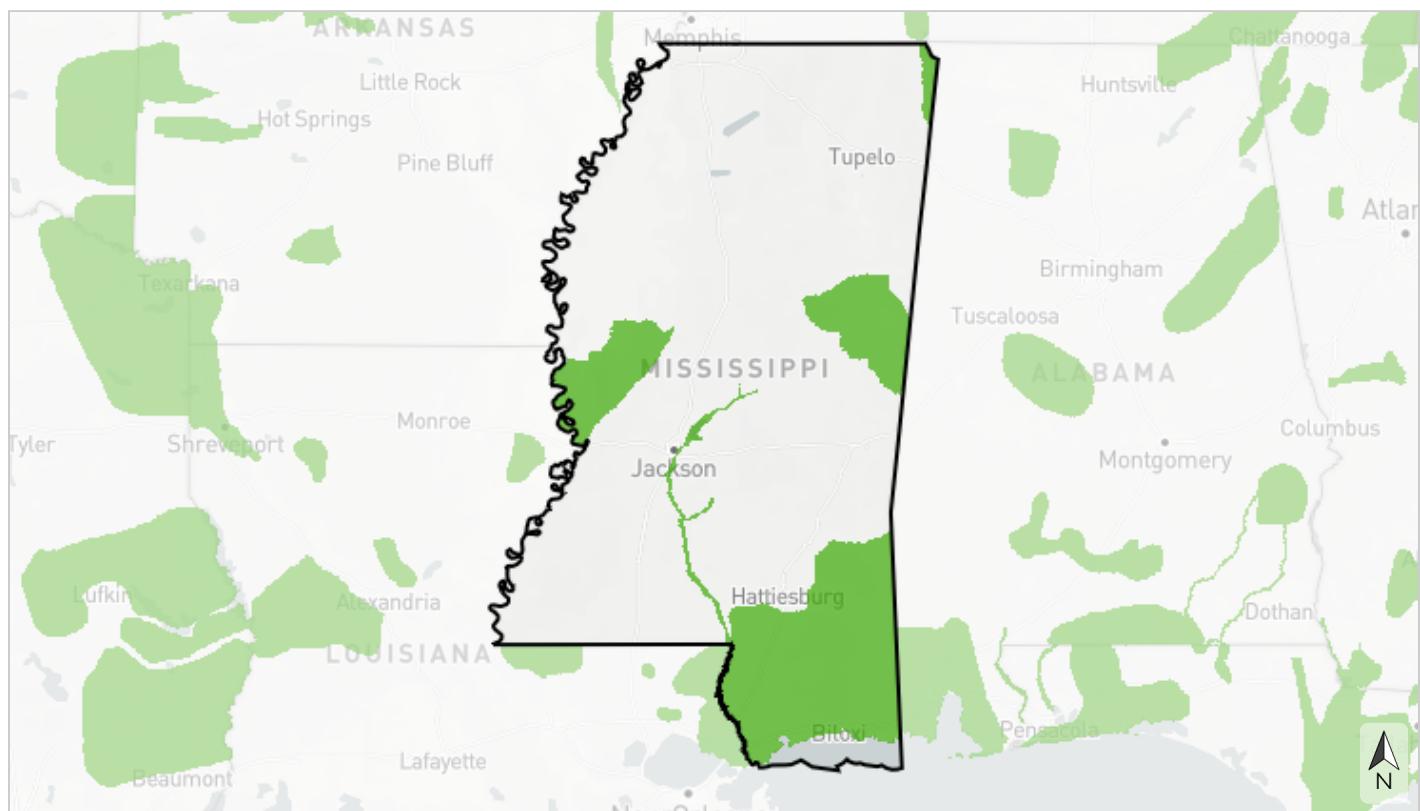
Indicator	Present
<a href="#">Coastal shoreline condition</a>	✓
<a href="#">Estuarine coastal condition</a>	✓
<a href="#">Gulf coral &amp; hardbottom</a>	✓
Gulf deep-sea coral richness	-
<a href="#">Gulf marine mammals</a>	✓
<a href="#">Gulf sea turtles</a>	✓
<a href="#">Island habitat</a>	✓
Marine highly migratory fish	-
<a href="#">Resilient coastal sites</a>	✓
<a href="#">Seagrass</a>	✓
South Atlantic maritime forest	-
<a href="#">Stable coastal wetlands</a>	✓



Terrestrial

## Amphibian & reptile areas

This indicator represents Priority Amphibian and Reptile Conservation Areas (PARCAs) across the Southeast. PARCA is an expert-driven, nonregulatory designation that includes places capable of supporting viable amphibian and reptile populations, places occupied by rare or imperiled species, and places rich in biodiversity or species unique to that geographic area (i.e., endemism). Reptiles and amphibians are a critical part of the Southeast region's rich biodiversity and many populations are declining in the face of threats like habitat loss, invasive species, and climate change. The PARCA dataset is maintained by the Amphibian and Reptile Conservancy and does not yet include Virginia or Kentucky.



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Priority Amphibian and Reptile Conservation Area (PARCA)  
 Not a PARCA (excluding Kentucky and Virginia)

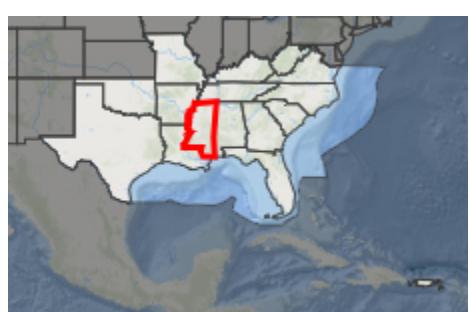


Table 6: Indicator values for amphibian & reptile areas within Mississippi. A good condition threshold is not yet defined for this indicator.

	<b>Indicator Values</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ High	Priority Amphibian and Reptile Conservation Area (PARCA)	6,309,182	20.4%
↓ Low	Not a PARCA (excluding Kentucky and Virginia)	24,689,703	79.6%
	<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>

## Priority Amphibian and Reptile Conservation Areas:

### Gulf Coast

The Gulf Coast PARCA spans the southern portion of Mississippi, encompassing a diverse landscape influenced by its proximity to the Gulf of Mexico. This region includes coastal flatwoods and marshes, upland longleaf pine forests, and expansive riverine systems, with notable features such as the Pascagoula River, renowned for its biodiversity. Habitats range from saltwater and freshwater marshes to fire-maintained longleaf pine forests, supporting species like the dusky gopher frog, Gulf salt marsh snake, and Mississippi diamondback terrapin. The confluence of these subregions, coupled with the area's history of fluctuating sea levels and sediment deposition, has sculpted a unique set of conditions conducive to supporting a wide range of plant and animal life, each with a distinct subset of species, threats, and conservation needs, underpinning its importance for conservation. Urban development, invasive species, and fire suppression are major threats that collaborative conservation efforts with national forests, national wildlife refuges, and educational institutions are crucial to address.

### Mann's Land

Named in honor of herpetologist Tom Mann, a longtime herpetologist in the region, the Mann's Land PARCA, located in east-central Mississippi, includes the Tombigbee National Forest and Black Prairie Wildlife Management Area. This PARCA features a mosaic of open prairies, chalk outcrops, and oak-hickory forests. The unique geology, including alkaline soils supporting prairie flora, provides habitats for species like the Webster's salamander, crawfish frog, and prairie kingsnake. Key threats are prairie conversion, invasive species like cogongrass, and incompatible forestry practices. Conservation efforts can be supported by partnerships with Mississippi State University, private landowners, and the Natural Resources Conservation Service (NRCS). Important research needs include mapping surface geology for salamanders and monitoring the effectiveness of prairie restoration efforts.

### Mobile Bay

Alabama's largest PARCA, Mobile Bay, contains a largely developed metro area, and in a region of such high biodiversity, this has pushed many species to the brink of extirpation. This area is considered the world's center of turtle diversity, harboring beautiful species like the eastern chicken turtle, southern painted turtle, Alabama red-bellied turtle, and Mississippi diamondback terrapin. Often called "America's Amazon," it was the boyhood home of EO Wilson; his dream was that it would one day hold a national park to celebrate its amazing biodiversity. Undeveloped areas along the coast and inland swamps are key habitats for a large number of imperiled amphibian and reptile species that find refuge or breed here,

including the Gulf Coast waterdog.

### **Pearl River Basin**

Boasting more than 100 species of reptiles and amphibians, the Pearl River Basin is widely considered one of America's crown jewels for herpetological biodiversity. It consists primarily of upland forest dominated by evergreen/mixed hardwoods, pine flatwoods, and forested wetlands. Much of the historical longleaf pine component within the woodlands and flatwoods has been converted to loblolly pine. Ongoing efforts continue to restore longleaf and improve habitat conditions to these vital communities. This area faces a large number of human threats from urbanization, water pollution, and unsustainable timber practices. The natural areas here are also threatened by invasive species (wild hogs and cogongrass), as well as fire suppression and increased hurricane frequency. A significant effort will need to be made by cooperating across the many individuals and organizations who occupy this land to control point source pollution, return pine forests to natural fire conditions, control invasive species, and restore many of these habitats.

### **South Delta**

The South Delta PARCA, nestled between the Mississippi and Yazoo Rivers, is characterized by rich alluvial soils that have historically supported extensive agriculture. Despite this transformation, remnants of bottomland hardwood forests and cypress-tupelo swamps persist within protected areas like Panther Swamp and Hillside National Wildlife Refuges. These wetlands are vital for species such as the western chicken turtle, alligator snapping turtle, and small-mouthed salamander. The region faces threats from agricultural runoff, invasive species like feral hogs and Chinese tallow trees, and altered hydrology. Conservation strategies include working with the Army Corps of Engineers, refining agricultural practices, and restoring abandoned catfish ponds to benefit aquatic species. Research efforts are needed to assess the impacts of invasive species and monitor turtle populations.

### **Tishomingo**

The Tishomingo PARCA, located in the northeastern corner of Mississippi, is a unique ecological region due to its position at the southwestern reach of the Appalachian foothills. This area, part of the Cumberland Plateau, features rugged topography and distinct geological formations that merge into the Fall Line Hills and Blackbelt Prairie. The mixed hardwood and pine forests provide critical habitats for species like the eastern hellbender, green salamander, and northern pine snake. Threats to this region include non-compatible timber practices, river sedimentation, and agricultural runoff. Conservation efforts can be bolstered through partnerships with regional authorities, state parks, and local universities. Key research needs include expanded surveys for hellbenders and studies on the impacts of quarry operations.

### **Tunica Hills**

The Tunica Hills PARCA is unique in that it is predominantly composed of the southern mesophytic hardwood forest community type that developed on loess hills with steep ravines and intermittent or spring-fed streams. Currently, this community type is only recognized from this area of Louisiana. In addition to southern mesophytic hardwoods, other associated community types within the Tunica Hills PARCA include hardwood slope forests and mixed hardwood-loblolly pine forests. Threats to this PARCA include water pollution (from sand and gravel mining), habitat conversion from hardwoods to pine, unsustainable timber harvests, and invasive species (wild hogs). Major priorities for this PARCA include

adhering to best management practices and streamside management zones, maintaining late stage hardwoods, and creating/restoring ephemeral wetlands.

### **Upper Pearl**

The Upper Pearl PARCA stretches along the Pearl River from its meeting with the Gulf Coast to central Mississippi. This region includes dynamic aquatic ecosystems and dense riparian forests of oak, hickory, and pine. The Pearl River is crucial for freshwater turtles like the Pearl River map turtle, ringed sawback, and alligator snapping turtle. Threats include altered hydrology from impoundments, invasive species, and agricultural runoff, which can be mitigated through conservation opportunities involving collaboration with water management districts, local municipalities, and environmental organizations. Research priorities include long-term turtle monitoring and habitat usage studies for key species that rely on the pristine waters that support one of the most diverse turtle populations in the country.

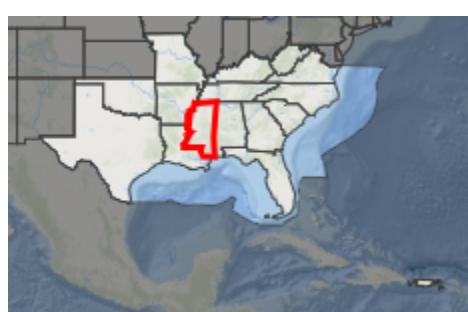
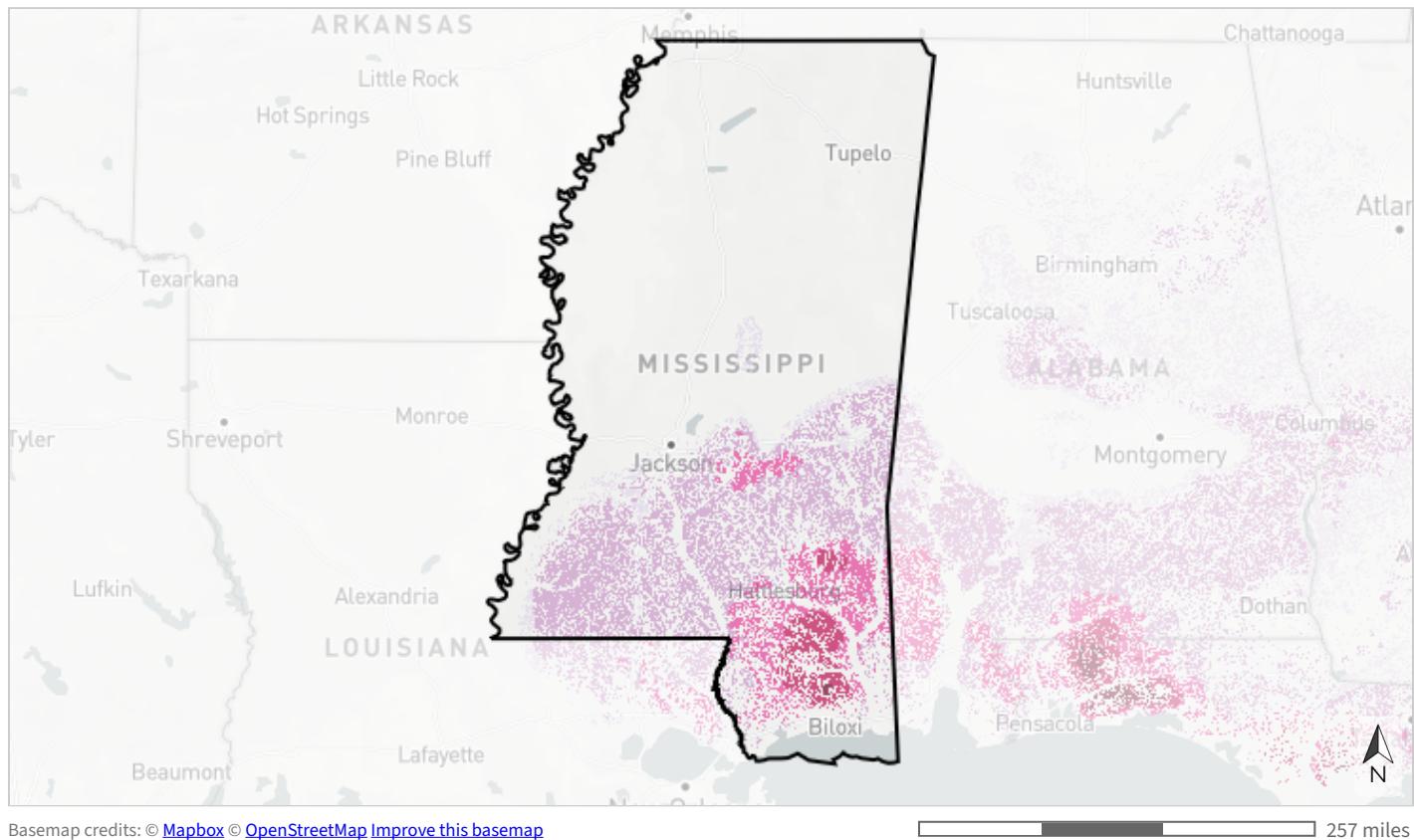
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 bird source populations. It originates from the East Gulf Coastal Plain Joint Venture's prioritization of areas for open pine ecosystem restoration.



### Priority for open pine conservation for focal bird species

- High priority (score >80-100)
- Medium-high priority (score >60-80)
- Medium priority (score >40-60)
- Medium-low priority (score >20-40)
- Low priority (score 0-20)
- Not a priority (not identified as upland pine)

Table 7: Indicator values for East Coastal Plain open pine birds within Mississippi. A good condition threshold is not yet defined for this indicator.

	<b>Indicator Values: Priority for open pine conservation for focal bird species</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ High	High priority (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 priority (score 0-20)	485,691	1.6%
↓ Low	Not a priority (not identified as upland pine)	6,959,944	22.5%
	<i>Area not evaluated for this indicator</i>	18,287,089	59.0%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

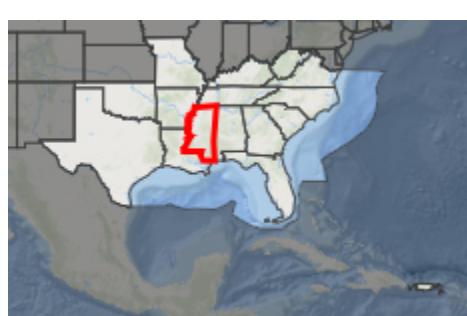
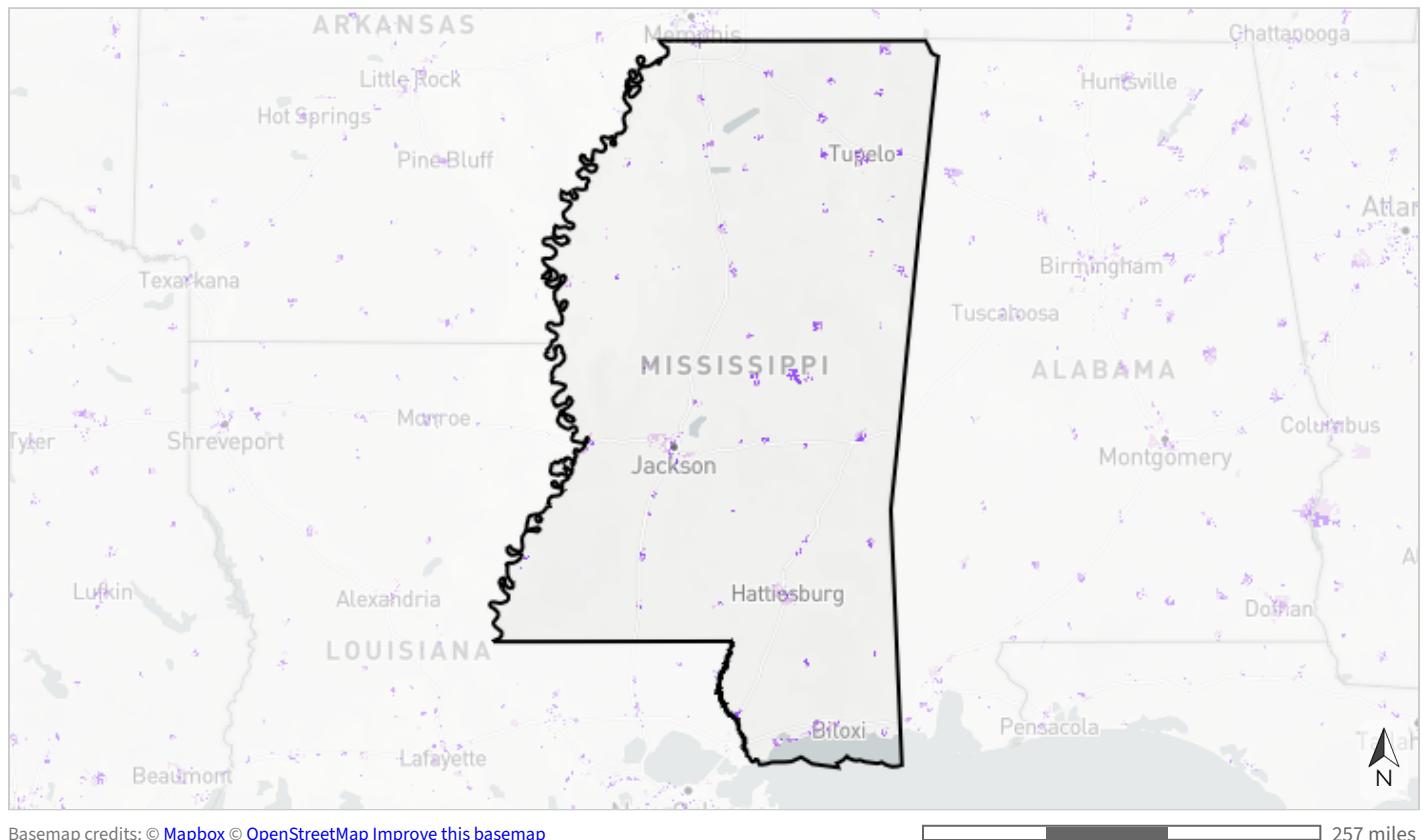
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 in urban areas. 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 and the Center for Disease Control's Social Vulnerability Index.



### Priority for a new park that would create nearby equitable access

- Very high priority
- High priority
- Moderate priority
- Not identified as a priority (within urban areas)

*Table 8: Indicator values for equitable access to potential parks within Mississippi. A good condition threshold is not yet defined for this indicator.*

<b>Indicator Values: Priority for a new park that would create nearby equitable access</b>		<b>Acres</b>	<b>Percent of Area</b>
↑ High	Very high priority	112,412	0.4%
	High priority	120,909	0.4%
	Moderate priority	135,534	0.4%
↓ Low	Not identified as a priority (within urban areas)	30,144,437	97.2%
	<i>Area not evaluated for this indicator</i>	485,592	1.6%
	<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>

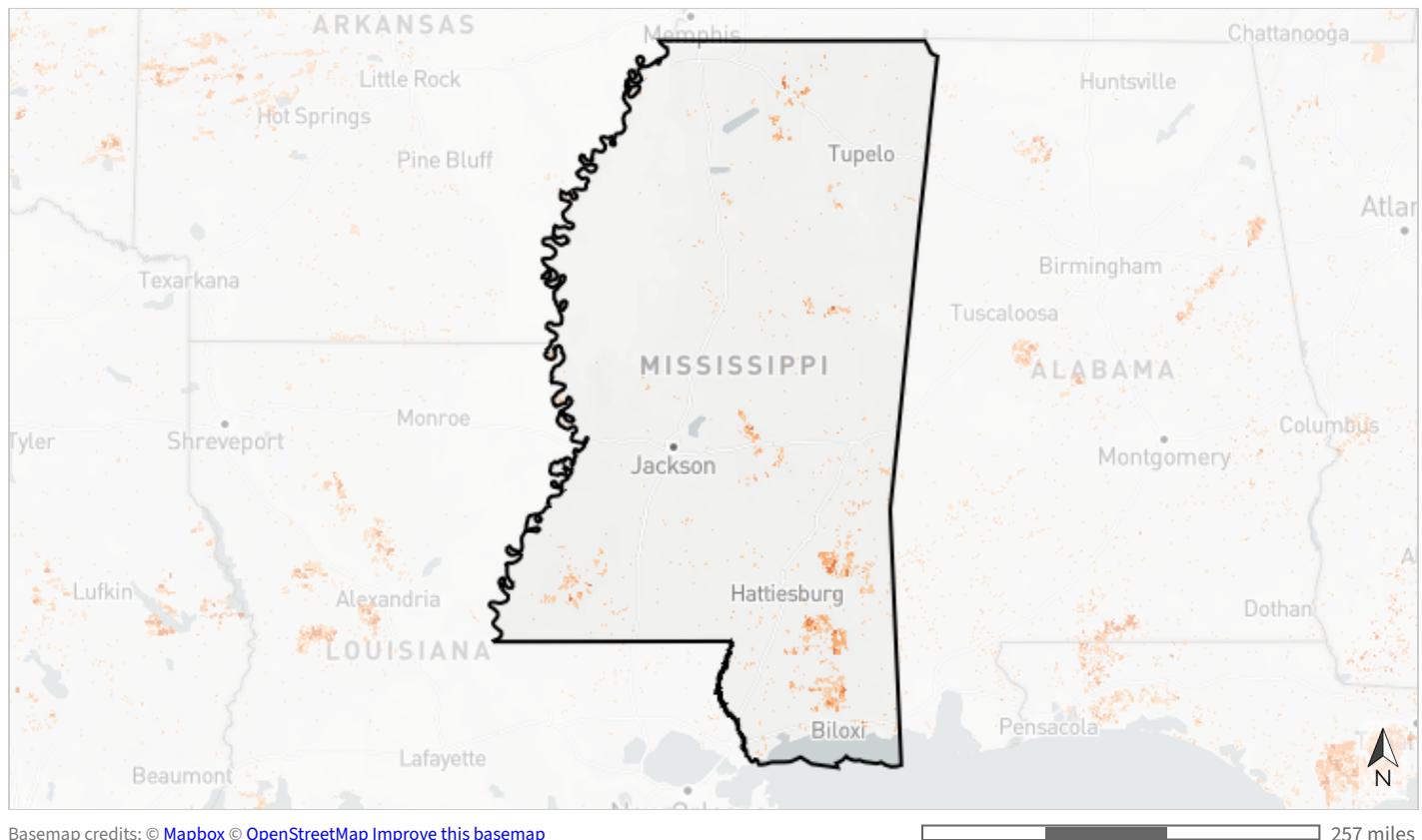
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 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 9: Indicator values for fire frequency within Mississippi. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.*

	<b>Indicator Values</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ 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>Area not evaluated for this indicator</i>	355	<0.1%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

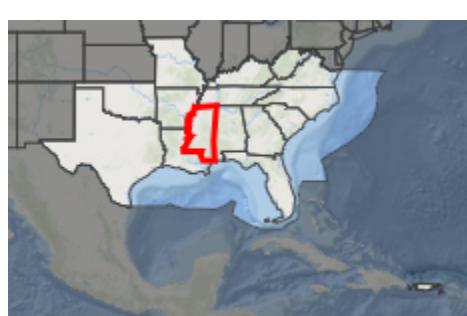
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Terrestrial

## Grasslands and savannas

This indicator represents grasslands and savannas in the southeastern United States, which support important plants, reptiles, amphibians, mammals, birds, and pollinators. It considers known grassland and savanna locations, likely locations managed for biodiversity, and surrounding pollinator buffers. It also incorporates other potential grassland and savanna locations within natural and altered landscapes, and restoration opportunities within historic locations based on past fire intervals and historic ecosystem predictions. This indicator combines data from multiple sources, including the Southeastern Grasslands Institute, the National Land Cover Database, LANDFIRE biophysical settings, Oklahoma and Texas ecological systems maps, and more.



- Known grassland/savanna
- Likely grassland/savanna >10 acres
- Likely grassland/savanna ≤10 acres
- Pollinator buffer around known or likely grassland/savanna
- Potential grassland/savanna in mostly natural landscape
- Potential grassland/savanna in more altered landscape
- Historic grassland/savanna
- Not identified as grassland/savanna

*Table 10: Indicator values for grasslands and savannas within Mississippi. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.*

	<b>Indicator Values</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ High	Known grassland/savanna	3,197	<0.1%
	Likely grassland/savanna >10 acres	32,750	0.1%
	Likely grassland/savanna ≤10 acres	19,607	<0.1%
↓ Low	Pollinator buffer around known or likely grassland/savanna	202,834	0.7%
	Potential grassland/savanna in mostly natural landscape	306,883	1.0%
	Potential grassland/savanna in more altered landscape	3,707,091	12.0%
↓ Low	Historic grassland/savanna	9,338,822	30.1%
	Not identified as grassland/savanna	16,902,165	54.5%
	<i>Area not evaluated for this indicator</i>	485,536	1.6%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

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



Terrestrial

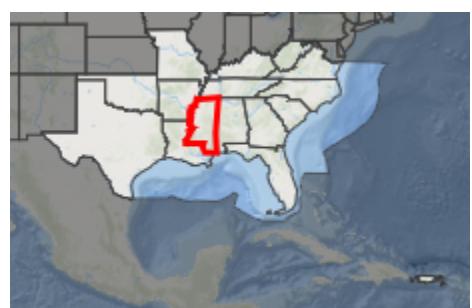
## Greenways & trails

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 data and the National Land Cover Database.



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- Mostly natural and connected for  $\geq 40$  km
- Mostly natural and connected for 5 to  $< 40$  km or partly natural and connected for  $\geq 40$  km
- Mostly natural and connected for 1.9 to  $< 5$  km, partly natural and connected for 5 to  $< 40$  km, or developed and connected for  $\geq 40$  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
- Not identified as a trail, sidewalk, or other path

*Table 11: Indicator values for greenways & trails within Mississippi. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.*

Indicator Values	Acres	Percent of Area
Mostly natural and connected for $\geq 40$ km	1,535	<0.1%
Mostly natural and connected for 5 to $<40$ km or partly natural and connected for $\geq 40$ km	2,903	<0.1%
Mostly natural and connected for 1.9 to $<5$ km, partly natural and connected for 5 to $<40$ km, or developed and connected for $\geq 40$ km	2,040	<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	1,885	<0.1%
Partly natural and connected for $<1.9$ km or developed and connected for 1.9 to $<5$ km	1,584	<0.1%
Developed and connected for $<1.9$ km	2,590	<0.1%
Sidewalk	4,091	<0.1%
Not identified as a trail, sidewalk, or other path	30,975,979	99.9%
<i>Area not evaluated for this indicator</i>	6,278	<0.1%
<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>

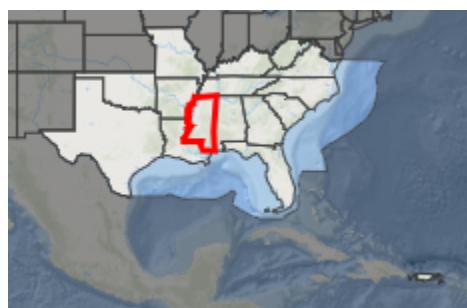
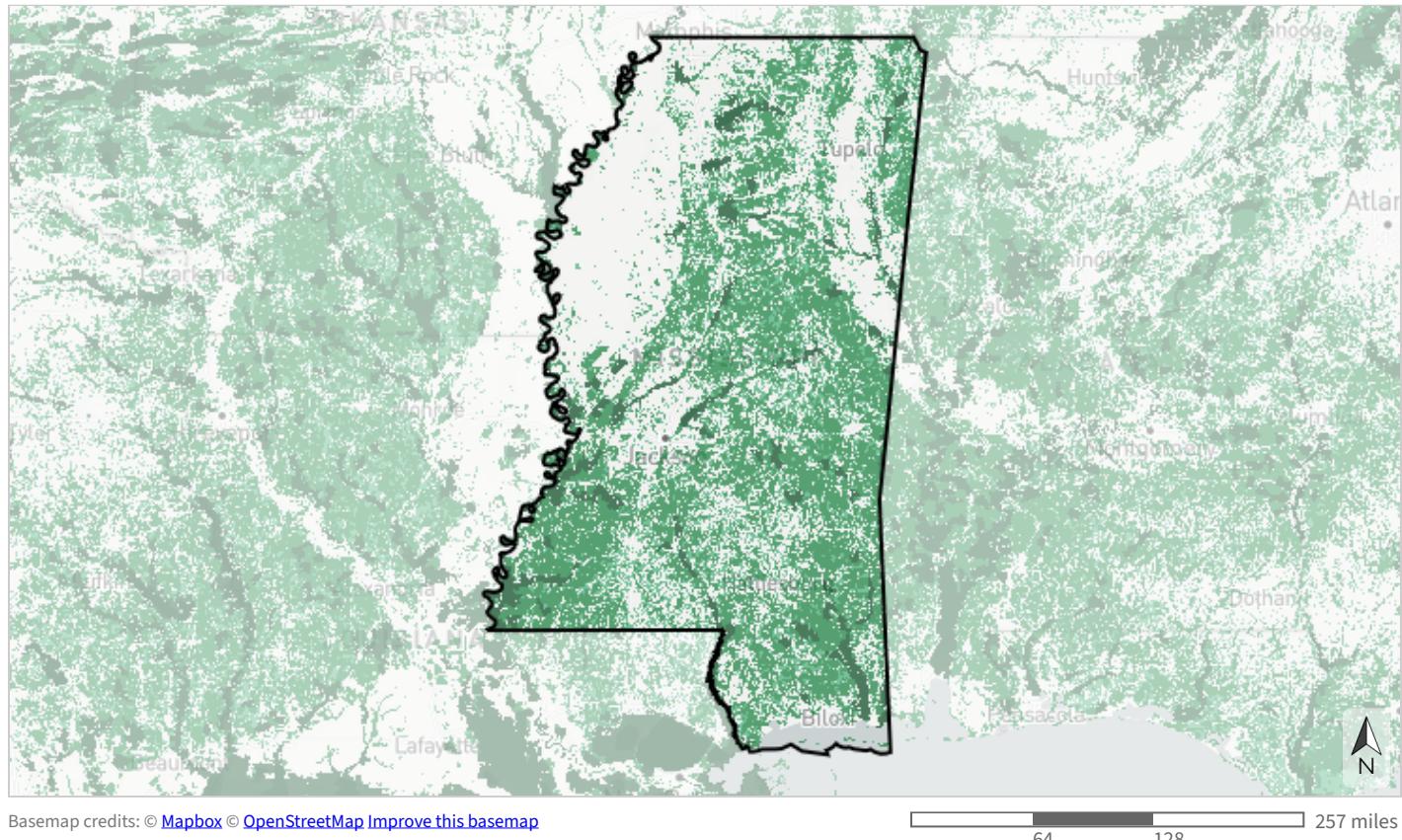
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 12: Indicator values for intact habitat cores within Mississippi. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.*

	<b>Indicator Values</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ High	Large core (>10,000 acres)	2,093,458	6.8%
	Medium core (>1,000-10,000 acres)	9,931,000	32.0%
	Small core (>100-1,000 acres)	4,192,752	13.5%
↓ Low	Not a core	14,775,752	47.7%
	<i>Area not evaluated for this indicator</i>	5,923	<0.1%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

↑ In good condition

↓ Not in good condition

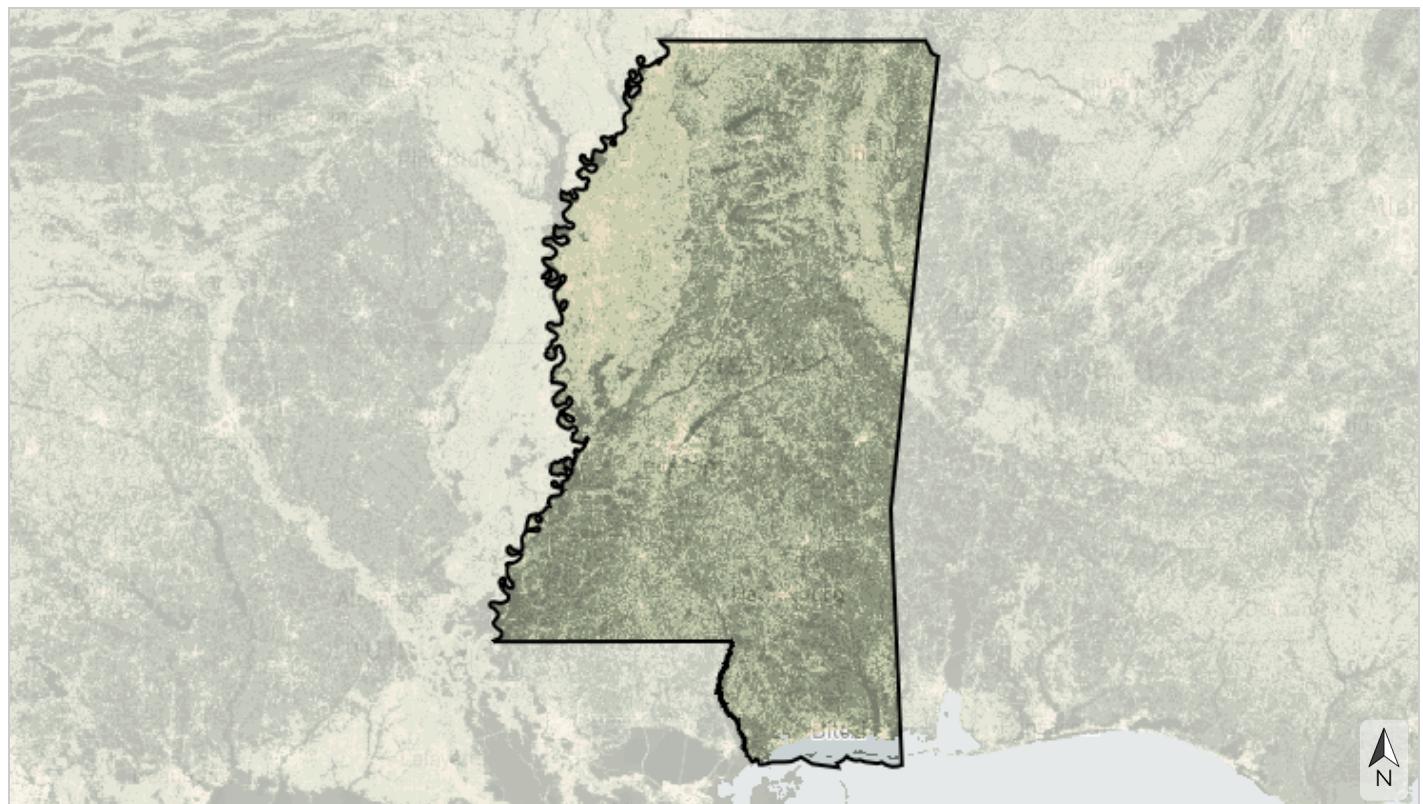
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Terrestrial

## Landscape condition

This indicator represents natural areas with limited human alteration while also considering the naturalness of the surrounding landscape. Examples of human alteration include urban development and intense agricultural use. The degree of naturalness across the landscape is a key ecological condition for sustaining species and ecosystem services that are sensitive to habitat fragmentation at multiple scales. This indicator uses the National Land Cover Dataset, various data on grasslands, mines, and quarries, and ideas from the Florida Critical Lands and Waters Identification Project's approach for evaluating landscape integrity.



- Very natural landscape
- Natural landscape
- Mostly natural landscape
- Partly natural landscape
- Altered landscape
- Heavily altered landscape

*Table 13: Indicator values for landscape condition within Mississippi. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.*

	<b>Indicator Values</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ High ↓ Low	Very natural landscape	2,878,024	9.3%
	Natural landscape	10,522,571	33.9%
	Mostly natural landscape	8,060,254	26.0%
	Partly natural landscape	8,102,565	26.1%
	Altered landscape	863,140	2.8%
	Heavily altered landscape	86,795	0.3%
	<i>Area not evaluated for this indicator</i>	485,536	1.6%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

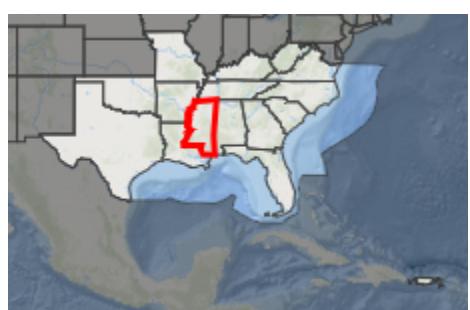
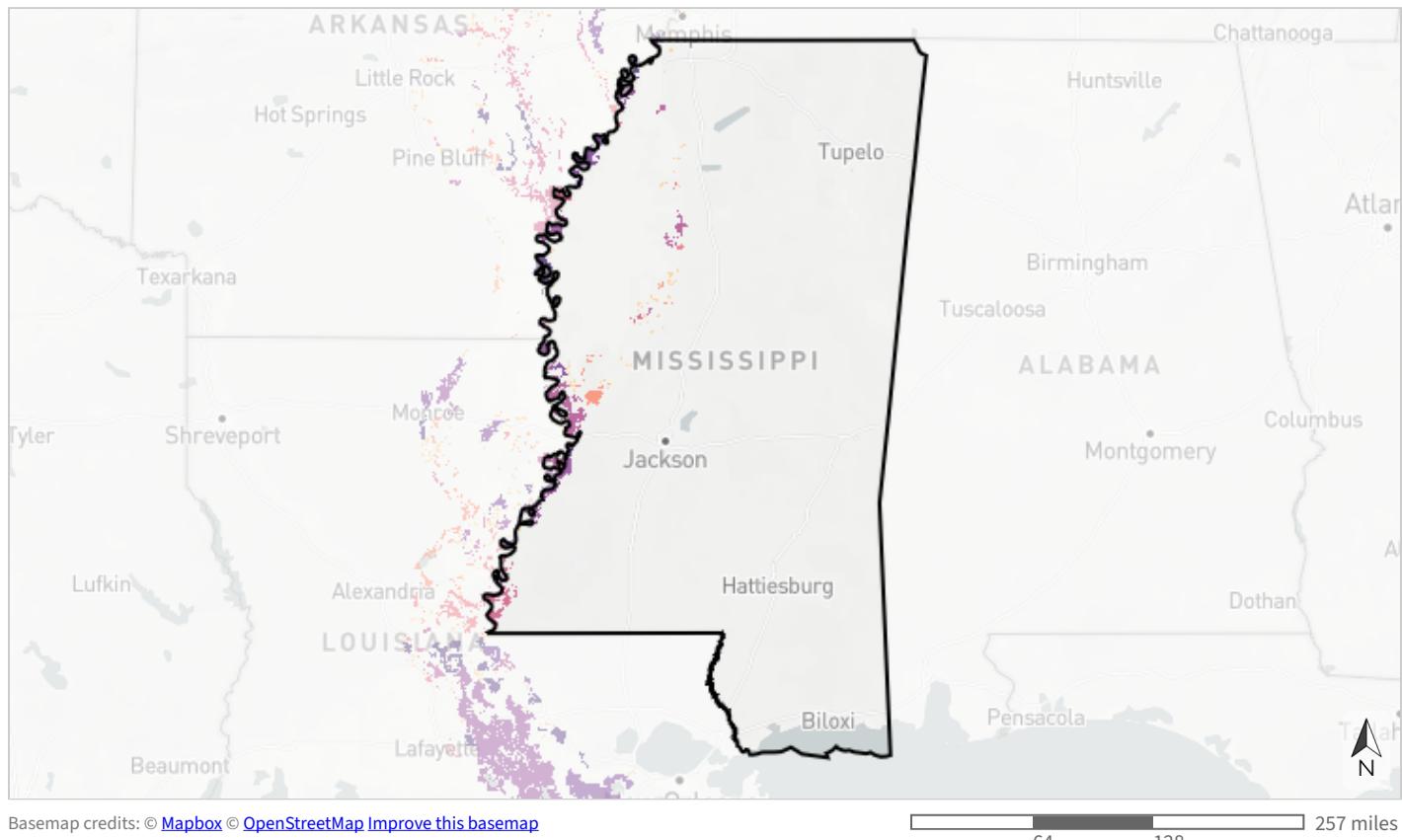
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 need 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 a forest patch, proximity to reforestation priorities, and risk of conversion to agriculture based on flooding frequency. The highest scores go to drier, unprotected forest patches with cores at least 2,000 ha (~5,000 ac) in size that are adjacent to complementary reforestation priority areas also identified by the Lower Mississippi Valley Joint Venture (LMJV). This indicator originates from the LMJV 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 (low priority)
- Score 0 (not a priority)

Table 14: Indicator values for Mississippi Alluvial Valley forest birds - protection within Mississippi. A good condition threshold is not yet defined for this indicator.

	<b>Indicator Values: Priority of forest breeding bird habitat patch for future protection</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ High	Score >90-100 (highest priority)	44,895	0.1%
	Score >80-90	65,238	0.2%
	Score >70-80	103,794	0.3%
	Score >60-70	133,961	0.4%
	Score >50-60	71,142	0.2%
	Score >40-50	8,733	<0.1%
	Score >30-40	41,094	0.1%
	Score >20-30	3,667	<0.1%
	Score >10-20	54,654	0.2%
	Score >0-10 (low priority)	1,164	<0.1%
↓ Low	Score 0 (not a priority)	4,408,566	14.2%
	<i>Area not evaluated for this indicator</i>	26,061,978	84.1%
	<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>

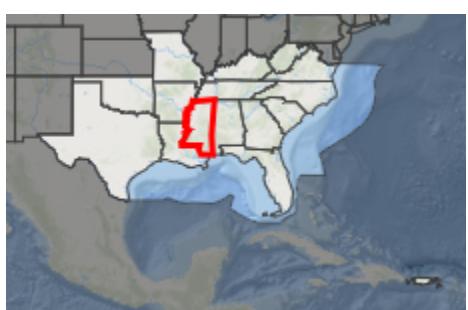
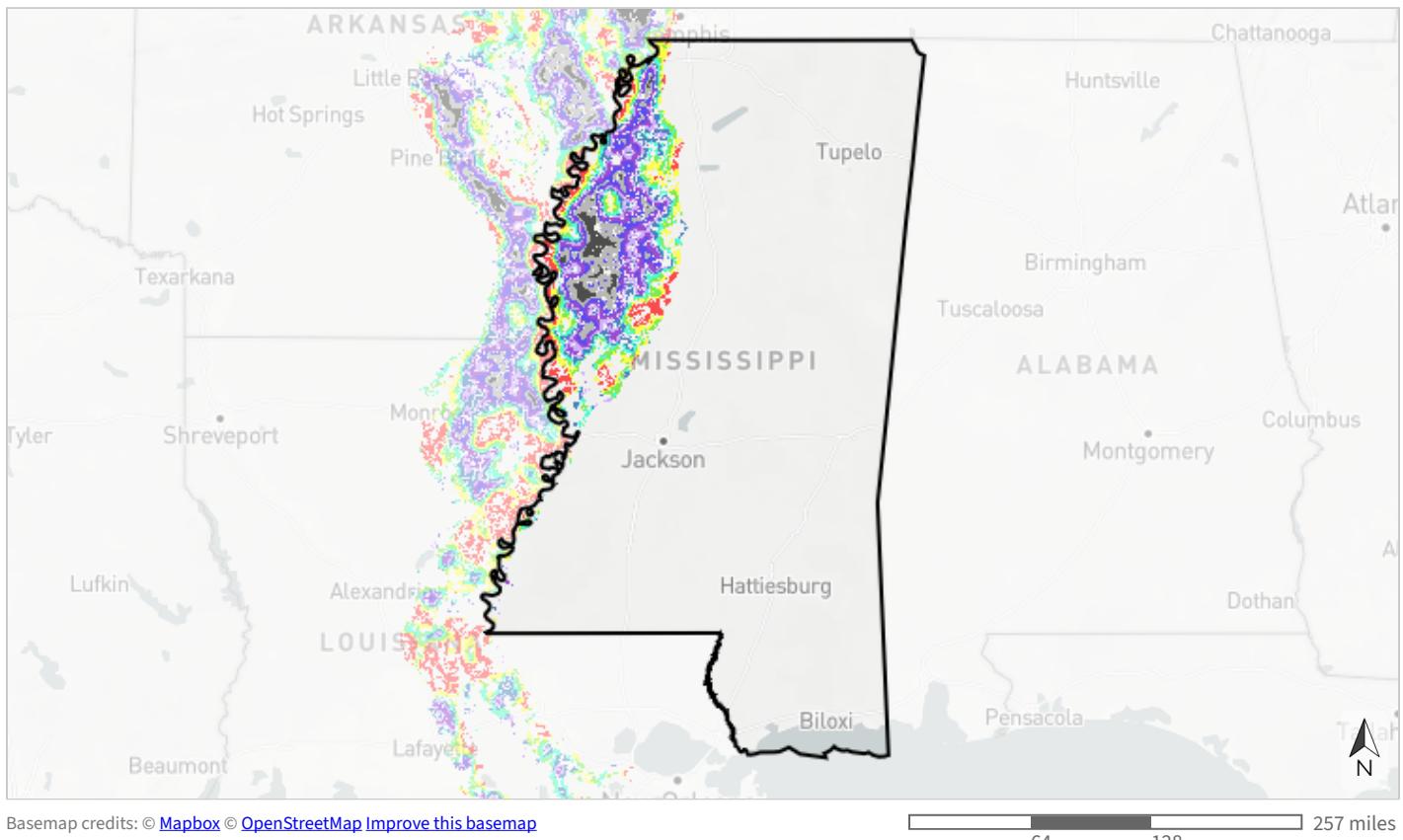
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 need 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 go to drier areas where reforestation would create new forest patches containing interior cores at least 2,000 ha (~5,000 ac) in size. It originates from the Lower Mississippi Valley Joint Venture 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 (80th to  $< 90^{\text{th}}$  percentile)
- █ More likely (70th to  $< 80^{\text{th}}$  percentile)
- █ Less likely (60th to  $< 70^{\text{th}}$  percentile)
- █ Least likely (50th to  $< 60^{\text{th}}$  percentile)
- █ Least likely (40th to  $< 50^{\text{th}}$  percentile)
- █ Least likely (30th to  $< 40^{\text{th}}$  percentile)
- █ Least likely (20th to  $< 30^{\text{th}}$  percentile)
- █ Least likely ( $< 10^{\text{th}}$  percentile)
- █ Not a priority for reforestation

*Table 15: Indicator values for Mississippi Alluvial Valley forest birds - reforestation within Mississippi. A good condition threshold is not yet defined for this indicator.*

<b>Indicator Values: Likelihood that reforestation will contribute to forest breeding bird habitat needs</b>		<b>Acres</b>	<b>Percent of Area</b>
↑ High	Most likely ( $\geq$ 90th percentile)	289,659	0.9%
	Most likely (80th to <90th percentile)	345,365	1.1%
	More likely (70th to <80th percentile)	302,638	1.0%
	Less likely (60th to <70th percentile)	305,718	1.0%
	Least likely (50th to <60th percentile)	329,817	1.1%
	Least likely (40th to <50th percentile)	352,571	1.1%
	Least likely (30th to <40th percentile)	398,328	1.3%
	Least likely (20th to <30th percentile)	357,563	1.2%
	Least likely (10th to <20th percentile)	413,587	1.3%
	Least likely (<10th percentile)	153,461	0.5%
↓ Low	Not a priority for reforestation	1,688,948	5.4%
	<i>Area not evaluated for this indicator</i>	26,061,228	84.1%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

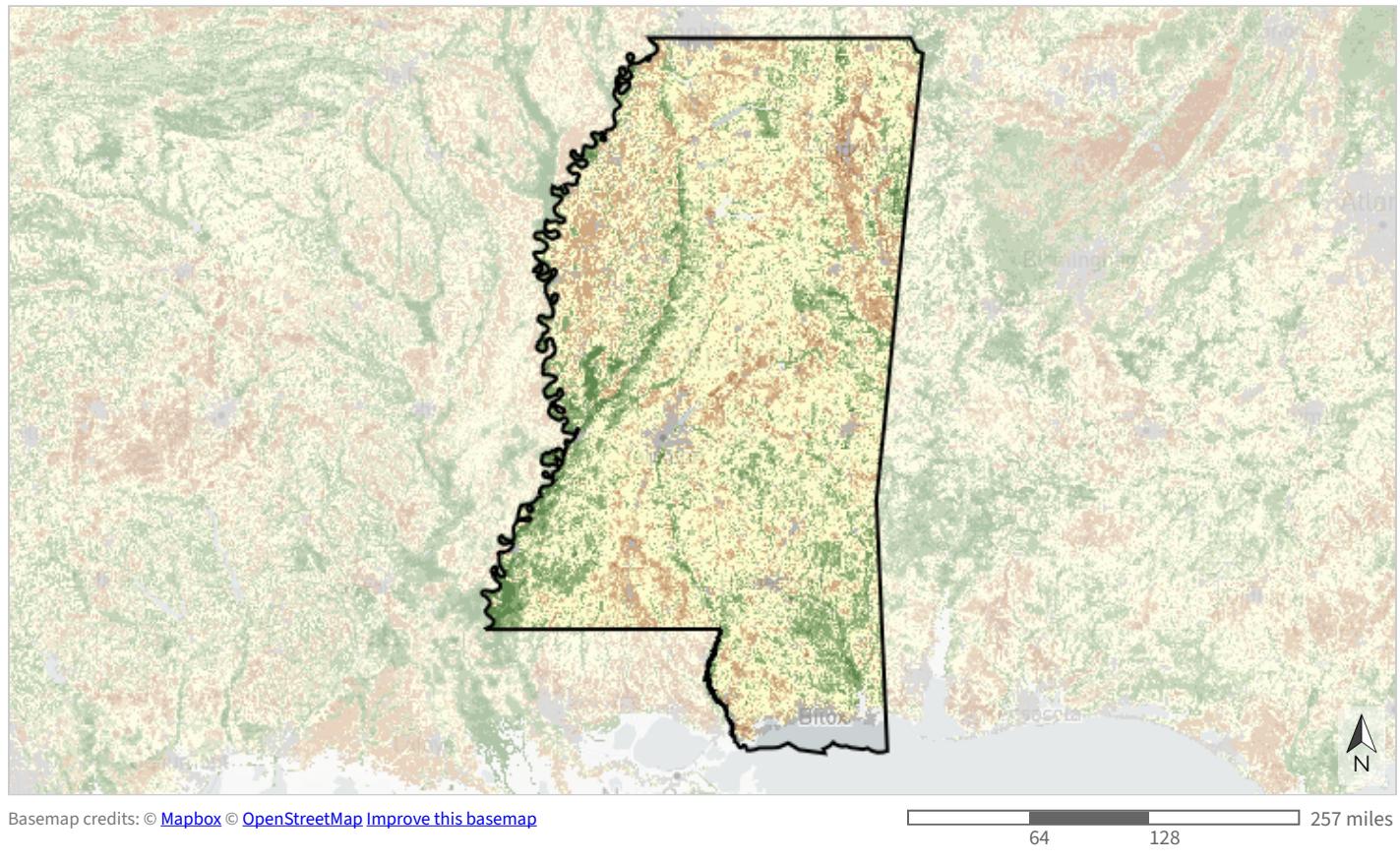
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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.



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

*Table 16: Indicator values for resilient terrestrial sites within Mississippi. A good condition threshold is not yet defined for this indicator.*

	<b>Indicator Values</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ 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>	1,605,274	5.2%
	<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>

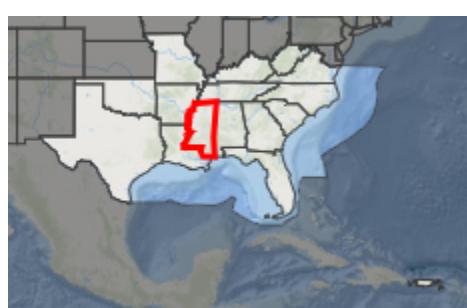
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 Protected Areas Database of the United States, Census urban areas, and the National Land Cover Database.



- 75+ acre urban park
- 50 to <75 acre urban park
- 30 to <50 acre urban park
- 10 to <30 acre urban park
- 5 to <10 acre urban park
- <5 acre urban park
- Not identified as an urban park

*Table 17: Indicator values for urban park size within Mississippi. A good condition threshold is not yet defined for this indicator.*

	<b>Indicator Values</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ High	75+ acre urban park	82,803	0.3%
	50 to <75 acre urban park	1,365	<0.1%
	30 to <50 acre urban park	1,221	<0.1%
	10 to <30 acre urban park	2,206	<0.1%
	5 to <10 acre urban park	976	<0.1%
	<5 acre urban park	610	<0.1%
↓ Low	Not identified as an urban park	30,869,837	99.6%
	<i>Area not evaluated for this indicator</i>	39,867	0.1%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

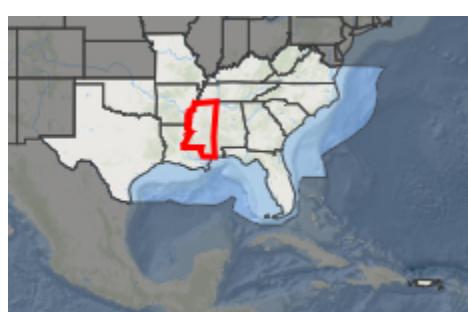
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Freshwater

## Gulf migratory fish connectivity

This indicator captures how far upstream migratory fish in the Gulf of Mexico have been observed. How far upstream migratory fish can travel reflects not just the presence of dams and other barriers, but also the presence of measures like fish ladders that allow specific species to access habitat upstream of dams. This indicator originates from The Nature Conservancy's Southeast Aquatic Connectivity Assessment Project 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).



- █ Presence of Gulf sturgeon
- █ Presence of Alabama shad, American shad, or striped bass
- █ Not identified as Gulf migratory fish habitat (east of the Mississippi River)

*Table 18: Indicator values for Gulf migratory fish connectivity within Mississippi. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.*

	<b>Indicator Values</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ High	Presence of Gulf sturgeon	882,689	2.8%
	Presence of Alabama shad, American shad, or striped bass	1,418	<0.1%
↓ Low	Not identified as Gulf migratory fish habitat (east of the Mississippi River)	11,616,772	37.5%
	<i>Area not evaluated for this indicator</i>	18,498,005	59.7%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

↑ In good condition

↓ Not in good condition

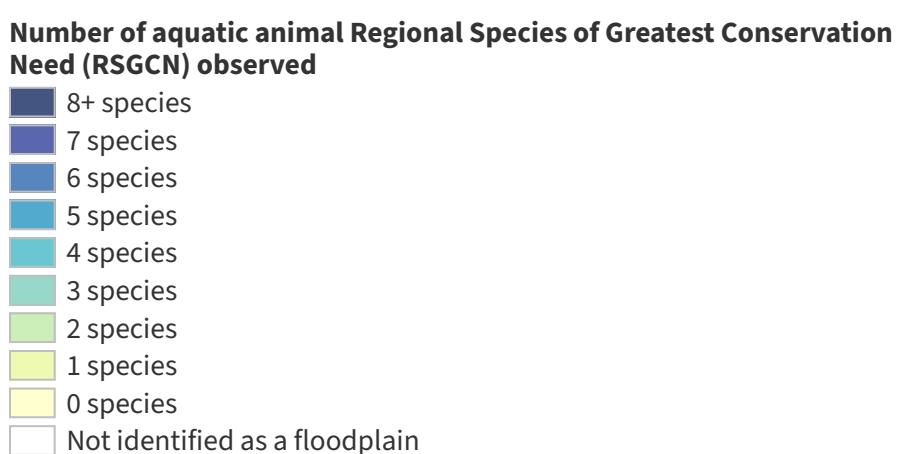
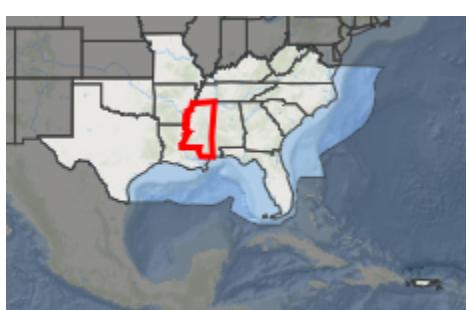
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Freshwater

## Imperiled aquatic species

This indicator measures the number of aquatic animal Regional Species of Greatest Conservation Need (RSGCN) observed within each 12-digit HUC subwatershed, including fish, mussels, snails, crayfish, and amphibians. RSGCN are regional priority species derived from the list of SGCN identified in Southeast State Wildlife Action Plans as most in need of conservation action. RSGCN were chosen based on consistent criteria, such as level of conservation concern, regional stewardship responsibility, and ecological significance. This indicator 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).



*Table 19: Indicator values for imperiled aquatic species within Mississippi. A good condition threshold is not yet defined for this indicator.*

<b>Indicator Values: Number of aquatic animal Regional Species of Greatest Conservation Need (RSGCN) observed</b>		<b>Acres</b>	<b>Percent of Area</b>
↑ High	8+ species	652,526	2.1%
	7 species	89,358	0.3%
	6 species	208,761	0.7%
	5 species	247,687	0.8%
	4 species	295,191	1.0%
	3 species	435,655	1.4%
	2 species	849,511	2.7%
	1 species	1,012,993	3.3%
	0 species	2,751,149	8.9%
	Not identified as a floodplain	23,955,720	77.3%
<i>Area not evaluated for this indicator</i>		500,333	1.6%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

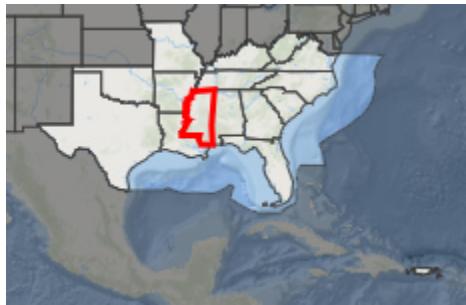
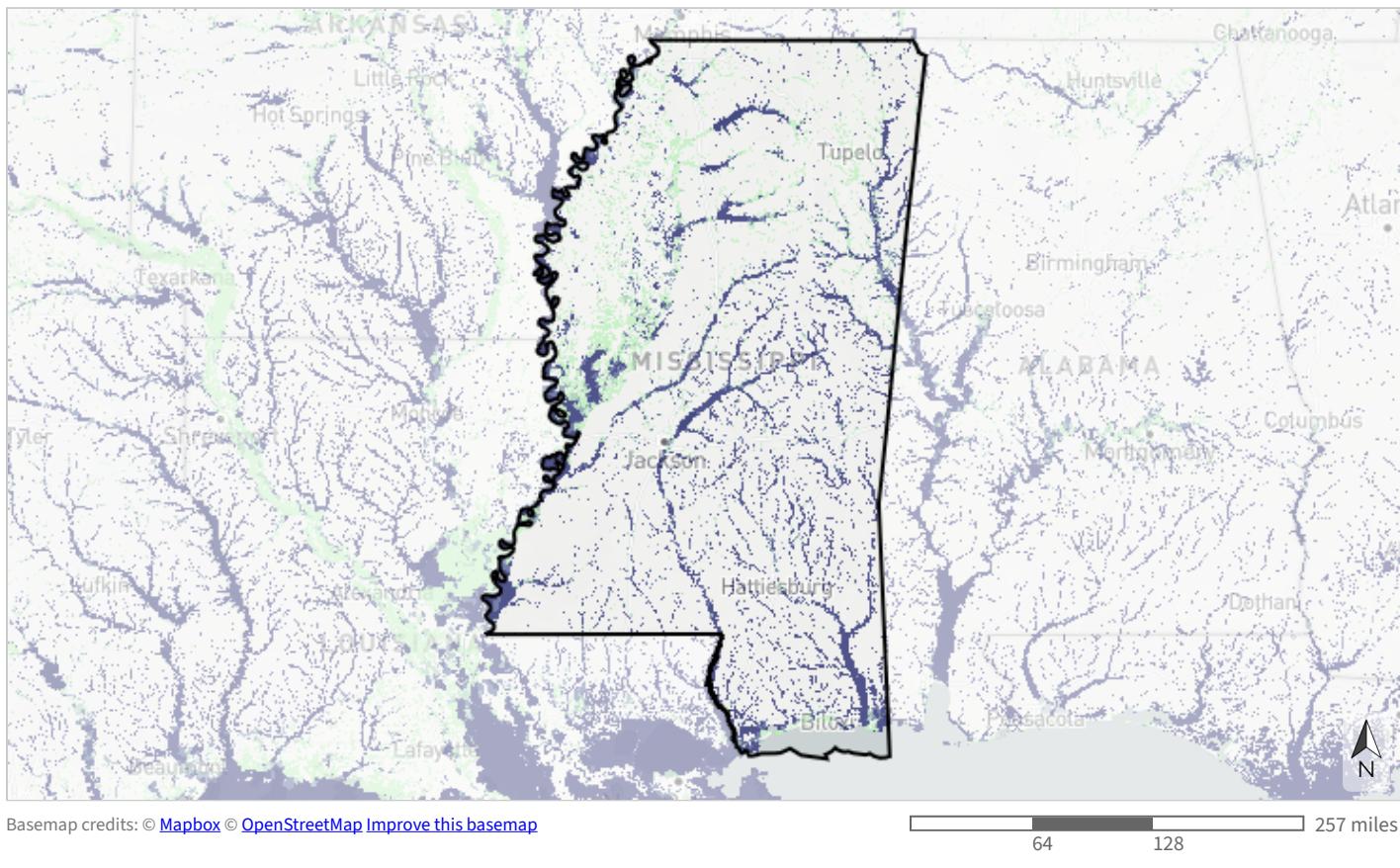
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 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).



### Percent natural landcover within the estimated floodplain, by catchment

- >90% natural landcover
- >80-90% natural landcover
- >70-80% natural landcover
- >60-70% natural landcover
- ≤60% natural landcover
- Not identified as a floodplain

Table 20: Indicator values for natural landcover in floodplains within Mississippi. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.

<b>Indicator Values: Percent natural landcover within the estimated floodplain, by catchment</b>		<b>Acres</b>	<b>Percent of Area</b>
↑ High	>90% natural landcover	3,213,937	10.4%
	>80-90% natural landcover	745,778	2.4%
	>70-80% natural landcover	464,598	1.5%
	>60-70% natural landcover	360,807	1.2%
	≤60% natural landcover	1,757,711	5.7%
	Not identified as a floodplain	23,955,840	77.3%
↓ Low	<i>Area not evaluated for this indicator</i>	500,213	1.6%
	<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>

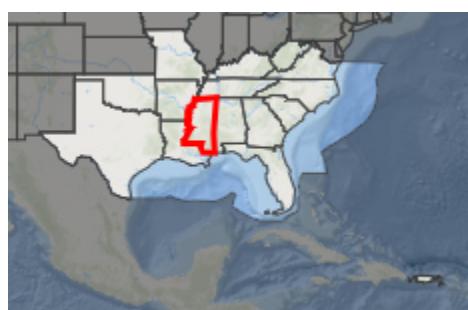
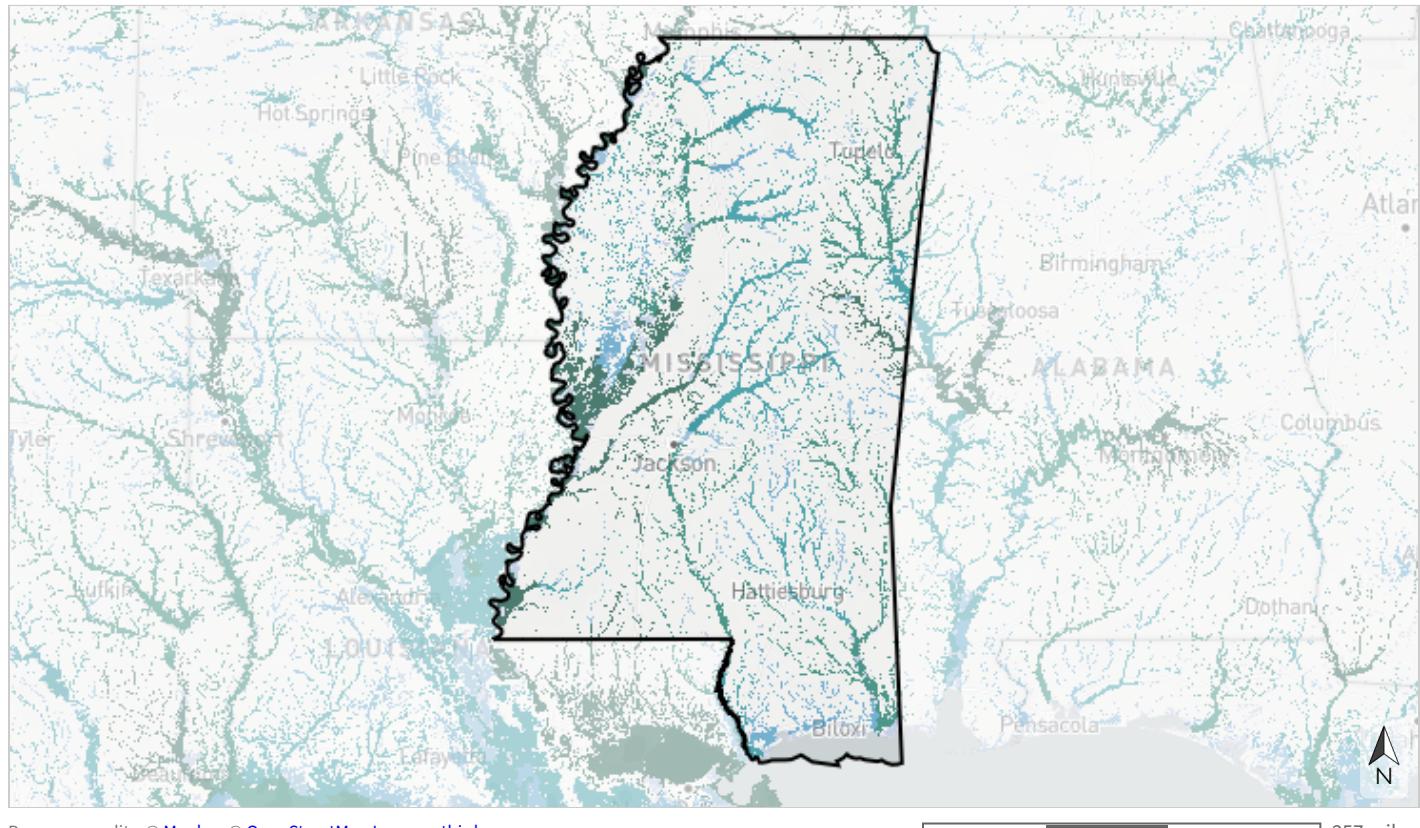
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Freshwater

## Network complexity

This indicator depicts the number of connected stream size classes in a river network between 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).



### Number of connected stream size classes

- 7 size classes
- 6 size classes
- 5 size classes
- 4 size classes
- 3 size classes
- 2 size classes
- 1 size class
- Not identified as a floodplain

*Table 21: Indicator values for network complexity within Mississippi. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.*

	<b>Indicator Values: Number of connected stream size classes</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ High	7 size classes	1,480,702	4.8%
	6 size classes	1,676,570	5.4%
	5 size classes	1,725,824	5.6%
	4 size classes	559,661	1.8%
	3 size classes	361,453	1.2%
	2 size classes	395,216	1.3%
	1 size class	340,548	1.1%
	Not identified as a floodplain	23,956,531	77.3%
↓ Low	<i>Area not evaluated for this indicator</i>	502,380	1.6%
	<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>

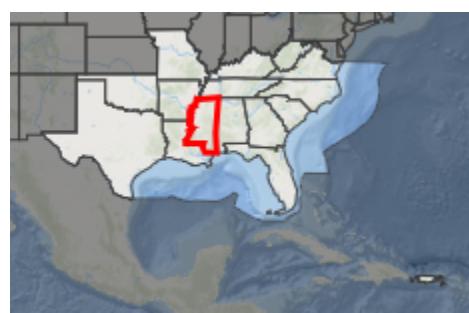
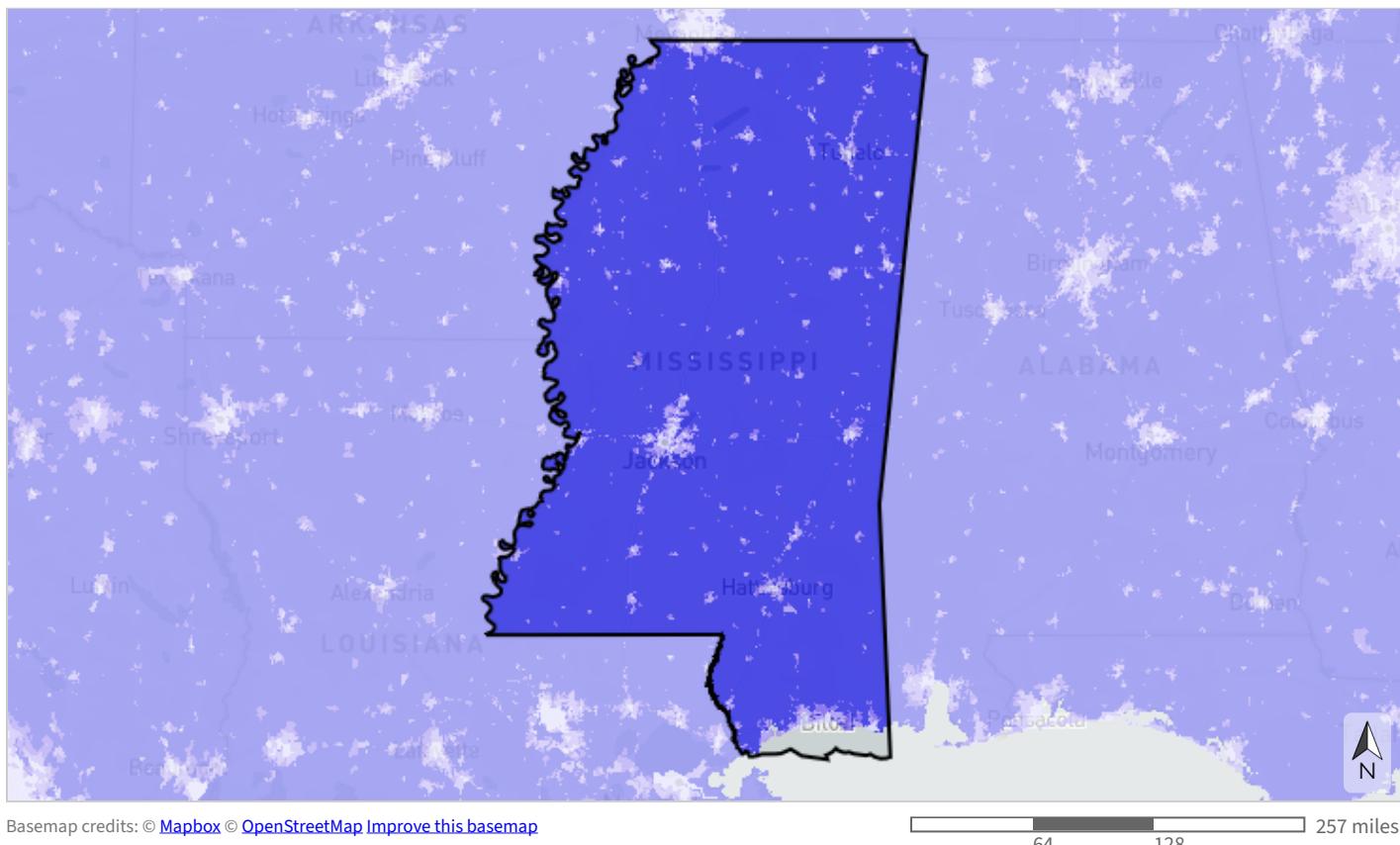
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



## 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 National Land Cover Database.



#### **Percent of catchment permeable**

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

Table 22: Indicator values for permeable surface within Mississippi. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.

	<b>Indicator Values: Percent of catchment permeable</b>	<b>Acres</b>	<b>Percent of Area</b>	
↑ High	>95% permeable (likely high water quality and supporting most sensitive aquatic species)	28,811,583	92.9%	↑ In good condition
	>90-95% permeable (likely declining water quality and supporting most aquatic species)	764,043	2.5%	↓ Not in good condition
	>70-90% permeable (likely degraded water quality and not supporting many aquatic species)	738,443	2.4%	
↓ Low	≤70% permeable (likely degraded instream flow, water quality, and aquatic species communities)	184,482	0.6%	
	<i>Area not evaluated for this indicator</i>	500,333	1.6%	
	<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>	

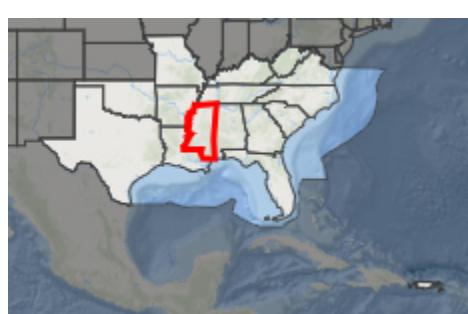
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Coastal &amp; 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 23: Indicator values for coastal shoreline condition within Mississippi. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.*

	<b>Indicator Values</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ 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>	30,975,111	99.9%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

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



Coastal &amp; 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
- Fair to good
- Fair
- Poor to fair
- Poor
- Shallow estuary not assessed for condition

Table 24: Indicator values for estuarine coastal condition within Mississippi. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.

	<b>Indicator Values</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ High	Good	127,599	0.4%
	Fair to good	155,026	0.5%
	Fair	167,175	0.5%
	Poor to fair	0	0%
	Poor	0	0%
	Shallow estuary not assessed for condition	18,912	<0.1%
↓ Low	<i>Area not evaluated for this indicator</i>	30,530,172	98.5%
	<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>

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



Coastal &amp; marine

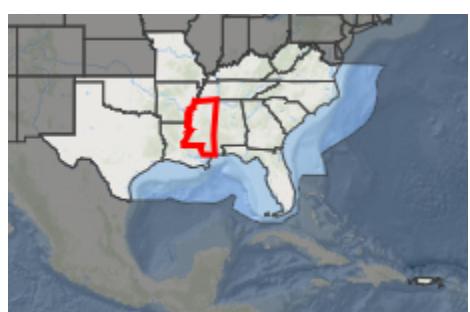
## Gulf coral & hardbottom

This indicator predicts the presence of coral and hardbottom in the Gulf of Mexico based on direct observations, acoustic surveys, and known locations of artificial reefs and shipwrecks. Hardbottom provides an anchor for important seafloor habitats such as deep-sea corals, plants, and sponges, providing valuable structure that supports a wide range of invertebrate and fish species. Hardbottom is also sometimes associated with diverse chemosynthetic communities supported by micro-organisms that feed off of hydrocarbon seeps. This indicator combines data from multiple sources, including Bureau of Ocean Energy Management seismic water bottom anomalies, usSEABED sediment data, several National Oceanic and Atmospheric Administration datasets, various state layers, and more.



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64 128 257 miles



- Confirmed hardbottom-associated species (e.g., corals, sponges, patch reef, chemosynthetic communities)
- Confirmed natural hardbottom
- Artificial reefs
- Shipwrecks
- Probable natural hardbottom (fine resolution)
- Rock (coarse resolution)
- Gravel (coarse resolution)
- Not identified as hardbottom

Table 25: Indicator values for Gulf coral & hardbottom within Mississippi. A good condition threshold is not yet defined for this indicator.

	<b>Indicator Values</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ High	Confirmed hardbottom-associated species (e.g., corals, sponges, patch reef, chemosynthetic communities)	0	0%
	Confirmed natural hardbottom	0	0%
	Artificial reefs	1,870	<0.1%
	Shipwrecks	612	<0.1%
	Probable natural hardbottom (fine resolution)	0	0%
	Rock (coarse resolution)	17,910	<0.1%
	Gravel (coarse resolution)	7,154	<0.1%
	Not identified as hardbottom	588,886	1.9%
	<i>Area not evaluated for this indicator</i>	30,382,453	98.0%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

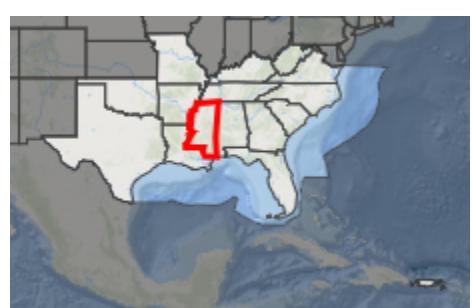
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Coastal &amp; marine

## Gulf marine mammals

This indicator identifies important areas in the Gulf of Mexico for dolphins and whales. It incorporates monthly density predictions for 13 marine mammal species or species groups (Atlantic spotted dolphin, beaked whales, blackfish [which includes killer whale, melon-headed whale, false killer whale, pygmy killer whale], bottlenose dolphin, Bryde's whale, clymene dolphin, pantropical spotted dolphin, pilot whales, pygmy/dwarf sperm whales, Rice's whale, Risso's dolphin, sperm whale, spinner dolphin) based on sightings from boat-based and aerial surveys and data on oceanographic conditions. It uses marine mammal models developed by the National Oceanic and Atmospheric Administration as part of the Gulf of Mexico Marine Assessment Program for Protected Species (GoMMAPPS).



### Percentile of importance for marine mammal index species (across larger analysis area)

- >90th percentile
- >80th-90th percentile
- >70th-80th percentile
- >60th-70th percentile
- >50th-60th percentile
- >40th-50th percentile
- >30th-40th percentile
- >20th-30th percentile
- >10th-20th percentile
- ≤10th percentile
- Land

Table 26: Indicator values for Gulf marine mammals within Mississippi. A good condition threshold is not yet defined for this indicator.

	<b>Indicator Values: Percentile of importance for marine mammal index species (across larger analysis area)</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ High	>90th percentile	0	0%
	>80th-90th percentile	150	<0.1%
	>70th-80th percentile	14,016	<0.1%
	>60th-70th percentile	17,322	<0.1%
	>50th-60th percentile	12,608	<0.1%
	>40th-50th percentile	924	<0.1%
	>30th-40th percentile	3,683	<0.1%
	>20th-30th percentile	0	0%
	>10th-20th percentile	0	0%
	≤10th percentile	428,982	1.4%
↓ Low	Land	2,500	<0.1%
	<i>Area not evaluated for this indicator</i>	30,518,700	98.5%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

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



Coastal &amp; marine

## Gulf sea turtles

This indicator identifies important areas in the Gulf of Mexico for sea turtles. It incorporates monthly density predictions for four species (green, Kemp's ridley, leatherback, and loggerhead sea turtles) based on sightings from boat-based and aerial surveys and data on oceanographic conditions. It uses sea turtle models developed by the National Oceanic and Atmospheric Administration as part of the Gulf of Mexico Marine Assessment Program for Protected Species (GoMMAPPS).



### Percentile of importance for sea turtle index species (across larger analysis area)

- >90th percentile
- >80th-90th percentile
- >70th-80th percentile
- >65th-70th percentile
- ≤65th percentile
- Land

Table 27: Indicator values for Gulf sea turtles within Mississippi. A good condition threshold is not yet defined for this indicator.

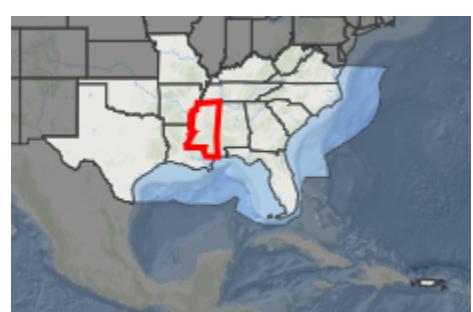
<b>Indicator Values: Percentile of importance for sea turtle index species (across larger analysis area)</b>		<b>Acres</b>	<b>Percent of Area</b>
↑ High	>90th percentile	6,655	<0.1%
	>80th-90th percentile	42,218	0.1%
	>70th-80th percentile	0	0%
	>65th-70th percentile	0	0%
	≤65th percentile	451,321	1.5%
↓ Low	Land	176,780	0.6%
	<i>Area not evaluated for this indicator</i>	30,321,910	97.8%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

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



## Coastal & marine Island habitat

This indicator represents important habitat for coastal 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 uses 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)
- Other island area
- Not a coastal island

Table 28: Indicator values for island habitat within Mississippi. A good condition threshold is not yet defined for this indicator.

	<b>Indicator Values</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ 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%
	Other island area	4,801	<0.1%
↓ Low	Not a coastal island	1,962,709	6.3%
	<i>Area not evaluated for this indicator</i>	29,023,638	93.6%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

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



Coastal &amp; 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 more. This indicator originates from The Nature Conservancy's Resilient Coastal Sites project.



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

Table 29: Indicator values for resilient coastal sites within Mississippi. A good condition threshold is not yet defined for this indicator.

	<b>Indicator Values</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ 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%
↓ Low	<i>Area not evaluated for this indicator</i>	30,823,346	99.4%
	<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>

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



## Coastal & marine **Seagrass**

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.



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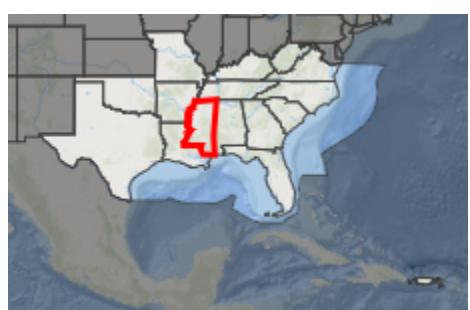


Table 30: Indicator values for seagrass within Mississippi. A good condition threshold is not yet defined for this indicator.

	Indicator Values	Acres	Percent of Area
↑ High	Seagrass present	339	<0.1%
	Area not evaluated for this indicator	30,998,545	100.0%
	<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>

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



Coastal &amp; 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. Marshes that maintain a higher proportion of vegetation tend to be more stable and resilient to threats like sea-level rise, erosion, and coastal development. 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. This indicator originates from a U.S. Geological Survey project on an unvegetated to vegetated ratio for coastal wetlands.



*Table 31: Indicator values for stable coastal wetlands within Mississippi. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.*

	<b>Indicator Values</b>	<b>Acres</b>	<b>Percent of Area</b>
↑ High	Stable coastal wetlands	70,537	0.2%
	Other coastal wetlands	22,497	<0.1%
↓ Low	Not identified as coastal wetlands	727,651	2.3%
	<i>Area not evaluated for this indicator</i>	30,178,200	97.4%
<b>Total area</b>		<b>30,998,884</b>	<b>100%</b>

↑ In good condition

↓ Not in good condition

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 SLR above current levels. Darker blue areas will experience flooding first, and at greater depth, compared to lighter blue areas. These models are not linked to a future timeframe; see the projections below. NOAA calculates the inundation footprint at "mean higher high water", or the average highest daily tide. The area covered in each SLR scenario includes areas projected to be inundated at lower levels. For example, the area inundated by 4 ft of SLR also includes areas inundated by 3 ft, 2 ft, 1 ft, and 0 ft of SLR (where 0 ft represents current levels).

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



Table 32: Extent of flooding by projected average highest daily tide due to sea level rise within Mississippi. Values from the [NOAA sea-level rise inundation data](#).

<b>Feet of sea-level rise</b>	<b>Acres</b>	<b>Percent of Area</b>
0 feet	535,278	1.7%
1 foot	572,401	1.8%
2 feet	597,478	1.9%
3 feet	613,216	2.0%
4 feet	626,417	2.0%
5 feet	639,873	2.1%
6 feet	654,871	2.1%
7 feet	667,808	2.2%
8 feet	683,025	2.2%
9 feet	701,309	2.3%
10 feet	719,453	2.3%
<i>Not projected to be inundated by up to 10 feet</i>	939,210	3.0%
<i>Sea-level rise unlikely to be a threat (inland counties)</i>	29,334,730	94.6%
<i>Sea-level rise data unavailable</i>	5,491	<0.1%
<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>

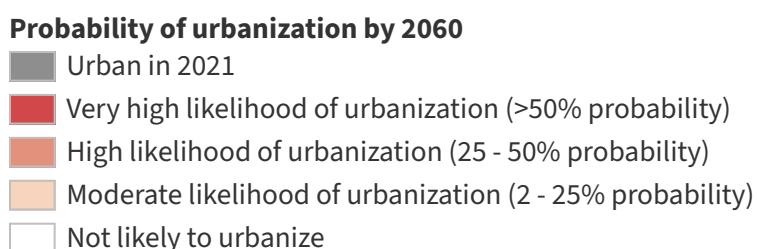
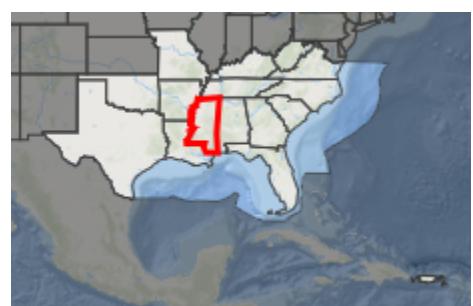
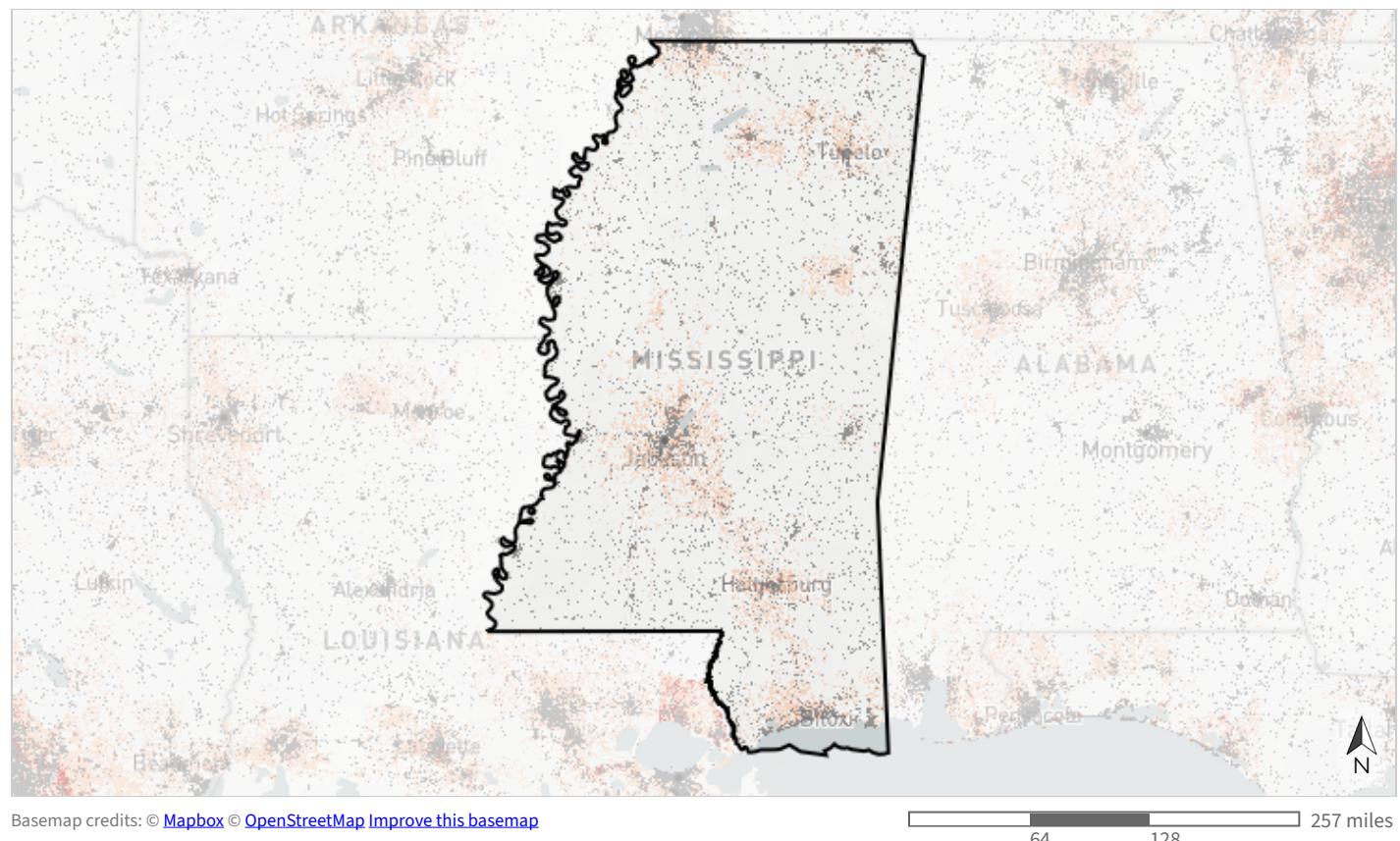
Table 33: Projected sea level rise by decade within Mississippi. Values are based on area-weighted averages of decadal projections for 1-degree grid cells that overlap this area based on [NOAA's 2022 Sea Level Rise Report](#). 2060 corresponds to the [SECAS goal](#): a 10% or greater improvement in the health, function, and connectivity of Southeastern ecosystems by 2060.

<b>SLR Scenario</b>	<b>2020 (ft)</b>	<b>2030 (ft)</b>	<b>2040 (ft)</b>	<b>2050 (ft)</b>	<b>2060 (ft)</b>	<b>2070 (ft)</b>	<b>2080 (ft)</b>	<b>2090 (ft)</b>	<b>2100 (ft)</b>
Low	0.42	0.64	0.87	1.1	1.3	1.5	1.6	1.8	2
Intermediate-low	0.45	0.7	0.97	1.2	1.5	1.8	2	2.3	2.6
Intermediate	0.45	0.72	1	1.4	1.7	2.2	2.7	3.3	4
Intermediate-high	0.45	0.76	1.1	1.6	2.1	2.9	3.7	4.6	5.6
High	0.45	0.77	1.2	1.8	2.5	3.5	4.7	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 2021 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.

To explore maps for additional time periods, [click here](#).



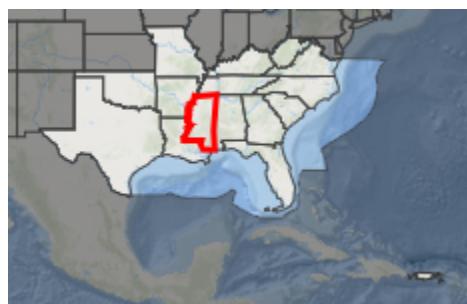
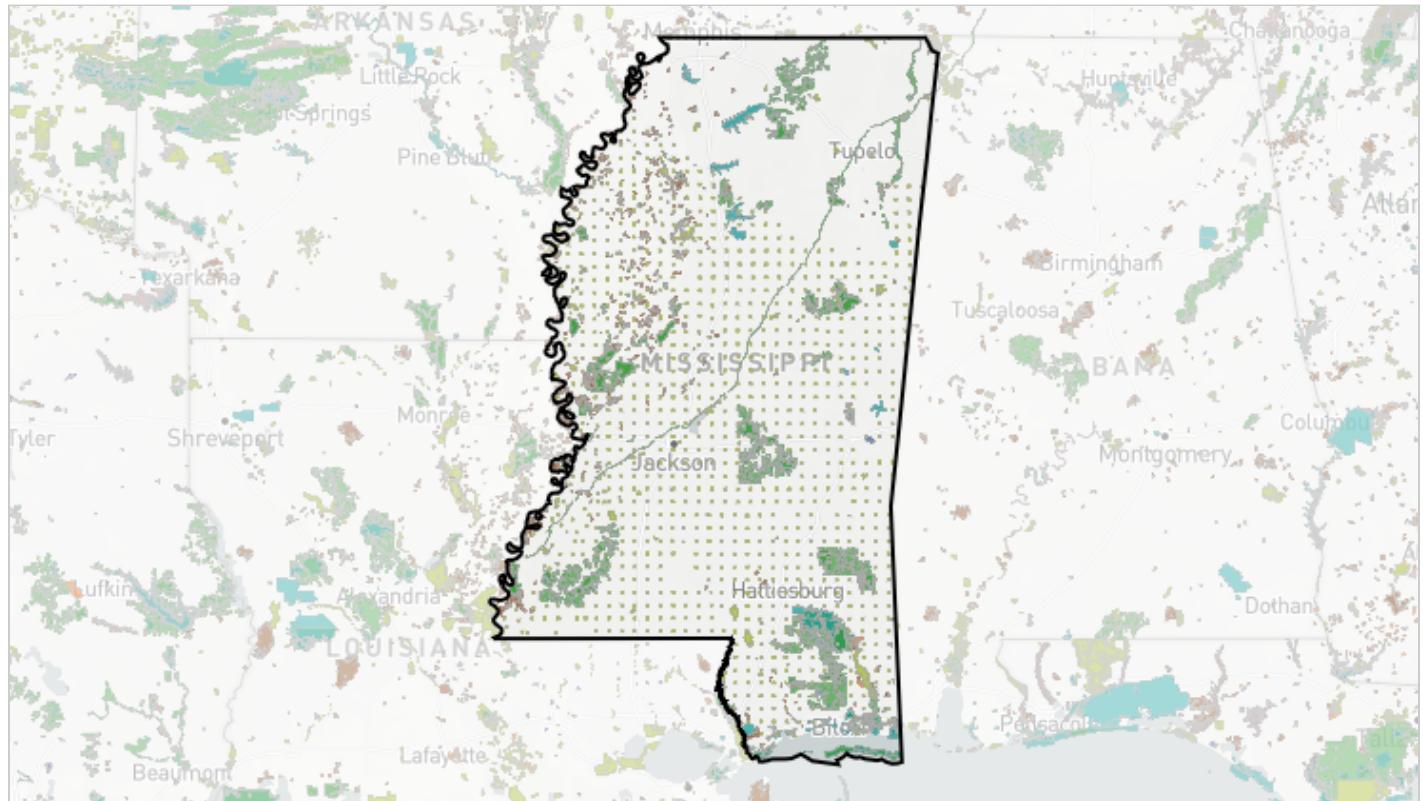
6.4% of this area is already urban in 2021, and an additional 7.2% has at least a moderate probability of urbanizing by 2060.

*Table 34: Extent of projected urbanization by decade within Mississippi. Values from [FUTURES model projections for the contiguous United States](#) developed 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.*

<b>Decade</b>	<b>Acres</b>	<b>Percent of Area</b>
Urban in 2021	1,998,807	6.4%
2030 projected extent	2,054,182	6.6%
2040 projected extent	2,076,003	6.7%
2050 projected extent	2,090,126	6.7%
2060 projected extent	2,101,899	6.8%
2070 projected extent	2,109,279	6.8%
2080 projected extent	2,114,429	6.8%
2090 projected extent	2,117,532	6.8%
2100 projected extent	2,119,221	6.8%
<i>Not projected to urbanize by 2100</i>	26,603,908	85.8%
<b>Total area</b>	<b>30,998,884</b>	<b>100%</b>

# Ownership and Partners

## Conserved lands ownership

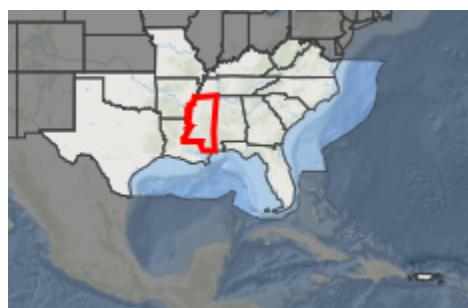
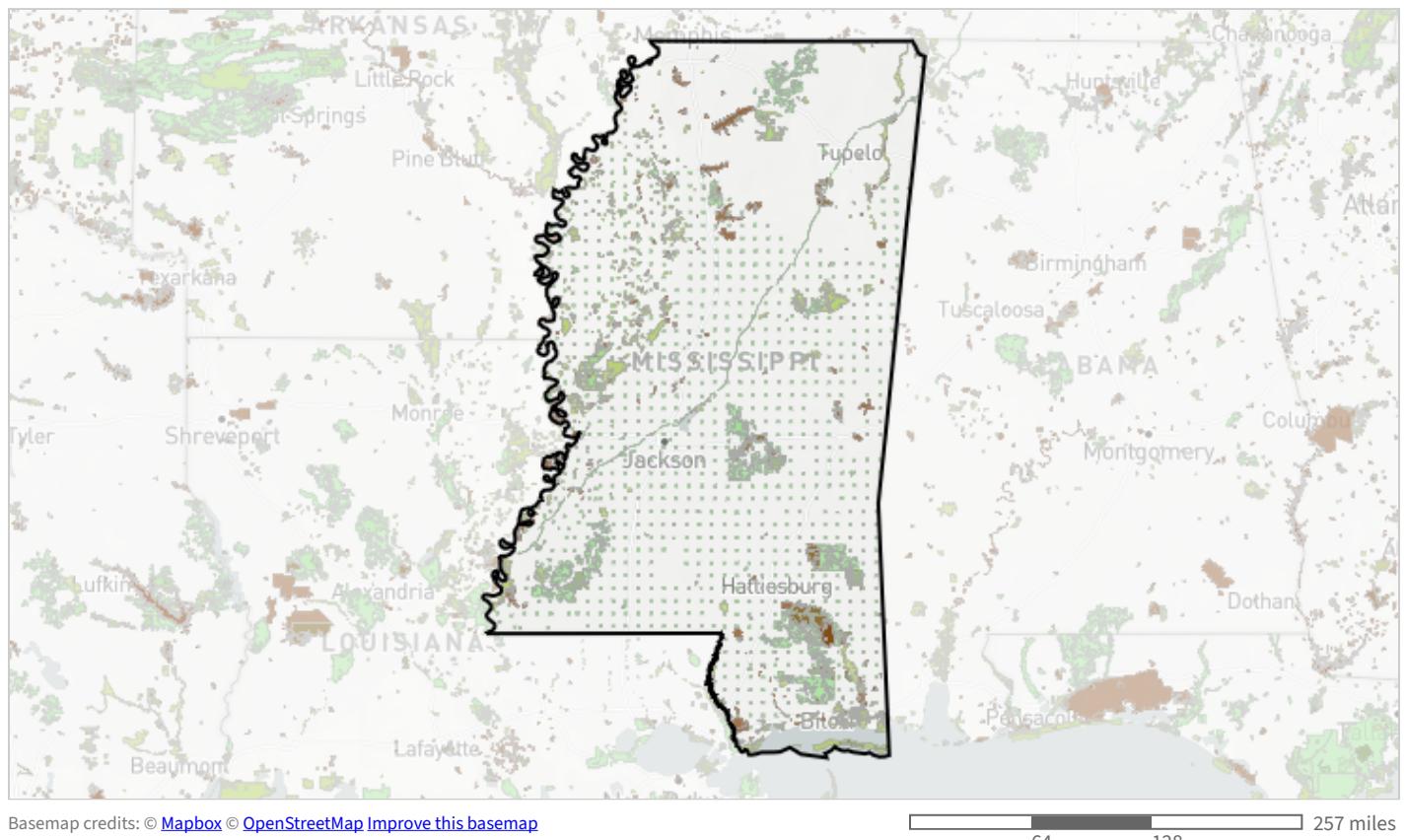


Federal	Joint
State/province	Private non-profit conserved lands
Territorial	Private conservation land
Regional	Tribal
Local	Designation
	Ownership unknown

*Table 35: Extent of ownership class within Mississippi. Protected areas are derived from the [Protected Areas Database of the United States](#) (PAD-US v4.0 and v3.0) and include Fee, Designation, Easement, Marine, and Proclamation (Dept. of Defense lands only) boundaries. 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. Also note: PAD-US includes protected areas that may overlap within a given area; this may cause the area within and between the following categories to be greater than the actual ground area.*

<b>Ownership</b>	<b>Acres</b>	<b>Percent of Area</b>
Federal	2,245,592	7.2%
State/province	881,728	2.8%
Regional	220	<0.1%
Local	12,346	<0.1%
Private non-profit conserved lands	15,497	<0.1%
Private conservation land	403,499	1.3%
Designation	498,266	1.6%
Ownership unknown	25,603	<0.1%

## Land protection status



- 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 36: Extent of land protection status within Mississippi. Protected areas are derived from the [Protected Areas Database of the United States](#) (PAD-US v4.0 and v3.0) and include Fee, Designation, Easement, Marine, and Proclamation (Dept. of Defense lands only) boundaries. 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. Also note: PAD-US includes protected areas that may overlap within a given area; this may cause the area within and between the following categories to be greater than the actual ground area.*

Land Protection Status	Acres	Percent of Area
Managed for biodiversity (disturbance events proceed or are mimicked)	59,470	0.2%
Managed for biodiversity (disturbance events suppressed)	1,300,461	4.2%
Managed for multiple uses (subject to extractive uses such as mining or logging, or OHV use)	1,961,166	6.3%
No known mandate for biodiversity protection	761,654	2.5%

## Protected Areas

- National Forests in Mississippi (USDA FOREST SERVICE; 1,190,991 acres)
- 16th Section Land (Unknown; 646,178 acres)
- Camp Shelby (Unknown owner; 138,435 acres)
- SUNFLOWER WMA (Unknown; 61,573 acres)
- Gulf Islands National Seashore (Unknown; 58,525 acres)
- GUIS (NPS; 57,793 acres)
- SAM D. HAMILTON NOXUBEE NATIONAL WILDLIFE REFUGE (Fee; 48,330 acres)
- Sam D. Hamilton Noxubee National Wildlife Refuge (Fee; 48,330 acres)
- UPPER SARDIS WMA (Unknown; 47,742 acres)
- LEAF RIVER WMA (Unknown; 41,418 acres)
- Sardis Lake (Unknown owner; 39,413 acres)
- PASCAGOULA WMA (MDWFP; 37,758 acres)
- PANTHER SWAMP NATIONAL WILDLIFE REFUGE (Fee; 33,156 acres)
- Panther Swamp National Wildlife Refuge (Fee; 33,156 acres)
- NATR (NPS; 31,527 acres)
- CANAL SECTION WMA (COE; 29,295 acres)
- CHICKASAWHAY WMA (Unknown; 29,055 acres)
- CANEY CREEK WMA (Unknown; 28,447 acres)
- CASTON CREEK WMA (Unknown; 28,288 acres)
- TALLAHALA WMA (Unknown; 27,545 acres)
- CHICKASAW WMA (Unknown; 26,802 acres)
- BIENVILLE WMA (Unknown; 26,770 acres)
- MASON CREEK WMA (Unknown; 26,077 acres)
- ST. CATHERINE CREEK NATIONAL WILDLIFE REFUGE (Fee; 24,909 acres)
- WRP, Humphreys, MS (Unknown owner; 24,349 acres)

# 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

Land ownership and conservation status is derived from the [Protected Areas Database of the United States](#) (PAD-US v4.0 and v3.0).

Future urban growth estimates derived from [FUTURES model projections for the contiguous United States](#) developed by the [Center for Geospatial Analytics](#), NC State University.

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](#).

Names and descriptions of public Priority Amphibian and Reptile Areas provided by the [Amphibian and Reptile Conservancy](#) on August 30, 2024 and edited slightly for clarity and consistency.