

Southeast Conservation Blueprint Summary

for Mississippi

Created 12/15/2023

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The Southeast
Conservation
Adaptation Strategy

SECAS



The Southeast Conservation Blueprint 2023

PR & USVI

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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 2023 Development Process](#)
- View and download the Blueprint data and make maps on the [Blueprint page of the SECAS Atlas](#)

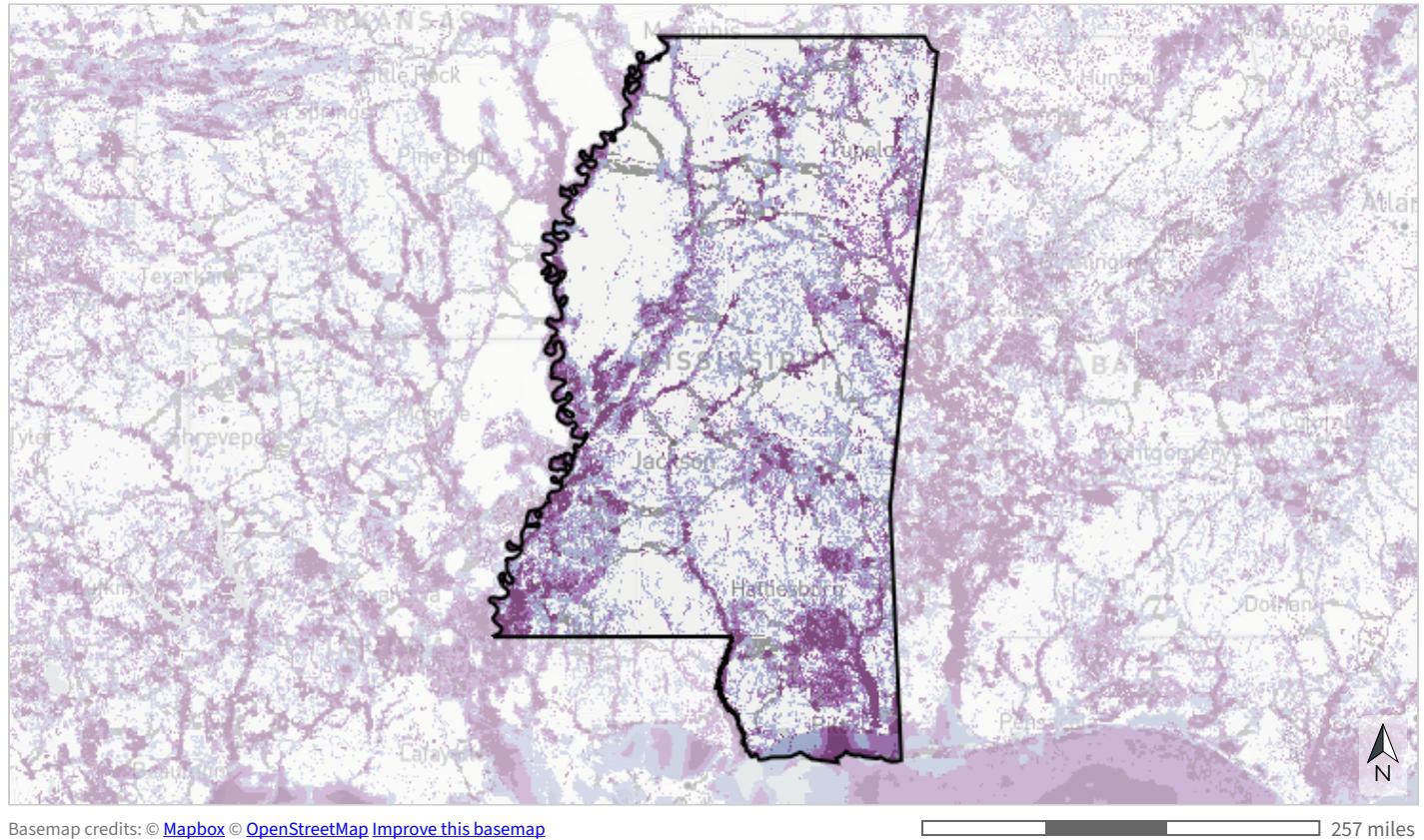
We're here to help!

- 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.

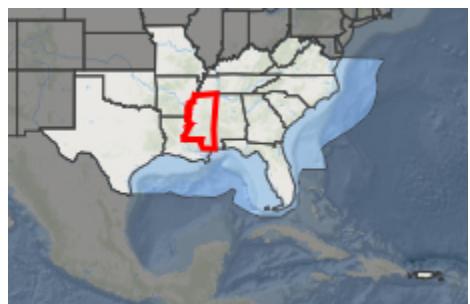
We're here to support you. We really mean it. It's what we do!

Southeast Blueprint Priorities



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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.

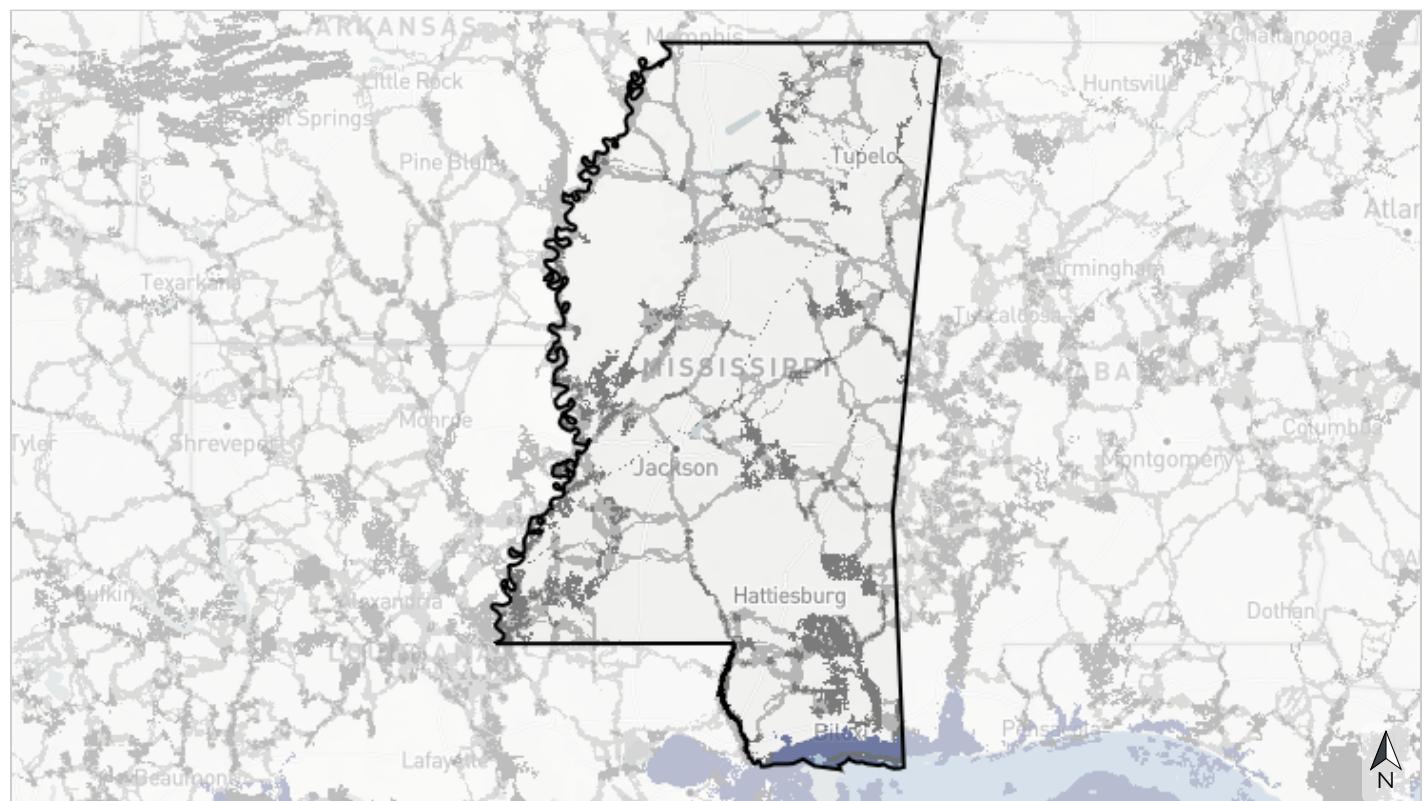
Table 1: Extent of each Blueprint priority category within Mississippi.

| Priority Category | Acres | Percent of Area |
|----------------------|-------------------|-----------------|
| Highest priority | 2,655,308 | 8.6% |
| High priority | 4,432,317 | 14.3% |
| Medium priority | 6,394,249 | 20.6% |
| Priority connections | 1,412,398 | 4.6% |
| Lower priority | 16,104,613 | 52.0% |
| 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.



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64

128

257 miles



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

Table 2: Extent of hubs and corridors within Mississippi.

| Type | Acres | Percent of Area |
|--|-------------------|-----------------|
| Inland continental hubs | 2,994,620 | 9.7% |
| Inland continental corridors | 4,845,452 | 15.6% |
| Marine & estuarine continental hubs | 425,095 | 1.4% |
| Marine & estuarine continental corridors | 22,066 | <0.1% |
| Not a hub or corridor | 22,711,650 | 73.3% |
| 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 | ✓ |
| Greenways & trails | ✓ |
| Intact habitat cores | ✓ |
| Interior Southeast grasslands | ✓ |
| Mississippi Alluvial Valley forest birds - protection | ✓ |
| Mississippi Alluvial Valley forest birds - reforestation | ✓ |
| Resilient terrestrial sites | ✓ |
| 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 |
|--|---------|
| Gulf migratory fish connectivity | ✓ |
| Imperiled aquatic species | ✓ |
| Natural landcover in floodplains | ✓ |
| Network complexity | ✓ |
| Permeable surface | ✓ |

Table 5: Coastal & marine indicators.

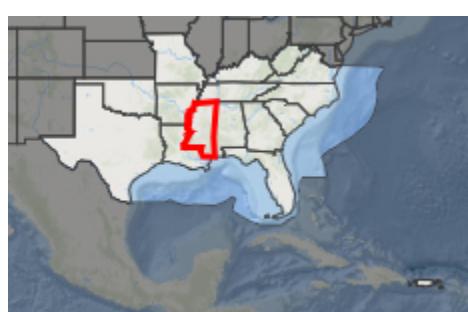
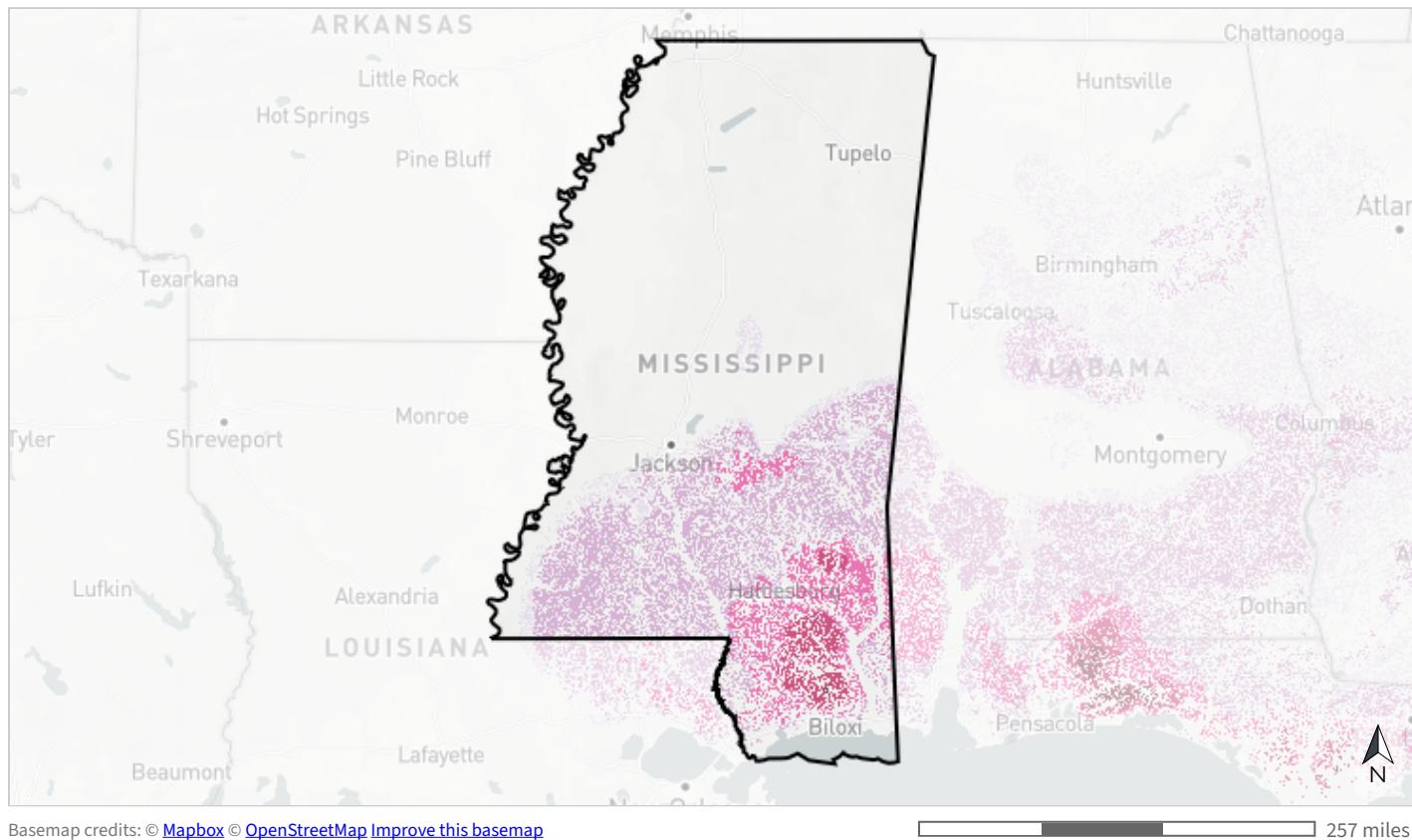
| Indicator | Present |
|--|---------|
| Atlantic coral & hardbottom | - |
| Atlantic deep-sea coral richness | - |
| Atlantic estuarine fish habitat | - |
| Atlantic marine birds | - |
| Atlantic marine mammals | - |
| <u>Coastal shoreline condition</u> | ✓ |
| <u>Estuarine coastal condition</u> | ✓ |
| <u>Gulf coral & hardbottom</u> | ✓ |
| Gulf deep-sea coral richness | - |
| <u>Gulf marine mammals</u> | ✓ |
| <u>Gulf sea turtles</u> | ✓ |
| <u>Island habitat</u> | ✓ |
| Marine highly migratory fish | - |
| <u>Resilient coastal sites</u> | ✓ |
| <u>Seagrass</u> | ✓ |
| <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 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 6: Indicator values for east coastal plain open pine birds within Mississippi. A good condition threshold is not yet defined for this indicator.

| | Indicator Values: Priority for open pine conservation for focal bird species | Acres | Percent of Area |
|-------------------|---|-------------------|------------------------|
| ↑ 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% |
| Total area | | 30,998,884 | 100% |

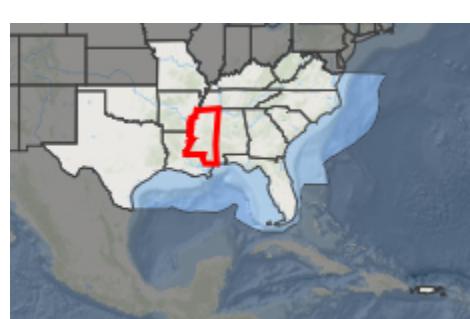
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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

| Indicator Values: Priority for a new park that would create nearby equitable access | | Acres | Percent of Area |
|--|---|-------------------|------------------------|
| ↑ 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% |
| | 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 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](#).

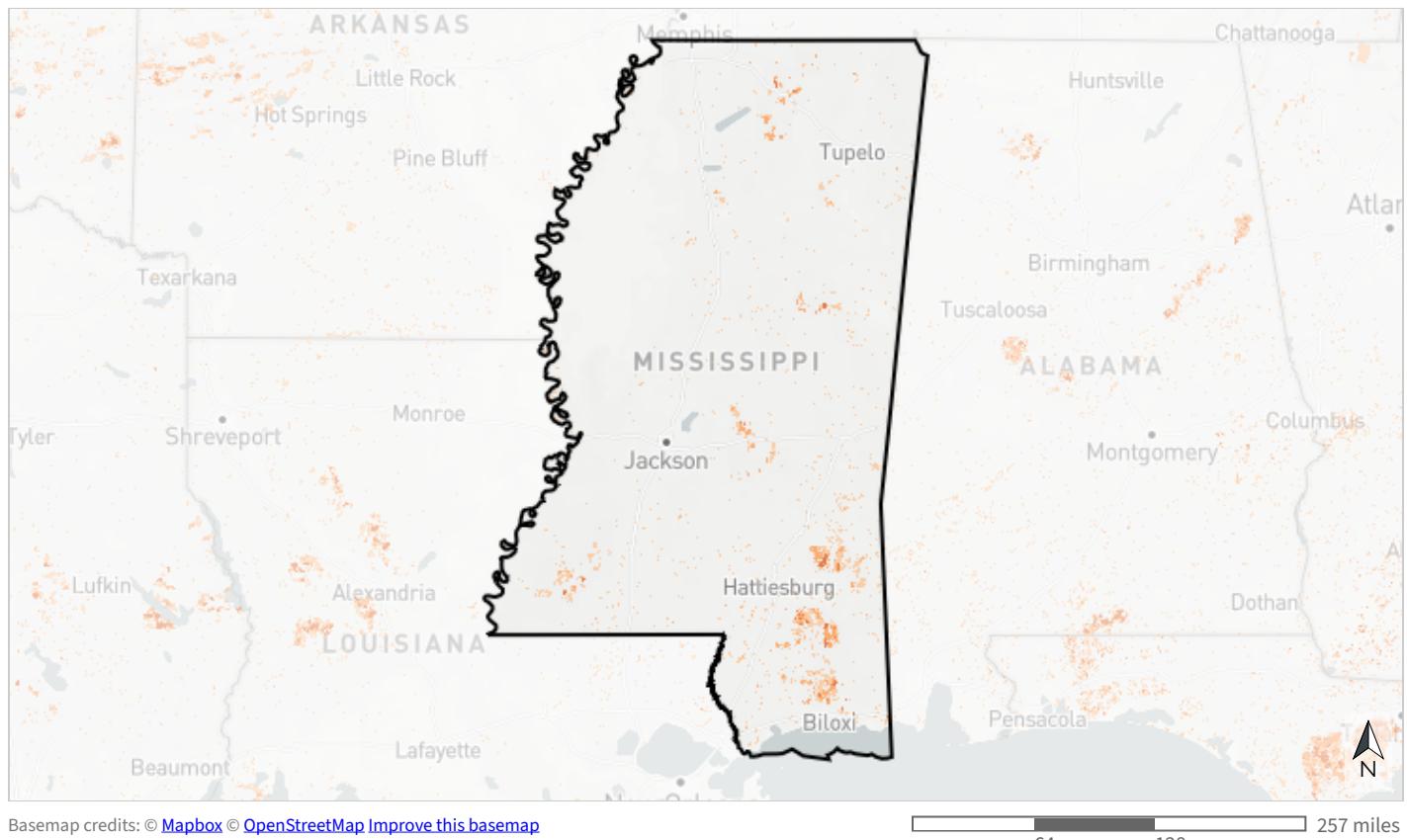


Table 8: Indicator values for fire frequency within Mississippi. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.

| | 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>Area not evaluated for this indicator</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

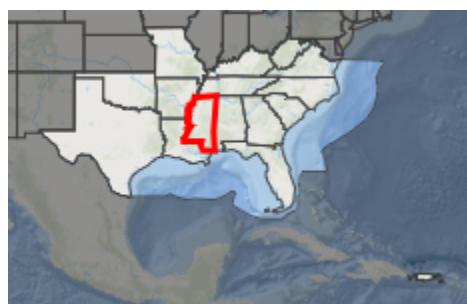
Greenways & trails

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 data and the National Land Cover Database.



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64 128 257 miles



- Mostly natural and connected for ≥ 40 km
- Mostly natural and connected for 5 to < 40 km or partly natural and connected for ≥ 40 km
- Mostly natural and connected for 1.9 to < 5 km, partly natural and connected for 5 to < 40 km, or developed and connected for ≥ 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 9: 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 |
|--------|--|-------------------|------------------------|
| ↑ High | Mostly natural and connected for ≥ 40 km | 1,535 | <0.1% |
| | Mostly natural and connected for 5 to < 40 km or partly natural and connected for ≥ 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 ≥ 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% |
| ↓ Low | <i>Area not evaluated for this indicator</i> | 6,278 | <0.1% |
| | Total area | 30,998,884 | 100% |

↑ In good condition

↓ Not in good condition

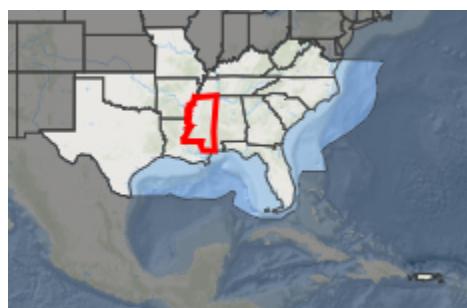
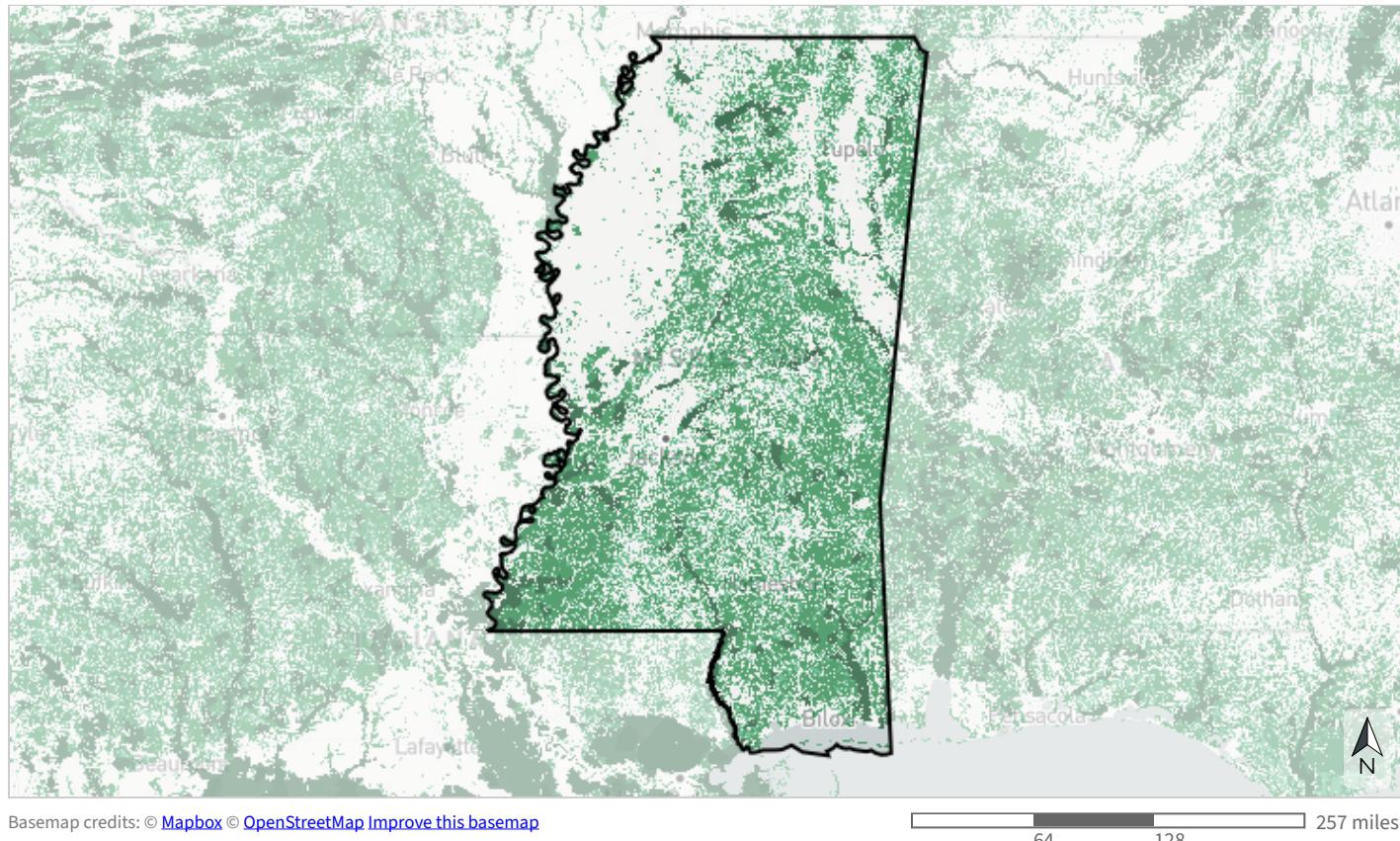
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Terrestrial

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 within Mississippi. 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 | 15,040,041 | 48.5% |
| | <i>Area not evaluated for this indicator</i> | 6,278 | <0.1% |
| Total area | | 30,998,884 | 100% |

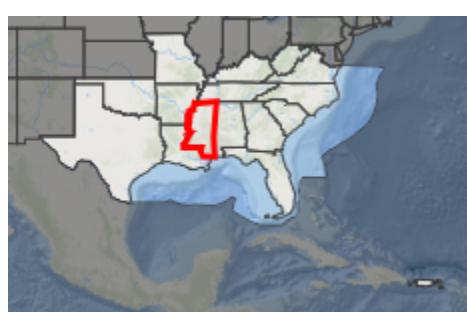
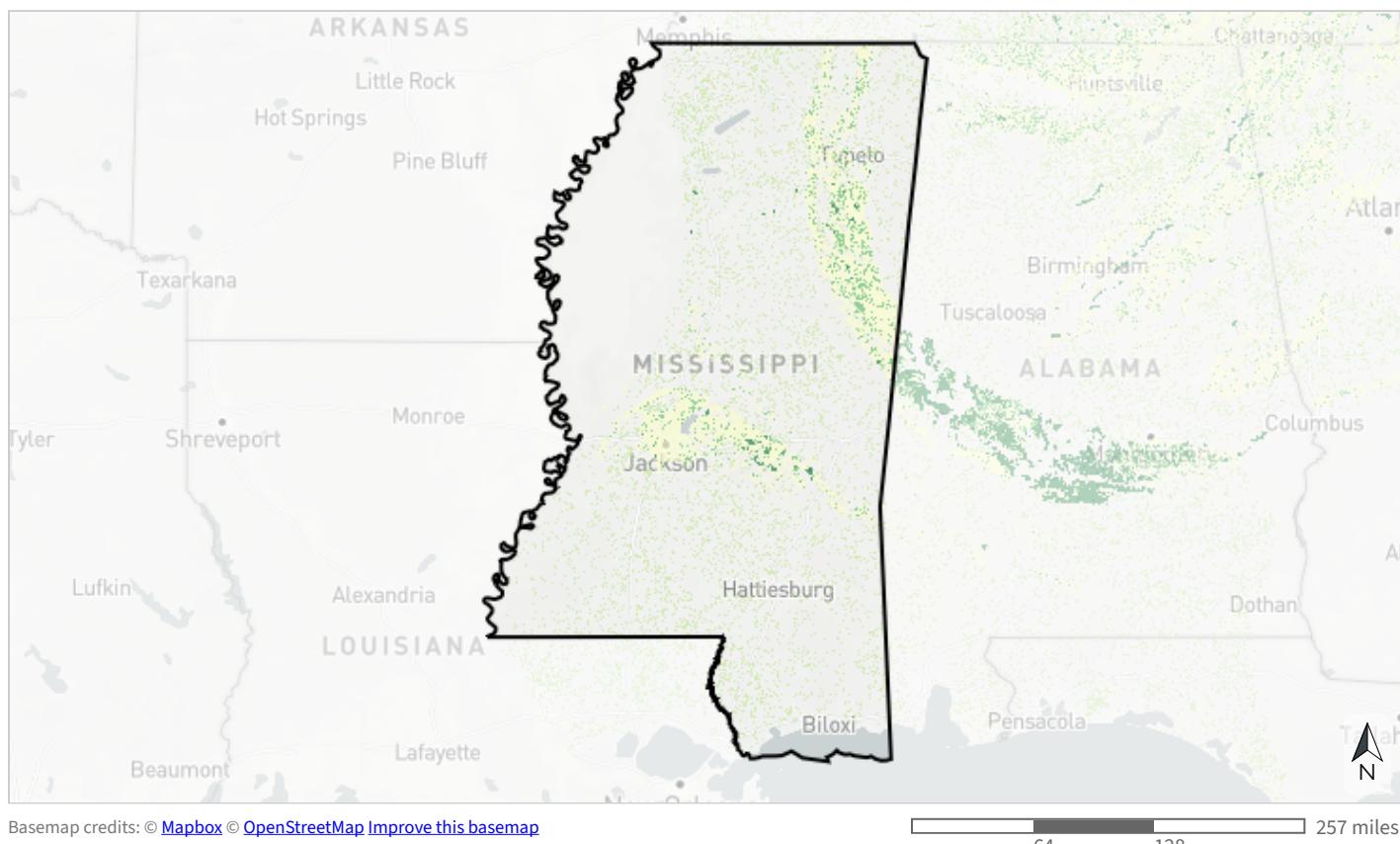
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 Institute, Central Hardwoods Joint Venture, Rangeland Analysis Platform, and more.



- 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 within Mississippi. 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% |
| | Grassland geology | 2,140,779 | 6.9% |
| | Grassland less likely | 20,903,980 | 67.4% |
| ↓ Low | <i>Area not evaluated for this indicator</i> | 4,980,331 | 16.1% |
| | Total area | 30,998,884 | 100% |

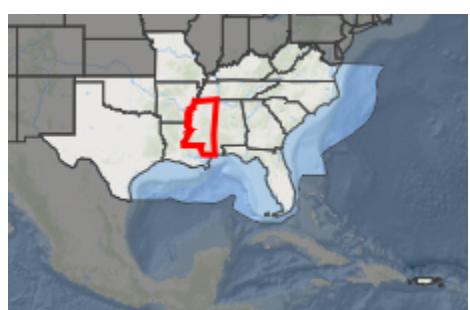
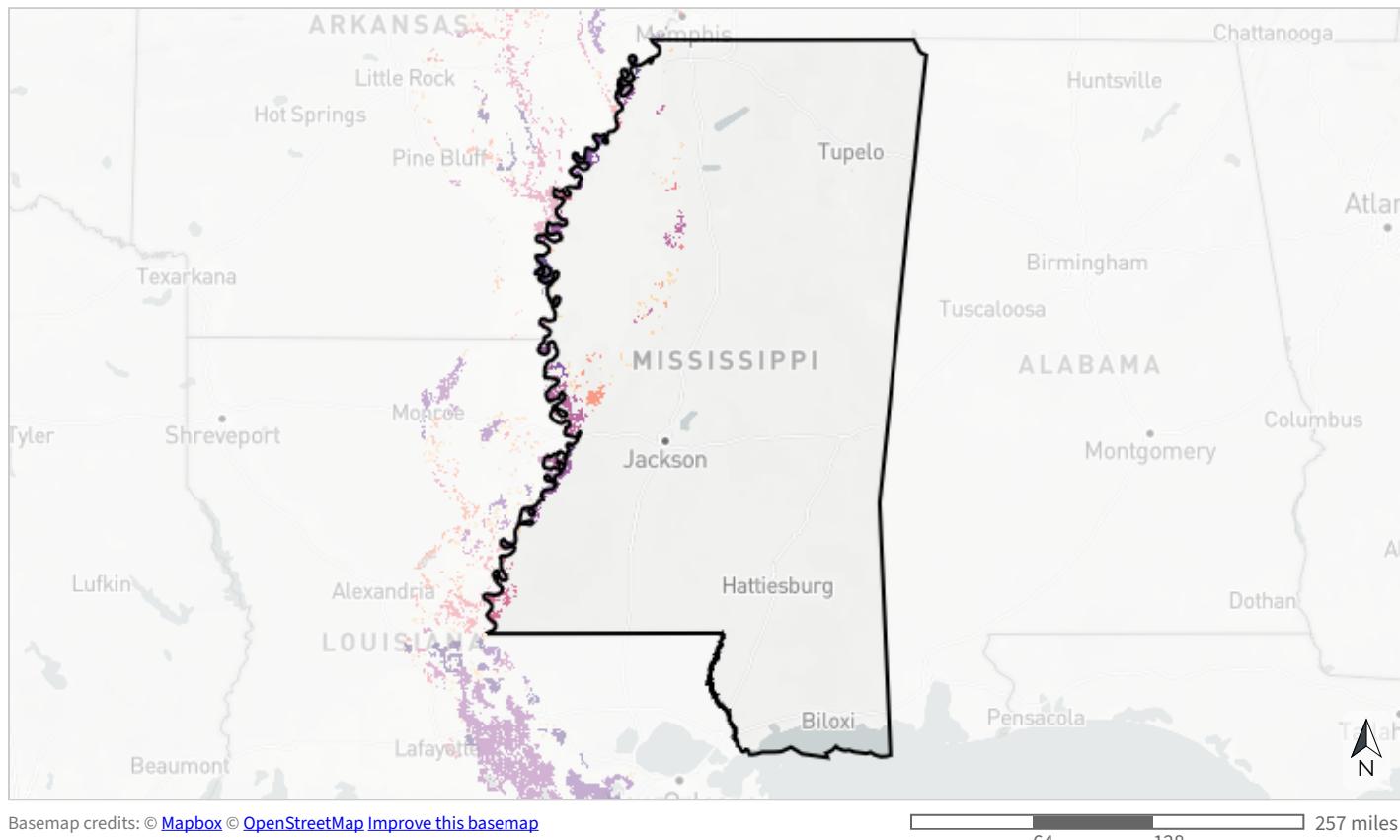
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 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 (LMVJV). This indicator originates from the LMVJV 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 12: Indicator values for Mississippi Alluvial Valley forest birds - protection within Mississippi. 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 | 103,794 | 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% |
| | Total area | 30,998,884 | 100% |

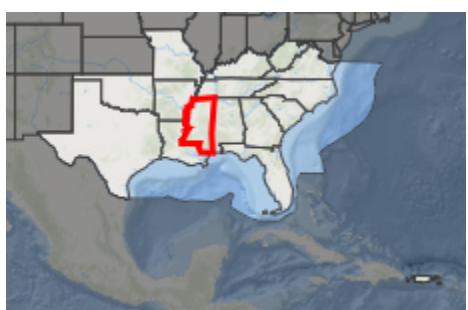
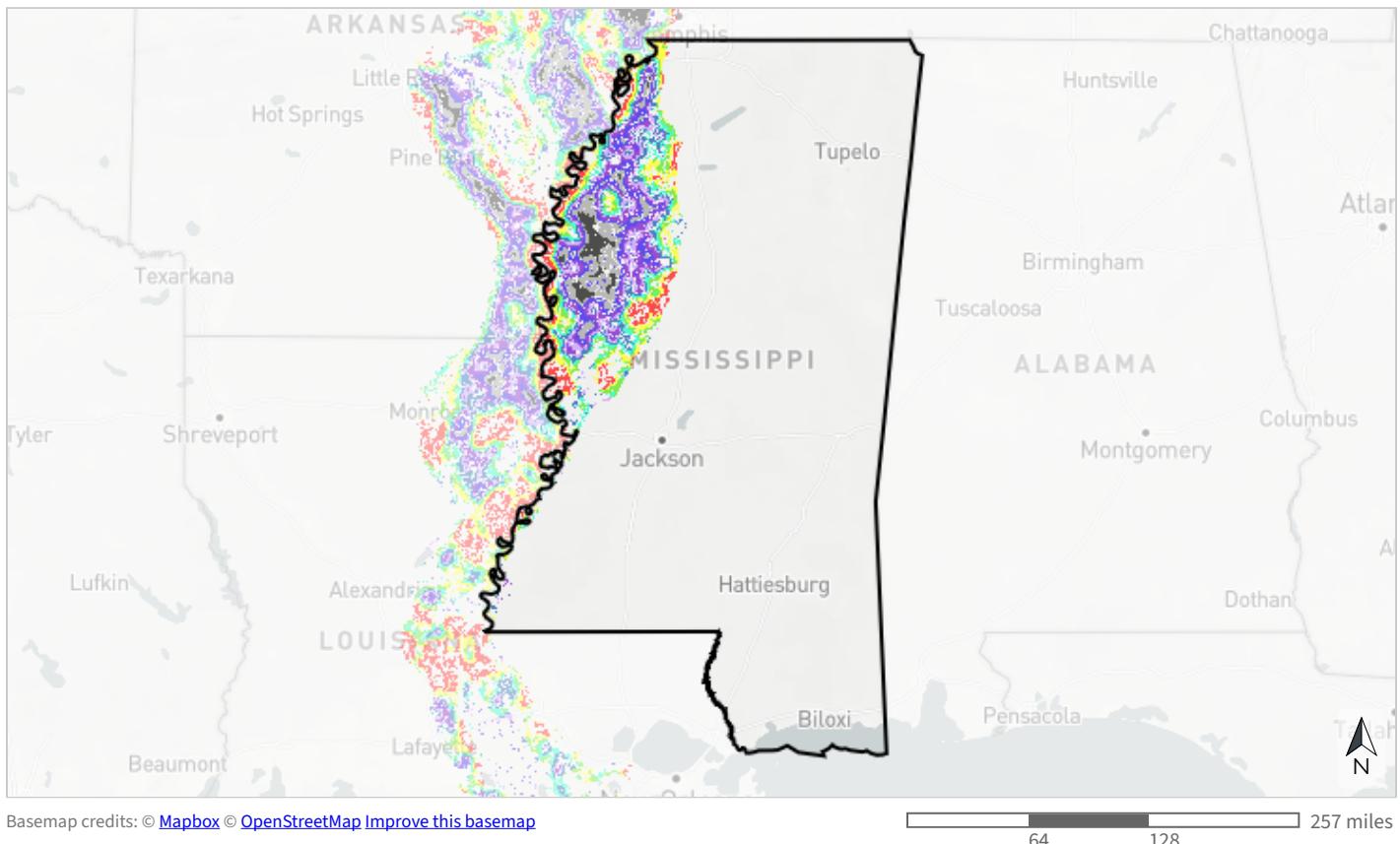
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 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 13: Indicator values for Mississippi Alluvial Valley forest birds - reforestation within Mississippi. 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) | 289,659 | 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% |
| Total area | | 30,998,884 | 100% |

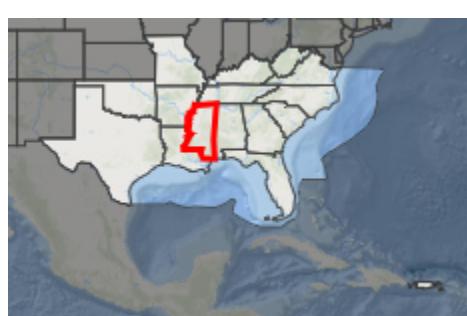
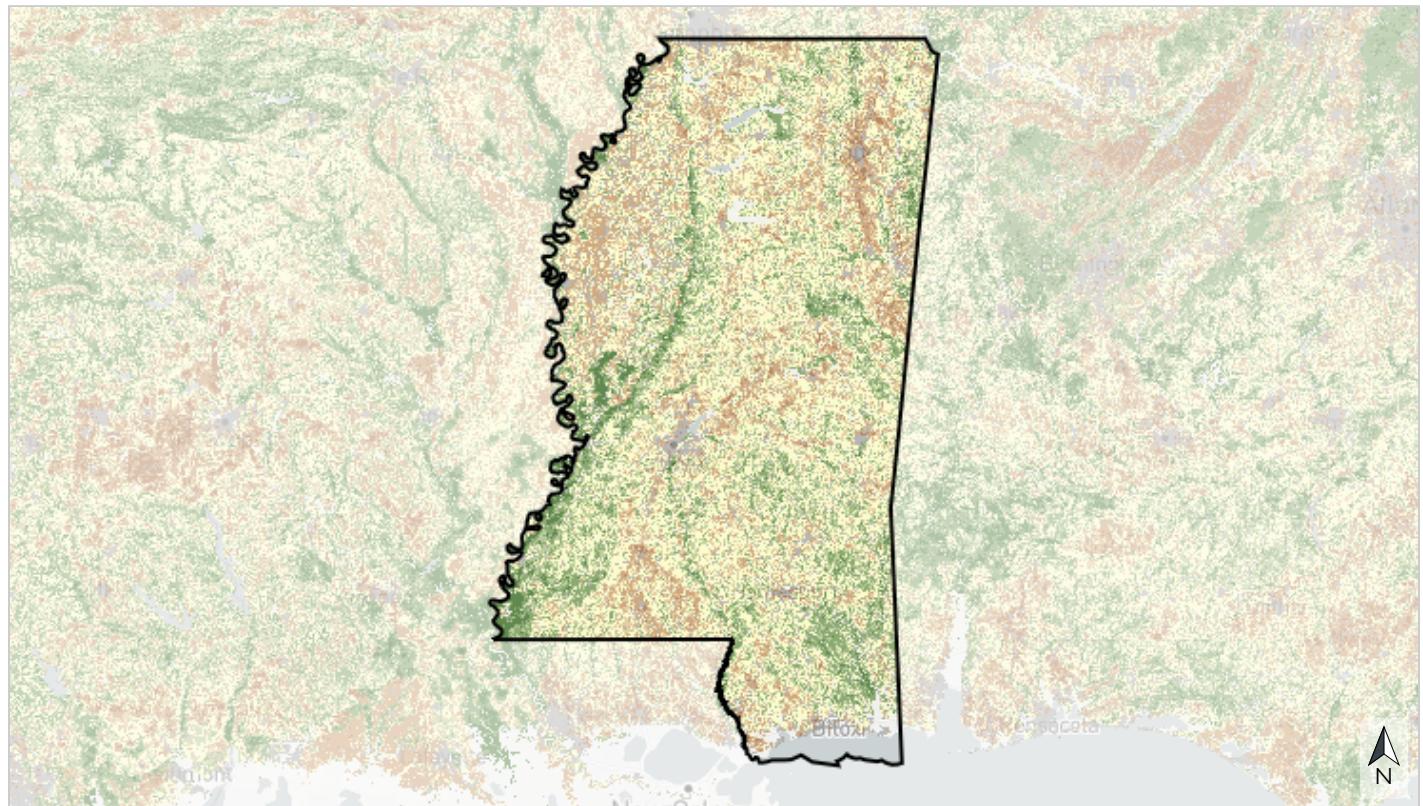
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Terrestrial

Resilient terrestrial sites

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



- 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 within Mississippi. 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> | 1,605,274 | 5.2% |
| | Total area | 30,998,884 | 100% |

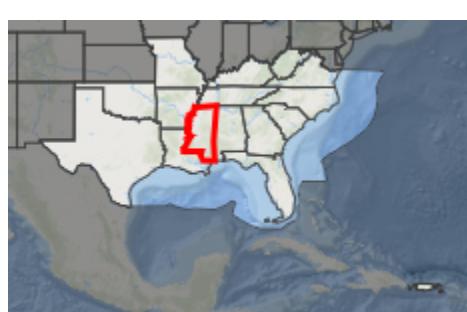
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 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 or not identified as an urban park

Table 15: Indicator values for urban park size within Mississippi. A good condition threshold is not yet defined for this indicator.

| | Indicator Values | Acres | Percent of Area |
|--|---|-------------------|------------------------|
| ↑ High | 75+ acre urban park | 57,474 | 0.2% |
| | 50 to <75 acre urban park | 2,147 | <0.1% |
| | 30 to <50 acre urban park | 2,016 | <0.1% |
| | 10 to <30 acre urban park | 2,925 | <0.1% |
| | 5 to <10 acre urban park | 1,174 | <0.1% |
| | <5 acre urban park or not identified as an urban park | 30,927,226 | 99.8% |
| <i>Area not evaluated for this indicator</i> | | 5,923 | <0.1% |
| Total area | | 30,998,884 | 100% |

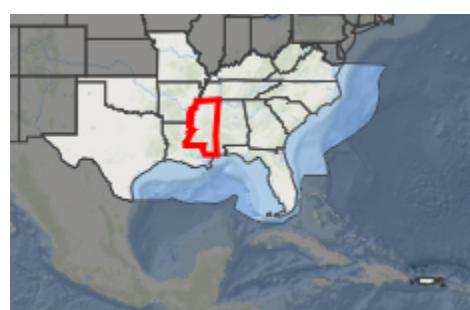
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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

| | Indicator Values | Acres | Percent of Area | |
|-------------------|---|-------------------|------------------------|-------------------------|
| ↑ High | Presence of Gulf sturgeon | 882,689 | 2.8% | ↑ In good condition |
| | 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% | ↓ Not in good condition |
| | <i>Area not evaluated for this indicator</i> | 18,498,005 | 59.7% | |
| Total area | | 30,998,884 | 100% | |

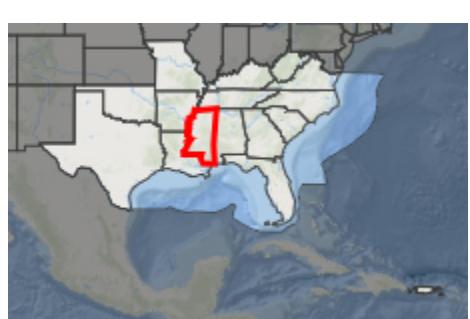
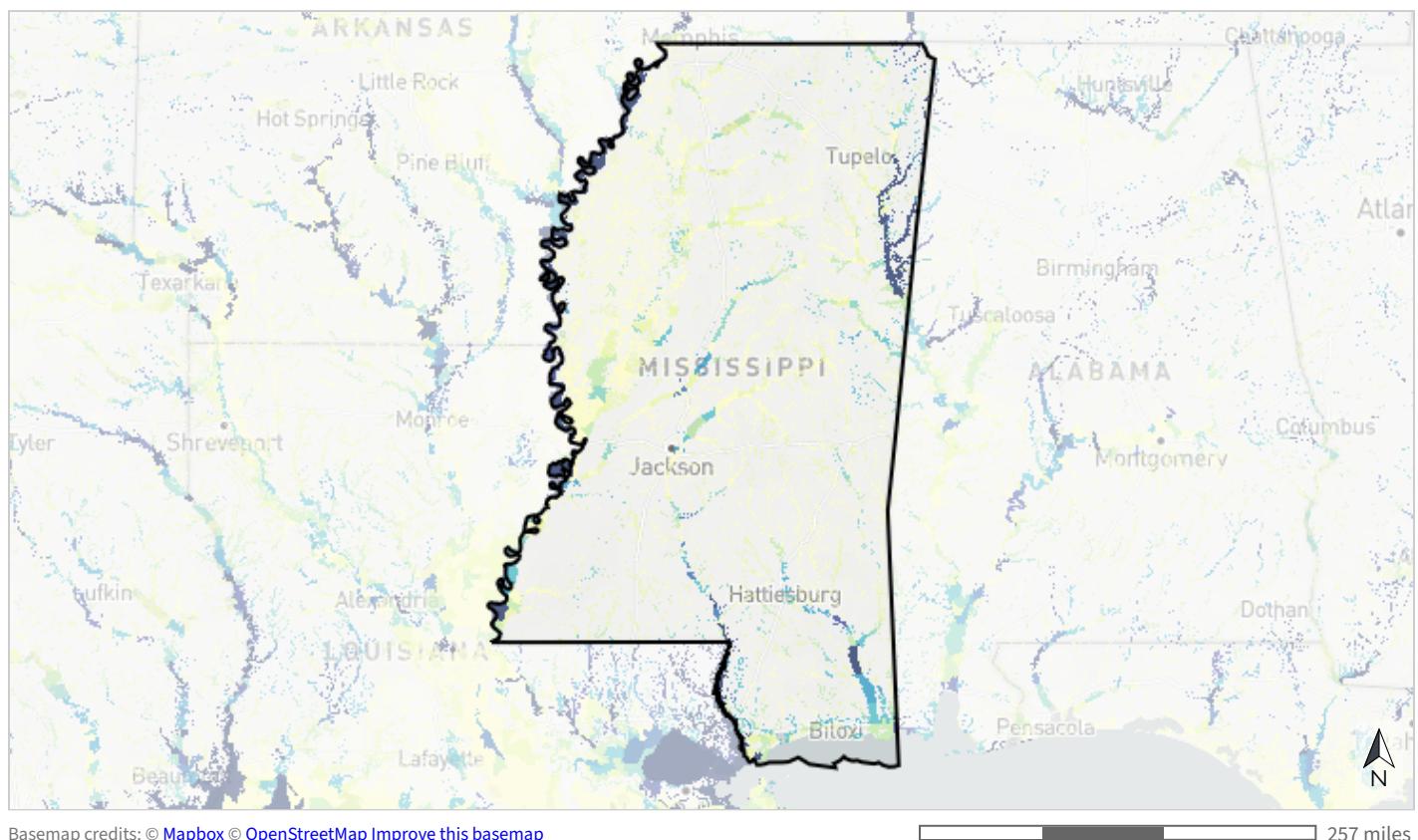
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 aquatic species diversity. 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).



Number of aquatic animal Species of Greatest Conservation Need observed

| |
|--|
| 8+ species |
| 7 species |
| 6 species |
| 5 species |
| 4 species |
| 3 species |
| 2 species |
| 1 species |
| 0 species |
| Not identified as a floodplain (excluding West Virginia) |

Table 17: Indicator values for imperiled aquatic species within Mississippi. A good condition threshold is not yet defined for this indicator.

| Indicator Values: Number of aquatic animal Species of Greatest Conservation Need observed | | Acres | Percent of Area |
|--|--|-------------------|------------------------|
| ↑ High | 8+ species | 656,044 | 2.1% |
| | 7 species | 86,047 | 0.3% |
| | 6 species | 50,451 | 0.2% |
| | 5 species | 152,632 | 0.5% |
| | 4 species | 251,582 | 0.8% |
| | 3 species | 376,351 | 1.2% |
| | 2 species | 699,555 | 2.3% |
| | 1 species | 1,186,278 | 3.8% |
| | 0 species | 3,083,890 | 9.9% |
| | Not identified as a floodplain (excluding West Virginia) | 23,955,720 | 77.3% |
| ↓ Low | <i>Area not evaluated for this indicator</i> | 500,333 | 1.6% |
| Total area | | 30,998,884 | 100% |

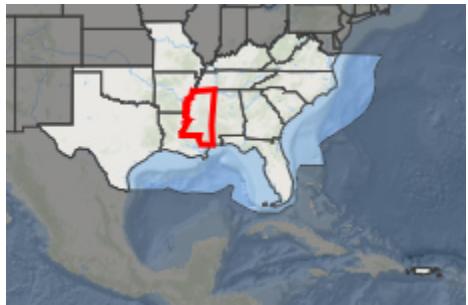
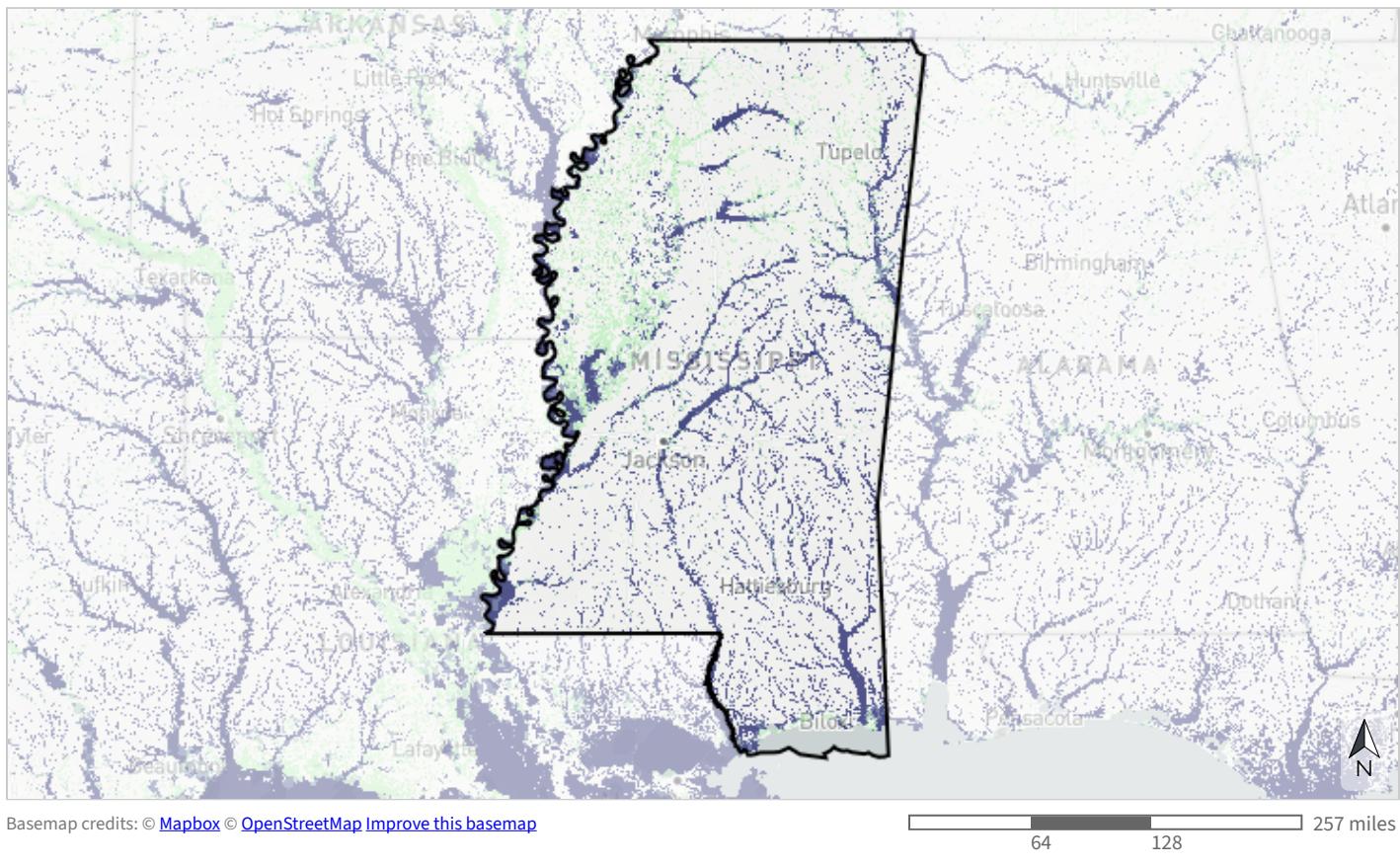
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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

| Indicator Values: Percent natural landcover within the estimated floodplain, by catchment | | Acres | Percent of Area |
|--|--|-------------------|------------------------|
| ↑ High | >90% natural landcover | 3,214,244 | 10.4% |
| | >80-90% natural landcover | 745,734 | 2.4% |
| | >70-80% natural landcover | 464,583 | 1.5% |
| ↓ Low | >60-70% natural landcover | 361,547 | 1.2% |
| | ≤60% natural landcover | 1,756,723 | 5.7% |
| | Not identified as a floodplain | 23,955,840 | 77.3% |
| | <i>Area not evaluated for this indicator</i> | 500,213 | 1.6% |
| Total area | | 30,998,884 | 100% |

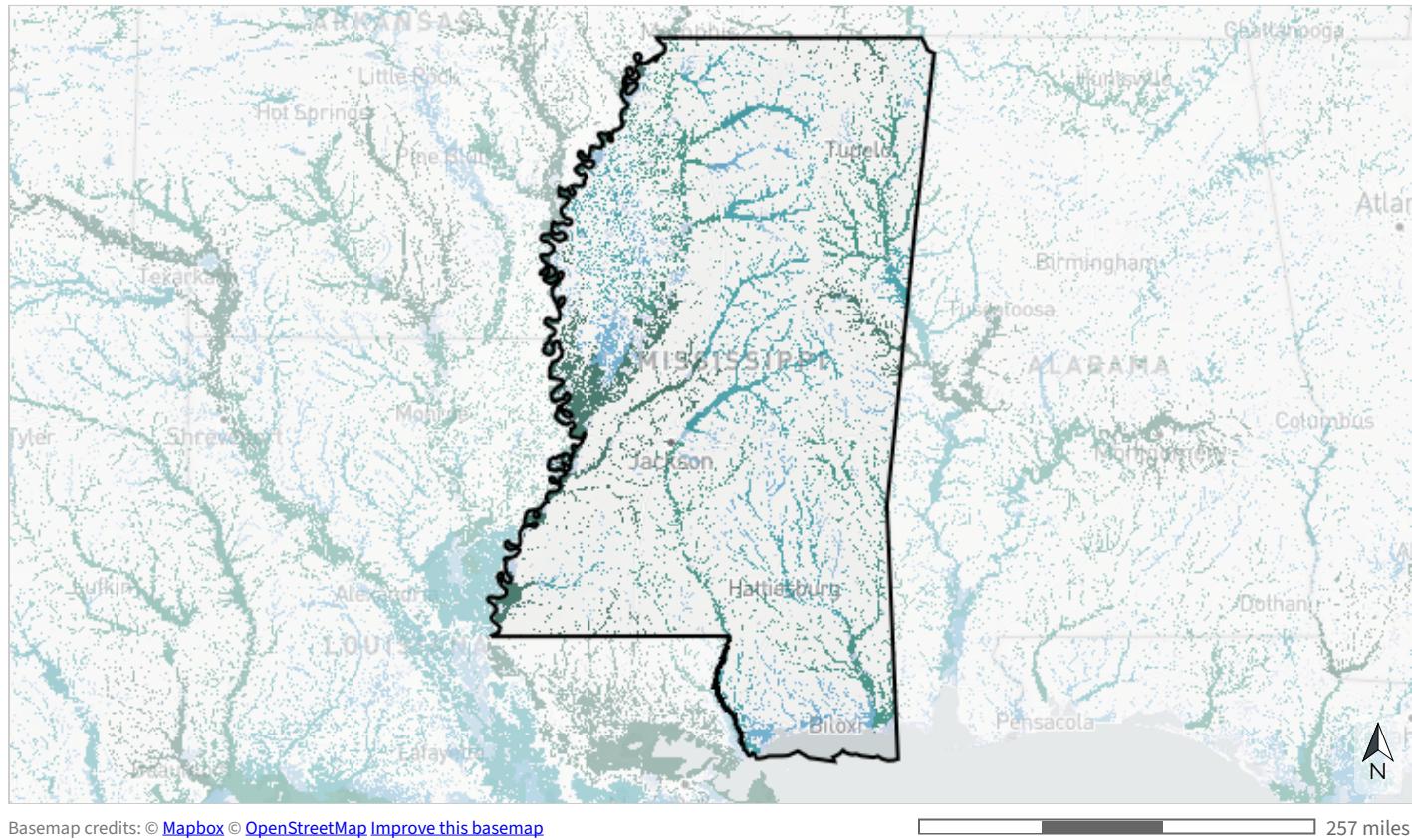
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Freshwater

Network complexity

This indicator depicts the number of 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 19: Indicator values for network complexity within Mississippi. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.

| Indicator Values: Number of connected stream size classes | | Acres | Percent of Area |
|--|--------------------------------|--|------------------------|
| ↑ High | 7 size classes | 1,480,702 | 4.8% |
| | 6 size classes | 1,676,569 | 5.4% |
| | 5 size classes | 1,725,823 | 5.6% |
| | 4 size classes | 559,649 | 1.8% |
| | 3 size classes | 361,451 | 1.2% |
| | 2 size classes | 395,214 | 1.3% |
| | 1 size class | 340,544 | 1.1% |
| | Not identified as a floodplain | 23,956,531 | 77.3% |
| <i>Area not evaluated for this indicator</i> | | 502,401 | 1.6% |
| Total area | | 30,998,884 | 100% |
| | | ↑ In good condition ↓ Not in good condition | |

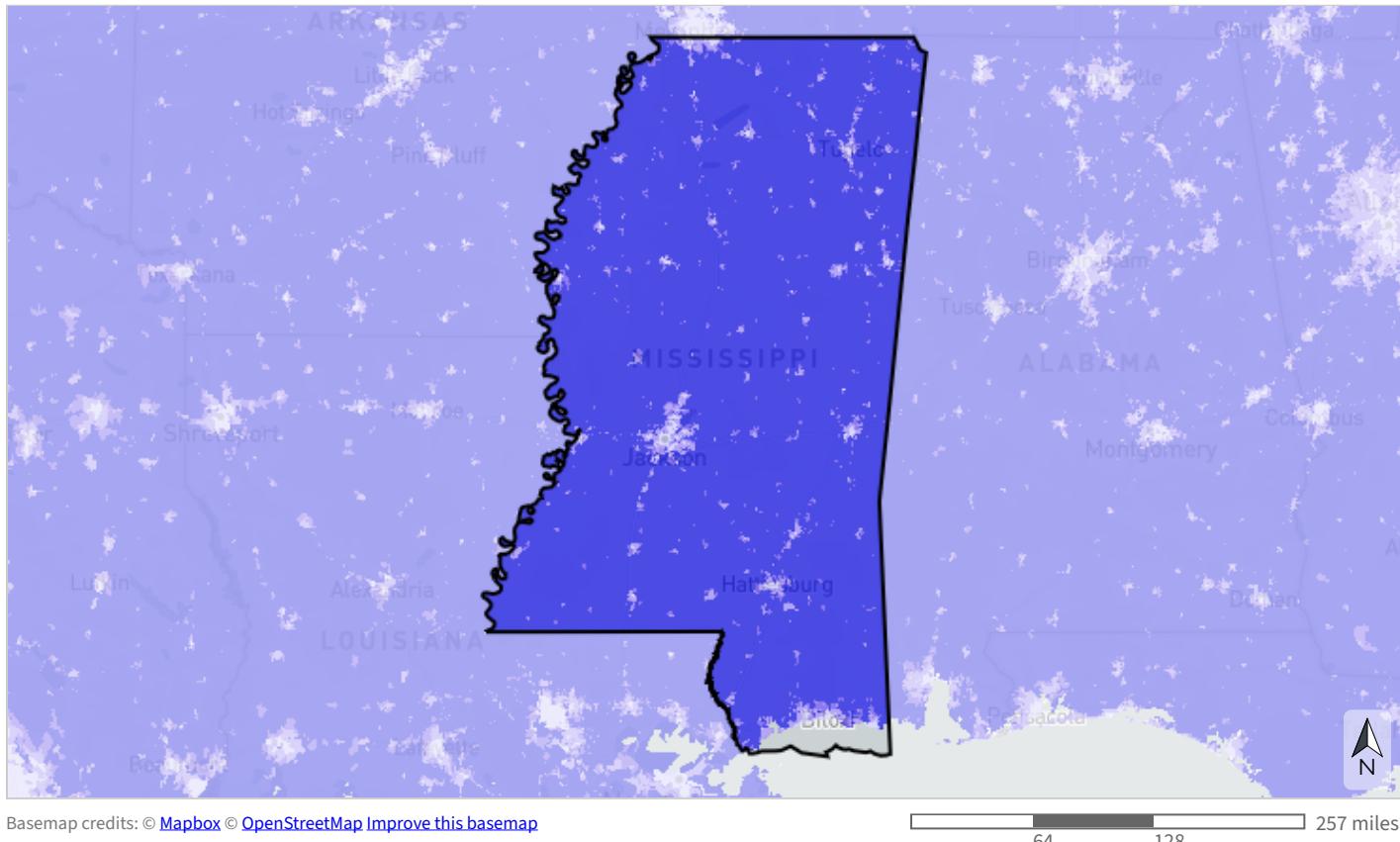
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Freshwater

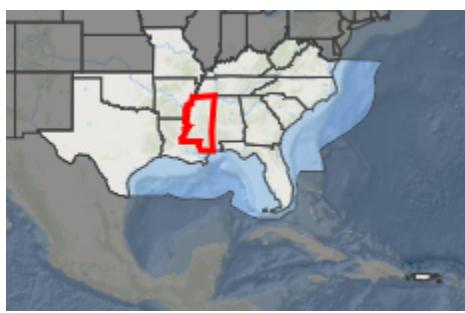
Permeable surface

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.



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64 128 257 miles



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

| | Indicator Values: Percent of catchment permeable | Acres | Percent of Area | |
|--|--|-------------------|----------------------------|-------------------------|
| ↑ High | >95% permeable (likely high water quality and supporting most sensitive aquatic species) | 28,825,672 | 93.0% | ↑ In good condition |
| | >90-95% permeable (likely declining water quality and supporting most aquatic species) | 759,461 | 2.4% | ↓ Not in good condition |
| ↓ Low | >70-90% permeable (likely degraded water quality and not supporting many aquatic species) | 730,883 | 2.4% | |
| | ≤70% permeable (likely degraded instream flow, water quality, and aquatic species communities) | 182,513 | 0.6% | |
| <i>Area not evaluated for this indicator</i> | | 500,356 | 1.6% | |
| 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 21: Indicator values for coastal shoreline condition within Mississippi. 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% | ↑ In good condition ↓ Not in good condition |
| | Natural | 19,259 | <0.1% | |
| | Partially armored and harder to develop | 6.2 | <0.1% | |
| | Partially armored | 343 | <0.1% | |
| ↓ Low | Armored | 2,438 | <0.1% | |
| | <i>Area not evaluated for this indicator</i> | 30,975,111 | 99.9% | |
| | Total area | 30,998,884 | 100% | |

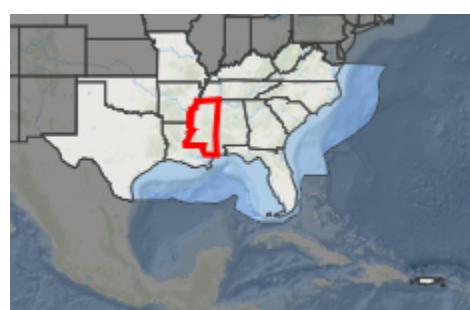
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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
- Fair to good
- Fair
- Poor to fair
- Poor
- Shallow estuary not assessed for condition

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

| | Indicator Values | Acres | Percent of Area |
|--------|--|-------------------|------------------------|
| ↑ 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% |
| | 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](#).



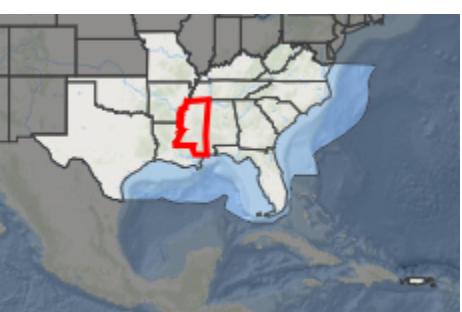
Coastal & marine

Gulf coral & hardbottom

This indicator predicts the presence of coral and hardbottom in the Gulf of Mexico based on direct observations, acoustic surveys, designated Coral Habitat Areas of Particular Concern, and known locations of human-created structures like artificial reefs. 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 bacteria that feed off of hydrocarbon seeps. This indicator combines data from multiple sources, including Bureau of Ocean Energy Management seismic water bottom anomalies, usSEABED sediments, several National Oceanic and Atmospheric Administration datasets, and more.



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- Confirmed hardbottom-associated species (corals, patch reef, chemosynthetic communities, or other organisms)
- Confirmed human-created hardbottom (shipwrecks, artificial reefs, decommissioned oil and gas platforms)
- Predicted hardbottom (fine resolution)
- Coral Habitat Area of Particular Concern (HAPC)
- Rock (coarse resolution)
- Gravel (coarse resolution)
- Not identified as hardbottom

Table 23: Indicator values for Gulf coral & hardbottom within Mississippi. A good condition threshold is not yet defined for this indicator.

| | Indicator Values | Acres | Percent of Area |
|-------------------|--|-------------------|------------------------|
| ↑ High | Confirmed hardbottom-associated species (corals, patch reef, chemosynthetic communities, or other organisms) | 0 | 0% |
| | Confirmed human-created hardbottom (shipwrecks, artificial reefs, decommissioned oil and gas platforms) | 6,153 | <0.1% |
| | Predicted hardbottom (fine resolution) | 0 | 0% |
| | Coral Habitat Area of Particular Concern (HAPC) | 0 | 0% |
| | Rock (coarse resolution) | 17,605 | <0.1% |
| | Gravel (coarse resolution) | 7,166 | <0.1% |
| | Not identified as hardbottom | 2,829,193 | 9.1% |
| | <i>Area not evaluated for this indicator</i> | 28,138,767 | 90.8% |
| Total area | | 30,998,884 | 100% |

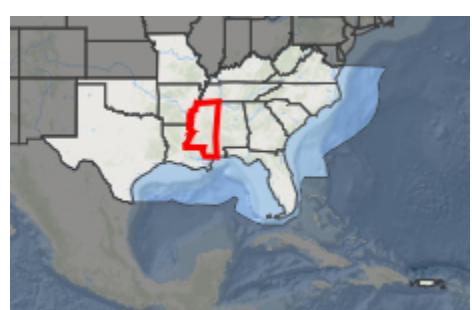
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Coastal & 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 24: Indicator values for Gulf marine mammals within Mississippi. A good condition threshold is not yet defined for this indicator.

| | Indicator Values: Percentile of importance for marine mammal index species (across larger analysis area) | Acres | Percent of Area |
|-------------------|---|-------------------|------------------------|
| ↑ 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% |
| Total area | | 30,998,884 | 100% |

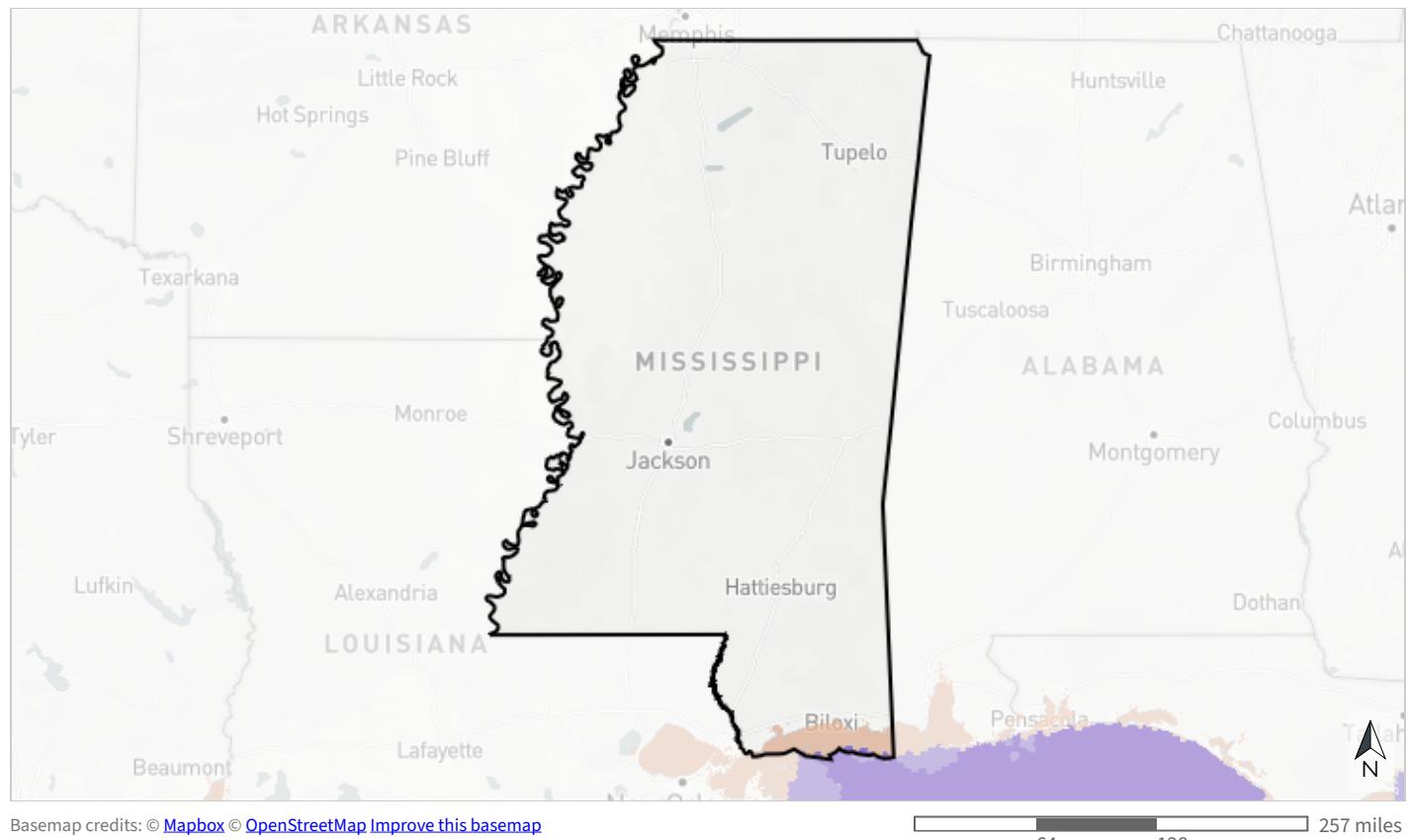
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



Coastal & 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
- >60th-70th percentile
- ≤60th percentile
- Land

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

| | Indicator Values: Percentile of importance for sea turtle index species (across larger analysis area) | Acres | Percent of Area |
|--------|--|-------------------|------------------------|
| ↑ High | >90th percentile | 6,655 | <0.1% |
| | >80th-90th percentile | 42,218 | 0.1% |
| | >70th-80th percentile | 0 | 0% |
| | >60th-70th percentile | 0 | 0% |
| | ≤60th percentile | 451,321 | 1.5% |
| ↓ Low | Land | 176,780 | 0.6% |
| | <i>Area not evaluated for this indicator</i> | 30,321,910 | 97.8% |
| | Total area | 30,998,884 | 100% |

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 26: Indicator values for island habitat within Mississippi. 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% |
| | 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% |
| Total area | | 30,998,884 | 100% |

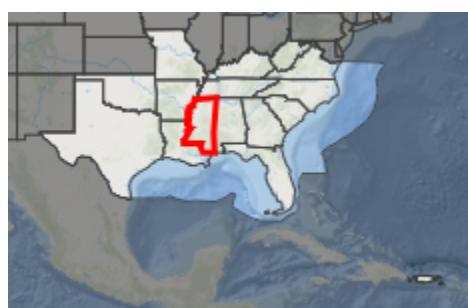
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).



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 more. 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 27: Indicator values for resilient coastal sites within Mississippi. 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% |
| ↓ Low | <i>Area not evaluated for this indicator</i> | 30,823,346 | 99.4% |
| | Total area | 30,998,884 | 100% |

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 28: 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% |
| | <i>Area not evaluated for this indicator</i> | 30,998,545 | 100.0% |
| | 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. 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 29: Indicator values for stable coastal wetlands within Mississippi. 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 | 70,537 | 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% |
| Total area | | 30,998,884 | 100% |

↑ In good condition

↓ Not in good condition

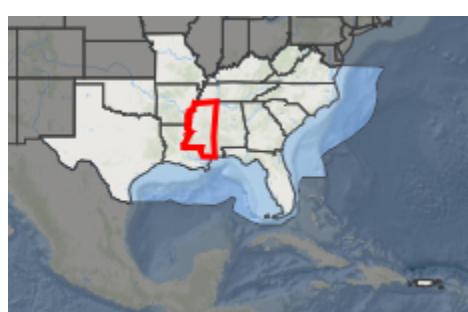
To learn more and explore the GIS data, [view this indicator in the SECAS Atlas](#).

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 30: 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](#).

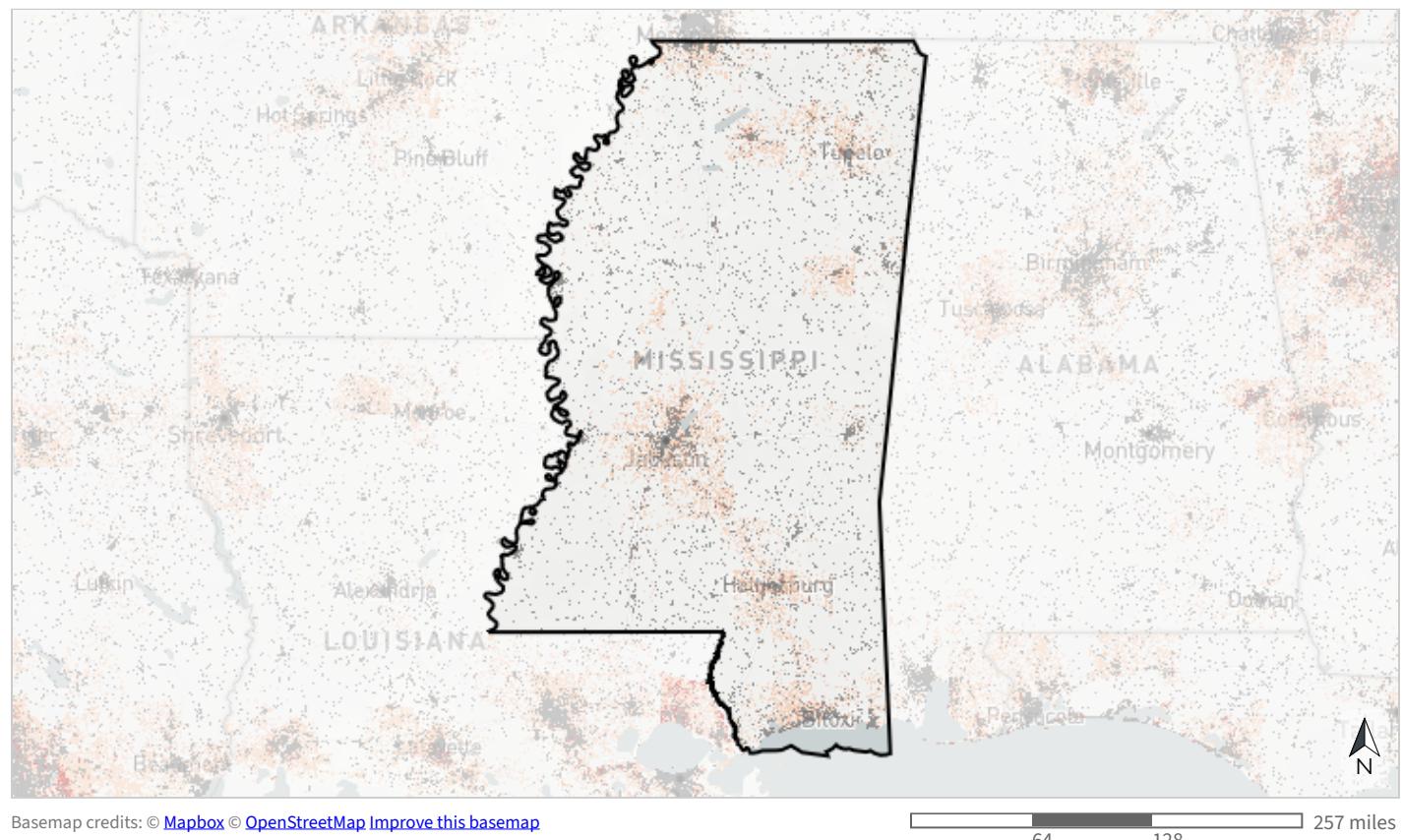
| Feet of sea-level rise | Acres | Percent of Area |
|---|-------------------|------------------------|
| 0 feet | 535,278 | 1.7% |
| 1 foot | 572,401 | 1.8% |
| 2 feet | 597,478 | 1.9% |
| 3 feet | 613,216 | 2.0% |
| 4 feet | 626,417 | 2.0% |
| 5 feet | 639,873 | 2.1% |
| 6 feet | 654,871 | 2.1% |
| 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% |
| Total area | 30,998,884 | 100% |

Table 31: 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.

| 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 | 1.5 | 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.



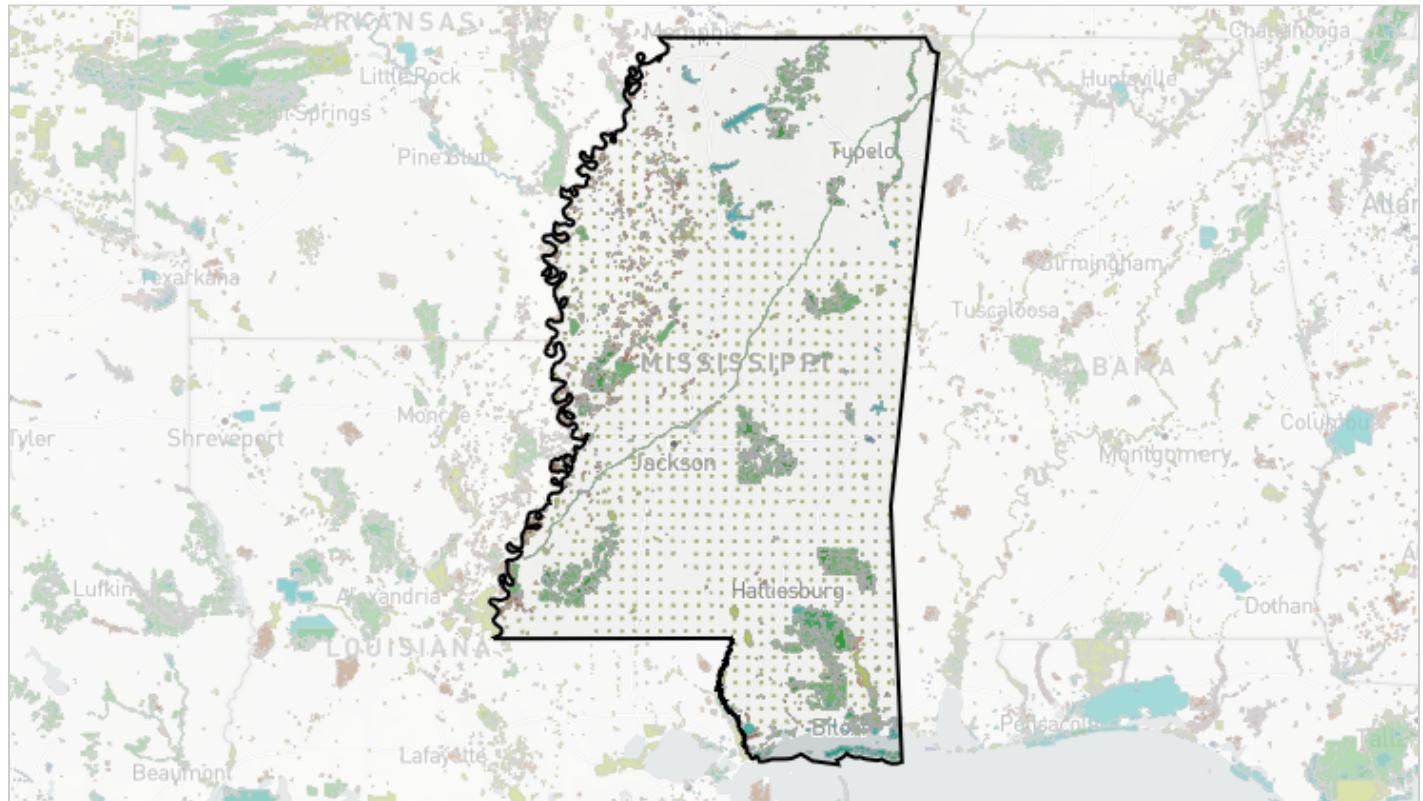
6.4% of this area is already urban in 2021, and an additional 7.2% has at least a moderate probability of urbanizing by 2060.

Table 32: 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.

| Decade | Acres | Percent of Area |
|--|-------------------|------------------------|
| 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% |
| Total area | 30,998,884 | 100% |

Ownership and Partners

Conserved lands ownership

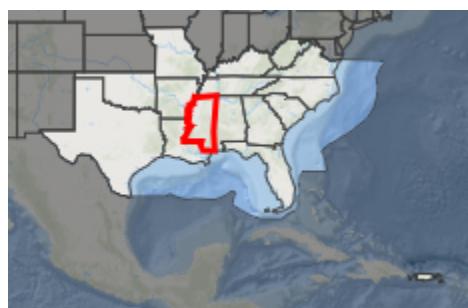
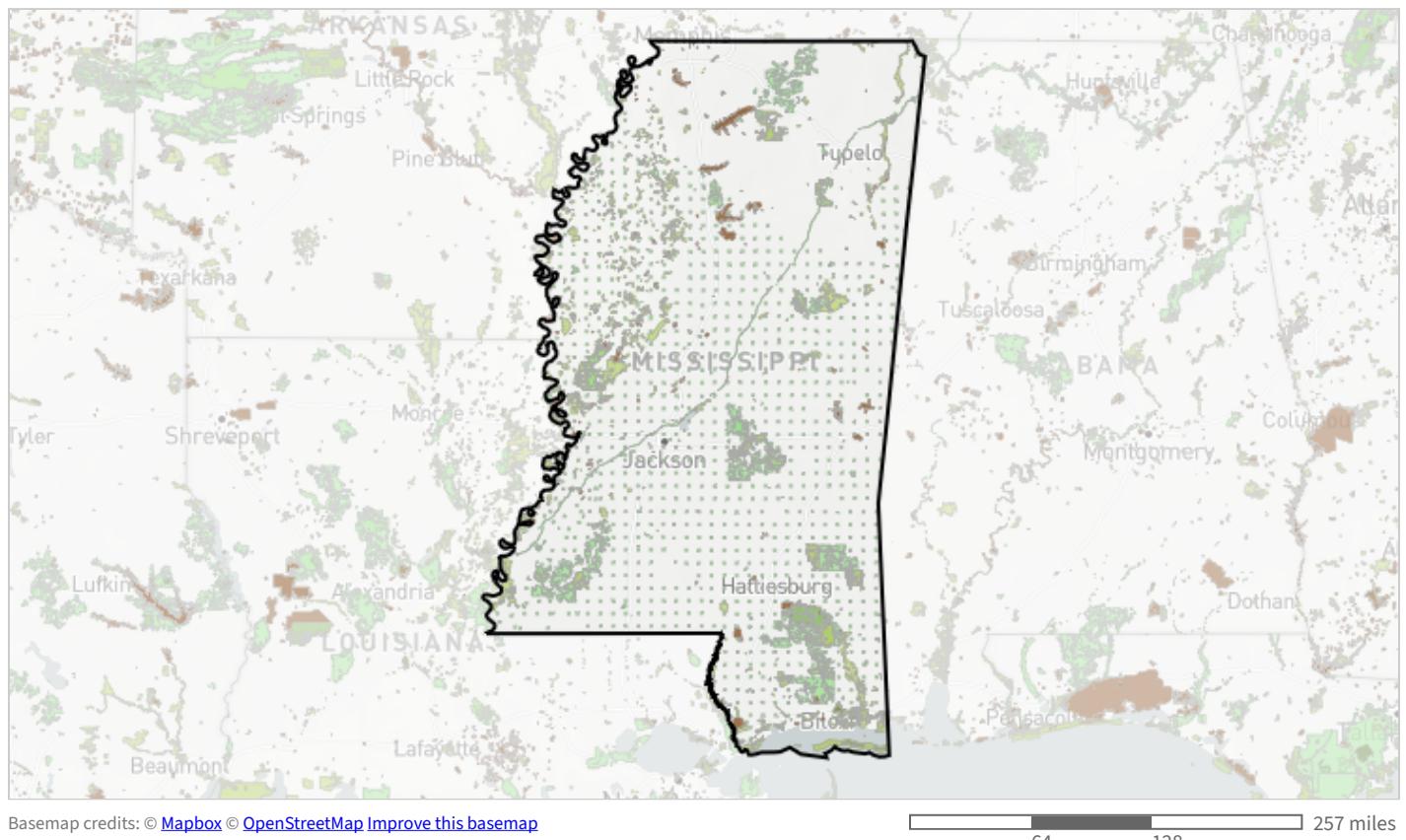


| | |
|----------------|------------------------------------|
| Federal | Joint |
| State/province | Private non-profit conserved lands |
| Territorial | Private conservation land |
| Regional | Tribal |
| Local | Designation |
| | Ownership unknown |

Table 33: Extent of ownership class within Mississippi. Protected areas are derived from the [Protected Areas Database of the United States](#) (PAD-US 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 v3.0 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.

| 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% |

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 34: Extent of land protection status within Mississippi. Protected areas are derived from the [Protected Areas Database of the United States](#) (PAD-US 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 v3.0 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) | 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% |

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

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 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](#).