

The Southeast Blueprint Changelog

What has changed with each version of the Southeast Blueprint?

October 16, 2020

Preferred Citation: Southeast Conservation Adaptation Strategy. 2020. Southeast Blueprint Changelog. Available online:
https://www.sciencebase.gov/catalog/file/get/5dc440b3e4b0695797584b9f?name=SE_Blueprint_Changelog.pdf

Contents

- What is a Changelog? 1
- The Evolution of the Southeast Blueprint..... 1
- Southeast Blueprint 2020 2
 - Changes to Subregional Inputs 2
 - Changes and Updates to Inputs 2
 - Integration of Overlapping Southeast Blueprint Inputs..... 3
 - Changes to Inputs Used in Specific Overlap Zones..... 3
 - Changes to Input Areas Layer 3
 - Changes to Connectivity Layer 3
- Southeast Blueprint v4.0 4
 - Changes to Subregional Inputs 4
 - New Inputs Added 4
 - Inputs Removed 4
 - Changes and Updates to Inputs 4
 - Integration of Overlapping Southeast Blueprint Inputs..... 5
 - Changes to Integration Rules..... 5
 - Changes to Inputs Used in Specific Overlap Zones..... 6
 - Other Miscellaneous Changes..... 7
 - Changes to Connectivity Layer 7
 - Changes to Input Areas Layer 7
- Southeast Blueprint v3.0 9
 - Changes to Subregional Inputs 9
 - New Inputs Added 9
 - Changes to Complementary Data Layers..... 9
 - Other Miscellaneous Changes..... 9
- Southeast Blueprint v2.0 10
 - Changes to Subregional Inputs 10
 - New Inputs..... 10
 - Changes and Updates to Inputs 10
- Southeast Blueprint v1.0 11

What is a Changelog?

Changelogs are commonly used in software development. According to the [Keep a Changelog project](#), a changelog contains “a curated, chronologically ordered list of notable changes for each version of a project.” Changelogs make it easier for both project users and project contributors to see what notable changes have been made between each version. When something changes, people often want to know both why and how. Here, we’re applying these principles to the Southeast Blueprint.

The Evolution of the Southeast Blueprint

As a living spatial plan, the Southeast Blueprint has evolved over time through an iterative revision process, improving its accuracy, spatial resolution, and utility to conservation professionals. This changelog is intended to capture the changes made to the Southeast Blueprint since the first version was released in December 2016.

Southeast Blueprint 2020

Version 2020 of the Southeast Blueprint was released at the October 2020 SEAFWA virtual annual meeting. At the highest level, significant improvements over the previous versions include:

- Major improvements to the inland area covered by the South Atlantic Blueprint, including finer resolution and a more connected network of priorities.
- Improvements to the area covered by the Middle Southeast Blueprint, including updated data and an approach to overall prioritization that will make comparisons across the Southeast more consistent.
- Better integration in areas where the South Atlantic Blueprint overlaps with the Florida Blueprint and with Nature's Network.

Changes to Subregional Inputs

Florida Blueprint 1.3, Florida Marine Blueprint 1.0, Gulf Hypoxia Precision Conservation Blueprint v1.5, the Appalachian NatureScape Design and The Nature Conservancy's Resilient and Connected Landscapes "Prioritized Network" layer, Nature's Network, the Caribbean Landscape Conservation Design, Oklahoma CHAT, and Texas CHAT remain unchanged from Southeast Blueprint 4.0. The following subregional inputs did change in Southeast Blueprint 2020.

Changes and Updates to Inputs

South Atlantic Blueprint 2020

An updated version of the South Atlantic Blueprint was used. This version is named South Atlantic Blueprint 2020. South Atlantic Blueprint uses a finer spatial resolution, improved modeling approach, and improved data for many indicators.

Middle Southeast Blueprint 2020

An updated version of the Middle Southeast Blueprint was used. Note: This input has been previously been referred to as the Middle South Blueprint and Gulf Coastal Plains & Ozarks (GCPO) Blueprint; the name has now changed to Middle Southeast. The 2020 Middle Southeast Blueprint includes minor improvements to the underlying species index, conservation hubs (partnership focal areas) layer, and risk index; it also prioritizes the species index, habitat index, and conservation hubs more highly in the final Blueprint. The Middle Southeast Blueprint was also spatially rebalanced this year within the smaller extent where the Middle Southeast Blueprint is used as an input.

Integration of Overlapping Southeast Blueprint Inputs

Changes to Inputs Used in Specific Overlap Zones

While the integration rules themselves remained the same as those used in Blueprint 4.0, the application of those rules resulted in different inputs being used in specific overlap zones.

Plans used in the following overlap zones changed this year:

- The zone in KY, TN, and AL where the Middle Southeast Blueprint and Appalachian NatureScape Design overlap: both plans were used this year, while only the Middle Southeast Blueprint was used in the previous version.
- The zone in AL, GA, NC, and SC where the South Atlantic Blueprint and Appalachian NatureScape Design overlap: only the App was used this year, while only the South Atlantic was used last year. Note: this overlap zone is much larger this year because the South Atlantic Blueprint was expanded to cover a larger buffer area.
- The zone in GA and AL where the Middle Southeast Blueprint and South Atlantic Blueprint overlap: both plans were used this year, while only the South Atlantic Blueprint was used in the previous version.
- The zone in the westernmost panhandle of Florida where the Florida Blueprint and Middle Southeast Blueprint overlap: both plans were used this year, while only the Florida Blueprint was used last year.

For comparison, plans used in the following overlap zones remained the same this year:

- The zone in MO where the Middle Southeast Blueprint and Gulf Hypoxia Blueprint overlap: both plans continued to be used.
- The zone in VA where the South Atlantic Blueprint and Nature's Network overlap: both plans continued to be used.
- The zone in the Big Bend of FL where the South Atlantic Blueprint and Florida Blueprint overlap: both plans continued to be used.
- The zone in the Big Bend of FL where the South Atlantic Blueprint, Florida Blueprint, and Middle Southeast Blueprint overlap: all three plans continued to be used.

Changes to Input Areas Layer

The input areas layer was updated to reflect the extents of the updated inputs to the Blueprint, as well as the inputs used in the overlap zones.

Changes to Connectivity Layer

The connectivity layer incorporated updated hubs and connectors for the South Atlantic subregion.

Southeast Blueprint v4.0

Version 4.0 of the Southeast Blueprint was released at the October 2019 SEAFWA annual meeting. At the highest level, significant improvements over the previous versions include: corrected overprioritization in Texas, Oklahoma, and the mountains of West Virginia and Virginia; improved priorities in the Lower Mississippi Valley, Louisiana marshes, and the Southern Appalachians; updated inputs from Florida and the Middle South subregion; expanded marine coverage to include state and federal waters around Florida; and expanded hubs and corridors that now cover all of Florida.

Changes to Subregional Inputs

South Atlantic Blueprint 2.2, Nature's Network, the Caribbean Landscape Conservation Design, and the Oklahoma CHAT remain unchanged from Southeast Blueprint 3.0. The following subregional inputs did change in Blueprint 4.0.

New Inputs Added

Florida Marine Blueprint

A new marine Blueprint for Florida was added as an input. This is the first marine Blueprint for this area, so it is named Florida Marine Blueprint 1.0.

Inputs Removed

The Gulf Coast Prairie (GCP) Blueprint 1.0

The Gulf Coast Prairie Blueprint is no longer used in Version 4.0 of the Southeast Blueprint. With the expansion of the Middle South (former GCPO) Blueprint to cover all of Louisiana, the GCP subregion is entirely captured by other Blueprint inputs. There is currently no process identified to update the GCP Blueprint long-term. The integration rules chosen by the expert teams that reviewed the Texas/Oklahoma and Gulf of Mexico overlap areas chose to exclude the GCP Blueprint and use only the Crucial Habitat Assessment Tool (CHAT) and Middle South Blueprint.

Changes and Updates to Inputs

Florida Blueprint

An updated version of the Florida Blueprint was used. This version is named Florida Blueprint 1.3.

The Appalachian NatureScape Design

We continue to use data from the Phase II Appalachian NatureScape Design. Because NatureScape does not cover enough of the landscape to be consistent with the other inputs, we augment it with

another prioritization. In Blueprint 4.0, we augmented the NatureScape design with The Nature Conservancy's Resilient and Connected Landscapes "Prioritized Network" layer instead of the NatureScape Phase I Species Richness layer that was used in 3.0. This newly available layer does a better job identifying biodiversity hotspots that will be resilient to climate change and, unlike the species richness layer, all the underlying information is also publicly available.

Middle South Blueprint (previously called the Gulf Coastal Plains and Ozarks, or GCPO, Blueprint)

The new Middle South Blueprint is an updated, expanded, and renamed version of the Gulf Coastal Plains and Ozarks (GCPO) Blueprint. It now covers the entire state of Louisiana and has significantly improved priorities in the Lower Mississippi Valley and the marshes of Louisiana.

Gulf Hypoxia Precision Conservation Blueprint v1.5

We continue to use data from the Gulf Hypoxia Precision Conservation Blueprint v1.5 Sum - Conservation and Watershed Interests (2016) layer. In version 3.0 of the Southeast Blueprint, scores of 5-7 were defined as "high", accidentally omitting scores of 8. This error has been corrected in Version 4.0 of the Southeast Blueprint, and high is now defined as scores of 5-8. Medium remains unchanged and is still defined as a score of 4.

The Crucial Habitat Assessment Tool for Texas

We continue to use data from the CHAT to cover both Texas and Oklahoma. While the Oklahoma CHAT input to Southeast Blueprint 4.0 remains unchanged, we changed our approach to spatially rebalancing the Texas CHAT input to the Southeast Blueprint to address issues with overprioritization. In Version 3.0 of the Southeast Blueprint, scores of 1 and 2 on the combined CHAT rank were defined as high, and scores of 3 were defined as medium. This approach continues to work well in Oklahoma, but in Texas, this prioritized too much of the landscape as high (more than the 30% intended). In the Version 4.0 Texas CHAT input, "high" includes CHAT rank 1 and only a subset of CHAT rank 2 with high terrestrial and aquatic scores (aquatic 2 & terrestrial 2, aquatic 2 & terrestrial 3, aquatic 3 & terrestrial 2). "Medium" is defined as the remainder of CHAT rank 2 with lower terrestrial and aquatic scores. CHAT rank 3 is no longer prioritized in the Texas CHAT input to Southeast Blueprint 4.0.

Integration of Overlapping Southeast Blueprint Inputs

Changes to Integration Rules

We use integration rules to define how Blueprint priorities are determined in areas where multiple subregional inputs overlap. Several changes were made to these integration rules in Southeast Blueprint 4.0.

In Southeast Blueprint 3.0, if an area was a priority in any of the inputs, it was included in the final Blueprint. If two inputs disagreed on whether an area should be medium or high value, we used the score from the most mature plan (the input that has been in development the longest) to favor the most well-established plans. This rule resulted in overlap areas that were overprioritized, with much more than 50% of the landscape included in the final Southeast Blueprint. We expect some overlap areas to slightly exceed the 50% target for subregional inputs due to the conservation importance of some of these areas. In some cases, however, more than 90% of the overlap area was prioritized.

To reduce overprioritization and confusion about what drives the Blueprint priorities, we instead only included more than one input in an overlap zone if known Blueprint uses had occurred using the input in that overlap zone. If no known Blueprint uses had occurred for any of the inputs, we included only the most well-established input. Teams of local experts reviewed the spatial results of the integration rules and approved the final approach. These improved methods massively reduced the amount of overprioritization. For example, in the West Virginia and northern Virginia overlap zone, the percentage of the landscape prioritized in the Blueprint decreased from 80% to 55%.

Changes to Inputs Used in Specific Overlap Zones

The new broad integration rules resulted in different plans being used in specific overlap zones. The treatment of overlap zones in Southern Virginia and Southern Missouri are the only overlap zones that did not change in Blueprint 4.0. Southern Virginia still uses both South Atlantic and Nature's Network inputs where those plans overlap.

Similarly, Southern Missouri still uses both the Middle South and Gulf Hypoxia where both plans overlap. However, while continuing to use the Gulf Hypoxia Blueprint across the full state of Missouri in Southeast Blueprint 4.0 does not reflect a change in methodology, this does reflect a change in approach. In Southeast Blueprint 3.0, using the Gulf Hypoxia Blueprint statewide was an error; it was not intended to be used in the overlap zone with the Gulf Coastal Plains and Ozarks Blueprint, but only to fill the gap in northern Missouri not covered by any other inputs. In Blueprint 4.0, the Gulf Hypoxia Blueprint is used statewide because there are use cases for that plan in the overlap zone with the Middle South Blueprint.

The approach to the following overlap zones did change in Southeast Blueprint 4.0:

- The panhandle of Florida now uses only the South Atlantic and Florida Blueprints where those plans overlap. The Middle South Blueprint is no longer used where it overlaps with the Florida Blueprint.
- Eastern Alabama/Southwest Georgia now only uses the South Atlantic Blueprint. The Middle South Blueprint is no longer used where it overlaps with the South Atlantic Blueprint.
- The Louisiana coast now only uses the Middle South Blueprint. Now that the Middle South Blueprint has expanded to cover the entire state of Louisiana, the Gulf Coast Prairie Blueprint is no longer used where it overlaps with the Middle South Blueprint.

- West Virginia and Northern Virginia now only uses the Nature’s Network Blueprint. The Appalachian NatureScape design is no longer used where it overlaps with Nature’s Network.
- Eastern Texas now only uses the Texas CHAT. The Middle South and Gulf Coast Prairie Blueprints are no longer used where they overlap with the Texas CHAT.
- Eastern Oklahoma now only uses the Oklahoma CHAT. The Middle South and Gulf Coast Prairie Blueprints are no longer used where they overlap with the Oklahoma CHAT.

Other Miscellaneous Changes

Because we no longer use a universal integration rule for the CHAT, and instead use different integration rules for Texas and Oklahoma, we no longer include the CHAT for other states when merging together the Southeast Blueprint before it is clipped down to the SECAS geography.

Changes to Connectivity Layer

The connectivity layer for Blueprint 4.0 incorporated new hubs and connectors data from the improved Florida Blueprint 1.3. Because “connectors/connections” was the most commonly used word, rather than “corridors”, this layer was renamed “hubs and connectors” rather than “hubs and corridors”.

Changes to Input Areas Layer

The input areas layer was updated to reflect the extents of the updated inputs to the Blueprint, as well as the improved approaches for dealing with multiple inputs in overlap zones. Since overprioritization is no longer a significant problem in these overlap zones, this layer was renamed simply “input areas” instead of “input and overlap areas”.

We added some new fields in the attribute table to help communicate how inputs were used in creating the Blueprint 4.0. We now have a field named “InputsUsedIn_4_0”, which lists the inputs that were actually used in each area to create Southeast Blueprint 4.0. This is in addition to the “InputExtents” field, which shows the full extent of each input area, but does not reflect whether the input was used in the Southeast Blueprint in that area. In Blueprint 3.0, we had a different field called “SEBlueprintInputAll,” which served both purposes, because the old integration rules used each input wherever it occurred.

In addition, we changed the default display for the input areas layer to show where each subregional input is used in Blueprint 4.0, rather than the full extent of each subregional input. The attributes of this layer can still be used to show the full extent of each subregional input, but that is no longer the primary function of this layer since issues with overprioritization in overlap zones have now been mostly resolved. The input areas layer is now primarily intended to serve as a resource for

determining which of the subregional Blueprint inputs covers a particular area of interest, providing a roadmap for where to look for more detailed information.

We've done our best with the following section, but keep in mind it does not represent an exhaustive list of every single change in every past version of the Blueprint. It contains all the changes we documented and were able to recall. The list is more comprehensive with more recent versions as Blueprint documentation improved over time and staff memories were fresher. In other words, we're almost certainly missing a few things, but this should be pretty close! It's always easier to maintain a thorough record moving forward than it is to try to reconstruct the past.

Southeast Blueprint v3.0

Version 3.0 of the Southeast Blueprint was first introduced at the October 2018 SEAFWA annual meeting, and officially released in February 2019. At the highest level, significant improvements over the previous versions include: full coverage of Texas, integrated threat layers covering the full Southeast, and the addition of a hubs and corridors layer covering part of the region.

Changes to Subregional Inputs

New Inputs Added

The Crucial Habitat Assessment Tool for Texas

The CHAT was expanded to Texas and incorporated into Southeast Blueprint 3.0. This filled in a gap in priorities in Western Texas and ensured complete coverage of all SEAFWA states.

Changes to Complementary Data Layers

Several new complementary data layers were developed and added to the Blueprint data gallery:

- A new layer depicting Blueprint input and overlap areas
- An integrated connectivity layer that combined hubs and corridors for the South Atlantic and Appalachian subregions
- Threats and land use change layers, including solar energy suitability, urban growth, and sea-level rise inundation

Other Miscellaneous Changes

We updated and improved the process of mosaicing together the various Blueprint inputs for better spatial accuracy. This included improving the methods we used to convert vector inputs to rasters and being more deliberate with methods for reprojecting and resampling raster inputs. This results in the Southeast Blueprint more closely aligned with its inputs.

Southeast Blueprint v2.0

Southeast Blueprint 2.0 was presented in October during the 2017 Southeastern Association of Fish and Wildlife Agencies' annual meeting, and officially released in November 2017. At the highest level, significant improvements over version 1.0 include improved consistency across LCC boundaries, improved consistency in climate change response, and improved integration beyond the Southeast.

Changes to Subregional Inputs

New Inputs

The Crucial Habitat Assessment Tool

Southeast Blueprint 2.0 brought in priorities from the Western Association of Fish and Wildlife Agencies' Crucial Habitat Assessment Tool (CHAT) to integrate beyond the Southeast (note: CHAT data for the state of Texas was not yet available for Blueprint 2.0).

Changes and Updates to Inputs

The Appalachian NatureScape Design

Southeast Blueprint 1.0 used the species richness layer from Phase I of NatureScape as the input for the Appalachian subregion. Blueprint 2.0 used the updated Phase II NatureScape design. Because the Phase II design did not cover enough of the landscape to be consistent with the other inputs, we augmented it with the same Phase I species richness layer used in 1.0. The Phase II NatureScape design is a connectivity-driven plan, so this added an important connectivity component to the Southeast Blueprint.

Southeast Blueprint v1.0

Southeast Blueprint 1.0 was presented in October during the 2016 Southeastern Association of Fish and Wildlife Agencies' annual meeting in Baton Rouge, Louisiana, and officially released in December 2016. This plan provided the first ever integration of spatial plans developed through the South Atlantic, Appalachian, Gulf Coastal Plains and Ozarks, Gulf Coast Prairie, North Atlantic, and Caribbean LCCs.