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**Project Title:** Selecting Climate Resilient Action Sites in the Central Appalachians

**Headline Title (2-5 words):** Central Appalachians Essential Forests and Key Connectors

**Brief Summary (Abstract**): Uncertainty about how species and habitats will respond to climate change and how conservationists will deal with the complex, interactive responses in a future climate change scenario is leading to paralysis in conservation decision-making and action. The Nature Conservancy's Central Appalachians Whole System Program is looking to overcome this paralysis by applying the Dr. Mark Anderson's science developed in "Resilient Sites for Terrestrial Conservation" to our conservation decision making. This work seeks to protect the ultimate drivers of biodiversity by focusing on the factors that underpin species richness and the long-term persistence of species and habitats across a landscape. The concept of "Saving the Stage," which seeks to map key geophysical settings and evaluate them for landscape characteristics that buffer against harmful climate impacts, makes it possible to identify the most resilient places in the landscape. Through this resiliency science, the Central Appalachians Whole System Program has developed a vision for the long-term conservation success of the region around which land managers can assess threats and impacts and provide for investment prioritization — even in the face of climate change uncertainty.

The Central Appalachians Whole System Program has used this Resiliency Analysis to design an "Essential Forests, Streams and Key Connectors" map to form our conservation vision of a dynamic landscape of connected, functional forests and rivers. Additionally, the Central Appalachians Program actively uses Dr. Anderson's resiliency science to shape and drive conservation investment within the region. The Central Appalachians Program is using the Essential Forests, Streams and Key Connectors vision and Dr. Anderson's resiliency science to help build partnerships with the U.S. Forest Service, U.S. Fish and Wildlife Service, Appalachian Landscape Conservation Cooperative, and Appalachian Mountain Joint Venture, as well as state governments, industries, and landowners.

**Project Location**: Central Appalachian Forests (PA, MD, WV, VA, KY, TN) See Map:

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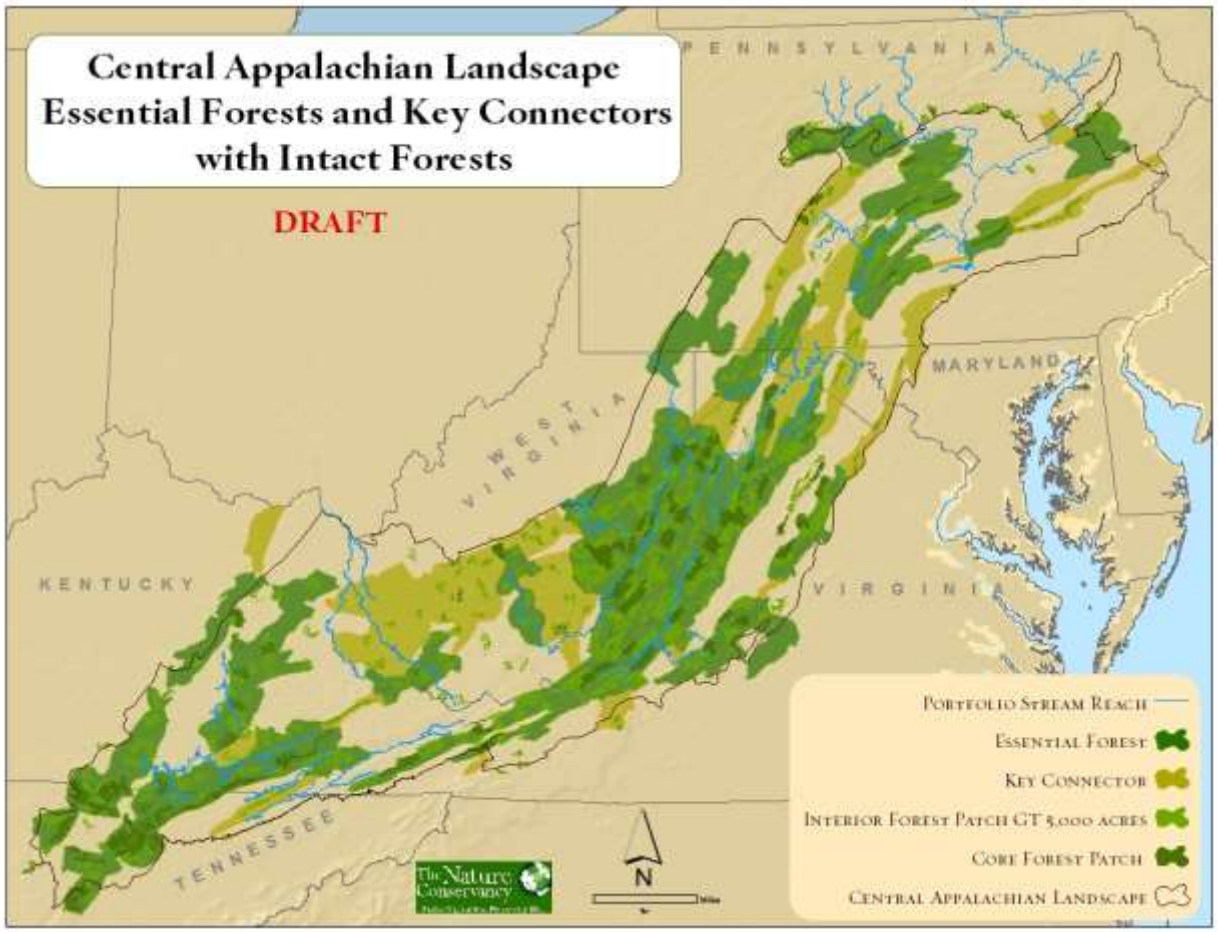


**Partners**: This project was designed and led by The Nature Conservancy's science staff across the Central Appalachian states of WV, PA, MD, VA, KY, and TN.

**Background:** To provide conservationists with a nuanced picture of the places where conservation is most likely to succeed under climate change, Anderson et al. (2012) completed a process to identify the most resilient examples of key geophysical settings, in relation to species of greatest conservation need.

The Central Appalachians Program has applied this science to develop an Essential Forests, Streams, and Key Connectors map. This map is being used to give context for how a particular place or project fits into the larger landscape, its relative role for protecting current biodiversity, and its relative role for ensuring future adaption in the face of climate change.

This map has helped us create a vision for conservation in the region. Applying resiliency science has helped us define the type of conservation work that should take place at any given site or management unit within the landscape. For example, if an area falls within an Essential Forest, it should be kept intact and managed for long term natural processes. If an area falls within a Key Connector between Essential Forests it is important to ensure that forest canopy remains as intact as possible, but many economic activities might be viable.

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**Project Goals:** Identify areas within the Central Appalachian Forests that can serve as climate change strongholds. Our goal is to use the Resiliency Analysis to inform conservation decision making at both the landscape and local scale.

**Strategy Goals Implemented**: The Central Appalachians Whole System Program has used the Resiliency Analysis to develop a finer-view "Essential Forests, Streams and Key Connectors" network map. We are using this map to drive our conservation vision and using the Resiliency Analysis to drive restoration and protection strategies.

**Climate Impacts Addressed**: Impacts on species and habitats.

**Status of Project Implementation (Timeline, Milestones, Next Steps):** Development of Essential Forests, Streams, and Key Connectors map is completed. We are presently working with partners across to region to export this vision of a connected, resilient landscape.

**Project Outcomes:** The ultimate conservation outcome of the Central Appalachians Whole System Program is to conserve a dynamic, functional, connected network of resilient forests and streams.

**Funding Sources:** The Nature Conservancy

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