

CONSERVING THE Appalachians

➤ Hope in a Changing Climate

▶ *From forested mountains to deep river valleys, the Appalachians harbor a remarkable variety of wildlife, cultures and communities.*
© Dylan Jones

▶ **In Maine, Butch** paddles his canoe along the Penobscot River, where his ancestors lived and fished for millennia. For nearly 200 years, dams on the river prevented native fish from returning to their spawning grounds, devastating the Penobscot Nation's fishing culture. Thanks to an innovative collaboration with dam owners and others, several dams have been removed, realizing Butch's lifelong dream.



▶ **In Pennsylvania, Susan and her granddaughter** explore their family's property, spotting bobcat dens and flocks of songbirds. Susan inherited the land, which has been passed down through generations, but her paycheck wouldn't stretch far enough to cover conservation practices that support biodiversity and carbon storage. Through the Family Forest Carbon Program, she gets paid to improve management of her land.



▶ **In South Carolina, Lindsay and Shawn** brew craft beers using high-quality freshwater sourced from the local watershed. Fire is an integral part of healthy watershed forests, and The Nature Conservancy helps Greenville use controlled burns to improve forest health and ensure a reliable water supply for over half a million people in the county.



What connects these people are the Appalachians

The Appalachians offer these opportunities—and many more—to tackle the intertwined climate and biodiversity crises while benefiting local communities and livelihoods.

▶ *Native fish thrive throughout the Appalachians, such as here in New Hampshire's Ammonoosuc River.*
© Jeff Lougee
Inset photos, top to bottom:
© Bridget Besaw, American Forest Foundation, Birds Fly South

► *Indigenous peoples have stewarded the Appalachians' lands and waters for millennia. © Dennis Oakley*

This ancient chain of forested mountains,

valleys, wetlands and rivers—which stretches 2,000 miles from Alabama to Canada's Maritime Provinces—nurtures a rich variety of wildlife, cultures and communities.

The Appalachians' varied terrain, diverse soil characteristics and microclimates enable animals and plants to shift habitats as the climate changes. These landscapes also provide clean drinking water for at least 22 million people and store significant amounts of carbon, reducing the volume of planet-warming carbon dioxide in the atmosphere.

However, these irreplaceable landscapes face growing threats from climate change, mining, poorly planned development, and outdated dams and culverts that fragment wildlife habitat, imperiling many species' very existence. Many local communities, long excluded from decisions about the region's rich landscapes and natural resources, also confront uncertain economic futures as the world transitions away from fossil fuels and climate change drives erratic weather and flooding.



The vast Appalachian region

© David Fox

The Nature Conservancy envisions a future where the people, plants and animals of the Appalachians have the freedom and capacity to adapt and thrive in a changing world. Where moose, elk and bobcat forage across huge, connected ranges, and native trout dart through fresh, free-flowing mountain streams. Where people can choose from a range of sustainable jobs and feel deeply connected by their love and enjoyment of this incredible landscape. And where people around the world benefit from the carbon the Appalachians store and the water and clean energy the region provides.

THE CHALLENGE

Nature's Highway

This map shows the projected movement of mammals, birds and amphibians as they shift their ranges to adapt to climate change. It highlights the importance of the Appalachians as a virtual superhighway for nature.

© Dan Majka/TNC

We must work at a continental scale, finding bold new ways to collaborate to find equitable solutions.

Recognizing the threats and opportunities this region faces, The Nature Conservancy (TNC) has identified the Appalachians as one of the most globally important landscapes for tackling climate change and conserving biodiversity—along with the Amazon, Kenya and Kalimantan in Indonesia.

To address the challenges facing the Appalachians, TNC is advancing solutions in three interrelated areas:

CONNECTIVITY: Create a 2,000-mile connected network of resilient lands and waters—a biodiversity superhighway enabling plants and animals to adapt to a changing climate

CLIMATE: Protect and manage forests to store significant amounts of carbon, and accelerate the transition to well-sited renewable energy

COMMUNITIES: Support resilient communities with sustainable livelihoods and strong connections to the region's incredible natural landscapes

As the only environmental organization with staff living and working across the Appalachians, TNC is uniquely positioned to partner with a wide range of communities, governments and businesses to conserve this globally valuable landscape.

By working together on connectivity, climate and community solutions, we can simultaneously conserve vital wildlife habitat, reduce greenhouse gas emissions, build resilience to the impacts of climate change and generate new job and recreation opportunities. And by coordinating our efforts from Quebec to Alabama, we will focus on the highest-impact opportunities and allocate resources where they are most needed, as outlined in the following pages.

We are at an extraordinary time in history. This is the deciding decade to address the existential threats of climate change and biodiversity loss and build the future we envision.



Connectivity

TNC has been conserving vital Appalachian habitats for decades. Now we must ramp up our efforts, coordinating them across the Appalachians to stitch together a virtual superhighway for nature—a continental-scale network of connected, resilient lands and waters where animals and plants can move as the climate warms.

To expand our impact, we will:

- ▶ **Protect and connect vital lands and waters**, leveraging public funding and innovative financing to lead outsized deals, connect key corridors and widen choke points
- ▶ **Remove barriers**, such as poorly designed culverts and dams, and restore stream banks to enable fish and other wildlife to move and shift their ranges
- ▶ **Improve management of public and private lands** by working with landowners to restore healthy forests, conduct controlled burns and adopt other climate-smart practices



▶ *In the Cumberland Gap area along the border of Kentucky and Tennessee, TNC is conserving an important migration route, enabling animals and plants to shift their ranges to cooler climates.*
© Cameron Davidson
Inset photos, top to bottom:
© Jeff Wendorff, © Jerry and Marcy Monkman/
EcoPhotography, Jeff Lougee



Climate

► TNC conserves and restores forests in the Canaan Valley, West Virginia, that store carbon and provide a resilient stronghold for people and wildlife. © Kent Mason
Inset photos, top to bottom:
© Patrick Cavan Brown,
Eric Aldrich

Based on our decades of science and conservation experience, TNC has identified two strategies where we believe we can have the greatest impact on climate change in the Appalachians.

To expand our impact, we will:

► **Scale up natural climate solutions** (protection, restoration and improved management of lands to enable them to absorb and store more carbon), such as by restoring degraded forests and enabling family forest owners to earn carbon revenue for adopting improved forestry practices



► **Accelerate renewable energy development** by identifying areas, such as former mine sites and other already degraded lands, where projects can be developed with minimal impacts on nature and greater benefits for people and local economies—thus reducing conflicts and delays





Communities

Conservation success depends on not only landscape diversity and connectivity, but also social and cultural diversity and connections. TNC is investing the time and resources needed to cultivate trusted, inclusive relationships with local communities, Indigenous partners and grassroots leaders.

Together we will:

▶ **Reduce flooding risk and enhance freshwater sources** by restoring watersheds, rivers and floodplains



▶ **Expand economic opportunities**, such as by siting renewable energy on former mine lands and facilitating grants and training for jobs in clean energy, land management and restoration, outdoor recreation and tourism



▶ **Improve local access** to natural areas and outdoor activities, and support communities seeking public funding



▶ *More than 100 million people live within a two-hour drive of the Appalachians, including residents of five cities with populations of more than a million. © Mike Wilkinson*
Inset photos, top to bottom:
© Eric Aldrich/TNC, Carlton Ward, Jr., Oliver Starks



➤ CONNECTIVITY, CLIMATE AND COMMUNITIES:

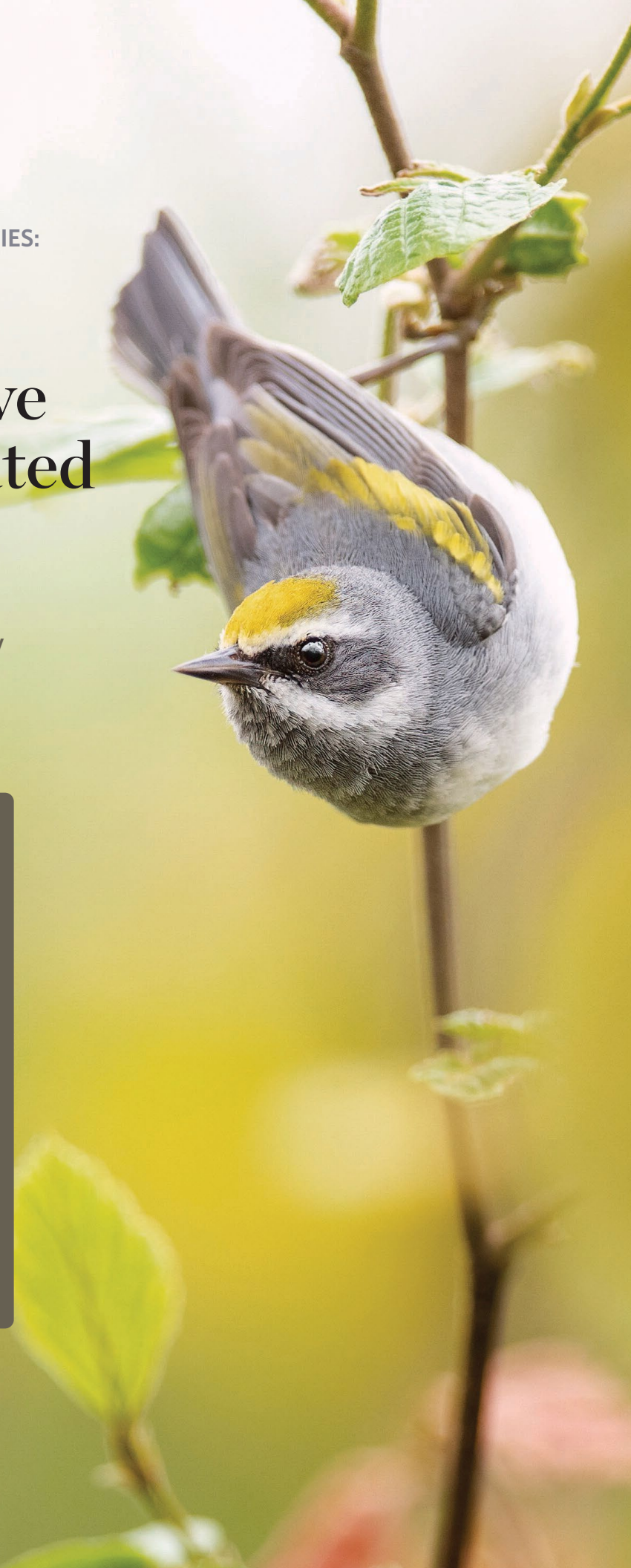
Our solutions are designed to achieve multiple interrelated benefits.

For example, by siting renewable energy projects on already degraded lands, we can simultaneously speed the transition to clean energy, reduce greenhouse gas emissions, conserve vital wildlife habitat and generate new job opportunities.

To escalate our impact in all three areas, we will:

- ▶ **Forge relationships** based on mutual support and trust, knowing that enduring conservation success depends on the active involvement of people whose lives and livelihoods are linked to the natural world we seek to conserve
- ▶ **Tap new sources of public funding** and advance supportive policies and incentives, such as by forming an Appalachians Congressional Caucus
- ▶ **Elevate the voices** and decisions of historically disempowered communities, including those who were forcibly resettled or excluded
- ▶ **Build internal and external capacity** to care for Appalachian landscapes to safeguard plants and animals, address the changing climate, and provide economic and recreational benefits

▶ *The Appalachians harbor a spectacular diversity of life, from moose, elk, bears and flying squirrels to golden-winged warblers, pileated woodpeckers, hundreds of fish species and 22 salamanders found nowhere else. © Scott Keyes*



► *The Appalachians offer tremendous opportunities for outdoor recreation, ecotourism and greater local access to nature, such as here in Clinch Valley, Virginia. © Travis Dove*

Our **2030** goals for the Appalachians include:

- **18 million acres**
of protected and sustainably managed lands
- **5,200 miles**
of rivers protected and reconnected
- **250 million metric tons**
of additional carbon sequestered

By working with diverse partners, we can achieve tremendous impact—measured not just in the number of acres protected, but in the scale of the newly connected landscape and the many plants and animals flourishing across the region. Measured not just in the tons of carbon stored, but also in the enhanced health of forests and freshwater throughout the Appalachians. Demonstrated not just by the number of jobs created, but by the ways Appalachian communities come together to support a mix of thriving businesses and enjoy the stunning lands and waters that are their home.



PLEASE JOIN US

► The Appalachians offer hope for wildlife, plants and people to adapt and thrive in a changing climate.
© Scott Suriano

The Appalachians are a global treasure humanity cannot afford to lose.

We all benefit from the water and clean energy the Appalachians provide and the carbon the region stores. We must act now to protect and restore the region's irreplaceable wildlife habitat, diverse species and remarkable climate, recreation and economic opportunities.

The decisions we make over the next decade will forever alter the future of the Appalachians and the millions of people who depend on their natural bounty. TNC has the credibility, partnerships, science and innovative field experience to enable people and nature to thrive throughout the Appalachians for generations to come. Your support is what makes this work possible.

To learn more about how you can contribute to Appalachian solutions, please contact:

Meredeth Winter
meredeth_winter@tnc.org

Greg Edwards
gedwards@tnc.org

The Nature Conservancy 



► In addition to conserving stunning natural vistas, your support will enable the Appalachians to be a beacon of hope and effective action to improve connectivity, address climate change and support thriving communities. © Kent Mason



The Nature Conservancy urgently needs to raise funding for four cornerstone strategies to effect transformational change for **connectivity, climate and communities:**

2023—2030

PRIVATE GIVING

1 Protect climate-resilient lands and waters

Stitch together working lands and protected areas into a continental-scale network of connected, resilient open spaces where species can move and thrive in a changing climate

\$150M

2 Improve land and water management

Remove barriers and reconnect rivers from headwaters to the ocean; enhance forest health through restoration, replanting, controlled burns and sustainable management on public and private lands

\$100M

3 Sequester carbon and accelerate renewable energy

Build living carbon reserves and expand access to carbon markets; support renewable energy deployment and guide its placement to avoid resilient lands and waters

\$50M

4 Support communities

Center communities and Indigenous peoples in efforts to reduce impacts from floods, diversify environmentally sustainable economic opportunities, increase access to lands, and promote local rights and decision making

\$50M

Once raised, private gifts will unlock hundreds of millions in public funding.