

2021

IMPACT
REPORT

CUMBERLAND FOREST

natureVest™

The Nature
Conservancy 

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All statements in this Impact Report other than historical facts are forward-looking statements, which rely on a number of estimates, projections and assumptions concerning future events. Such statements are also subject to a number of uncertainties and factors outside TNC's control. Such factors include, but are not limited to, uncertainty regarding and changes in global economic or market conditions, including those affecting industries related to the material presented in this Impact Report, and changes in US or foreign government policies, laws, regulations and practices. Opinions expressed are current opinions as of the date of this Impact Report. Should estimates, projections and assumptions or these other uncertainties and factors materialize in unexpected ways, actual results could differ materially from the forward-looking statements in this Impact Report. While the assumptions underlying these forward-looking statements may be reasonable under current circumstances, readers should bear in mind that such assumptions are inherently uncertain and subjective, and that past or projected performance is not necessarily indicative of future results. No representation or warranty, express or implied, is made as to the accuracy or completeness of the information contained in this Impact Report, and nothing shall be relied upon as a promise or representation as to the performance of any investment in Cumberland Forest, LP.





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INTRODUCTION

The Cumberland Forest Project is an impact investment fund formed in 2018 to acquire and operate 253,000 acres of working forest land in the Central Appalachians. Backed by private investors, the Project seeks to provide positive conservation, community, and financial returns. The Project comprises two properties known as Ataya, located in Kentucky and Tennessee, and Highlands, located in Virginia that together represent one of TNC's largest conservation projects in the eastern United States. This report provides a summary of the conservation and community impacts delivered by the Project across its entire portfolio in 2021.

Greg Meade
*Director, Cumberland
Forest Project,
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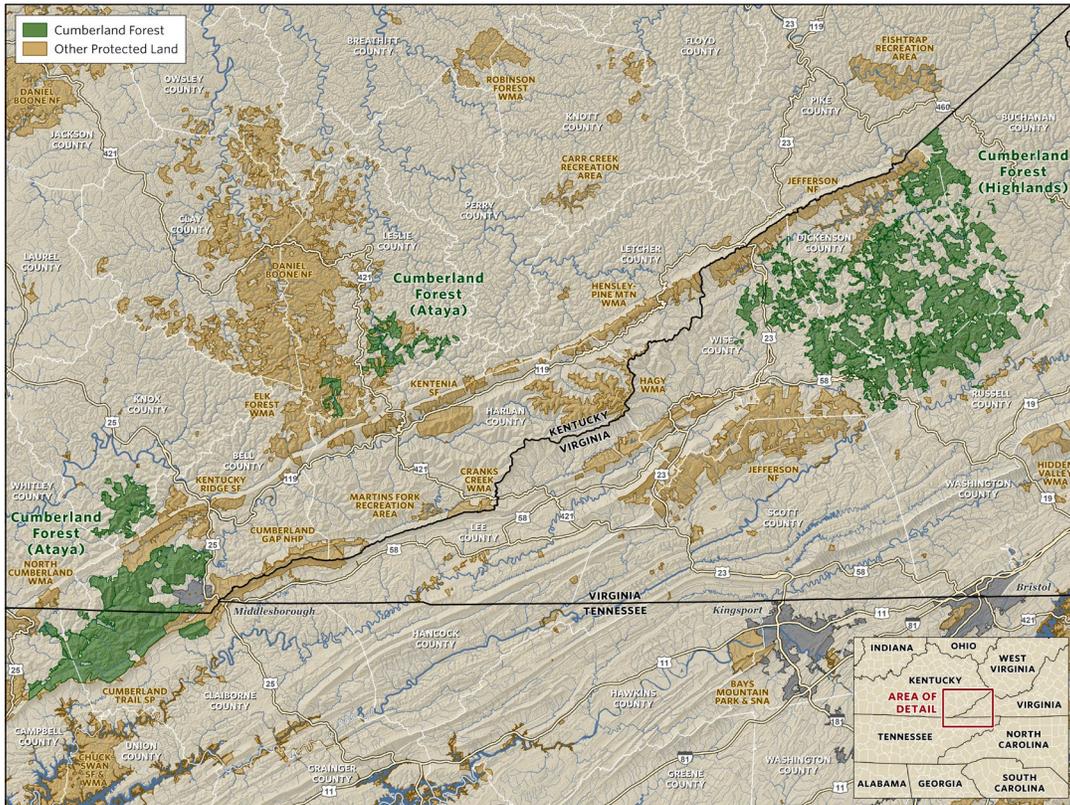


FIGURE 1. Map of Portfolio and Adjacent Protected Areas

In the following pages, we take stock of the Project’s progress towards long-term impact goals related to sustainable forest management, long-term protection, climate mitigation, recreational access, and local economic development. Data related to the physical attributes of the properties have been collected by The Nature Conservancy (TNC). We have used publicly available data where possible.

In this third year of operations, the Project continued to make meaningful progress towards several goals across all targeted areas. These include:

- » Successful placement of a public access conservation easement on 43,000 acres of Ataya property located in Tennessee
- » Management of the properties in accordance with the Forest Stewardship Council® FSC®-C008922 principles and criteria
- » Reaching cumulative carbon sequestration of 3.32 million metric tons of carbon dioxide equivalent (tCO₂e), verified through the California Air Resources Board
- » Execution of two solar energy development option agreements with Sun Tribe and Dominion Energy to pursue up to 89MW of solar power installations on 706 acres of former mine lands

» Through our community non-profit partners, provided funding to 16 projects to advance local environmentally sustainable economic development

In the report that follows, additional details and metrics are provided to aid in tracking progress over time. We also include qualitative updates from the field regarding the impact of the Project’s ownership and operation of the properties on the local environment and adjacent communities.

We also wish to acknowledge, with respect, that the land currently being managed is the traditional and ancestral homelands of the Cherokee, Shawnee, and Yuchi Nations and peoples. These areas are also historical sites of trade, gathering, and healing for numerous other Native tribes. We respectfully acknowledge, recognize, and affirm these Indigenous peoples as the original stewards of this landscape and all relatives within, and pay respects and gratitude to their elders and management, past and present.

It is our privilege to manage these assets, to the benefit of people and nature, and we hope everyone finds this report both informative and inspiring. We thank the fund’s investors and other supporters who are making these positive impacts on the environment and local communities possible.

PROTECTION

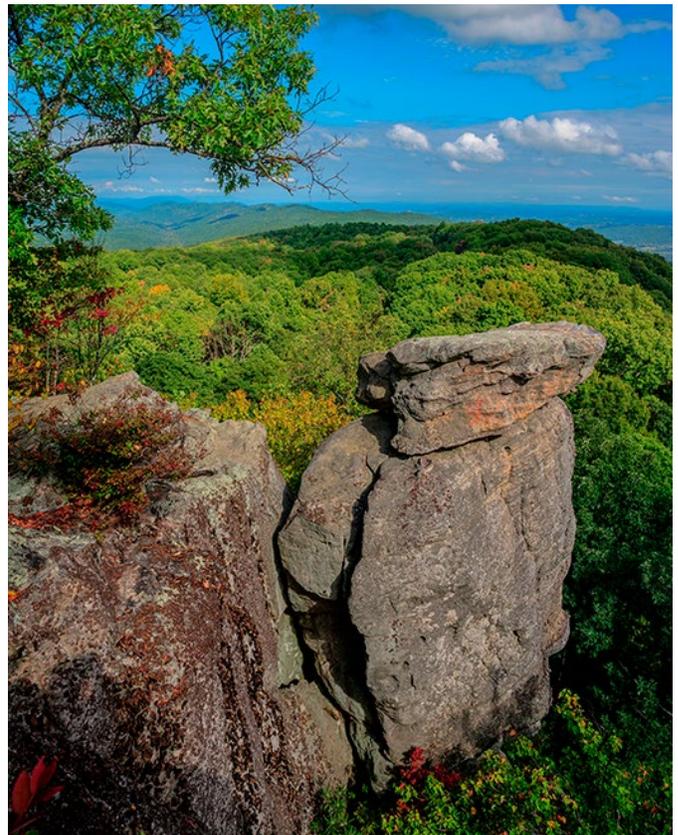
The Central Appalachian region spans six states and, at more than 50,000 square miles, is a globally significant biodiversity hotspot, a major North American migratory corridor, and home to a network of watersheds vital to both people and nature. The Project’s properties provide connectivity to federal, state and other protected lands (Figure 1, page 3) that scientists believe can help promote climate resilience through “escape routes” as plant and animal species shift their ranges to cooler climates. One of the Project’s conservation goals is to protect as many environmentally significant areas as possible, while continuing to operate the properties for timber, carbon and other revenue. Protections on the properties have been and will continue to be accomplished through sales of conservation easements and fee land sales to public agencies, as well as the long-term forest management requirements associated with forest carbon projects.

As of 2021, we have secured permanent protection on 26% of the Project’s total acreage, as a result of two conservation easements. The first is a 22,856-acre open-space easement on the Russell County, Virginia portion of the Highlands Property, conveyed to the Virginia Department of Forestry in 2019. The second is a public access conservation easement that protects 42,766 acres of the Ataya property (Figure 2, page 5) located in Tennessee. The fund sold the latter easement to the Tennessee Wildlife Resources Agency (TWRA) in December of 2021. TWRA used funding from the State of Tennessee and the National Fish & Wildlife Foundation’s Acres for America program to purchase the easement to ensure public access to the property and permanent protection of 179 miles of streams, while allowing for continued sustainable forest management, maintaining private ownership, and contributing to the local economy. More information regarding the conservation easement can be found [HERE](#).

We worked this year to advance our protection strategy in Kentucky and Virginia as well. Our Kentucky staff continued to engage with key stakeholders to build support for a similar transaction on the Ataya property acreage in Kentucky. Support is growing and we are optimistic we will have positive news in the coming year. In Virginia, we are working to lease additional acreage on the Highlands property to the Virginia Wildlife Resources Agency, with an eye towards permanent agreements in the future.

In a separate transaction independent of the fund, TNC also arranged for the purchase of an 850-acre parcel known as the Asher Tract that provides connectivity between a smaller 2,636-acre outlier parcel owned by the fund and the main,

contiguous Ataya parcels as well as the Cumberland Gap National Historic Park. The Asher Tract, which TNC transferred to TWRA, creates an ecologically important connection between the properties and could provide an opportunity to further expand the conservation area in the future.



McLean Rock, Cumberland Forest Project, Tennessee © Byron Jorjorian

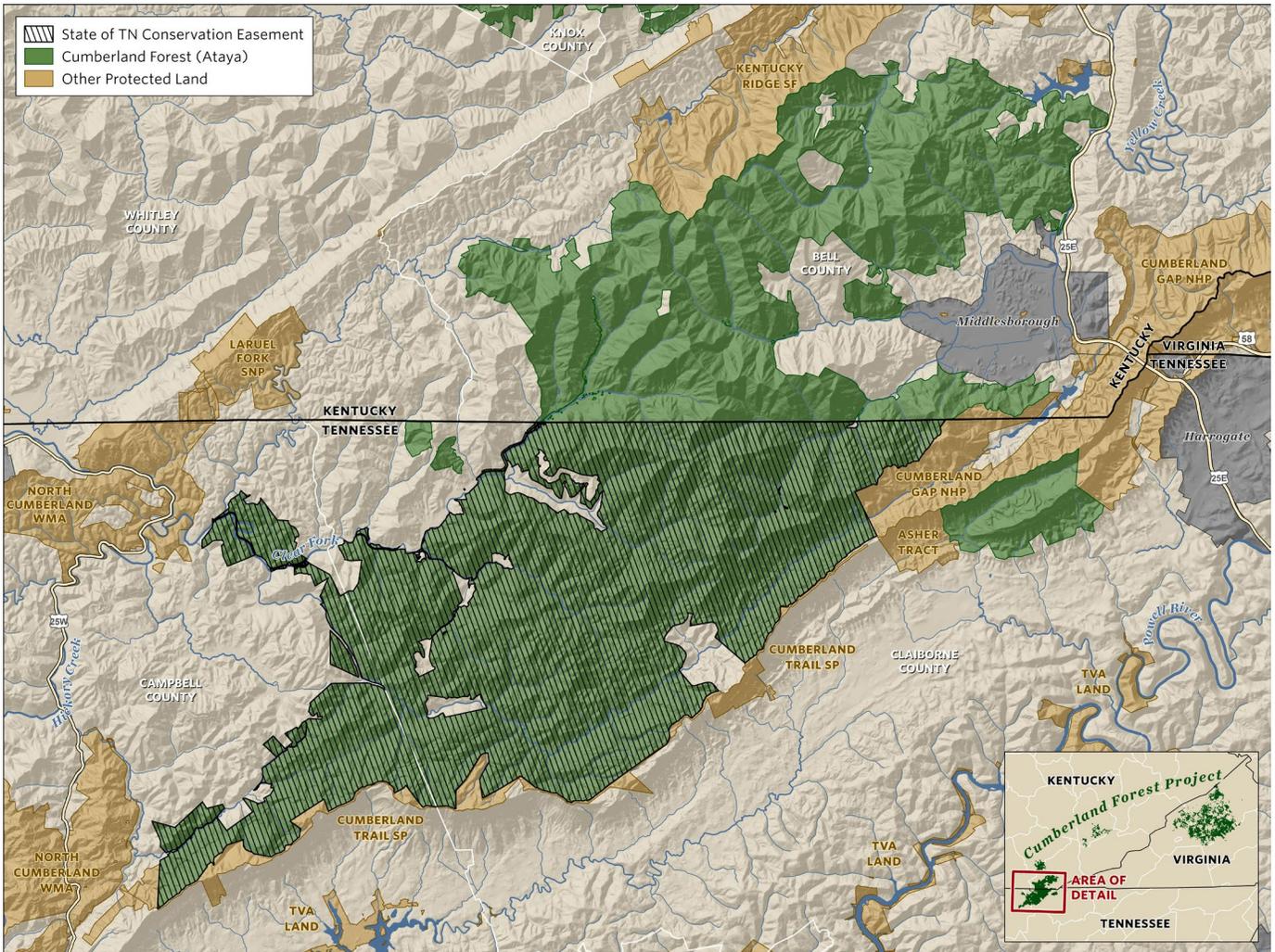
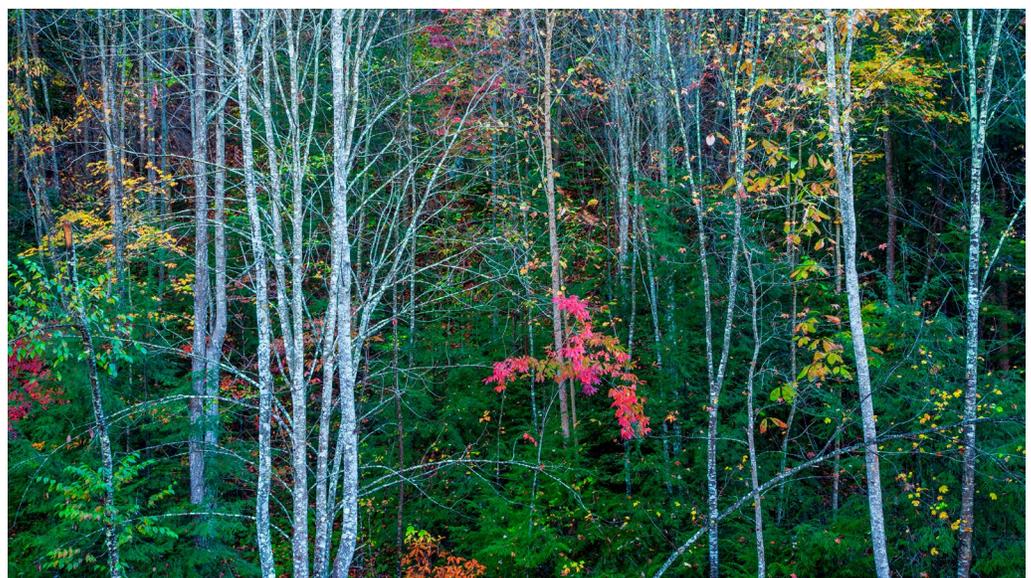


FIGURE 2. Map of TWRA Easement on the Ataya Property.

The 43,000-acre state-held conservation easement is the largest of its kind in Tennessee history.



Ataya Tract in Cumberland Forest Project, Tennessee © Byron Jorjorian

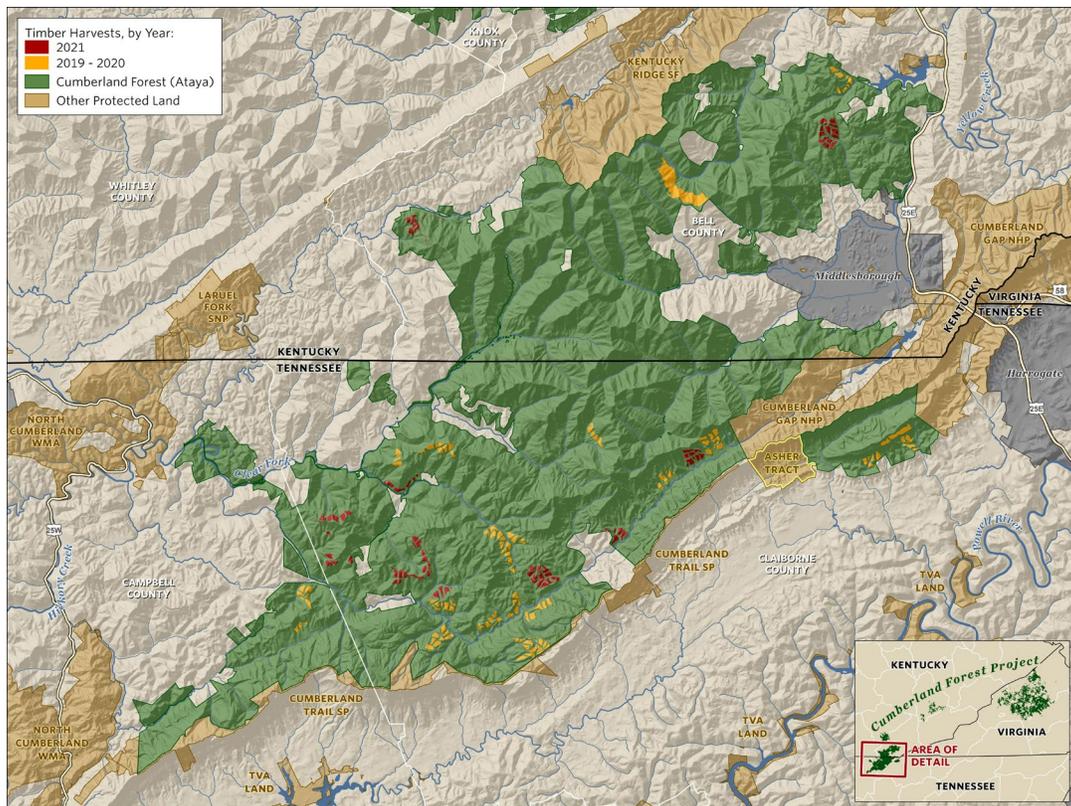
FORESTRY

The Project manages all properties under FSC® certification and has a goal of increasing timber stocking over time to both sequester carbon and improve the overall quality of the forest across the portfolio. This is achieved by carefully managing forest management operations, including harvesting, to support a healthy forest ecosystem and increased resilience.

During 2021, the Project continued FSC-certification on all of the forested acreage, completing the annual third-party audits in full conformance to FSC standards. This certification has been a significant achievement for sustainable forestry in each state, as the Project's land now represent 17% and 22% of the entire FSC certified acreage in the states of Kentucky and Tennessee respectively, and 66% of FSC certified acreage in Virginia. During 2021 we continue to recognize an increased demand for FSC certified timber. This is a direct recognition in the marketplace that timber produced in accordance with FSC standards is providing co-benefits above and beyond what typical forestry delivers.

The Project currently targets timber harvest rates of only 30% to 40% of natural growth, leading to a net increase in the properties' timber inventory. This approach is designed to provide resilient landscapes by creating diverse age class and ecosystem structures across the properties. In 2021, the Project conducted harvests on 994 acres, primarily as patch regeneration harvests. These harvests typically range in size from four to 10 acres and are separated by unharvested retention areas that supply seed sources, provide habitat connectivity and diversity, reduce visual impact on the landscape and protect water resources. Harvesting activities directly supported 65 jobs, including property management and logging crews working on the properties. Additional indirect jobs were supported in trucking, log yards and mills that are part of the forest products value chain.

FIGURE 3. Example of Harvest Treatment Areas



CLIMATE MITIGATION

The Project has an overall goal of sequestering 5 million tonnes of carbon dioxide equivalency (tCO₂e). During 2021, the forests within the properties sequestered more than 250,000 tCO₂e, bringing the cumulative total to 3.3 million tCO₂e, or 67% of the Project's long-term goal.

During 2021, carbon sequestration resulted from net growth of timber stocks as harvest rates were maintained below annual forest growth. The Project's carbon sequestration in 2021 is equivalent to taking more than 53,000 cars off the road for one year.¹

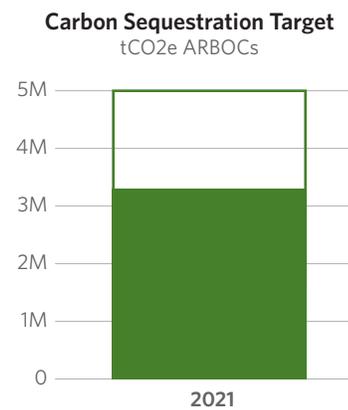
In addition to carbon sequestration, the Project continued to advance our work on climate mitigation through the announcement of seven utility scale solar projects with two collaborating companies for the installation and operation of solar panels on former surface mined lands currently owned by the fund. The seven selected sites cover approximately 700 acres of former mine lands on the Cumberland Forest, with additional neighboring lands also leased. Collectively, the projects have the potential for approximately 120 megawatts of solar generated power, enough to provide electricity to 22,800 homes.²

In May we announced our first solar development collaboration with Sun Tribe and Sol Systems across six projects on both the Highlands and Ataya properties. Sun Tribe, a Virginia-based company and Sol Systems, based in Washington D.C., were selected in part because of their shared and demonstrated commitment to community focused impact and results. Read more about this collaboration [HERE](#).

A second collaboration with Dominion Energy was announced in September with a planned 50-megawatt solar project on the Highlands Property (including lands on Cumberland Forest and neighboring properties). Dominion Energy has 7 million customers across 16 states and is the largest power provider in Virginia. Read more about the Dominion Energy Partnership [HERE](#).



Former mine lands in southwest Virginia © TNC



By steering solar development to former mine lands that have been highly degraded, the Project is seeking to set a high standard for avoiding and minimizing development impacts to higher-value forests. Well-sited renewable energy projects on non-forested, previously disturbed areas can help create positive outcomes such as clean energy and the creation of new local tax revenues while conserving the surrounding forests in support of clean water, wildlife, wood projects, carbon storage, and outdoor recreation. If successfully developed, these solar projects will be some of the first solar farms on abandoned mine lands in Appalachia, helping to launch a new chapter in the region's long history of providing domestic energy. The projects are expected to be in the pre-development phase until 2025, with construction and operation projected for 2026.

1 Based on EPA average vehicle greenhouse gas emissions data. As accessed on January 10, 2021: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results>

2 Calculation based on information provided by Solar Energy Industries Association: <https://www.seia.org/initiatives/whats-megawatt>

RECREATION

The Project seeks to expand recreational access on the property while at the same time minimizing the environmental impact of the recreation program. The Project pursues this goal by working with multiple partners including public agencies, private hunting clubs, local governments, and recreational authorities.

Public Access

The Project currently has two leases and one public access easement that provide public access to 50% (127,700 acres) of the fund’s holdings (Table 5). All hunting and fishing activities are regulated by state agencies, require appropriate permits, and fish and game law enforcement staff patrol the properties to ensure compliance with general laws and regulations.

In addition, the Project has a private hunting license program that provides access for hunting and fishing to private individuals and hunt clubs in designated areas. This includes 2,636 acres in Tennessee and 77,107 acres in Virginia, of which 79% was leased in 2021 to 157 hunting clubs comprised of 1,108 individual members.



A StreamSweepers employee pulls a canoe to shore on the Clinch River, Virginia. © Travis Dove

TABLE 1. Public Access Leases and Public Access Easements

	Kentucky Lease	Virginia Lease	Tennessee Easement	Total
Acres	55,000	30,000	43,000	128,000
Access Instrument	Lease	Lease	Easement	
Agency Partner	Kentucky Department of Fish and Wildlife Resources (KDFWR)	Virginia Department of Wildlife Resources (VDWR)	Tennessee Wildlife Resources Agency (TWRA)	
Detail	Wildlife Management Area (WMA) allows for public hunting and non-motorized recreation; Ataya provides more than one third of all public hunting land across its three counties in Kentucky	Public Access Lands for Sportsmen (PALs) program allows for public hunting, fishing, and wildlife viewing	Recently transferred public access conservation easement allows for public hunting, non-motorized recreation, and OHV use by permit, and managed by TWRA	

Elk Reintroduction

The Project's properties sit in the bullseye of elk reintroduction efforts in Tennessee, Kentucky and Virginia. Eastern elk were originally native to the area but were hunted extensively as Europeans spread west into the Appalachians and were eventually declared extinct in the 19th century. Re-introduction efforts in the region began in the late 1990s, and today there are viable elk herds in all three states. The herds have become a tourist attraction for wildlife viewing and hunting.

- » In Kentucky, the Project receives 10 elk tags under our Wildlife Management Area (WMA) agreement in exchange for allowing public access, which are sold to private individuals or guides. The state also has a lottery system through which it awards additional elk tags that may be used on the fund's property. In the 2020-2021 season, we estimate 53 people had the opportunity to hunt elk on the Ataya property in Kentucky, and we estimate that these hunters had direct expenditures of \$204,007, with a total economic benefit of \$416,174 in the state³.
- » According to a 2019 report from the North Cumberland WMA in Tennessee (in which Ataya represents 23% of the acreage), total spending by visitors that year was \$20.2 million, supporting 505 jobs and total economic impact (indirect and multiplier effects) of \$53.2 million, making it one of the top five WMAs in the state in terms of economic impact. The Campbell Outdoor Recreation Association estimates that 12,000 visitors come to Tennessee each year for elk viewing, and TWRA estimates the economic impact of elk viewing and hunting is \$10.75 million per year in Tennessee.
 - Elk habitat restoration efforts are currently underway on approximately 350 acres of previously mined lands on Ataya in partnership with TWRA and in cooperation with the Rocky Mountain Elk Foundation. Restoration activities in 2021 included invasives species control, woody vegetation removal and prescribed fire. Also referred to as a controlled burn, prescribed fire refers to the controlled application of fire by a team of experts to restore health to ecosystems that depend on fire. In this case woody underbrush is being controlled, which will lead to higher value forage for elk.
- » In Virginia, the Project is working with the Rocky Mountain Elk Foundation, Southwest Virginia Sportsman, Buchanan County, and the Virginia Department of Wildlife Resources (DWR) to increase quality elk habitat and expand opportunities for public elk viewing on several areas of the Highlands property in Buchanan County. These partners were awarded an Abandoned



Gathering at the Virginia Elk Restoration Project ©TNC; Prescribed burn crew, Virginia © Nikole Simmons/TNC

Mine Land (AML) Pilot grant in the amount of \$2.25 million to implement vegetation management on several large tracts within the Highlands property that aim to improve elk habitat on former mined lands. The grant also supports the construction of new elk viewing platforms and parking areas, and the payment of an annual lease to the fund for public wildlife viewing. This project is being enhanced by TNC's efforts, independent of the fund, to secure an additional 1,100 acres of currently unprotected private land that provides improved connectivity with the Highlands property where Virginia's elk herd currently spends most of the season. The new elk reserve provides exceptional opportunities to view elk and commands outstanding views of the surrounding Highlands property, furthering TNC's support for ecotourism in the area.

³ Estimates based on Ataya proportion of Kentucky Elk Hunting Unit by acreage, 2020 KDFWR Elk Hunter Survey and economic multiplier for big game hunting in Kentucky from the US Fish and Wildlife Service.

Trails

On the Highlands property in Virginia, the Project negotiated an improved license agreement with the Southwest Regional Recreation Authority (Spearhead Trails) that covers 144 miles of publicly accessible trails. These are primarily motorized off-highway vehicle (OHV) trails, and also includes the Russell Fork Equestrian Trail that connects the Highlands property to Breaks Interstate Park. The new license agreement more clearly identifies the trail network and sets higher expectations for environmental management, such as provisions for trail closures or additions, infrastructure enhancements, maintenance, and monitoring/oversight. Furthermore, it requires that Spearhead Trails maintain enrollment in Virginia Department of Environmental Quality Annual Standards and Specifications Programs for Erosion and Sediment Control and Stormwater Management, follow Best Management Practices, and share related annual reports with the Project.

As part of this effort, the Project and Spearhead Trails have developed an Annual Trail Maintenance and Improvement Plan to address problem areas on the trail systems focused initially on environmental impacts. The Project has worked with Spearhead Trails to implement a collection of trail

developments near the community of Dante, primarily for non-motorized cycling and hiking trails as well as a new trail to connect the existing Mountain View Trail network to the community of Dante. This work is funded through the U.S. Office of Surface Mining Reclamation and Enforcement AMLER (formerly AML Pilot program) program for abandoned mined land remediation and economic development.

On the Tennessee portion of the Ataya property, trail use is granted under the public access conservation easement that was conveyed to the State of Tennessee in December. As a direct result, TWRA announced the addition of four full-time positions to support their management, including two law enforcement officers and two stewardship and trail maintenance positions. We continued the inventory of trails in Tennessee in 2021, which resulted in a recommendation of 96 miles be open for public use and identified on TWRA trail maps. In addition and independent of the fund, TNC is working with TWRA and the Yamaha Outdoor Access Initiative to improve trail conditions and their impact on the environment. In Kentucky, the WMA agreement allows for public hunting and fishing, hiking, wildlife viewing and nature study.



Flag Rock Area Trails, near Norton, Virginia © Travis Dove

COMMUNITY ECONOMIC DEVELOPMENT

Due to the ownership structure common in the Central Appalachians, the Project owns the surface estates of the Ataya and Highlands properties, while unrelated third parties retain ownership of the subsurface mineral rights on both properties. As stipulated by the property deeds, mining royalties are paid to the surface owners on a periodic basis. The Project has committed to redirecting 100% of these royalties into project grants supporting local community economic development.

In 2021, the Project continued our relationships with two local organizations and began fostering a relationship with a new organization:

- » **Virginia:** The University of Virginia's College at Wise (UVA-Wise) Office of Economic Development and Engagement (Virginia) - As the only four-year public university in Virginia's coalfield region, UVA-Wise is committed to improving the quality of life and economic vitality of Southwest Virginia. The Office of Economic Development and Engagement connects the university's faculty, staff, students, and resources to economic, professional, and leadership development opportunities in local communities. UVA-Wise issued their first community grant solicitation in Q1 2021, receiving 15 proposals and selecting 10 projects for an aggregate \$100,000 in awards. Selected projects ranged from the Breaks Interstate Park developing additional rock-climbing routes to OH Rentals LLC improving their infrastructure that provides services to trail users on over 100 miles of trails in the region.
- » **Tennessee:** The Clinch-Powell Resource Conservation and Development Council (CPRCD) is a 501(c)3 non-profit sustainable community development organization focused on providing direct investments, financial education, counseling and housing solutions to individuals and small businesses in the region. The CPRCD issued their first community grant solicitation in Q1 2021, receiving 9 proposals and selecting 6 projects for an aggregate \$92,000 in awards. Selected projects included the Campbell County Chamber of Commerce receiving funding to rebuild and make ADA compliant an elk viewing tower, and Riverside Rentals being funded to plant vegetation to prevent erosion, and infrastructure improvements to enhance river access.

- » **Kentucky:** We engaged with the Mountain Association in 2021 to evaluate and prioritize community solar installation projects that would deliver long-term cost savings for local governments and community non-profits while also reducing carbon emissions and providing an outreach opportunity within Kentucky about the benefits and feasibility of clean energy. The Mountain Association serves Eastern Kentucky by investing in the people and places to advance the transition to a new economy that is more diverse, sustainable, equitable and resilient. Together we have evaluated more than a dozen potential projects and will begin funding in 2022. The first project to be completed in 2022 will be a rooftop solar installation on the Middlesboro Community Center.

We look forward to reporting the outcomes and impacts of these community grants in 2022.



Trail building at Breaks Interstate Park © TNC

APPENDIX: GLOBAL IMPACT METRIC INDICATORS

The Project tracks or will track several metrics that align with globally recognized impact reporting standards. The table below details progress against relevant metrics identified by the Sustainable Development Goals (SDGs) formulated by the United Nations General Assembly, as well as select metrics defined by the Global Impact Investing Network (GIIN) Impact Reporting and Investment Standards (IRIS). Generally, the Project’s strategy and operations support the following SDGs:



TABLE 2. Standardized Impact Metrics

		Year Ended December 31, 2021
SDGs	Forest area as a proportion of total land area	82%
	Sustainable forest management	100%
	Coverage by protected areas of important sites for mountain biodiversity (acres)	3,724
GIIN IRIS	Area of Land Deforested (acres)	0
	Area of Land Reforested (acres)	0
	Area of Trees Planted: Native Species (acres)	0
	Area of Trees Planted: Total (acres)	0
	Area of Natural Regeneration (acres, cumulative)	2,365
	Charitable Donations (dollars, via Community Economic Development)	\$67,400
	Forest Management Plan	Complete
	Greenhouse Gas Emissions Avoided due to Carbon Offsets Sold (tons CO ₂)	329,658
	Length of Streams Restored (miles)	0
	Protected Land Area: Permanent (acres)	65,622
	Units/Volume Sold: Certified sawtimber (MBF, FSC®-C008922 certified)	2,875
	Units/Volume Sold: Certified pulpwood (tons, FSC®-C008922 certified)	39,073