



# CASE STUDY

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## LOOKOUT MOUNTAIN CONSERVANCY

### ST ELMO FOREST PRESERVATION

# EXECUTIVE SUMMARY

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Lookout Mountain Conservancy leveraged verified carbon credits to earn almost \$300,000 in funding for forest conservation in Chattanooga, TN

## Background

LMC is a nationally accredited land trust whose mission is to protect Lookout Mountain's scenic, historic, and ecological resources through conservation, advocacy, recreation, and education for current and future generations. With a newly expanded team of four staff, LMC's programs and activities are conservation-focused and community-minded.

## About St. Elmo Forest Preservation Project

The 58-acre oak-hickory St. Elmo Forest is situated within the limits of Chattanooga, TN. As the city expanded, the forest was threatened by encroaching residential development.

With grassroots support, LMC protected this forest and linked it to the existing trail system, opening up recreation opportunities to residents and visitors. This project also connects habitat corridors and provides essential wildlife habitat.

## Carbon Credit Opportunity

### More revenue for greater impact

With funds raised from carbon crediting, LMC can do more conservation, ensure long-term stewardship, protect more land, and increase their community education and engagement efforts.

### Connecting local conservation to global action

Carbon crediting enables LMC to strengthen its conservation impact, showing the community how conserving even small forests can have an outsized effect on climate mitigation and human health.

## AT A GLANCE

### Project Details

**Year Registered:** 2021

**Size:** 58 acres

**Location:** Chattanooga, TN

**Lifetime Credits:**

10,127 tons CO<sub>2</sub>

**Credits Issued (2021-22):**

10,127 tons CO<sub>2</sub>

### Financial Snapshot

**Staff Time:** 80 hours

**LMC Credits Sold to Date**

**(2022):** 8,715 tons CO<sub>2</sub>

**LMC Gross Revenue to Date**

**(2022):** \$296,000

**Average Price per Credit:** \$34

**Registry Fees:** \$16,000

**"The benefits of carbon crediting have  
been cascading in their effects."**

Holly Odell, Community Outreach Coordinator at LMC

# INTRODUCTION

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Urban growth is projected to add close to 100 million acres of urban land to the United States by 2060, an area roughly equivalent to the size of Montana. Trees and forests in cities have acquired greater significance as “green infrastructure,” providing services such as stormwater reduction, carbon storage, energy savings, public health benefits, and air quality improvements.

City Forest Credits (CFC) is a national nonprofit carbon registry that serves one sector of carbon – the carbon stored in forests and trees in metropolitan areas in the United States. Through third-party verified carbon crediting, CFC is providing a new way for private-sector dollars to finance conservation projects that contribute to the health and well-being of people and the environment. CFC’s 40 and 100-year Tree Preservation Protocol protects urban forests that are at risk of conversion to non-forest use such as residential or commercial use.

**Land Trusts can leverage urban forest carbon credits as a finance tool to protect land.** Lookout Mountain Conservancy (LMC) employed verified carbon crediting to protect forest and critical habitat, expand recreation opportunities, and support climate action in Chattanooga, TN.

## BACKGROUND

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LMC is a small but mighty nationally accredited land trust that seeks to protect Lookout Mountain’s scenic, historic, and ecological resources through conservation, advocacy, recreation, and education for current and future generations. By connecting landowners to voluntary land conservation options, providing environmental education, and promoting greenway and trail development, LMC promotes the conservation of lands critical for clean air, water, and food.

### Bringing together the community

Community engagement and youth education is a key priority. LMC partners with the Howard School to use Lookout Mountain as a classroom to empower high school students with leadership, academic, social, and conservation skills. Another partnership is with schools such as Calvin Donaldson Elementary, to maintain outdoor classrooms and connect youth directly to the environment.

### Organizational Growth

In the past two years, LMC has grown and hired two new staff members. They continue to expand their conservation portfolio, acquiring between 5 and 60 acres of forested properties per year.

## GEOGRAPHIC AREA

Lookout Mountain is part of Southern Appalachia and is uniquely positioned between Alabama, Georgia, and Tennessee.

LMC’s service area spans the entire mountain and several counties and cities, the largest of which is Chattanooga, TN.



# OPPORTUNITY

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LMC began discussing carbon crediting as a new funding source for conservation after an inquiry from a local company. Research into other carbon registries found that most of LMC's forest conservation projects were too small or didn't fit their eligibility for crediting. However, City Forest Credits and the Tree Preservation Protocol were a great fit for an urban forest like St. Elmo.

Funding and impact were key to garnering Board approval for a carbon project:

- **The considerable price commanded by urban forest carbon credits in the voluntary carbon market - up to twice the average forest credit price - generates funding for reinvestment in more conservation and stewardship.**
- **Carbon crediting allows LMC to strengthen its conservation impact, showing how conserving small forests can have an outsized effect on climate mitigation and human health.**

# BENEFITS

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## A new source of conservation revenue

With funds raised from carbon crediting, LMC can do more conservation, ensure long-term stewardship, protect more land, and increase their community education and engagement efforts. LMC has also expanded their staff, increasing capacity for greater impact.

## A new understanding of the importance of Lookout Mountain

For communities in the South, climate change can be a politically charged issue. Developing a carbon project led to a shift in organizational culture, with LMC taking the stance that climate change and local actions matter – and conserving Lookout Mountain plays a broader role in addressing global problems.

# THE PROCESS

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## Selecting a property

St. Elmo Forest was the largest land acquisition for LMC to date. In addition to grants, community members were energized by the goal of creating a trail connection and raised funds to protect the forest.

## FUNDING SOURCES FOR ACQUISITIONS & STEWARDSHIP



Philanthropy, grants, and private donations are the main sources of revenue. Community-based support is also vital. The areas surrounding Lookout Mountain have a robust outdoor community devoted to protecting these important ecological and historic sites.

# PROJECT SNAPSHOT

## Forest Details

The Project includes 58 acres on 44 forested parcels acquired in 2020 and 2021. The forest consists of 90-year-old oak hickory trees.

## Urban Location

The forest lies within the limits of the City of Chattanooga, TN.

## Preservation Commitment

LMC recorded a conservation easement in 2021 that prohibits tree removal and allows for complementary passive-use recreation. The forest is protected in perpetuity, exceeding CFC's 40-year Protocol requirement.

## Threat of Loss

The property was zoned residential, with a third of its perimeter surrounded by developed residential lots in the historic St. Elmo neighborhood. Due to rapid nearby development, it was important to preserve this valuable forest.

## Effort and Due Diligence

About 80 hours of staff time were spent completing the crediting documentation for the project. This does not include time spent on initial carbon market research.

LMC discussed with their Board to obtain approval. An attorney on the Board helped write the conservation easement. Another important step was maintaining transparency with funders, including

community members and foundations who had helped purchase the property. LMC had conversations with supporters to secure buy-in, emphasizing that the funds raised would be re-invested in land stewardship and conservation.



**St Elmo Forest**

Project Area      Developed Parcels

## Project Credits (tons CO2)

Credits Attributed to the Project	11,252
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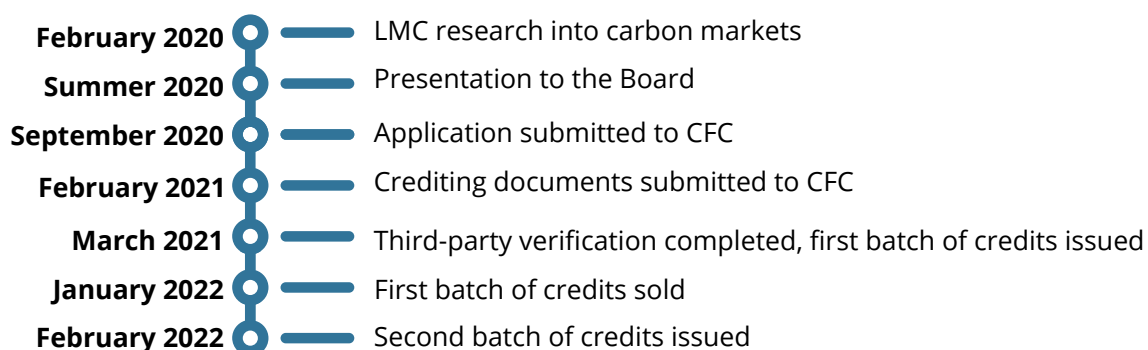
10% Registry Reversal Pool	1,125
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Credits Issued in 2021	8,715
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Credits Issued in 2022	1,412
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Projects between 50 -100 acres are issued third-party verified credits over two years.

## Timeline



## Monitoring and Reporting

As an LTA-accredited land trust, LMC adheres to the highest standards of land conservation. Per CFC's Tree Preservation Protocol, the project duration spans 40 years. Monitoring reports will be prepared and submitted to CFC every three years within the 40-year project lifetime. Should a loss of trees occur due to neglect or willful harm, LMC will be responsible for compensating or return the reversed credits. Per the Protocol, LMC may request credits for additional carbon sequestered in new growth.

## Co-Benefits

Well-designed and managed urban forests make significant contributions to the environmental sustainability, economic viability and livability of cities. Carbon projects like the St Elmo Forest provide social, human health, and equity impacts that contribute towards the achievement of global targets such as the UN Sustainable Development Goals.

### Quantified Co-Benefits

Rain interception	9,161 m <sup>3</sup> /yr	\$24,000/yr
Air Quality Improvements	1.55 t/yr	\$3,600/yr
Energy Savings	77,000 kWh/yr 37,000 kBtu/yr	\$6,200K/yr

### Sustainable Development Goals

<b>3</b> GOOD HEALTH AND WELL-BEING 	<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES 	<b>15</b> LIFE ON LAND 
Improve health and well-being for residents	Promote wellness and livability	Support climate resilience

# THE OUTCOME

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## Credit Sale

LMC reached out to local companies about purchasing credits, but unfortunately these small firms did not have the financial capacity to purchase urban forest credits at the high price they command. To increase efficiency, 13 urban forest carbon projects pooled their 31,000 credits into a national sale to a single buyer. LMC participated in the national sale to lighten the administrative and organizational burden of finding a buyer and negotiating a sale, while still selling the credits at a competitive price. Through the sale, LMC sold 8,715 credits at \$34/credit to Regen Network.

"Liz at CFC was great! We were a small team at LMC trying to get this going, and she was very flexible with answering questions, troubleshooting issues, and connecting us to resources".

**Holly Odell, Community Outreach Coordinator at LMC**

## Commitment to the property

The CFC Tree Preservation Protocol requires at least a 40-year preservation commitment. The St. Elmo Forest will be protected in perpetuity, with the goal of expanding recreation opportunities for the community. Trails will connect the base of the mountain to upper trails for hikers, walkers, mountain bikers and horseback riders to play, explore, and come together.

# TIPS FROM LMC

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- **Have realistic expectations about the time that crediting will take.** Don't expect to be able to just knock it out in 2 weeks; it's an iterative process. There are going to be unexpected issues. Be sure to communicate and set expectations around timelines with the Board at the outset of the project.
- **GIS is instrumental in understanding, defining, and mapping the project area.** If you don't have in-house GIS capabilities, consider partnering with a local university to save money and provide opportunities for students. For example, LMC partnered with UT Chattanooga - GIS lab.

