

GIS Mapping Capacity Building

THE VISION

The Appalachian Trail and its globally significant landscape are protected, resilient, and connected forever through the use of cutting-edge technology, innovative collaboration, and data-informed conservation strategies.



THE NEED

For more than 25 years, the Appalachian Trail Conservancy (ATC) utilizes geographic information systems (GIS) across many programmatic areas such as mapping and inventorying the A.T. footpath and its facilities and monitoring the corridor boundaries and rare species. Today, the rapid expansion of spatial data and computational efficiency tools is unlocking opportunities for outdoor recreation and natural resource managers to more effectively achieve place-based desired conditions through data-informed management actions.

Near-term investment in the ATC's GIS capacity will maintain our current level of sophistication and produce the transformational, innovative advancements needed to achieve our larger vision.

What is GIS? GIS is a computer system that displays and analyzes geographically referenced data and information. In addition to depicting things on a map, GIS analyses can help us understand patterns and relationships across spatial scales, from the very local to continental. Over the last 30 years, GIS data and tools have become foundational elements in effective conservation and recreation management.

THE SOLUTION

Inspired by innovative GIS tools created by conservation organizations from around the country, the ATC is actively collecting and analyzing spatial data as well as building and adapting GIS tools to benefit the A.T. experience well into the 21st century. These data and tools will:

- Support the Trail's transition to sustainable outdoor recreation
- Connect resilient and biodiverse habitats
- Activate local conservation action
- Strengthen and support volunteer engagement
- Foster partner collaboration
- Preserve and manage viewsheds
- Build local recreation economies
- Ensure the A.T. experience is protected for future generations

In pilot and beta phases, these data and tools are already cultivating partner buy-in, producing positive on-the-ground conservation and recreation outcomes, and propelling ATC as a national leader in the fields of conservation and outdoor recreation.

THE APPROACH

The A.T. landscape has long served as a beloved recreation resource, an important migration corridor for wildlife, and a place for restoration and reconnection. The ATC works closely with the National Park Service and A.T. Clubs to effectively steward the Trail and its infrastructure within an increasingly complex system of obligations and constraints. The ATC also works with dozens of land trusts, state and local agencies, and conservation organizations to permanently protect, conserve, and provide recreational access to the lands around the Trail.

These groups often work independently of one another without a unifying entity leading a larger, shared vision. Many groups encounter barriers to accessing critical information and require additional capacity, resources, and technical skills to act proactively and efficiently. The scale and diversity of the A.T. and its landscape compound these problems further.

These challenges also provide a unique opportunity for the ATC to produce critical positive impacts for the Trail and its broader landscape, and the waters and communities it passes through. By building on 100-years of convening and coordination experience, coupled with modern data-science tools and technology, the ATC can activate and lead the next generation of partners toward a future where both the Trail and its surrounding landscape are protected and stewarded for everyone.

THE INVESTMENT

\$3 Million

To scale the ATC's GIS mapping capabilities over the next three years.

Outcomes

- A.T.-wide data-informed and integrated decision-making
- Full deployment of ATLAS IT and expansion to a second state (see case study)
- Deployment of a new "living" collaborative A.T. Landscape Conservation Portfolio
- A modernized, enterprise-level GIS infrastructure



CASE STUDY

ATLAS IT: Conserving the Kittatinny Ridge

The A.T. in Pennsylvania traverses 160 miles of the Kittatinny Ridge. This climate-resilient landscape provides clean drinking water for thousands of people and shelters many endangered, threatened, and migratory species. To protect this important landscape, the ATC collaborated with a local conservation organization and identified a need for modernized, enterprise-level GIS data and analyses. In response, the ATC developed ATLAS IT, a pilot GIS tool that aggregates conservation-relevant data for 13 counties and a million tax parcels (properties) and shares it with A.T. conservation partners. More than 60 organizations in Pennsylvania have engaged with the tool to date, and the ATC has been asked to co-lead the Pennsylvania Department of Conservation and Natural Resources Kittatinny Ridge Conservation Landscape partnership.



To learn more about how your gift can help the ATC achieve its vision for GIS mapping, contact philanthropy@appalachiantrail.org or 304.535.6331.

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