



One Website, Thousands of Parks and Trails in Minnesota's Great Outdoors

State of Minnesota – Minnesota IT Services

CATEGORY:

Cross-Boundary Collaboration & Partnerships

CONTACT:

Emily Shimkus
Director of Communications
emily.shimkus@state.mn.us
(O) 651-201-1011
(C) 651-485-1354

INITIATION DATE:

September 2016

END DATE:

June 2018



Executive Summary

The State of Minnesota launched a new online tool to help outdoor recreationalists find amenities at Minnesota's parks and trails across the state. The project was a successful collaboration across jurisdictions between the Greater Minnesota Regional Parks and Trails Commission, the Metropolitan Council, the Minnesota Department of Natural Resources, and Minnesota IT Services (MNIT), the state's technology agency.

This new mobile-friendly site was made possible by the [Minnesota Legacy Parks and Trails Fund](#), and it shows all state and regional parks and trails that are eligible to receive Legacy funding. The Parks and Trails Legacy Advisory Committee helps guide the 2008 Legacy Amendment Parks and Trails projects for the Metropolitan Council (Met Council), the Minnesota Department of Natural Resources (DNR), and the Greater Minnesota Regional Parks and Trails Commission (GMRPTC). One of the committee's **top priorities** was aimed at increasing awareness of recreational opportunities by developing more integrated web-based offerings, thus engaging future generations of natural resource stewards.

The [Minnesota Great Outdoors](#) website allows people planning to visit regional and state-managed parks and trails to easily filter their search based on location, accessibility, camping amenities, lodging, interpretive programming, rental equipment availability, and landscape features, among other interests.

Consolidating geospatial information that existed in dozens or hundreds of places into a single website makes it easier for Minnesotans to find the outdoor options that might be just beyond their back door, or near a favorite destination. Previously, users would have to know which office or region managed the park or trail to find information.

Users accessing the [Minnesota Great Outdoors site](#) can search for parks and trails by name or by amenity, or pan and zoom across a map to locate one. Users can also drop a pin on specific locations to review them later.

While this website does not currently include information about national or city parks and trails, it provides in-depth information about state and regional parks that is helpful to Minnesotans and visitors in all corners of the state, during all times of the year. The website's search filters even break out trails by use, indicating trails that are best for hiking, off-highway vehicles, snowmobiles, and bicycles. To date, the Minnesota Great Outdoors site includes more than 184 parks and 419 trails.

This new site will help connect even the most casual parks and trails visitors with the great outdoor recreational opportunities available in Minnesota. It's the perfect 'first-stop' for information when planning a trip to a new area or region.

By bridging technology with Minnesota's beautiful parks and trails, it's even easier for people to connect with the bountiful outdoor opportunities available in our state. Through this huge collaboration, Minnesota IT Services and all the partners showed Minnesotans that we heard their feedback and their needs, and responded with a modern, transparent, accessible way to experience our beautiful natural resources.

Exemplar

This project was a model of **collaboration between jurisdictions**, something that we strive for in Minnesota state government. It was also a model for IT best practices and building accessibility into the design phase of our projects.

In 2008, Minnesota's voters passed the Clean Water, Land and Legacy Amendment (Legacy Amendment) to the Minnesota Constitution, which provided funding to: protect drinking water sources; protect, enhance, and restore wetlands, prairies, forests, and fish, game, and wildlife habitat; preserve arts and cultural heritage; **support parks and trails**; and protect, enhance, and restore lakes, rivers, streams, and groundwater.

The Parks and Trails Legacy Advisory Committee helps guide Legacy Amendment funded projects for the Metropolitan Council (Met Council), the Minnesota Department of Natural Resources (DNR), and the Greater Minnesota Regional Parks and Trails Commission (GMRPTC). One of the committee's **top priorities** was aimed at increasing awareness of recreational opportunities by developing more integrated web-based offerings, thus engaging future generations of natural resource stewards.

The objective was to create a modern, seamless, accessible way for people to find what they want easily online that would enable them to connect to the outdoors. This required an integrated, standardized digital data source, and a system where the partners could collaboratively deliver and manage the data.

The problem: each park and trail office or region published their own information on their own individual websites. Everything was distributed, nothing was centralized, and the type and amount of content was inconsistent. Users had to know the exact name of the region or district, the exact name of the park or trail in order to find any information, and even then, they might not find exactly what they needed to know.

The work involved **identifying the audience and how they access information helped craft a customer-centric solution**. According to Pew Research Center, today 95 percent of American adults (mirrored by Minnesota statistics) own a cell or smart phone. 8 in 10 households in Minnesota own some type of computer, whether it's a desktop, laptop, smartphone or tablet. That information played a huge factor in the development of an IT solution that was easy to access and to use, and did double-duty for web and mobile users, with built-in accessibility features.

This project team looked to IT best practices to help deliver a solution with lasting, long-term benefit. The customer-centric Minnesota Great Outdoors website was cost-effective to develop, and the data system was designed to be sustainable and easy to use for all content owners. Empowering content owners across the state with the freedom to update their own data gave them a sense of ownership and collaboration that had not existed before.

Concept

The idea began with a recommendation from the Parks and Trails Legacy Advisory Committee that helps guide Legacy Amendment funded projects for three of the agency partners involved in this project—the Metropolitan

Council, the Minnesota Department of Natural Resources, and the Greater Minnesota Regional Parks and Trails Commission.

The desired outcome was to connect people to the outdoors. A smaller percentage of Minnesotans is taking part in outdoor recreation, which means fewer who receive and understand the benefits those activities bring, everything from physical activity to social and family bonding to education for children. The project partners emphasized the importance of building Minnesota's next generation of stewards for the state's natural areas by increasing outdoor recreation participation.

People are more likely to take part in outdoor recreation if they feel welcome, can get to outdoor areas easily, know what's available, and have good experiences. To do that, the Legacy Committee recommended a **seamless user experience** that was modern, engaging and met the digital needs of state residents and visitors. This would require a website and data system that could be updated easily.

However, there was no single system to connect the vast network of individual state and regional parks and trails, with different providers in different parts of the state, funded by a number of different sources. Users needed to know which agency was responsible for management of the natural area they wanted to enjoy.

The implemented design (below) was a collaborative effort between the three Legacy partners, and Minnesota IT Services Geospatial Information Office. They contracted with the Software Usability Research Lab at Wichita State University, KS for user testing, and to help design the information architecture and public interface.



The homepage features a simple design and rotating seasonal images, with universal icons that explain how to use the tool. Selecting the Search link takes the user to the Search page. Each park or trail displays a photo and a brief description on the new site, with a link back to its authoritative website to learn more, make a reservation or download maps. The search filters break out trails by use, indicating trails that are best for hiking, off-highway vehicles, snowmobiles, and bicycles. Users can:

- Search for parks and trails by name
- Pan and zoom across a map of Minnesota to find parks and trails

- Drop a pin on a specific location to compare parks and trails without losing track of what you've seen
- Use search filters to come up with a list of parks and trails with specific amenities

The project used a **modified Agile** approach. MNIT's Geospatial Information Office developed the app and its data editor, managed all server operations, and provide ongoing maintenance and management for the website and application. While the online map is now fully public, MNIT's Geospatial Information Office and the partners continue to add additional functionality, and information about Minnesota's state and regional parks and trails, particularly related to recreational activities and the locations of these opportunities.

MNIT's Geospatial Information Office worked closely with our business partners to gather and implement the **geospatial data** that formed the core functionality. The tools used to create this responsive website included Apache Solr Search, Material Design, Angular framework, Leaflet, and GitLab. Open Street Map data was used to create the basemap. ArcGIS Online was used for data editing and ETL scripts were developed to move and manipulate data in PostgreSQL.

The site automatically pulls existing data from the project partners. A data editing tool was developed to support and easily update new data. The partners had to establish a **shared filter vocabulary** in order to collect the same data before development could begin; an Interpretive Center in one system was a Nature Center in another.

The state's **Office of Accessibility** was also engaged early in the design and development. MNIT teams from geospatial services, application development and the Office of Accessibility, and the Department of Natural Resources accessibility coordinator worked collaboratively to incorporate design and accessibility functionality. Members of the public participated in testing on multiple occasions to make sure we were connected and understood how the public would actually use the site. The guidance, tools, and testing provided by MNIT's Office of Accessibility helped build a site that is accessible, responsive, user friendly, and meets Minnesota state's brand standards.

Communications planning was a collaborative effort, with [press releases](#) and a [joint press event](#) at Fort Snelling State Park. The event was well attended by local media, and announced the launch of the new [MN Great Outdoors website](#) with Minnesota IT Services, the Minnesota Department of Natural Resources, the Metropolitan Council, and the Greater Minnesota Regional Parks and Trails Commission. A link to the site is prominently featured on the Parks and Forests section of the [Explore Minnesota tourism](#) website.

Project costs were approximately \$255,000. This included staff costs for project managers, code developers and testers, plus infrastructure for data, web, and application servers for DEV, TEST, and PROD. It also included two contracts for usability testing from the Software Usability Research Laboratory (SURL) at Wichita State University.

Significance

The project scope was to develop and maintain an integrated and standardized website about parks and trails of state and regional significance; to deliver an appropriate user experience; to give interested users the ability to find what they want easily; and to give providers a system to quickly and easily update data.

The state and regional parks and trails system is made up of many parts, with different providers in different parts of the state, funded by a number of different sources. **Coordination was essential** to reach the vision laid out in this plan and to ensure that the principles the public developed for the use of Legacy Funds are achieved.

Minnesotans and visitors are beneficiaries of this project. They see parks and trails of state and regional significance as a seamless network; they don't need to know what agency is responsible for management of the natural area they are enjoying. Emphasis is on the user experience, with accessibility and mobile features as primary considerations.

Partners also benefit from a consolidated, collaborative editing tool that is easy to access and use.

This site is unique in that it's not a typical government agency website. This site is user-centric—it erases the boundaries between the regional and state systems, so the public can now search for their desired activities, amenities, and locations without having to know who administers each location.

It also ignored the popular trend of a “one-stop shop.” This website was intentionally designed to be a recreation discovery tool, with links to the authoritative website for every location because users need real-time important alerts and messages from the park or trail they want to visit.

The partners are monitoring website **metrics** to correlate web visits to statistics from park and trail visits. That data was not available at the time of this nomination.

This project is in alignment with the priorities, strategic plans, and/or goals of each partner:

- Legacy Plan top priority: Minnesotans expressed a need for better information, including more integrated web-based offerings, to increase awareness of recreational opportunities.
- Department of Natural Resources Strategic Plan Goal: Minnesota's outdoor recreation opportunities meet the needs of new and existing participants so all benefit from nature.
- Metropolitan Council Thrive MSP 2040: To strengthen equitable usage of regional parks and trails by all our region's residents across age, race, ethnicity, income, national origin, and ability.
- NASCIO's State CIO Top Ten Priority: to meet priorities of interjurisdictional collaboration, customer relationship management, digital government improving citizen experience, accessibility, creating enterprise solutions.
- MNIT's mission: to work in partnership with agencies, sharing expertise and data that provides full, rich experiences for Minnesotans.

Impact

Before the Minnesota Great Outdoors website, users would have to know which office or region managed the park or trail they were looking for.

Now, they have a clear, easy-to-navigate launchpad to find all of the information they need to plan a trip to a park, take a hike, or an extended vacation in the great Minnesota outdoors.

Long-term, when more people can access information in a modern, accessible format, the impact will be seen in increased participation in outdoor recreation, and in future support for natural resources.

Investment in this project was important in three main areas:

- *Efficiencies through collaboration*: It established collaborative relationships between government partners where before there were none.
- *Reputation/Modernization*: Minnesotans now know there is a single website where they can find trip planning resources and discover new outdoor recreation opportunities around the state.

The three partners benefited by gaining improved operational processes, eliminating redundant efforts, increasing citizen engagement and satisfaction.

The benefit for MNIT was that we were able to showcase both Geospatial and Accessibility Offices to partners across jurisdictions. Both those services conduct outreach statewide to counties, cities and other governments, and across the nation to other states and peer organizations. This project was a signature example of collaboration, cooperation and the importance of engaging accessibility early in the development stage.

There is no better way to **promote transparent government** than to show it. By creating an attractive, simple, easy to use mobile-ready website, users can see that all the partners and MNIT listened to them. Now, they can easily discover new outdoor recreation opportunities in Minnesota.

Likewise, creating a data system that is easy for partners and their staff to use carries the visual message every time they use it that says “MNIT listened to what you said you needed.”