



Transportation Asset Management

FEDERAL LANDS TRANSPORTATION PROGRAM FACT SHEET

Roads, bridges, and other transportation infrastructure deteriorate from age, use, and environmental factors. Fixing only infrastructure in fair and poor condition increases costs. A systematic, analytical approach using construction best practices and engineering-economic analyses is key to successfully stretching scarce transportation funding.

While the practice of building roads and bridges is long-standing, the practice of preserving these assets efficiently is relatively new. Asset management is a new approach that provides insights and tools to help transportation agencies improve investment decisions. By using an asset management strategy, less expensive treatments such as pavement chip seals or bridge deck sealants are completed earlier in the life cycle of a road or bridge. This approach provides a variety of benefits:

- » requires less life cycle costs than traditional rehabilitation
- » minimizes work zones and construction delays improving worker safety
- » maintains roads or bridges in good condition as long as possible
- » improves visitor experience
- » decreases economic impacts to gateway communities

Much like state transportation agencies, the NPS transportation asset portfolio includes roads, parking, trails, transit fleets, and tunnels and bridges. Because of its unique mission and responsibilities, however the NPS transportation system needs to meet transportation engineering and safety requirements while preserving both natural and cultural resources and promoting visitor experience.



Road damage from a slide at New River Gorge National River. (NPS Photo)



Road damage at Morristown National Historical Park. (NPS Photo)

Access to and within the National Park System has been a defining experience for generations of visitors. The National Park Service coordinates the planning and implementation of transportation systems that improve the visitor experience and care for national parks by: **1) Preserving natural and cultural resources** **2) Enhancing visitor safety and security** **3) Protecting plant and animal species** **4) Reducing congestion** **5) Decreasing pollution.**



Completed road and drainage rehabilitation at Delaware Water Gap National Recreation Area. (NPS Photo)



Construction on the Devils Tower Parking Area to improve accessibility. (NPS Photo)

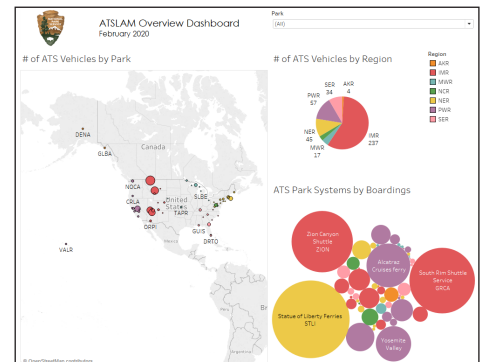


The Zion Canyon Shuttle System fleet is scheduled to be replaced over the next five years. (NPS Photo)

To better meet the requirements of its mission, the NPS has fully incorporated asset management best practices into its business processes for life cycle investment decisions. Pavement and bridge management systems, which include both data collection and analysis, are integral to the NPS transportation asset management portfolio and project level decision making.

ATSLAM

Identifying relevant assets associated with nearly 100 alternative transportation systems is underway through the Alternative Transportation System Lifecycle Asset Management (ATSLAM) initiative. Using existing NPS financial systems identification of assets includes transit, trails, and associated infrastructure. This systematic approach by the NPS will incorporate transit vehicles and multimodal facility asset inventory, condition, and life cycle information to inform priorities for recapitalization and facility investments. The ultimate goal is to achieve and maintain a state of good repair for NPS multimodal assets for these vital visitor services.



The ATSLAM dashboard provides a national overview of alternative transportation assets.

In addition, the data from this effort will also be used to help inform the annual National Transit Inventory report and to assist with recapitalization of NPS transit fleets.

Bridge Management System

The NPS Bridge Management System software—American Association of State and Highway Officials’ AASHTOWare Bridge Management (BrM)—is used by 45 states and models more than 100 different bridge components (for example steel girders, concrete decking, etc.), with up to eight treatments for each component. The Federal Highway Administration maintains this product for the NPS, performing bridge inspections and analyses for the agency. This software greatly improves the ability of engineers and decision makers to determine network needs and optimal asset management investments as well as to inform the prioritization and scheduling of projects.



Improvements to the Arizona Creek Bridge at Grand Teton National Park. (NPS Photo)