

The National Park Service

Customer Success Story

Autodesk Infrastructure Solutions
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“We now have the ability to assemble a massive geospatial database, provide web delivery of data, and perform real-time mark up of maps. The effectiveness of Autodesk CAD and GIS solutions has given us the ability to turn around legislative requests for information overnight.”

Roger Johnson,
Chief Cartographer,
National Park Service

Government Agency Delivers Online Maps and Spatial Analysis

The National Park Service furthers its mission with geospatial solutions

Project Summary

Tasked with preserving the natural resources and historical heritage of the United States for future generations, the National Park Service (NPS) relies on Autodesk Infrastructure Solutions for many of its mapping needs. From creating precision maps to tracking land acquisitions and even facilitating Congressional funding processes, NPS uses an array of Autodesk GIS and civil engineering solutions, including Autodesk MapGuide, Autodesk Land Desktop, Autodesk Survey, and Autodesk Raster Design, to reduce costs, streamline business processes, and increase productivity.

The Challenge

In order to fulfill its mission, the NPS' Land Resources Division (LRD) must maintain an extensive spatial database of property and ownership information. However, prior to turning to Autodesk, the NPS lacked the ability to rapidly turn that information into precise maps and spatial analysis. When spatial information and maps were available, LRD couldn't easily share them with operational and funding decision-makers. Park superintendents were forced to rely

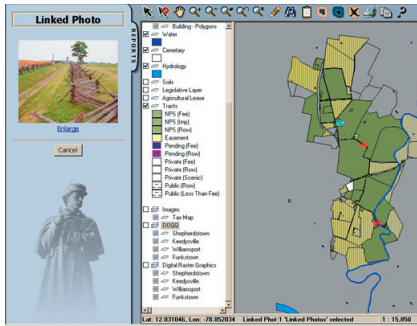
on paper maps for the location-based operational information they needed. The agency's ability to provide Congress with funding-related spatial information was just as inefficient. NPS cartographers would ship paper maps to Washington D.C., Congress would request changes, and the process would repeat, regularly taking weeks to complete.

“We decided it was time to look for a better way to manage and share spatial information,” says Roger Johnson, a chief cartographer with the NPS. “Our park superintendents needed instant access to maps to help with daily maintenance and park management. And we needed a better, faster way of providing proper funding-related documentation and maps.”

The Solution

After evaluating a number of options, NPS chose Autodesk MapGuide as its online digital map delivery system. The Autodesk offering stood out because, in addition to incorporating other data formats without the need for translation, it integrated seamlessly with the civil engineering software—Autodesk Land Desktop, Autodesk Survey, and Autodesk Raster Design—already in use by NPS staff.

Autodesk®



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According to Johnson, “We have found that Autodesk GIS applications work well with data in a variety of GIS, CAD, and database formats. Updates to NPS tract and boundary data are reflected immediately in the Autodesk solution without sacrificing the engineering precision that LRD works so hard to create.”

Online Maps Facilitate Decision Making

Using Autodesk MapGuide, the NPS has developed an online service that provides park units with spatial data in the form of dynamic maps. Elements within the maps link to NPS databases. These links give users real-time access to both tabular data and additional geospatial information. In addition, Autodesk MapGuide is compatible with government-wide data sharing mandates and initiatives. This allows the NPS to share data with other government agencies quickly and cost-effectively.

“We’re helping users to make decisions based on the most up-to-date information available,” says Johnson. He adds, “Autodesk MapGuide is easy and flexible to work with. We can update or add entire park units to the system in a matter of minutes without the need for a third party vendor or a dedicated programming staff.”

Securing Funding for a New Park

Beyond enhancing decision-making within the NPS, Autodesk solutions have greatly improved the agency’s ability to compete for Congressional funding. The NPS can now readily incorporate base cartographic and GIS data, such as bathymetry, hydrography, topography, and transportation, and analysis into maps. Cartography staff can then combine this information with satellite or aerial photography to produce sophisticated maps for presentation to Congress in a fraction of the time it took before.

“We now have the ability to assemble a massive geospatial database, provide web delivery of data, and perform real-time mark up of maps,” explains Johnson. “The effectiveness of Autodesk CAD and GIS solutions has given us the ability to turn around legislative requests for information overnight.”

An example of this is the new Lewis and Clark National Park in Astoria, Oregon. Efficient access to geospatial information helped the NPS garner crucial support for the park. Using the Autodesk solution, the NPS documented the necessary land acquisitions and expedited the regulatory, funding, and political processes. According to the NPS the ability to display information to both constituents and lawmakers helped the agency to secure funding and open the new Lewis and Clark National Park in time to celebrate the bicentennial of the Lewis and Clark expedition.

The Result

Saving Time and Increasing Efficiency

Throughout the NPS, Autodesk applications are resulting in measurable time savings and efficiency gains. LRD staff estimates that much of their traditional cartographic work can be accomplished several times faster than before. Johnson states, “The Land Resources Division is currently in the process of converting all its land status maps to Autodesk, no longer limiting this effort to new acquisitions and proposals. This will increase the efficiency of the entire operation by allowing for quick and easy mapping of changes to parks and will also aid in the proper day-to-day stewardship of existing NPS resources.”

In addition, the decision-making power attributable to online mapping is dramatic. According to Johnson, “Once a park is available online, users can review mission-critical documents, including deeds, legal descriptions, and legislation, as well as make real-time spatial queries of parcel level data contained in other NPS maintained databases. Using the site LRD developed with Autodesk MapGuide, NPS employees can access a wealth of land status information at the touch of a button.”

To learn more about how Autodesk solutions are helping government organizations to further their missions, visit us on the web at www.autodesk.com/infrastructure.