

# Newsletter

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## New Soil Data Access Web Site

By Paul R. Finnell, National Soils Database Manager, Natural Resources Conservation Service, National Soil Survey Center, Lincoln, Nebraska.

A new Web site that allows customers direct query access to the Soil Data Mart database was placed online in March 2007. "Soil Data Access" (<http://sdmdataaccess.nrcs.usda.gov>) is the name of a suite of Web services and applications, the purpose of which is to meet requirements for requesting and delivering soil survey spatial and attribute data that are not being met by the current Soil Data Mart or

Geospatial Data Gateway download capabilities.

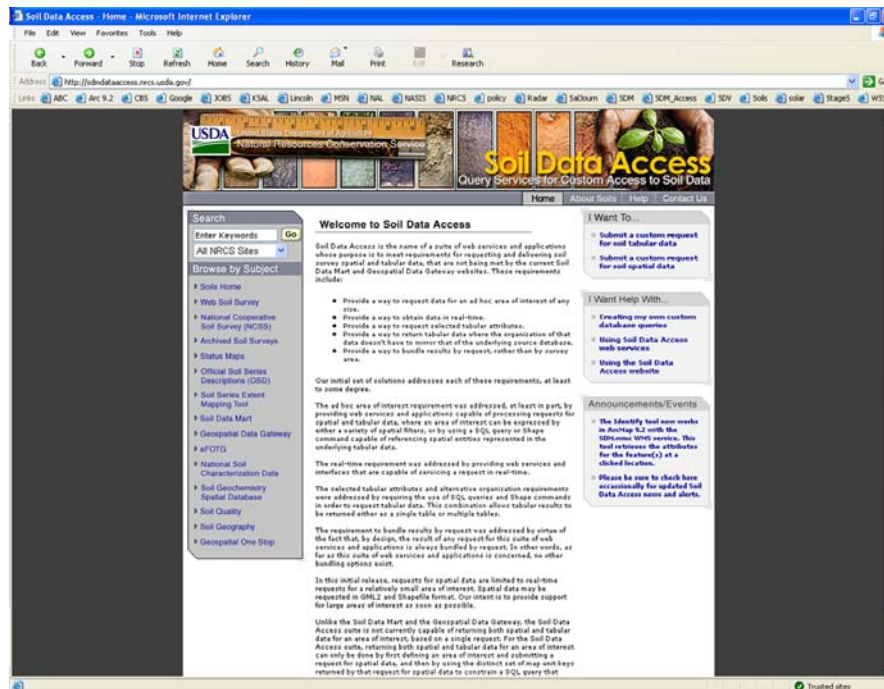
This Web site allows customers to access spatial and attribute data in real time. Spatial and attribute soils data for any location across the Nation can be queried and downloaded. The location is an area of interest defined by the customer. The target customer is the GIS user, soil modeler, or other person interested in querying soils data outside of the predefined county or soil survey area download capability of the Soil Data Mart and the Geospatial Data Gateway.

Soil Data Access allows the customer to define an area of interest and retrieve spatial data in either shapefile or GML2 format. The key

## Editor's Note

Issues of this newsletter are available on the World Wide Web (<http://soils.usda.gov/>). Under Quick Access, click on NCSS, then on Newsletters, and then on the desired issue number.

You are invited to submit stories for this newsletter to Stanley Anderson, National Soil Survey Center, Lincoln, Nebraska. Phone—402-437-5357; FAX—402-437-5336; email—[stan.anderson@lin.usda.gov](mailto:stan.anderson@lin.usda.gov).



Homepage for Soil Data Access.

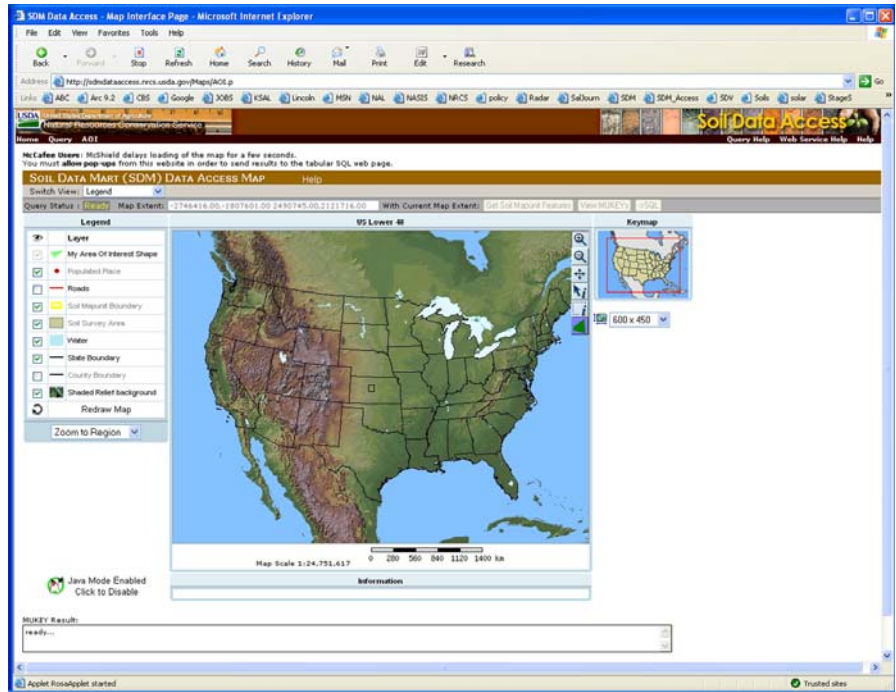
column, “mukey,” can then be passed to the attribute site to query for corresponding soils data. The resulting soils data are tailored for the customer and are not confined to the SSURGO template database format. This feature allows customers to query for specific soil properties or interpretations of interest to them.

Using the Map Interface, the customers can zoom into their area of interest. After the customers zoom in on the map, tools that allow retrieval of the soil spatial geometry are enabled. Additionally, the "mukeys" can be viewed or passed to a Structured Query Language (SQL) query in order to query for coincident soil data.

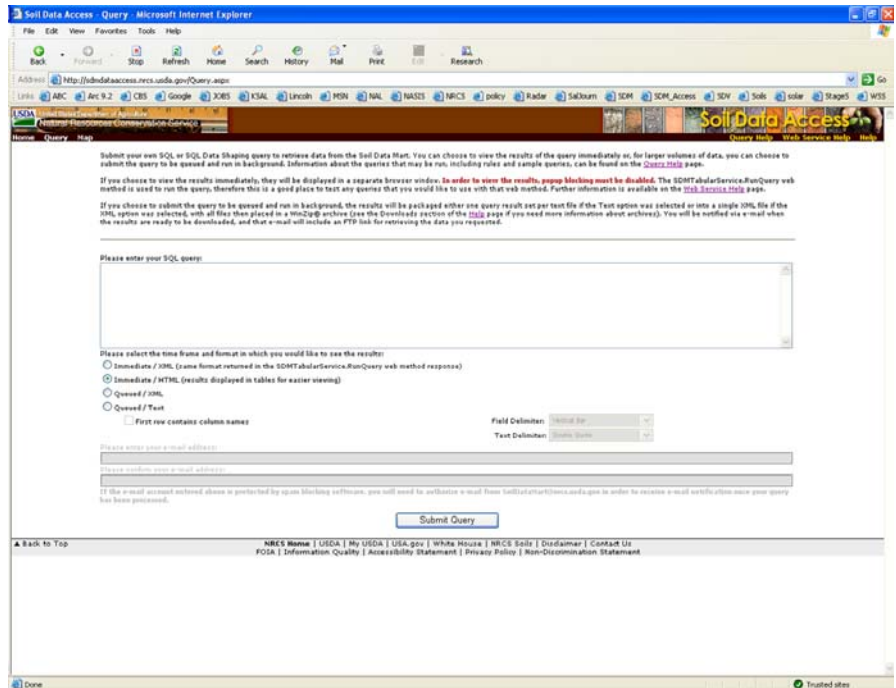
Using SQL, the attribute data can be queried and retrieved in XML or HTML formats in an immediate query or queued query. Data queries returning in excess of 10,000 rows of data are queued for later processing. In an email message, the customer is notified where the resulting data can be retrieved via FTP. Queries can be written to allow for a single table or multiple tables of data (shaping query), depending on the customers needs.

The Web Map Service or Web Features Service can be used to produce dynamic and customized soil maps for use in GIS applications that support these Web service standards. Requests through these services are limited to 2.5 million acres.

The Soil Data Access site has extensive Help documentation to assist the user of this site. Many examples are available to explain how to write SQL queries that retrieve soils data. Extensive documentation is available for those interested in the use of the Web Map and the Web Feature services. For assistance in the use of this site, contact Paul R. Finnell, National Soils Database Manager, Lincoln, Nebraska, at paul.finnell@lin.usda.gov. ■



Map query page.



Attribute query page.



## National Technical Committee for Hydric Soils (NTCHS) Announces New Members

By Karl W. Hipple, National Leader for Soil Interpretations, National Soil Survey Center, Lincoln, Nebraska, and Chair, NTCHS.

The National Technical Committee for Hydric Soils has announced that three vacancies created when members retired or when they changed jobs have recently been filled. The NTCHS is charged with providing continuing technical leadership in the formation, evaluation, and application of the science of hydric soils. It meets annually to conduct business. It is made up of university representatives involved in hydric soils research and members from the Environmental Protection Agency, the U.S. Army Corps of Engineers, the U.S. Forest Service, the U.S. Fish and Wildlife Service, and the U.S. Department of the Interior, Bureau of Land Management, and it is chaired by NRCS. Dr. Randy Dahlgren, Dr. Steven Monteith, and Bill Ypsilantis have recently been added to the committee.

Dr. Randy Dahlgren, Professor of Soil Science and Biogeochemistry at the University of California at Davis, has replaced Dr. Herb Huddleston of Oregon State University, who retired in 2006. Randy completed his undergraduate and graduate studies at North Dakota State University and the University of Washington. He has authored or co-authored more than 100 publications. Randy serves on several editorial boards, and his research interests include the interactions of hydrologic, geochemical, and biological processes in regulating nutrient cycling and ground-water chemistry.



**Randy Dahlgren**



**Steven Monteith**

Dr. Steven Monteith, MLRA Soil Survey Project Leader for the Mississippi Delta, is headquartered at the NRCS Delta Conservation Demonstration Center in Metcalf, Mississippi. He is replacing Mike Lilly,

who retired in 2006. Steve completed his undergraduate and graduate studies at the University of Tennessee and North Carolina State University. He mapped soils in Tennessee for the Soil Conservation Service and worked 10

years as a private consultant. His work as a consultant was partly for the U.S. Agency for International Development (USAID) and United Nations, Food and Agriculture Organization (FAO), in Bolivia.

Bill Ypsilantis, Soil Condition and Health Specialist and Acting Soil Lead for the U.S. Department of the Interior, Bureau of Land Management (BLM), is located at the National Science and Technology Center in Denver, Colorado. Bill is replacing BLM member Bill Volk, who retired in May 2007. Bill received his bachelor's degree from Michigan Technological University and his MS degree from the University of Idaho. He has worked as a municipal forester in Detroit, Michigan, and has spent the past 31 years with BLM in Winnemucca, Nevada; Montrose, Colorado; Coeur d'Alene, Idaho; and Denver, Colorado.



Bill Ypsilantis

Wade Hurt recently retired from the NRCS and has accepted a position at the University of Florida. He will remain as a member of the NTCHS. ■

## California Soil Scientist Named National Park Service Liaison

Excerpted from *Yahoo! News*, PRNewswire-USNewswire, July 3, 2007; contact Anita Brown, NRCS (+1-530-792-5644).

**S**usan Southard, USDA Soil Scientist in Davis, California, has been selected for a newly created position as liaison for soil survey work on National Parks throughout the Nation.

The National Park Service (NPS), part of the U.S. Department of the Interior, is cooperating with NRCS to conduct soil mapping on parks across the Nation. The surveys will give NPS data to meet emerging needs, including better management of park roads, trails, camping sites, and protection of park animal and plant species. Soil surveys are part of the Park Service's ongoing Natural Resource Challenge to inventory and monitor all park resources, including soils.

"Most people know soil for its agronomic qualities; that our food grows in it," says Southard. "But soil is part of other experiences we have. Soil is underfoot when we hike a trail in a National Park, pitch our tent or stop at a scenic overlook. Soils are Park landscapes. This position is an exciting opportunity to make the importance of soil better understood and appreciated by Park Service employees and millions of people who visit Parks every year."

Southard will specifically be responsible for database management and interpretations for the 272 National Parks, Monuments, and Historic Sites in the NPS system, assuring consistency with standards set up by the National Cooperative Soil Survey. This will provide consistent delivery and application of soil information that



Sue Southard

includes soil types, soil chemical and physical properties, plant communities associated with specific soil types, and soil-forming processes. ■

## Language Matters

By Stanley P. Anderson, Editor, Natural Resources Conservation Service, National Soil Survey Center, Lincoln, Nebraska.

**I** am always a little surprised, and perhaps more than a little perturbed, when I note for the umpteenth time somebody calling USDI "United States Department of Interior" rather than "United States Department of the Interior" (its real name, the name it has had since it was established on March 3, 1849). Perhaps the "the" disappears because people are used to referring to the Department as "Interior." There must be some value in getting the names of our cooperators right. ■



## Web Soil Survey Improved and Now Online

By Linda Greene, Agricultural Conservation Enrollees/Seniors Project, National Soil Survey Center, Lincoln, Nebraska.

Web Soil Survey (WSS), the Internet program developed by the Natural Resources Conservation Service (NRCS) to provide soil maps, and information about soil properties and interpretations, is now better than ever. The Web site launched in August 2005 has been improved and enhanced to meet the demands of its growing customer base. The newest version of WSS (2.0) appeared online May 29, 2007. It can be accessed at <http://websoilsurvey.nrcs.usda.gov>.

The first and most noticeable change is to the WSS homepage (fig. 1). It has been redesigned to make navigation easier and more intuitive for the visitor and to conform to new USDA standards. Another major addition is a new shopping cart feature that enables the customer to accumulate content, then download and/or print one composite PDF file with selected thematic maps and soil reports, basic soil maps, map unit legends, and map unit descriptions. This file is called a “custom soil resource report” (fig. 2).

In addition, the Public Land Survey System section data layer has been added to aid customers in navigating to their area of interest. Federal land ownership boundaries for United States Forest Service, National Park Service, Bureau of Land Management, and Department of Defense have also been added.

A point marker has been added to mark the designated street address and latitude/longitude location. The shifted or “tilted” Area of Interest (AOI) boundary problem has been corrected. The new version also provides the customer with the option to print using

The screenshot shows the WSS homepage layout. At the top, there's a banner with the USDA logo and 'Web Soil Survey' text. Below that is a navigation bar with 'Home', 'About Soils', 'Help', and 'Contact Us'. The main heading is 'Welcome to Web Soil Survey (WSS)' with a 'START WSS' button. A search box and a 'Browse by Subject' menu are on the left. The central text describes the WSS program and lists 'Three Basic Steps': 1. Define (Area of Interest), 2. View/Explore (Soil Map, Soil Data Explorer), and 3. Check Out (Shopping Cart). Sidebars contain 'I Want To...' and 'I Want Help With...' sections. A 'Tips & Shortcuts' banner is at the bottom right. The footer indicates 'Last Modified: 6/20/2007'.

Figure 1.—The new homepage for Web Soil Survey.

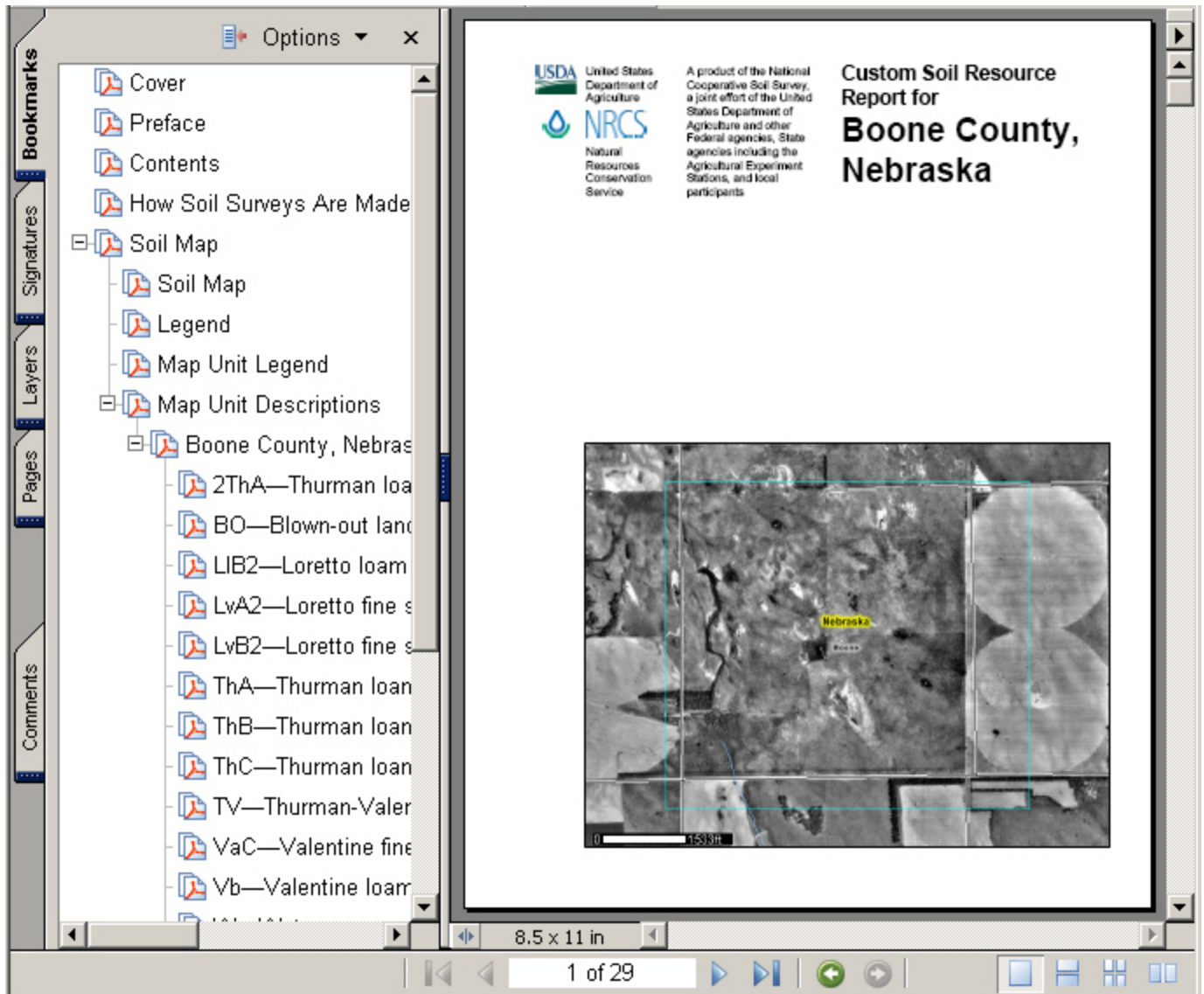


Figure 2.—The cover and bookmarks of a custom soil resource report assembled in Web Soil Survey.

a nationally unique map unit symbol instead of the traditional map unit symbol. This option is useful when the AOI crosses soil survey area boundaries.

On the Soil Map tab the customer can access a new pop-up map unit description. Another valuable feature provides customers a link to all previously published and archived soil survey reports. Also, the customer can now use scanned USGS topographical

maps as an optional backdrop (fig. 3). The legend and layer tabs have been combined into a single tab. On this tab the user can access layer properties and display options.

These are examples of the more important enhancements included in the latest version of WSS. A large number of minor enhancements have also been added. Overall the 2.0 version has made changes and/or improvements to more than 21

categories impacting subject areas that range from browser support to custom soil resources reports. More enhancements are planned for future releases.

Since its beginning, the Web Soil Survey has attracted a wide array of online visitors from all over the world. During the first few months of its existence, the site averaged about 1,000 visitors per day. We are now averaging about 3,500 visitors per day.

Soil surveys are important sources of critical information about land use, both on the farm and in the city. Whether a developer is looking to build on or purchase land or a farmer is considering alternative crops, soil survey data are critical in the equation that produces profits. The data are essential to rural America. They meet the need of ranchers and farmers to maximize productivity without harming natural resources.

Making soils information available on the Web has been a major achievement for NRCS. The agency has an ongoing commitment to make the process better and easier for the customer, so that the important information can find its way into the hands of those making natural resource decisions. NRCS is a science-based USDA agency committed to the preservation of the nation's natural resources through the use of conservation. ■

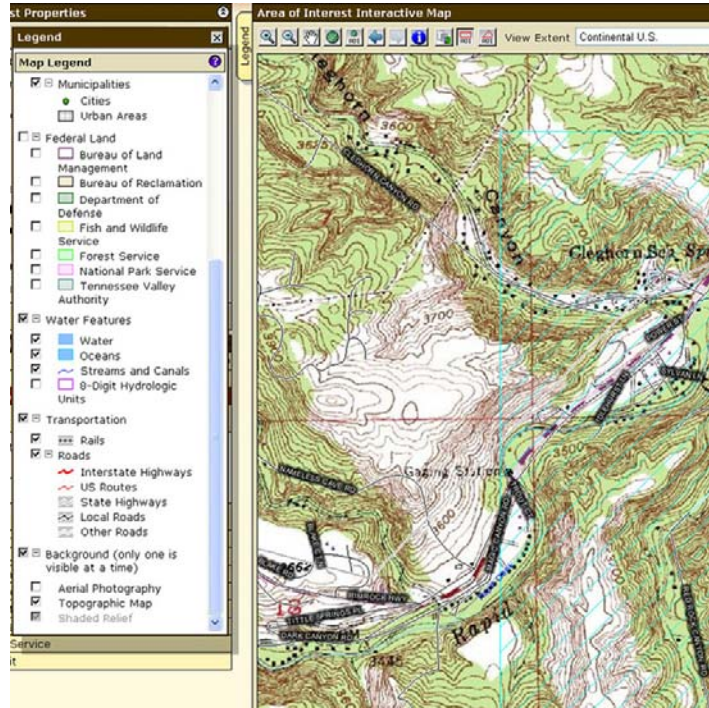


Figure 3.—A map with a topographic backdrop (a scanned USGS topographic map) generated in Web Soil Survey.

## NGDC Develops New Communications Options

By Amanda Moore, Soil Scientist/GIS Specialist, NRCS, National Geospatial Development Center, Morgantown West Virginia.

Two new methods of sharing information and ideas about the application of GIS, remote sensing, and statistical methods—that is, digital soil mapping—have been established at the National Geospatial Development Center (NGDC).

First, a DSM listserv was developed to facilitate discussion among individuals interested in any aspect of digital soil mapping. Second, a Microsoft Share Point Site was created to provide a central location for collaboratively developing and sharing data, documents, tools, and ideas related to the use of GIS, remote sensing, and statistical methods in soil

survey. Both are hosted by West Virginia University and are open to the entire NCSS partnership.

To sign up for the DSM listserv, send an e-mail message to [listserv@listserv.wvu.edu](mailto:listserv@listserv.wvu.edu) with the words “subscribe DSM” in the body of

the message. To sign up for the DSM Share Point Site, send an e-mail message to Amanda Moore ([amanda.moore@wv.usda.gov](mailto:amanda.moore@wv.usda.gov)) with the words “subscribe Sharepoint” in the subject line and your preferred user name in the body. ■

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