

## USGS Sets Ambitious Goal for *The National Map*

### What is ACSM's role?

As reported in the ACSM Government Affairs Update dated June 18, 2001, the U.S. Geological Survey (USGS) recently issued a draft report for public comment regarding its plan to create *The National Map*. The vision noted in the report's preface states "by the year 2010, working with partners, we will provide the nation with current, accurate, and nationally consistent basic spatial data, including digital data and derived topographic maps, and deliver spatial information that is not more than seven days old."

Further in the preface it is stated that "*The National Map* is proposed as a database of basic spatial data that will provide a starting point for users to extend and enhance, and to which users could tie additional data, to meet their business needs. USGS will provide the leadership needed to develop and continually maintain these data through partnerships among federal, state, local, and tribal governments, the private sector, other organizations, and volunteers."

Advancing from a system that has historically taken years to update its maps to one that will provide updated spatial information that is not more than seven days old will be quite an accomplishment. It would be foolhardy, to assert that it cannot happen. Although it may not happen, advancements in the technologies that make such a vision even thinkable may very well permit it. In fact, most of the technology needed is already available.

On a recent visit to USGS headquarters in Reston, Virginia, for their periodic open house, I was amazed to see some of the activities taking place there. Being able to find on a computer, photographs of my hometown in Virginia right down to my mom's house, and then getting a printout of it, was pretty exciting. Standing before an electronic world map and watching the sequence of volcanic eruptions over the past several decades take place within a matter of minutes was awe inspiring. Even for one who, through my work with ACSM, has seen a great deal of what is in this country, the presentation of all of that information was very impressive. For the person inside, who is still

a small-time surveyor at heart, it made me feel pretty insignificant. In retrospect, though, I see that all of that data and the different applications for its use is no more than a compilation of the work of many people just like me doing their part. It is with that view that I am writing this article.

While *The National Map* concept envisioned by USGS is difficult to grasp at first glance, it may very well be achievable. The question that comes to mind is, "How, and for what purposes, will it be used?" When the vision statement in the preface of the report speaks of accuracy, people like surveyors get nervous. We are so accustomed to dealing with extremely accurate data, it is difficult to accept that not all data needs to be as accurate as that we use. At the same time,

**"...our role in this, or in any other project, is to become part of the process ... not to close our minds to the idea..."**

we know from experience that those who do not understand the relativity of accuracy tend to think anything depicted on an "official" map is "dead on," as we surveyors say. This realization leads us to sometimes be leery of data represented in a GIS. Because of our commitment to the public good, surveyors worry about how people may be affected if they misinterpret the accuracy of data in a GIS. As a practical matter,, *The National Map* will be a GIS. This notwithstanding, surveyors must realize that there are many uses for GIS data that do not require survey grade accuracy. Many ACSM members work in arenas outside of the survey world, and play major roles in the development and maintenance of GIS. A great deal of the data they use is not "survey" data. What, then, is the role ACSM and its members can play in the inevitable development of a national map, whether it is actually created by USGS or by some private vendor who acts more quickly?

First, we need to express concerns we may have with the concepts outlined in the USGS report. Comments sent to USGS from ACSM are attached

to this article. Secondly, we must remain aware of what is being done in the map's development, and continue to be a part of the process, rather than complain after it is too late for input. The ACSM Government Affairs Committee and ACSM staff work very hard to keep abreast of all issues important to our members, but there are not enough of them and they are not well enough funded to get it all done alone. ACSM members need to be on the front lines, helping with the development of stan-

dards and training the volunteers the USGS report speaks about. We need to be actively involved in the agencies where we work, or pursue work to be contracted to private firms as part of the project.

In summary, our role in this, or in any other project is to become part of the process that determines what should be done, and how it should be done, not to close our minds to the idea that it may be done.

---

---

## COMMENTS

### REGARDING *THE NATIONAL MAP*

From

### THE AMERICAN CONGRESS ON SURVEYING AND MAPPING, INC

**T**he American Congress on Surveying and Mapping, Inc. (ACSM) congratulates the USGS on its proposal for the development of *The National Map*. Clearly, basic spatial data as described in the draft document, is important for the current and future needs of the almost infinite user communities that will evolve along with, and because of, the technologies that will help provide the data.

ACSM appreciates the opportunity to provide comments on the draft document. In keeping with the suggestions for reviewers listed within the Invitation for Comments, the following comments from ACSM might be characterized as "items that need to be clarified." For this reason, we would like to meet with USGS to discuss further development of the plan and its implementation.

Throughout the document there are numerous references to data collection, the positional accuracy and completeness of data, and the common referencing system on which data is based. ACSM contends that any data collected should include metadata acknowledging how the data is collected and to what standard of accuracy. This is a critical element for any body of data, so that users will know what level of confidence to place in it. Likewise, it is important to use a uniform datum for expressing data positions. The most common datum utilized is geographic coordinates (latitude and longitude) that can be easily converted to state

plane coordinate system values. The National Spatial Reference System provides a network of highly accurate horizontal and vertical reference points on which positions should be based. Standards for data collection also help to eliminate duplication and allow for multiple use of geographic data. ACSM would very much like to assist USGS in developing these standards for *The National Map*.

Partnerships with the public are discussed on page 15 of the document. This section proposes the use of a volunteer force predicated on the "anticipated widespread availability of Global Positioning System (GPS) capabilities in personal devices," and a training program for that force. ACSM feels that further discussion of this concept is warranted with regard to the anticipated accuracy of data collected and the potential end use of the data. Liabilities associated with unintended, and even unauthorized, collection and use of data such as that to be depicted on *The National Map* need to be considered. In fact, some states have developed rules that outline what types of GPS data collection must be conducted by Licensed Professional Surveyors because of incorrect data provided by well meaning individuals. ACSM can assist USGS in making the volunteer force aware of these rules, and in training them.

Respectfully submitted for ACSM,  
Curt Sumner, Executive Director