

Testimony of
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on
before the
Subcommittee on Energy and Mineral Resources
Committee on Natural Resources
U.S. House of Representatives

Mr. Chairman, members of the Subcommittee, thank you for the opportunity to present our views on H.R. 916 and H.R. 1604. MAPPS (www.mapps.org) is a national association of private sector geospatial firms. Our 160+ member firms span the entire spectrum of the geospatial community, including satellite and airborne remote sensing, surveying, photogrammetry, aerial photography, LIDAR, hydrography, bathymetry, charting, aerial and satellite image processing, GPS, and GIS data collection and conversion services and companies that provide hardware, software, products and services to the geospatial profession in the United States and other firms from around the world. A significant number of our member firms are prime contractors or subcontractors to USGS and other Federal agencies, and to the state and local governments that receive Federal grant monies.

I'd like to commend you, Mr. Chairman, for holding this hearing and for introducing H.R. 1604. There is a critical need to reorganize Federal geospatial activities, including governance, strategic investment in data, structure, and in understanding the proper roles and responsibilities of various stakeholders, including government and the private sector.

H.R. 1604, the Map It Once, Use It Many Times Act, is an effort to re-establish the USGS to its position as the pre-eminent civil Federal mapping agency. It focuses a new USGS, through its National Geospatial Technology Administration on leadership, coordination, and providing the basic geospatial data needed for smaller more efficient government and lower costs. The bill also updates USGS authorizations for data activities, such as the framework layers of the National Spatial Data Infrastructure (NSDI). It would accomplish this through greater utilization of the private sector, and strengthening Federal agency performance of inherently governmental activities.

Why are a new focus and a new governance structure necessary? Let me cite just a few examples.

There are 814 references to location or geographic data that require place-based information in the health care reform law. Notwithstanding all of these disparate needs for geospatial data, Congress failed to create a Geospatial Management Office (GMO) or Geospatial Information Officer (GIO) within the Department of Health and Human Services (HHS) to coordinate the collection, management, utilization, and sharing of the required geospatial data activities. Moreover, the legislation lacked a provision establishing a Health Care GIS at the Department level. Congress established such a position in the Department of Homeland Security after it was created and a GMO-GIO has been administratively implemented in the Department of the Interior, Agriculture, EPA, FCC and other agencies. The National Geospatial Advisory Committee (NGAC) recommended a Geographic Information Officer (GIO) in each Cabinet department. MAPPS wrote Secretary Sebelius about the need for such an office after Congress failed to do so in the legislation in 2010. One can only wonder if the lack of a strategic approach to place-based, location and geospatial data is one of the factors in the problems with implementation of the health care law and the lack of functionality of the e-commerce web site.

Regardless of which side of the climate change debate one is on, all parties should be able to agree on one fundamental point: that government decisions should be based on the best data available. But what data is the government currently relying on? There is a need for geospatial data to measure, monitor, verify and validate the phenomena that may be caused by global climate change. There is fundamental data the U.S. government and the American people need in order to determine if climate change is indeed having the effect some claim, and the catastrophe some are predicting. A national elevation data set utilizing LiDAR technology to quantify change in vegetative canopy structure and coincident field measurements of aboveground biomass, a network of geodetic bench marks, coastal tide and sea level gauging and shoreline delineation maps for measurement and observation of long- and short-term sea level change, and a series of historic and current land use and land cover classification data are all needed to accurately determine and quantify the effects of climate change, but do not exist.

Hundreds of billions of dollars in taxpayer money was expended due to the mortgage crisis that is still having lingering adverse affects on our economy. If the Federal government had a national parcel system, we would have had an early warning system that could have prevented the subprime mortgage crisis. Such a system would have given our nation the ability to track changes in the housing market, such as a slight increase in defaults and foreclosures, early on. We could then have taken small steps to curb the crisis instead of having to take big steps that have now cost taxpayers billions of dollars.

Mr. Chairman and Mr. Holt, you, and your constituents, have personally experienced the need for a better, more coordinated response to natural disasters – wildfires and floods in Colorado and Hurricane Sandy in New Jersey. While processes are improving, the Federal government, in coordination with state and local government and the private sector, still lacks an adequate response to both natural and anthropogenic disasters. There is still lack of coordination, a lack of clearly delineated roles and responsibilities, gaps in coverage, and the absence of a process for timely funding of the collection of critically needed geospatial data. Many of the recommendations in the National Academy report, “Successful Response Starts with a Map: Improving Geospatial Support for Disaster Management”, (2007) still have not been implemented.

The Census Bureau spent nearly \$1 billion developing an in-house mapping and addressing system for the 2010 census. The Topologically Integrated Geographic Encoding and Referencing (TIGER) system is a less accurate, less current version of mapping available from the private sector. Consumers have become accustomed to utilizing high quality maps every day on their mobile phones, GPS devices, laptops/desktops/tablets and in auto navigation systems. A study conducted by the Census Bureau itself found private sector maps to be of higher quality than Census maps (“Census Bureau Market Research Project with Nokia”). The private sector, having already made the hundreds of millions of dollars in investment in the creation, updating and maintenance of their maps for their existing customer base, could provide the Census Bureau with the highest quality maps at a fraction of the in-house cost. However, duplication of and competition with the private sector appears to be the norm, as there is little indication that Census will be increasing its contracting with the private sector for the 2020 effort.

The USGS operates primarily under authorization provided by the Act of March 3, 1879 (codified in 43 U.S.C. 31 et seq.). It has been decades since Congress last enacted major legislation affecting one of the original and core missions of the USGS – the surveying and mapping of the United States. As a result, surveying and mapping has proliferated among more than 40 Federal agencies, resulting in duplication, a lack of coordination, gaps in coverage and the absence of a strategic approach to providing the basic geographic information needed in the 21st century for scientific research, as well as practical

applications that contribute to the economic health, quality of life and safety and security of our Nation. The need for better coordination of Federal surveying and mapping activities has been well documented by previous Congressional hearings, including by this Subcommittee, GAO reports, National Academy of Sciences studies, and investigations by the National Academy of Public Administration, OMB and other entities.

USGS should be focused on leadership and coordination among Federal agencies, and non-Federal stakeholders. Its functions should be assisting with applying geospatial data to our Nation's challenges; encouraging economic development, private sector job creation and export promotion; driving a research agenda that is responsive to the private sector's needs; working to assure a geospatial workforce that will meet the demands of the nation; and contracting with the private sector and partnering with other government entities to build and then maintain the NSDI. We believe this is where USGS's priorities should be and we support building a stronger USGS that once again leads the Federal government's geographic information activities.

H.R. 1604 would provide a new, more up-to-date authorization for USGS. It would consolidate responsibilities for NSDI leadership in a National Geospatial Technology Administration within USGS; merge duplicate Federal geospatial programs of the Interior Department, Forest Service, and NOAA into the new Administration; encourage the uses of commercial data and private sector service providers; establish a National Geospatial Policy Commission to replace the FGDC in order to provide a priority-setting mechanism that not only includes Federal agencies, but Congress and non-Federal stakeholders as well; provide for acquisition of professional geospatial services on the basis of quality, qualifications and experience of competing firms; establish an advocacy function for the dynamic U.S. private sector geospatial community; and coordinate the tens of millions of dollars the U.S. Government spends each year on geospatial-related research and development along strategic goals that meet the needs of government and the private sector.

H.R. 1604 has other features we think are necessary and forward-looking. The bill calls for an examination of a user fee system to fund geospatial activities. MAPPS is exploring this concept and we believe such a process may reduce the burden on taxpayers generally and provide a more reliable flow of funding to produce geospatial data for those who need and use these data. It also provides long overdue legislative authorization for national imagery and elevation data collection. It also calls for activities to define roles and responsibilities, particularly those of the private sector, and activities to implement these functions, to reduce government competition with and duplication of the private sector. Moreover, it will coordinate the significant research and development investments the Federal government makes each year in geospatial activities, so that such investments are strategic and used to meet identified goals and requirements. It prevents inmates working in prison industries from having access to certain sensitive infrastructure or individual citizen data.

Additionally, the bill adds to the NSDI "information on underground infrastructure, including the location, type, size, composition, and use of underground structures including tunnels and pipelines". The need for this data is extraordinary. During my five minute testimony, an underground utility line will have been hit five times – once every 60 seconds. The annual cost due to utility damage is in the billions of dollars. And one of the leading causes of these accidents and disruptions is inaccurate records and locating.

The bill also provides for an inventory and accounting of all Federal geospatial activities, identifying unnecessary activities and converting to the private sector those activities that are commercial in

nature, while quantifying the cost savings. This provision is particularly necessary as the Federal government still cannot accurately track its geospatial expenditures.

H.R. 1604 also includes elements of H.R. 916, the Federal Land Asset Inventory Reform (FLAIR) Act. These provisions call for a current, accurate inventory of the land owned by the Federal government. Not only does the Federal government lack a current, accurate and reliable inventory of its land assets, but tax dollars are wasted through duplication and inefficiency through a proliferation of stove-piped, non-interoperable inventories. I am convinced that if the Federal government were to have one, GIS-based land inventory, it could save tens of millions of dollars, or more.

Mr. Chairman, the fact is the Federal government does not know what it owns, where it owns it, what condition it is in, what its appraised or market value is, what its characteristics are, whether it is still in the public interest for the government to own it, whether it should be surplus and disposed, or what its designated use should be.

For more than 15 years, the Government Accountability Office (GAO) has found that dozens of Federal agencies control hundreds of thousands of real property assets worldwide, including facilities and land, worth hundreds of billions of dollars. However, the portfolio is not well managed, many assets are no longer consistent with agency mission or needs and are therefore no longer needed, and many assets are in an alarming state of disrepair. In 1995, GAO told Congress “The General Services Administration publishes statistics on the amount of land managed by each Federal agency. However, we found this information was not current or reliable”. (GAO-T-RCED-95-117).

As far back as 1980, the National Research Council/National Academy of Sciences said, “There is a critical need for a better land-information system in the United States to improve land-conveyance procedures, furnish a basis for equitable taxation, and provide much-needed information for resource management and environmental planning.” (Need for a Multipurpose Cadastre).

Why is a Federal land inventory, as envisioned in the FLAIR Act, necessary?

As I noted earlier, GAO has found that the government lacks a current, accurate, reliable land inventory. That led GAO to put the government’s real property asset management activities on its High Risk list. (High Risk Series – An Update, GAO-05-207), a position still held today.

Since the National Academy issued its recommendation in 1980, the technology and capability of land or geographic information systems (GIS) has exploded. The Academy endorsed the FLAIR Act (National Land Parcel Data: A Vision for the Future) and the National Geospatial Advisory Committee has endorsed the recommendations in the Academy’s parcels report.

An accurate inventory is an important feature of good land management. Proper conservation, recreation and multiple use activities are dependent on accurate information about the government’s land ownership.

The American taxpayer can also be the biggest beneficiary of a “cadastre”, also known as a land information system or geographic information system (GIS). Many units of local government -- cities, counties -- have used such land information systems, or even single purpose digital parcel or tax mapping programs, to more accurately and efficiently inventory real estate within the jurisdiction. There are numerous examples where local government has used GIS to identify tens of millions of dollars in

annual property taxes that were unpaid or under paid. These systems have paid for themselves many times over, many in the first year alone.

It is time the U.S. government invested in a similar methodology and technology to identify and inventory its land holdings. Such a system can help enhance the management of Federal lands, identify lands that could be put to higher priority use, as well as those that are no longer needed by the government and can be made surplus and sold, thus bringing revenue and savings to the Federal budget.

Once the multipurpose inventory is complete, the government can become a better real property asset manager, and a responsible steward of its land holdings. This will result in more efficient land management, again providing savings. Additionally, areas for multiple-use can be better identified, thus enhancing the American citizens' use of public lands and generate more revenue from leasing, mineral rights, recreation and fees from other activities. Moreover, legislation to facilitate a process by which the Federal Government can more efficiently sell its surplus lands can be enacted. This will not only help state and local government by providing them land they can manage as open space, or these lands can be sold to the private sector for economic development, thus expanding the local tax base and creating jobs. The proceeds of these sales can be used to balance the budget and pay down the debt, be invested in higher priority activities such as roads, schools, parks, environmental protection, resource management and maintenance in our National Parks.

Moreover, as mentioned earlier, when integrated with land records on private property, a national parcel system can be an "early warning system" to monitor and prevent disruptions in the real estate market, like the one we recently experienced with the foreclosure crisis.

Mr. Chairman, geospatial data, products, technology and services enhance and contribute to national priorities in economic development, resource management, environmental protection, infrastructure, construction and maintenance, homeland security and a variety of other national needs and applications. The USGS was once the envy of the world for its leadership in this field. We are heartened by the leadership recently exhibited by USGS with the development of the national elevation or 3DEP program. This program will satisfy the growing demand for consistent, high-quality topographic data and a wide range of other three-dimensional representations of the Nation's natural and constructed features. Among the applications that will benefit from 3DEP data are flood risk management, agriculture, water supply, homeland security, renewable energy, aviation safety, and other areas.

MAPPs believes 3DEP will promote economic growth, facilitate responsible environmental protection and resource development and management, assist with infrastructure improvement, and generally enhance the quality of life of all Americans. The USGS, with involvement from the private sector and other stakeholders, conducted a National Enhanced Elevation Assessment (NEEA), to determine and document the need for national elevation data within government and private markets. The results indicated that enhanced elevation data have the potential to generate \$13 billion in annual benefits, at a benefit:cost ratio of 4.7 to 1.

A capable, qualified private sector capacity exists to fulfill the data acquisition requirements of 3DEP. Utilizing the Geospatial Products and Services Contract (GPSC), a suite of multiple-award USGS contracts with the private sector competitively procured via the qualifications based selection process pursuant to 40 USC 1101 and FAR part 36.6, provides a public-private partnership between USGS and the private sector to accomplish 3DEP via task orders for Light Detection And Ranging (LIDAR) acquisition.

MAPPS strongly supports the USGS intent to utilize these contracts for 3DEP data collection and processing. The equipment infrastructure and service capacity and capability of the private sector, as well as the contract vehicles in USGS, are in place to efficiently implement the 3DEP program. Moreover, Congress provided an innovative mechanism for cooperative activities in elevation data when it enacted section 100220 of Public Law 112-141, which can be utilized to pool funding from Federal, state and local government entities, with participation by USGS.

In conclusion, Mr. Chairman, H.R. 916 and H.R. 1604, are steps to eliminate waste and duplication; use geospatial information to grow the economy; and better coordinate Federal geospatial activities. We respectfully recommend their enactment.