

Testimony of  
John M. Palatiello  
MAPPS Executive Director  
on  
Federal Geospatial Spending, Duplication and Land Inventory Management and H.R. 4233 and H.R. 1620  
before the  
Subcommittee on Energy and Mineral Resources  
Committee on Natural Resources  
U.S. House of Representatives  
Colorado Springs, CO  
May 3, 2012

Mr. Chairman, members of the Subcommittee, thank you for the opportunity to present our views on Federal geospatial activities generally and H.R. 4233 and H.R. 1620 in particular. MAPPS ([www.mapps.org](http://www.mapps.org)) is a national association of private sector geospatial firms. Our 180+ 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. 4233. 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.

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 21<sup>st</sup> 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 one by this Subcommittee in 2009, GAO reports, National Academy of Sciences studies, and investigations by the National Academy of Public Administration, OMB and other entities. A list of such studies is attached.

The National Spatial Data Infrastructure (NSDI), established by President Clinton in Executive Order 12906 on April 11, 1994, and amended and reaffirmed by President Bush in Executive Order 13286 on

March 5, 2003, provides a framework for the geographic information America needs today. However, this priority is not reflected among Federal geospatial agencies.

H.R. 4233, the Map It Once, Use It Many Times Act, proposes the following: 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.

The bill 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 NSDI. It would accomplish this through greater utilization of the private sector, and strengthening Federal agency performance of inherently governmental activities.

We support these priorities because we have seen a retrenchment from the USGS's utilization of the private sector. In FY10, the appropriated amount from Congress for the USGS National Geospatial Program was \$70 million. However, only \$5 million of the \$70 million went to contract via the Geospatial Products and Services Contracts (GPSC). That is only 7% going to contract for data and related services. This is a reversal of a direction from Congress that USGS had previously implemented. In House Report 104-173, to accompany H.R. 1977, the Department of the Interior and Related Agencies Appropriations Act, 1996, the Appropriations Committee instructed:

“The Committee expects the Survey to continue to increase its contracting of map and digital data production, with the goal of no less than 50 percent contracting by the end of fiscal year 1997 and no less than 60 percent contracting by the end of fiscal year 1999. The survey should not be competing with the private sector for map production contracts. When services of equal quality and cost are available from the private sector, the Survey should use the private sector.”

USGS should be focused on coordination; 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.

We all remember President Obama's quip about Federal regulation of salmon -- "The Interior Department is in charge of salmon while they're in fresh water, but the Commerce Department handles them when they're in saltwater. I hear it gets even more complicated once they're smoked." This has led to the President's proposal to reorganize the trade and commerce functions of the Federal government, which includes a proposal to transfer the National Oceanic and Atmospheric Administration (NOAA) from the Department of Commerce to the Department of the Interior.

The fact is, the problem identified by the President is also evident in Federal mapping and geospatial activities. If you want a topographic map, you go to the USGS in the Interior Department. If you want a shoreline map, you go to NOAA. If you want to add Federal parcels you have to go to BLM. With today's geographic information systems (GIS) technology, this duplication and overlapping activities should no longer occur.

While the President has proposed a trade and commerce reorganization, little detail has been made public on how NOAA will be integrated into the Department of the Interior. H.R. 4233 suggests how the mapping functions of NOAA can be efficiently merged into the new NGTA within USGS. Moreover, should the existing geospatial activities of the Interior Department be consolidated? Why do we have one surveying and mapping function for public lands in BLM and another in the Forest Service? This bill begins to seek answers to these questions.

H.R. 4233 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 5 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. When I was a member of the

National Geospatial Advisory Committee (NGAC), I made a presentation to my colleagues on the need for metrics and data on geospatial deployment and coordination. “You can’t manage what you can’t measure” has been commonly repeated by the NGAC.

In testimony before this subcommittee in 2009, Karen Siderelis, then the Chief Geospatial Information Officer of the U.S. Department of the Interior said the federal government spent “\$1.89 billion in spatial data and geospatial services during the FY 2007--FY 2009 period.”

The Geospatial Line of Business Data Call Analysis Report, July 14, 2006, found that federal agencies expended \$2.33 billion over a three-year period (FY 2005 – FY 2007) in spatial data and geographic information systems (GIS) activities. This is an average of \$776 million per year. However, in 1994, the FGDC estimated more than \$4 billion was spent annually by the U.S. Federal Government on the production, management, and dissemination of geospatial data. The \$4 billion figure was publicly used by FGDC as recently as 2008. One of these figures has to be grossly inaccurate. Total outlays for discretionary spending in the federal government nearly doubled from 1994 to 2004. It is unrealistic to think that spending on geospatial activities declined in that same period by more than 75 percent.

H.R. 4233 also includes elements of H.R. 1620, 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. In testimony before the House Interior Appropriations Subcommittee in 2005, then Secretary of the Interior Gail Norton said her department maintains more than “100 property databases across dozens of computer operating systems.” At a MAPPS conference in March, a Department of Defense official said he was embarrassed to admit the Pentagon has more than 300 such systems. The idea of “Map It Once, Use it Many Times” should certainly apply here. 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).

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.

A Republican Study Committee fact sheet on Federal real estate holdings reported that more than 5.1 million acres of federal land are classified as “vacant” with no definable purpose. Representative Duncan of Tennessee, a member of the Natural Resources Committee, had the Congressional Research Service review the Bureau of Land Management’s area plans. CRS found 3.3 million acres of lands which BLM’s land use planning process has identified as surplus and suitable for disposal.

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, 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.

A few weeks ago, the U.S. House of Representatives unanimously passed the Excess Federal Building and Property Disposal Act, H.R. 665. That bill creates a pilot program for identifying and disposing of excess Federal buildings. There are provisions in H.R. 665 that seeks to address the GSA’s Federal Real Property Profile (FRPP). The legislation before us in this hearing today addresses important issues that are not in H.R. 665. Executive Order Executive Order 13327, "Federal Real Property Asset Management," issued by President Bush in 2004, as well as the FRPP, exclude the public lands. The Executive Order required the Secretaries of the Interior and Agriculture to develop a plan for an inventory of public lands, including any legislative recommendations. To the best of our knowledge, this has never been done. Moreover, we’ve met with GSA and found the FRPP is not GIS-based; it is in effect a spread sheet. That makes it very difficult for a citizen to identify Federal property in their neighborhood, county or their area of interest.

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.

These bills 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.

### **Bibliography of Geospatial Studies**

**The following is a list of previous studies and investigations that have identified or recommended reorganization, consolidation or reform of Federal surveying, mapping and geospatial activities that are relevant to the Map It Once, Use It Many Times Act.**

Office of Management and Budget  
Task Force on Mapping, Charting, Geodesy and Surveying, 1973

House Appropriations Committee, Investigative Staff  
Study of BLM and Forest Service Cadastral Survey Programs, 1980

National Academy of Sciences  
Need for a Multipurpose Cadastre, 1980

National Academy of Sciences  
Federal Surveying and Mapping: An Organizational Review, 1981

National Academy of Sciences

Modernization of the Public Land Survey System, 1982

National Academy of Sciences  
Procedures and Standards for a Multipurpose Cadastre, 1983

National Academy of Sciences  
Mapping and Charting - A Perspective for the Office of Charting and Geodetic Services, 1985

Bureau of Land Management  
Managing our Land Information Resources, 1989

National Academy of Sciences  
Spatial Data Needs: The Future of the National Mapping Program, 1990

National Academy of Sciences  
Research and Development in the National Mapping Division, USGS: Trends and Prospects, 1991

Federal Geographic Data Committee  
Manual of Federal Geographic Data Products, 1992

National Academy of Sciences  
Toward a Coordinated Spatial Data Infrastructure for the Nation, 1993

National Academy of Sciences  
Charting a Course into the Digital Era: Guidance for NOAA's Nautical Charting Mission, 1994

National Academy of Sciences  
Promoting the National Spatial Data Infrastructure Through Partnerships, 1994

General Accounting Office  
Research Fleet Modernization: NOAA Needs to Consider Alternatives to the Acquisition of New Vessels, 1994

National Academy of Sciences  
A Data Foundation for the National Spatial Data Infrastructure, 1995

Heritage Foundation  
Cutting the Deficit and Improving Services by Contracting Out, March, 1995

National Academy of Sciences  
Technical Issues in NOAA's Nautical Chart Program, 1996

National Academy of Public Administration  
A Performance Based Organization for Nautical Charting and Geodesy, 1996

Office of Inspector General, Commerce Department  
NOAA Should Decommission its Ships and Terminate the Recent Billion-Dollar Fleet Modernization Plan, 1996

National Academy of Public Administration  
Geographic Information for the 21st Century, 1998

NOAA, Department of Commerce, Mitretek Systems  
Hydrographic Survey Data Collection: Analysis, Conclusions, and Recommendations, 1998

Office of Inspector General, Department of Commerce  
Light Aircraft Fleet Should Be Privatized, 1998

US House of Representatives  
Geographical Information Systems Policies and Programs, 1999

National Academy of Sciences  
Distributed Geolibraries: Spatial Information Resources, Summary of a Workshop, 1999

NOAA, Office of Marine and Aviation Operations, Department of Commerce, Mitretek Systems  
NOAA Light Aircraft Operations: An Independent Internal Assessment, 2000

National Academy of Sciences  
National Spatial Data Infrastructure Partnership Programs: Rethinking the Focus, 2001

Central Intelligence Agency  
Memo from Director, CIA to Director, National Imagery and Mapping Agency, 2002

Federal Geographic Data Committee  
Value of Civil Imagery and Remote Sensing, 2002

National Academy of Sciences  
Weaving A National Map: A Review of the U.S. Geological Survey Concept of the National Map, 2003

White House  
Commercial Remote Sensing Space Policy, 2003

National Academy of Science  
GIS for Housing and Urban Development, 2003

General Accounting Office  
Geospatial Information Technologies Hold Promise for Wildland Fire Management, But Challenges Remain, 2003

General Accounting Office  
Geographic Information Systems: Challenges to Effective Data Sharing, 2003

Transportation Research Board (TRB)  
Geospatial Information Infrastructure for Transportation Organizations: Toward a Foundation for Improved Decision Making, 2004

Reason Foundation  
Building Highways or Bureaucracies, 2004

National Academy of Sciences  
A Geospatial Framework for the Coastal Zone: National Needs for Coastal Mapping and Charting, 2004

U.S. House of Representatives  
Geospatial Information: Are We Headed in the Right Direction, or Are We Lost?, 2004

National Academy of Sciences  
Licensing Geographic Data and Services, 2004

General Accounting Office  
Geospatial Information: Better Coordination Needed to Identify and Reduce Duplicative Investments, 2004

U.S. House of Representatives  
Geospatial Information: A Progress Report on Improving Our Nation's Map-Related Data infrastructure, 2003

National Academy of Sciences  
Priorities for GEOINT Research at the National Geospatial-Intelligence Agency, 2006

National Academy of Sciences  
Beyond Mapping: Meeting National Needs Through Enhanced Geographic Information Science, 2006

National Academy of Sciences  
Elevation Data for Floodplain Mapping, 2007

National Academy of Sciences  
Successful Response Starts with a Map: Improving Geospatial Support for Disaster Management, 2007

National Academy of Sciences  
A Research Agenda for Geographic Information Science at the United States Geological Survey, 2007

National Academy of Sciences  
National Land Parcel Data: A Vision for the Future, 2007

Office of Science and Technology Policy  
A Plan for a U.S. National Land Imaging Program, 2007

Federal Geographic Data Committee  
A History of Spatial Data Coordination, 2008

National Geospatial Advisory Committee  
A National Geospatial Strategy: Recommendations for the 2008-2009 Presidential Transition Team, 2008

National Academy of Sciences  
Mapping the Zone: Improving Flood Map Accuracy, 2009

U.S. House of Representatives  
Federal Geospatial Data Management, 2009

National Geospatial Advisory Committee  
The Changing Geospatial Landscape, 2009

Library of Congress, Congressional Research Service  
Geospatial Information and Geographic Information Systems (GIS): An Overview for  
Congress, 2011

Library of Congress, Congressional Research Service  
Issues and Challenges for Federal Geospatial Information, 2011