

Geospatial Data Management

—by Ilse Genovese



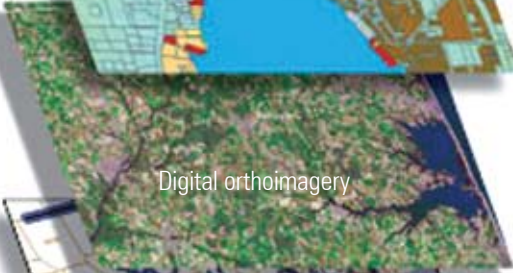
Hydrography



Elevation



Cadastral



Digital orthoimagery



Governmental units



Transportation



Geodetic control

"If we as a country are sincere about resolving universal concerns such as global warming, sea level rise, and affordable health care, the federal government needs to adopt innovative policies supporting a dynamic and robust spatial data infrastructure, an initiative that was promised more than 15 years ago." — The Changing Geospatial Landscape, NGAC [www.fgdc.gov/ngac]

Fifteen years after NSDI was signed into law by President Clinton in 1994, a truly national infrastructure of spatial data, people, information technology, and policies and standards governing geospatial activities in the U.S. is yet to be achieved, concluded a July 23rd hearing on "Federal Geospatial Data Management" before the Subcommittee on Energy and Mineral Resources of the House Committee on Natural Resources.

Lack of coordination in imagery acquisition across federal government agencies was cited as a lingering problem. The consequences, warned panelists at the hearing, are gaps in data and runaway costs for equipment and salaries.

From the states' point of view, for NSDI to be successful, it must meet local and state government needs. Among other things, accessibility to data collected by federal agencies should be improved. "Few of such data now in the public domain meet state needs for the different NSDI layers, said Michael Byrne, California's Geographic Information Office in his testimony.

Most panelists agreed that non-disclosure laws hamper sharing of geospatial information across federal and state agencies, and John Palatiello, MAPPs executive director,

pointed out that much of the data on congressional districts, roads, and boundaries that the government will need to create the \$350 million nationwide broadband service map included in President Obama's economic recovery package has already been collected by the U.S. Census Bureau. This information is not in the public domain because of non-disclosure laws.

The Federal Geographic Data Committee (FGDC), a multi-agency, multi-sector task force led by the Department of the Interior was also criticized, particularly for failing to manage coordination of geospatial activities at the federal level.

Karen C. Siderelis, Geospatial Information Officer at the Department of the Interior, and Acting Chair of FGDC, defended the Committee's work on NSDI, noting that new geospatial standards being put in place will improve data-sharing capacity between agencies.

State and local governments are generally supportive of building a collective geospatial capacity at the federal level, but they want to see more clearly defined roles and responsibilities to guide collaborative geospatial activities.

"It is not clear," said Byrne, "where the central point for geospatial data assemblage is at the federal level. Is it the Geospatial One Stop, The National Map, or something else?" States also need to know whether their NSDI metadata nodes are being harvested by the right portal, and there is considerable uncertainty where the new data.gov fits into the federal model.

Susan Marlow, president of Smart Data Strategies and member of National Academy of Science's study "National Land Parcel Data: A Vision for the Future," echoed these concerns by calling for a model and governance plan for data sharing and geospatial coordination at all levels of government.

According to Marlow, after 15 years of trying to define the framework and the standards associated with each layer, critical information has not been produced, and framework layers remain incomplete.

Using as an example the parcel layer, Marlow described a situation where millions of dollars are spent on the creation and maintenance of geospatial data at the local level, yet, comparable investments are not being realized at the federal level.

The Bureau of Land Management (BLM), to whom the national parcel (cadastral) layer has been assigned, does not collect parcel information for the country. It manages only the property owned by the U.S.

Standardization of accuracy appropriate for the parcel layer is not part of BLM's or any other federal agency's mission. The parcel layer, said Marlow, is urgently in need of accuracy standards. "It is, after all, the most detailed layer," and property lines cannot be based on USGS quad maps' accuracy of plus/minus 30-40



feet—this may not make some neighbors happy!

Marlow spoke in favor of a closer collaboration between the public and private sectors in completing all the NSDI layers. But she said that among the nine recommendations by the "National Land Parcel Data" study, only one has pending legislation—H.R. 1520, the Federal Land Asset Inventory Reform (FLAIR) Act of 2009, which calls for an inventory of all federally owned property.

Several studies and reports examining the status of the land parcel layer have been conducted since 1890, yet, the layer remains unfunded and incomplete. "The problem is not technical," said Marlow, "it is political and institutional."

Adding local Parcel IDs to the Home Mortgage Disclosure Act data would improve the federal government's ability to monitor the status of mortgage and property valuation conditions, concluded a stakeholders' meeting on "Land Parcel Data for the Mortgage Crisis." Also recommended were development of a Parcel-based Early Warning System and completion of the standardization and availability of parcel data nationwide.

Marlow urged Congress to enact legislation to provide funding and

agency coordination to complete the parcel layer and all the other NSDI framework layers.

This may have to include a decision on who should oversee geospatial activities at the federal level and where this oversight function should be located.

One suggestion offered at the hearing was to relieve USGS of its role of spearheading FGDC and instead create a Federal Geographic Information Officer position within the White House's Office of Management and Budget—the only agency according to Palatiello,

who has the carrots and sticks to keep all the other agencies in the Committee accountable.

The National States Geographic Information Council appears to be leaning toward backing this recommendation, noting that currently, state and local agencies are not adequately represented in FGDC's decision-making.

Siderelis maintained that the federal government has and will continue to play a key role in NSDI. This appears to be a logical direction, given the national goal to "geo-enable" government.

Were the federal government to become a consumer of geospatial information rather than a partner in its assemblage—as suggested during the hearing—its ability to respond quickly and effectively to the Nation's priorities, including natural disaster and security events, would be compromised.

According to Siderelis, while there has been a shift away from federal government being the primary producer of geospatial data, the expectation remains that the federal government will provide competent leadership to realize a coordinated NSDI.