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Important National Geospatial Data Act Coupled with Problematic Additional Language

The bi-partisan [Geospatial Data Act \(GDA\) of 2017](#) (S.1253) has recently been making waves in the geospatial community for reasons beyond its original and important intent: to improve the coordination and use of geospatial data. Senator Orrin Hatch (R-UT) sponsors this bill, re-introduced since it made its first appearance in [2015 \(S.740\)](#). The current 2017 version is co-sponsored by Mark Warner (D-VA), Dean Heller (R-NV), and Ron Wyden (D-OR).

The Act's goals have always been to strengthen the National Spatial Data Infrastructure (NSDI) and to reduce duplicated efforts by various agencies in authoring geospatial data. The bulk of language in the GDA references details for the organizations and structure that can make that happen, such as the National Geospatial Advisory Committee, the Federal Geographic Data Committee, geospatial data standards, and a GeoPlatform to aid in data access and distribution.

While the GDA's goals for improved coordination to advance the NSDI are shared by virtually all within the wider geospatial community (including UCGIS), language was added to the 2017 GDA bill (Section 11, Use of the Private Sector) that could have dramatic implications for the types of individuals, companies, and organizations eligible to earn contracts with the government to produce geospatial data. This unnecessarily and inappropriately harnesses the vast set of applications and projects that characterize our dynamic and rapidly evolving field and will have an impact on the types of employment and activities that students will be able to do, now and in their future careers.

Since late May 2017, the bill has been sitting with the Senate's Commerce, Science and Transportation Committee, and in July the related bill was introduced in the House as well ([H. R. 3522](#)). This is legislation that will impact those involved with the geospatial domains within higher education, and UCGIS encourages everyone to carefully read the language of the [Act itself](#) and inform yourself about these matters.

Specifically, the problematic language is detailed and described below.

- 1) **Section 11(c)** (page 37 of the proposed GDA bill) states that with this GDA Act, a *separate* part of the Code of Federal Regulations ([Part 36 of the Federal Acquisition Regulation \(FAR\), 48 C.F.R. 36.000 et seq.](#)) will be changed so that now "architectural and engineering services" will be defined to include "surveying and mapping services and the acquisition of geospatial data," and that the ways that the government selects which companies or organizations it will award contracts to will follow the specifics that had previously be outlined in subpart 36.6 of that previous code ([subpart 36.6 of the FAR](#)). Those selection criteria in 36.6 of the FAR include evaluating the "professional qualifications" and "specialized experience and technical

competence” that one would expect licensed architects and engineers to be able to demonstrate.

Problem #1: What type of professional qualifications, specialized experience, and technical competence would individuals (and their organizations, companies, or institutions) be required to demonstrate now that “surveying and mapping services and the acquisition of geospatial data” are under the definition of “architectural and engineering services”?

- 2) In the subsection immediately before this in the GDA, **Section 11(b)**, also on page 37, it says that the term “surveying and mapping” shall now “have the meaning given the term ‘geospatial data’ in section 2 of this [GDA] Act.” First, this change of meaning (of what “surveying and mapping” is) is stated to be “For purposes of selecting a firm under (*another law*), chapter 11 of title 40, United States Code.” Well, [chapter 11 of title 40](#) is all about the competence and qualifications that architects and engineers must demonstrate to have their companies be awarded contracts by the government. This 1972 law, also called the Brooks Architect-Engineers Act as it was named for its original sponsor, John Brooks (D-TX), clearly [defines what “architectural and engineering services” are](#), including the licensing, registration, or certification expected of the architect or engineer. This is a good thing: we want our buildings and roads and bridges designed and engineered by these professionals.

Problem #2: However, as we just saw in Problem #1 above, the subsequent GDA Section (11.c) changes “architectural and engineering services” to include “surveying and mapping services and the acquisition of geospatial data.” Though the original Brooks Act does reference “surveying and mapping” as one type of activity that “members of the architectural and engineering professions ... may logically or justifiably perform,” its clear focus is on architects and engineers, not map makers.

Problem #3: When this was written in 1972, the type and extent of “mapping services” as we now know it, would have been futuristic fiction. But “surveying” continues to be an important profession conducted by licensed and credentialed individuals. Not surprisingly, surveyors and related geospatial professionals care passionately about continuing to be recognized – and selected by the government – for the authoritative work that they conduct. One organization that represents many such firms, [MAPPS](#) (the Management Association for Private Photogrammetric Surveyors), has previously tried to have the Brooks Act modified to have their role in authoritative mapping efforts be more strongly codified. This [MAPPS vs. United States course case from the mid-2000s](#) was a [high profile concern](#) among geospatial mapping practitioners. In that case, the court [ruled against MAPPS](#), but this language in the GDA re-opens all of these issues.

Problem #4: This **Section 11(b)** says that “‘surveying and mapping’ shall have the same meaning of ‘geospatial data’ in section 2 of this Act [the GDA.]” Well, to appreciate the implications of that, we need to understand how “geospatial data” are defined in **Section 2 of the GDA:** a lengthy and unsorted list, including such items as:

- **Section 2(5)(C)(i)(I)**: georeferenced data transcribed into a Geographic Information System or Land Information System format by manual or electronic means, and the maintenance of that data;
- **Section 2(5)(C)(i)(III)**: data depicting the distribution of natural or cultural resources, features, or phenomena;
- **Section 2(5)(C)(i)(VIII)**: data used to create general maps prepared for private firms or government agencies for
 - (aa) use as guides to motorists, boaters, aviators, or pedestrians;
 - (bb) publication in a gazetteer or an atlas as an educational tool or reference publication;
 - (cc) use in the curriculum of any course of study;
 - (dd) use as an illustrative guide to the geographic location of any event, produced in any electronic or print media; or
 - (ee) conversational or illustrative purposes, including use as advertising material or user guides;
- **Section 2(5)(A)**: Or, basically, **any** “information that is tied to a location on the Earth, including by identifying the geographic location and characteristics of natural or constructed features and boundaries on the Earth, and that is generally represented by points, lines (for example a road), polygons (for example a forest), or other complex geographic features or phenomena (for example a forest fire, the spread of West Nile virus, or the infestation of pine-bark beetles).”

This last connection is the heart of the matter. If “surveying and mapping” means all of these above-referenced items (**as GDA Section 11(b) dictates it shall**), and if “surveying and mapping services and the acquisition of geospatial data” is now part of “architectural and engineering services” (**as GDA Section 11(c) specifies**), then the government could be expected to evaluate the competence and qualifications of any individual (and their company or organization) that seeks to receive a contract to do government-sponsored geospatial work, **and binding them to select those with licensed qualifications for virtually any geospatial data collection task**. As a [statement from the Association of American Geographers \(AAG\)](#) describes, “The Geospatial Data Act (GDA) of 2017 (S.1253) would set up a system of exclusionary procurement that would prevent most companies and organizations in the dynamic and rapidly growing GIS and mapping sector from receiving federal contracts for a very-wide range of activities, including GPS field data collection, GIS, internet mapping, geospatial analysis, location-based services, remote sensing, academic research involving maps, and digital or manual map making or cartography of almost any type.”

We urge you to become familiar with this Act and inform your students and colleagues as well.