

Report to the President of the National Society of Professional Surveyors

The NSPS ad hoc committee on the NCEES Model Law was charged with reviewing the current NCEES Model Laws and Rules for Surveying to ensure that it is still consistent with the practices of surveying today, and to make a report of recommendations for any revisions to the NSPS Board of Directors for its review.

As such, the ad hoc committee's effort revolved around the relevant sections of NCEES Model Law Section 110.20 and Model Rules Section 210.25.

The ad hoc committee met by Zoom almost monthly over the last year, had extended, in-depth and open discussions, and made numerous suggestions and modifications to the proposal through the course of those meetings. The ad hoc committee's consensus was that it was an excellent exercise, that members' concerns were heard and addressed in good faith, and that the final proposal was superior to the original proposal.

The committee in its February 20, 2025 Zoom meeting expressed a consensus to forward this proposal to President Edwards pursuant to the ad hoc committee's charges.

Notwithstanding that consensus, one member of the committee (1) did not agree with the added exclusionary language at the end of the Model Rule, (2) did not agree with including the Model Rule as part of the Model Law, (3) was concerned that the committee was too concerned about the GIS community over the surveying community and the public, and (4) was concerned that the wording in this proposal might be inadvertently or otherwise revised and its intent altered if the proposal ended up before NCEES, given that the process at NCEES is extended and involves review by several different committees. This member, however, consented to forwarding the proposal to the President for his discretion with the Board of Directors.

Hopefully, if this proposal goes before NCEES, on-going communication by interested members of NSPS who are also members of NCEES will help avoid any tribulations.

The committee was comprised of the following members of NSPS all of whom participated in good faith throughout the process:

Gary Kent, Chair
Tim Burch
Linda Foster
Jacob Heck
Tim Lingerfelt
Jon Roder
Mark Sargent
Stewart Ward

Respectfully submitted by Gary R. Kent, PS, Ad hoc committee chair
February 21, 2025

**Proposed revisions to relevant sections of
NCEES Model Law Section 110.20 and Model Rules Section 210.25
From the NSPS Ad Hoc Committee on the NCEES Model Law and Rules.**

February 20, 2025

Proposed deletions are shown as ~~Strike-outs in purple~~ and proposed additions are underlined in red. Explanations of the changes are provided in [blue brackets] by ad hoc committee chair Gary Kent.

B. Professional Surveyor (Professional Land Surveyor, Professional Surveyor and Mapper, Geomatics Professional, or equivalent term)

- 1. Professional Surveyor (Professional Land Surveyor and Mapper, Geomatics Professional, or equivalent term)**—The term “Professional Surveyor,” as used in this Act, shall mean an individual who is qualified to practice surveying by reason of surveying education, training, experience, and examination in the application of surveying principles and the interpretation of surveying data and who has been duly licensed as a professional surveyor by the board.

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3. Practice of Surveying —

a. The term “Practice of Surveying,” as used in this Act, shall mean providing, or offering to provide, professional services using such sciences as, but not limited to, mathematics, geodesy, and photogrammetry, and relevant aspects of the law, involving both: [“but not limited to” is a necessary addition, otherwise, surveying could be argued as being limited to the sciences of math, geodesy and photogrammetry. “Relevant aspects of the law” is a crucial addition because all boundary surveying is rooted in the law. Any number of states include such a reference in their state definitions (in a very quick and brief search Gary Kent found it included in the laws of Indiana, Tennessee, Florida, Illinois, Colorado, Massachusetts, Wisconsin and Alabama).]

1. the making of geometric measurements and gathering related information pertaining to the physical or legal features of the earth, improvements on the earth, the space above, on, or below the earth and
2. providing, utilizing, or developing the same into surveying deliverables ~~products~~ [Surveying professional services more properly result in “deliverables,” not “products.”] such as graphics, data, maps, plans, reports, descriptions, or projects.

Professional services include acts of consultation, investigation, testimony evaluation, expert technical testimony, planning, mapping, assembling, and interpreting gathered measurements and information related to any one or more of the following:

- i. Determining by measurement the configuration or contour of the earth’s surface or the position of fixed objects thereon.
- ii. ~~Determining by performing geodetic surveys the size and shape of the earth or the position of any point on the earth~~ Determining, by performing geodetic surveys, the positions of geodetic control points.

which take into account the size and shape of the earth, to be used as surveying deliverables [Determining the size and shape of the earth seems like a high-level scientific activity that is independent of jurisdiction. Control surveys, however, take that science into account and bring the geodetic positioning onto the ground as something usable.]

- iii. Locating, relocating, establishing, reestablishing, or retracing property lines or boundaries of any tract of land, road, right of way, or easement
 - iv. Making any survey for the division, subdivision, or consolidation of any tract(s) of land
 - v. Locating or laying out alignments, positions, or elevations for the design or construction of fixed works. [Adding “design” expands this part of the definition.]
 - vi. Determining, by the use of principles of surveying, the position for any survey monument (boundary or nonboundary) or reference point; establishing or replacing any such monument or reference point.
 - vii. Applying surveying measurement and mapping techniques for the elucidation of questions before courts of law and equity relating to items i-vi above. [This expands the definition to cover surveying for purposes of supporting litigation in court.]
 - viii. Creating, preparing, or modifying electronic, computerized, or other data, relative to the performance of the activities in items a-f-i-vii above [expands earlier reference to include the newly added item]
- b. An individual shall be construed to practice surveying, within the meaning and intent of this Act, if he or she does any of the following:
- i-1. Engages in or holds himself or herself out as able and entitled to practice surveying
 - ii-2. Represents himself or herself to be a professional surveyor by verbal claim, sign, advertisement, letterhead, or card or in any other way
 - iii-3. Through the use of some other title, implies that he or she is a professional surveyor or licensed under this act

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N. Authoritative—The term “Authoritative,” as used in this Act or Rules promulgated under this Act, shall mean being presented as legally reliant, trustworthy and competent when used to describe surveying deliverables products, processes, applications, or data derived from the practice of surveying that results in a description that meets or exceeds the positional accuracy for the location of a feature, object or boundary. [The recent change to the definition of the word “Authoritative” by NCEES - which apparently narrows its application to preparing property descriptions - has essentially destroyed the use the term as a critical part of defining the difference between surveying and GIS. The proposed change here simply brings back that intent, adds “legally reliant” (which is what licensure provides for), and replaces reference to a list of surveying products with reference to surveying deliverables.]

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R. Surveying deliverables—Any authoritative map, graphics, data, database, plan, report, description, process, application, data, project or other similar electronic or printed

deliverable that shows the authoritative location of features or coordinate systems. Surveying deliverables provide spatial information to a level of positional accuracy, whether that accuracy is stated, regulated, or implied product, derived from the practice of surveying as defined in Section B.3 of this Act, and fit for the intended use of the surveying service(s) provided. [This change goes hand-in-hand with the references to surveying deliverables mentioned above. It also focuses on the intended use of the deliverable, which gets to the difference between GIS and surveying - what is the deliverable being used for, what is it being represented as? If it is not being represented as a surveying service - as defined in the definition of surveying - then it's not surveying.]

S. Locating and Establishing - The terms “locating” and “establishing” as used in Section B.3. this Act, shall mean performing an original survey for purposes of locating on the ground, and describing the location of, an interest in real property that has not been previously described in a document conveying an interest in that real property. The terms apply to the division, subdivision, or consolidation of any tract(s) of land, and the subdivision of a section or portions of a section of land under common ownership in the United States Public Land Survey System, where no such subdivision has been previously conducted on the ground. [Provides context for the otherwise ill-defined terms of “locating” and “establishing.”]

T. Relocating, Reestablishing and Retracing - The terms Relocating, Reestablishing and Retracing as used in Section B.3. this Act, shall mean performing a retracement survey of real property that has been previously described in a document creating or conveying an interest in that real property by applying the appropriate boundary law principles governed by the facts and evidence found in the course of performing the survey. The term includes retracing the lines and corners of a previous original survey of real property. [Provides context for the otherwise ill-defined terms of “relocating” and “reestablishing.”]

[Model Rule Section 210.25 - THIS MODEL RULE SECTION IS PROPOSED TO BE INCLUDED AS A PART OF THE MODEL LAW AS ORIGINALLY PROPOSED BY THE SURVEYING/GIS WORK GROUP WHEN THEY WERE ORIGINALLY WRITTEN IN CA. 2000.]

Inclusions and Exclusions to the Practice of Surveying

UA. Activities Included within the Practice of Surveying

Activities that must be accomplished by or under the responsible charge of a professional surveyor (unless specifically exempted in subsection **VB** of this section) include, but are not limited to, the following:

1. The creation of maps or georeferenced databases representing authoritative locations for boundaries, the location of fixed works, or topography. This includes maps and georeferenced databases prepared by any person or government agency where that data is provided to the public as a surveying deliverable.
2. Original data acquisition, or the resolution of conflicts between multiple data sources, when used for the authoritative location of features within the following data themes: geodetic control, orthoimagery, elevation and hydrographic, fixed works, private and public boundaries, and cadastral information
3. Certification of positional accuracy of maps or measured survey data
4. Adjustment or authoritative interpretation of raw survey data

5. Geographic Information System (GIS)-based parcel or cadastral mapping used for authoritative boundary definition purposes wherein land title or development rights for individual parcels are, or may be, affected
6. Authoritative interpretation of maps, deeds, and other land title documents to resolve conflicting data elements
7. Acquisition of field data required to authoritatively position fixed works or cadastral data relative to geodetic control
8. Analysis, adjustment or transformation of cadastral data of the parcel layers with respect to the geodetic control layer within a GIS resulting in the affirmation of positional accuracy

VB. Activities Excluded from the Practice of Surveying

A distinction must be made in the use of electronic systems between making or documenting original measurements in the creation of surveying deliverables, versus the copying, interpretation, or representation of those measurements in such systems. Further, a distinction must be made according to the intent, use, or purpose of measurements derived from electronic systems to determine an authoritative location versus the use of those measurements as a reference for planning, infrastructure management, and general information. The following items are not to be included as activities within the definition of the practice of surveying:

1. The creation of general maps
 - a. Prepared by private firms or government agencies for use as guides to motorists, boaters, aviators, or pedestrians
 - b. Prepared for publication in a gazetteer or atlas as an educational tool or reference publication
 - c. Prepared for or by education institutions for use in the curriculum of any course of study
 - d. Produced by any electronic or print media firm as an illustrative guide to the geographic location of any event
 - e. Prepared by laypersons for conversational or illustrative purposes. This includes advertising material and users guides.
2. The **transcription incorporation** of previously **produced survey data and/or** georeferenced data into a GIS ~~or LIS~~ by manual or electronic means, and the maintenance thereof, provided the **incorporated** data are clearly not intended to indicate the authoritative location of property boundaries, the shape or contour of the earth, or fixed works. **Incorporated data must include appropriate metadata describing, at a minimum, that it is not authoritative.** [This more properly expresses what is done in GIS. They are typically not “transcribing” data, they are incorporating it. And rather than limiting it to “geo-referenced,” it includes survey data. This does **NOT** narrow the definition of surveying. It recognizes what GIS does, which is to take a variety of geo-referenced and survey data, and incorporate it into a GIS, not for authoritative purposes, but for purposes of making data available to the public and agencies for planning, maintenance, etc. This requirement also puts an additional burden on GIS, which was not here previously, to provide for disclaimers, which is not currently the case.]
3. The **transcription incorporation** of public record data, without modification except for graphical purposes, into a GIS- ~~or LIS~~-based cadastre (~~tax maps and associated records~~) by manual or electronic means, and the maintenance of that cadastre,

provided the data are clearly not intended to authoritatively represent property boundaries. This includes tax maps and zoning maps.

4. The preparation of any document by any federal government agency that does not define real property boundaries. This includes civilian and military versions of quadrangle topographic maps, military maps, satellite imagery, and other such documents.
5. The incorporation or use of documents or databases prepared by any federal agency into a GIS/LIS, including but not limited to federal census and demographic data, quadrangle topographic maps, and military maps
6. Inventory maps or databases created by any organization, in either hard-copy or electronic form, of physical features, facilities, or infrastructure that are wholly contained within properties to which they have rights or for which they have management responsibility. The distribution of these maps or databases outside the organization must contain appropriate metadata describing, at a minimum, the accuracy, method of compilation, data sources and dates, and disclaimers of use clearly indicating that the data are not intended to be used as a surveying deliverable.
7. Maps and databases depicting the distribution of natural resources or phenomena prepared by foresters, geologists, soil scientists, geophysicists, biologists, archeologists, historians, or other persons qualified to document such data
8. Maps and georeferenced databases depicting physical features and events prepared by any government agency where the access to that data is restricted by statute. This includes georeferenced data generated by law enforcement agencies involving crime statistics and criminal activities.
9. Original data acquisition, or the resolution of conflicts between multiple data sources, when that data will not be represented as authoritative or as a surveying deliverable.
[This addresses one of the main issues which is data acquisition for GIS purposes versus data acquisition for surveying purposes. This addition merely clarifies that data acquisition that does not fall in the definition of surveying is not surveying. Note that this item is simply the inverse of what is included in item 2 under Activities Included within the Practice of Surveying]