

**August 5, 2009**  
**Next Edition Roll-Out**  
***Manual of Surveying Instructions***  
**Questions and Answers**

Q Will there be a new *Manual of Surveying Instructions (Manual)*?

A No, the 1973 edition has been updated by the Bureau of Land Management. Because of its significance to practitioners, most of the content from the 1973 version can be found in the next edition. Similarly, most of the content from the 1947 edition was retained in the 1973 edition.

Q What was the process used to develop the next edition of the *Manual*?

A Sounding Boards, comprised of 79 subject matter experts from both the public and private sectors, surveying, mining, and legal profession, were called upon to review the first draft. Two BLM internal technical reviews resulted in over 1,700 edits and comments, and the draft was subject to comments by the Office of the Solicitor and Interior Board of Land Appeals (IBLA). Prior to its release, the next edition is approved by Department of the Interior (DOI) and BLM management.

Q What is the status of the next edition of the *Manual*?

A It will become official on September 24, 2009.

Q During the development of the next edition, how did the BLM inform the private sector?

A Presentations were given about the development of the next edition and its relationship to state laws and the practice of private land surveying. Audiences included private surveyors in Alaska, Arizona, Arkansas, California, Colorado, Idaho, Indiana, Kansas, Montana, Nevada, Oklahoma, Oregon, Utah, Washington, Wyoming, and more. A next edition website was developed to enable interested parties to track the process.

Q Did the BLM engage the private sector in the update of the 1973 *Manual*?

A Yes. Approximately 25 subject matter experts from the private sector and other Federal agencies were solicited to provide comments. 18 responded with substantive technical edits that have been incorporated into the next edition.

Q After publication, does the BLM plan any training for interested surveyors and other publics?

A Yes. Training sessions are planned for the BLM Cadastral Survey leadership and surveyors, Certified Federal Surveyors, and professional land surveyors during the second-half of 2009 and beyond, as needed.

A How can I learn more on my own about the BLM's Cadastral Surveying Program and the next edition of the *Manual*?

Q Visit the next edition website at:  
[http://www.blm.gov/wo/st/en/prog/more/cadastralsurvey/next\\_edition.html](http://www.blm.gov/wo/st/en/prog/more/cadastralsurvey/next_edition.html)

Q Are there significant changes in the next edition?

A Yes and no. Most of the content in the *Manual* will not change. Remarkably, most of what was relevant to practitioners in 1973 remains so in 2009. However, there are four areas of significant change, two areas of policy clarification, an added topic, and a change in principle. These are summarized below.

#### **Four Areas of Significant Change**

1. **Water Boundaries:** The Federal courts and the IBLA continue to articulate further nuances regarding water boundaries, such as navigability determinations, submerged lands issues, and ownership of unsurveyed islands in meandered non-navigable streams. These decisions are addressed in the next edition in a manner of general instructions to guide the surveyor.
2. **Standard of Evidence:** The Federal courts, followed by IBLA, have changed the standard of evidence to determine whether a corner is existent, obliterated, or lost. The beyond reasonable doubt evidence standard used in the 1973 edition of the *Manual* is now a substantial evidence standard. Definitions of existent, obliterated, and lost corners using the substantial evidence standard in the context of the PLSS and other Federal surveys are included in the next edition.
3. **Coordinates as Collateral Evidence:** General instructions are given in cases where repeatable coordinates may be collateral evidence of a corner position and when they may be the best available evidence for the position of an obliterated corner. New technology, enabling quick generation of precise and repeatable coordinates, has led to many corner positions being "witnessed" by coordinates. Coordinates by

themselves have little meaning. However, using the "following in the footsteps" concept, if the first surveyor documents how he or she obtained the coordinates so the second surveyor can, within an acceptable degree of confidence, determine the same point on the earth's surface (following in the computational footsteps) within acceptable level of certainty, then coordinates may be the best available evidence of the corner position.

4. Mineral Survey Resurveys: Instructions have been expanded for mineral survey resurveys and mineral segregation surveys. The next edition has incorporated much that is in the Bureau's publication Mineral Survey Procedures Guide and also includes general instructions on resurvey procedures of mineral lands surveys.

### **An Area of Policy Clarification**

**Closing Corners:** A corner, no matter what it has been called in the official record (closing corner, junior corner, crossing-closing corner, intersection point, or corner of minimum control), established during a careful retracement of the intersected, senior, or existing line, can be accepted in place and may be an angle point in the intersected, senior, or existing line. By expired policy from the General Land Office, closing corners were established approximately on an intersected line by measurement to one corner on the intersected line. By current policy, when a corner monument, established by the expired closing-corner policy method, is recovered, the intersected line is to be retraced between the two adjacent corners of the intersected line. If it is determined that the closing corner monument is off the intersected line, it is to be amended and the true point of intersection is to be monumented and marked as the closing corner. The method, by which a corner is established and not by what it is called, will determine the proper treatment. By current policy, corners are established on an intersected line by measurement to the nearest corner in each direction. These corners have been called closing corners, intersection points, corners of minimum control, and junior corners. Often times, a line was run and off-setting corners were established at the same time. These corners have been called closing corners, standard corners, intersection points, corners of minimum control, corners of maximum control, junior corners, and senior corners. How the corner is established and not what it is called is controlling. The next edition clarifies that by current policy, when a corner monument established by the current closing-corner policy method is recovered, the intersected line is to be retraced between the two adjacent corners of the intersected line. If it is determined that the closing corner monument was established in an obvious careful retracement, it will be accepted as controlling the line intersected.

### **Specific Area Added**

**Alaska-centric Federal survey statutes:** The next edition includes, as an additional topic, identification and discussion of the Federal survey statutes that pertain only to Alaska. There are approximately 14 Federal statutes that guide the PLSS surveyor's work in Alaska and, as a result, the process is different from how a surveyor is to survey similar situations under the general public land survey laws. Many of these "Alaska only" survey laws and existing instructions are included in the next edition.

**Change in Principle**

Technology: In the next edition, one major change in principle is that the *Manual* is largely technology independent. How the surveyor determines the relationship between point A and point B, i.e., measurement procedures and what instrumentation is used, will be determined for each survey from the best available technology to meet the purpose of that survey. How to measure is best handled by special instructions.