



**DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

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<http://www.blm.gov/cadastral/Manual/nextedition.htm>

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Survey Manual Note 6

October 16, 2003

To: Next Edition Files  
From: Bob Dahl  
Subject: Notes on Types of Survey Systems and Inclusion or Exclusion in the Next Edition of the Manual of Surveying Instructions.

**Situation**

The Bureau of Land Management (BLM) must determine how many of the survey systems in the country will have instructions within the next edition of the Manual of Instructions for the Survey of the Public Lands of the United States (Manual). Currently when instructions for a survey system are not covered in the Manual, special instructions with detailed specifications and technical direction necessary for executing the survey will be issued to the federal surveyor.

**Discussion**

The Department of the Interior is the primary Federal government surveyor. This responsibility has been delegated to the Cadastral Survey program within the BLM. The legal boundaries of federal land, Indian land, and federal interest in other land, are located in conformance to statutory law and its judicial interpretation.

The BLM proscribes survey procedures for federal surveys in order to protect bona fide rights of non-federal landowners and to protect the Public and Indian trust. This guidance is in the form of written instructions, general and special.

In the United States, land has been parceled out and described by over four dozen survey systems. The largest survey system by far is the Public Land Survey System (PLSS), often called, The Rectangular Survey System. The PLSS is the primary survey system described in the Manual. The Federal government was the creator of many of the survey systems, and owns or has owned title to parcels or interests in parcels in every survey system.

Survey instructions written by the Federal government for surveys of federal or Indian lands have been recognized and adopted by federal and state courts, state legislatures, and state land surveying regulation boards as a source of information on how to legally conduct non-federal boundary surveys within their jurisdictions. The BLM survey instructions therefore have application in areas where there is neither federal land, Indian land, nor a federal interest in land. One consequence is the BLM receives numerous inquiries from non-federal surveyors requesting advice on surveying procedures.

For the survey systems described, the Manual is the source of many procedures to be followed when locating boundaries. The BLM and its predecessor the General Land Office (GLO) has discerned which survey systems will be described in the Manual. Only a small fraction of the survey systems has historically been included. Some survey systems are very localized, often within one or two states only, some being only in a small area in one state. The survey systems currently described in the Manual include; PLSS, tracts, metes-and-bounds, townships, small tracts, mineral segregation, water boundaries, and mineral surveys. These survey systems cover over four-fifths of the country.

The BLM desires that the rules controlling the acts of federal authority surveyors be considered by all other surveyors as merely advisory and explanatory of the principles which should prevail in performing such duties. The BLM assumes no control or direction over the acts of local and county surveyors where the lands or the interests in lands are in non-federal ownership, nor will it issue instructions in such cases.

### **Conclusion**

During the outreach process in developing the next edition of the Manual, an interest may be expressed that; the BLM include in the next edition an additional survey system not in the current edition; or, exclude from the next edition a survey system that is in the current edition; or, that the BLM prepare survey instructions for a survey system in a format different than the Manual. These interests will be taken under advisement.

Attachment: Survey Systems in the United States - An attempt to list and categorize the survey systems in the United States. Comments or clarifications to this list are welcomed. Send to Bob Dahl, at: [robert\\_w\\_dahl@blm.gov](mailto:robert_w_dahl@blm.gov)

## Survey Systems in the United States

### Goal:

1) Identify the survey systems within the United States; 2) Determine the applicable laws and rules to survey by; and 3) Determine the court of competent jurisdiction.

### Definition:

Survey System – Unique laws and rules to survey by.

### Reservations: Land reserved prior to Federal jurisdiction

- 1) State Cession – a condition in the deed of cession from an original state to the federal government; the survey system may be federal or state in origin
- 2) Public Trust – for example; tidelands, lands beneath navigable waters
- 3) Indian – a reservation of land from the land ceded by a Tribe to the federal government
- 4) Foreign sovereignty – for example, Mexican Land Grant

### Survey Systems:

- 1) Federally created Survey Systems – Generally federal rules govern.
  - a) Rectangular
    - i. 38 Initial Points (PLSS 1785)
    - ii. U.S. Military Survey (OH 1797)
    - iii. West of the Great Miami (OH 1798)
    - iv. Scioto River Base (OH 1798)
    - v. Ohio River Base (OH 1799)
    - vi. Muskingum River Survey (OH 1800)
    - vii. Between the Miamis, north of Symmes Purchase (OH 1802)
    - viii. Twelve Mile Square Reserve (OH 1805)
    - ix. Omitted Lands
    - x. Three Mile Method Subdivision of Sections
    - xi. Alaska Statehood Act sec. 6g (AK 1959; 72 stat. 339)
    - xii. Alaska Native Claims Settlement Act, secs. 12(a)(2), 13, 22j, PL 94-456 sec. 4(b), 43 CFR 2650.5-3, 4, and 6 (AK 1971; 85 stat. 688)
    - xiii. Alaska National Interest Lands Conservation Act, secs. 901(b), 906(d)(5), (f)(3), and (h)(4), 909, 1410 (AK 1980; 94 stat. 237)
    - xiv. USFS Educational Grant Act Survey (2001\*)
  - b) Non-Rectangular
    - i. International Boundaries<sup>^\*#</sup>
    - ii. Indian Reservation Boundaries
    - iii. Tidelands<sup>^\*</sup>
    - iv. Lands Beneath Navigable Waters<sup>^\*</sup>
    - v. Metes and Bounds Surveys<sup>\*</sup>

- vi. Lot and Block Surveys\*
  - vii. Townsite Survey (1810; 2 stat. 590 et al.)
  - viii. Riverfront (French) Tracts in Orleans Territory (LA, 1811; 2 stat. 662)
  - ix. New Madrid Claims (MO 1815; 3 stat. 211)
  - x. River, Lake, Bayou, or Watercourse Tracts (1824; 4 stat. 34)
  - xi. Islands and Keys (FL 1848; 9 stat. 242)
  - xii. Small Holding Claims (NM^\*)
  - xiii. Accretion Surveys
  - xiv. Reliction Surveys
  - xv. Donation Land Claims (OR, WA, NM, AZ 1851^\*)
  - xvi. Military Reserve Surveys\*#
  - xvii. Mineral (Lode) Survey (1866\*)
  - xviii. Mineral Segregation Survey\*
  - xix. Tracts
  - xx. Forest Homestead Entry Survey (1899; 30 stat. 1074\*)
  - xxi. Alaska Native Allotment Survey (AK 1906; 34 stat. 197\*)
  - xxii. U.S. Surveys (AK)
  - xxiii. Railroad Townsite Act (AK)
  - xxiv. Small Tract Survey (1938, 43 USC 682a)
  - xxv. USFS Small Tract Act Survey (1983\*)
  - xxvi. Alaska Submerged Lands Act sec. 101(a)(b)(c)and (d) (AK 1988; 102 stat. 979^\*)
- 2) State created Survey Systems – Generally state rules govern
    - a) Ohio Company Purchase (OH 1788#)
    - b) Symmes Purchase (OH 1788#)
    - c) Connecticut Western Reserve (OH 1796^\*#)
    - d) Firelands (OH 1796^\*#)
    - e) Metes and Bounds States Surveys^\*#
    - f) State Boundaries^\*#
    - g) Donation Tract (OH 1789\*#)
    - h) Virginia Military Reserve (OH 1790\*#)
  - 3) Foreign created Survey Systems – Private Land Claims – Generally foreign laws govern
    - a) Vincennes Tract (IN, IL 1802)
    - b) French Grants^\*
    - c) Private Land Claims^\*
    - d) Spanish Land Grants^\*
    - e) Mexico Land Grants^\*

(PLSS-wide or state specific, and start date)

^ not public lands

\* general land laws not applicable

# non-federally surveyed