

Bureau of Land Management

Interpret and Write Descriptions of Land

Curriculum Job Aid

Additional Resources

Specifications for Descriptions of Land

The Specifications provides guidance for writing accurate boundary descriptions, locations by survey, the form and arrangement to be followed for Executive orders, proclamations, public land orders, and examples of boundary descriptions and also provides a standardized process for review of descriptions to assure that only the best available descriptions are published.

- **Path:** BLM.gov > What We Do > More > Cadastral Survey > Tools
- **Link:** <http://www.blm.gov/wo/st/en/prog/more/cadastralsurvey/tools.html>

Manual of Surveying Instructions

The Manual, while not written specifically for non-Federal surveyors, contains guidance on the subject of retracement which is an integral part of private surveying in the 30 Public Land States. Many States have formally adopted the Manual in statute, rule, and/or case law as guidance for private licensed surveyors. Thus, the book is a fundamental piece of the complex subject of boundary surveys here in the United States.

- **Path:** BLM.gov > What We Do > More > Cadastral Survey
- **Link:** <http://www.blm.gov/wo/st/en/prog/more/cadastralsurvey.html>

Marine Managed Areas: Best Practices for Boundary Making (June 2006)

Written by the Federal Geographic Data Committee's (FGDC) Marine Boundary Working Group and sponsored by the National Marine Protected Areas Center, this handbook represents the current best practices for marine boundary delimitation. This publication provides a short, useful guide—best practices—for writing boundary descriptions for federal, state, or local MMAs within U.S. waters and for developing those boundaries within a GIS environment.

- **Link:** www.coast.noaa.gov/products/mb_handbook/

General Land Office Records: Maps of Official Survey, Master Title Plats, Protraction Diagrams

Provides live access to Federal land conveyance records for the Public Land States, including image access to more than five million Federal land title records issued between 1820 and the present and images related to survey plats and field notes, dating back to 1810. Due to organization of documents in the GLO collection, the site does not currently contain every Federal title record issued for the Public Land States.

- **Path:** BLM.gov > Information Center > Land Records > General Land Office (GLO) Records Automation > Survey Plats and Field Notes
- **Link:** <http://www.glorerecords.blm.gov/default.aspx>

BLM State Offices

Provides local information, documentation, and resources by state.

- **Path:** BLM.gov > Our Offices/Centers > “Select your local area” “What We Do” “Cadastral”

Laws, Regulations, Policies

Provides access to laws, regulations, and policies important to managing BLM lands.

- **Path:** BLM.gov > Information Center > Laws, Regulations, Policies
- **Link:** <http://www.blm.gov/wo/st/en/info/regulations.html>

BLM Module Glossary

This glossary is used in conjunction with the Bureau of Land Management's Interpret and Write Descriptions of Land online curriculum.

Terminology	Description
Accretion	The gradual and imperceptible addition of soil.
Aliquot	Contained an exact number of times in another; a part of a measurement that divides the measurement without a remainder. All parts are equal.
Angle Point	A point in a survey where the alinement or boundary deflects from a straight line.
Area	<ol style="list-style-type: none">1. Gross: In BLM usage, the total area of all lands, irrespective of ownership, within the boundaries of a township, reservation or other tract of land.2. Net: In BLM usage, the area of public lands within the boundaries of a township, reservation or other tract of land less exclusions.
Avulsion	A sudden and often violent change in a water course.
Base Line	A line which is extended east and west on a parallel of latitude from an initial point, and from which are initiated other lines for the Cadastral Survey of the public lands within the area covered by the principal meridian that runs through the same initial point.
Boundary	A boundary is the fixing of a limit or extent of property and is associated with uplands, inland waters, and tidelands with application to marine boundaries.
Cadastral Survey	A survey which creates, marks, defines, retraces or reestablishes the boundaries and subdivisions of the public land of the United States.
Center Line or Centerline	The line connecting opposite corresponding quarter corners or opposite subdivision-of-section corners or their theoretical positions. Applied to a street, right of way or any other strip of land of uniform width " <i>centerline</i> " defines the line midway between the side lines of said strip.
Congress of the Confederation	The Congress of the Confederation, or the Confederation Congress, formally referred to as the "United States in Congress Assembled", was the governing body of the United States of America that existed from March 1, 1781, to March 4, 1789. It comprised delegates appointed by the legislatures or assemblies of the several states.
Corner Monument	A point on the surface of the earth, determined by the surveying process, which defines an extremity on a boundary of the public lands. The specific data about a corner monument and its accessories which include marks, positions, and physical characteristics. Corner monument markings – letters, numerals, lines, groves or notches used to mark corner monuments. The markings usually indicate the location of the corner.

Terminology	Description
Delimit or delimited	To officially set or state the limits of something. Delimited land means a parcel of land where the boundary has been determined (set) and has, or can be, described (stated).
Division Line	<p><i>Between a Bog and an Upland Area</i> – The line where the area occupied by a shallow, virtually undrained bog area meets mineral soil, which lies above ordinary high water. If upland vegetation is present, the inference will be that it has been an upland site for the period equal to the age of the vegetation.</p> <p><i>Between a Meanderable Body of Water and a Swamp</i> – The line where the area occupied by the water for the greater part of each average year meets the area where the types of vegetation occur which may normally be found only within the swamp zone. For example, while certain varieties of trees are found only in upland situation, other varieties and other types of vegetation may be found only with in the zone of the swamp. All such vegetation normally ends at the margin of permanent water.</p> <p><i>Between a Swamp and an Upland Area</i> – The line where an area lying above the ordinary high water elevation meets an area of low, wet land of such character that without the construction of artificial reclamation methods it would be wet and unfit for agriculture.</p>
Erosion	The wearing away of land by the action of water, wind, or other elements.
Geographer’s Line	The first line surveyed under the rectangular system. This line, which extends the width of the Seven Ranges (42 miles), is named for Thomas Hutchins, the Geographer of the United States. Under the Ordinance of May 20, 1785, the geographer was to “ <i>personally attend to the running of</i> ” a line westward from the “ <i>Point of Beginning.</i> ”
Guide Meridian	An auxiliary governing line projected north along an astronomical meridian, from points established on the base line or a standard parallel, usually at intervals of 24 miles east or west of the principal meridian, on which township, section, and quarter-section corners are established.
High Water Mark	<ol style="list-style-type: none"> 1. The line which the water impresses on the soil by covering it for sufficient periods to deprive it of upland vegetation. 2. (NOS) A line or mark left upon tide flats, beach, or alongshore objects indicating the elevation of the intrusion of high water. The mark may be a line of oil or scum on alongshore objects, or a more or less continuous deposit of fine shell or debris on the foreshore or berm. This mark is physical evidence of the general height reached by wave run-up at recent high waters. It should not be confused with the mean high water line or mean higher high water line.
Initial Point	Rectangular Survey System: A point which is established from which is initiated

Terminology	Description
	<p>the cadastral survey of the principal meridian and base line that controls the cadastral survey of the public lands within a given area.</p> <p>Metes-and-Bounds: Also called "<i>beginning point</i>." In a survey such as the survey of the boundaries of an Indian reservation, each angle point is monumented and assigned a number. The numbers are in series with number one at the initial point.</p>
Irregular Section	A section having two or more adjacent boundaries, as returned on the original survey, that are no within 0° 21' of cardinal or exceed 25 links from 40 chains in measurement.
Junior Corner	A corner which is part of a survey occurring at a date subsequent to a prior (senior) survey.
Junior Rights	Subordinate to the senior rights. The later patent issued usually has the subordinate right in a situation where a later survey is in conflict with an earlier survey. The first patent issued usually has the subordinate right in a situation where a later survey is in conflict with an earlier survey. The first patent issued usually has the superior (senior) right and the second patent usually has the subordinate (junior) right, regardless of the dates of the original surveys.
Junior Survey	A survey made subsequent to an earlier survey.
Lot	A subdivision of a section which is not described as an aliquot part of the section, but which is designated by number, e.g., LOT 2. A lot may be regular or irregular in shape and its acreage varies from that of regular subdivisions. The term "Government Lot" is commonly used by persons outside the Bureau of Land Management in referring to such a subdivision of a section. "Lot" is also the name given individual parcels of recorded subdivisions of private tracts.
Lotting	A method used to compensate for loss in acreage due to convergence or when land cannot be described in aliquot parts because of special surveys (mineral, homestead) and the meandering of rivers or lakes.
Map	A representation on a plane surface, at an established scale, of the physical features (natural, artificial, or both) of a part or the whole of the earth's surface, by means of signs and symbols, and with the means of orientation indicated.
Meander Line	Meanders are survey lines to depict the bank or shore line of water bodies.
Medial Line	In surveying, the term refers to a particular line which must be determined by the consideration of various factors, or the weighing of evidence, as well as the use of measurement and/or calculation. An example would be the determination of the center of the main channel of a river as distinguished from the measurement or calculation of a line midway between its banks. Occasionally used as though synonymous with " <i>median line</i> ."
Metes-and-Bounds	A method of describing a parcel of land by citing the owners of abutting lands

Terminology	Description
	and describing the length of each course of a boundary as "along" some apparent line, such as, "along a stream" or "along the road." In modern usage, a metes and bounds description includes the bearings and distances of each course.
Monument	A physical structure, such as an iron post, marked stone, or tree in place, which marks the location of a corner point established by a Cadastral Survey. Objects, to be ranked as monuments, should have certain physical properties such as visibility, durability, and stability, and they must define location without resorting to measurements.
Navigable Waters	Waters which afford a channel for useful commerce or travel. The beds of navigable bodies of water are not public domain and are not subject to survey and disposal by the United States. Under the laws of the United States, navigable waters have always been and shall ever remain common highways. This includes all tide water streams, and other important permanent bodies of water whose natural and normal conditions and the date of the admission of a State into the Union was such as to classified the same as navigable water.
Nominal Mile	The intent of the Rectangular Survey System is to lay out the grids in one mile square sections. In reality, few if any, are perfectly square. This term is used to dispel an inference that miles of measurement are exact.
Oxbows	The force of how fast moving water takes a short cut that changes the river's channel.
Plat	As used technically by the BLM, the drawing which represents the particular area included in a survey, such as a township, private land claim, or mineral claim, and the lines surveyed, established, retraced, or resurveyed, showing the direction and length of each such line; the relation to the adjoining official surveys; the boundaries, descriptions, and area of each parcel of land subdivided; and, as nearly as may be practicable, a representation of the relief and improvements within the limits of the survey.
Principal Meridian	The meridian extended from an initial point, upon which regular quarter quarter-section, section, and township corners have been or are to be established.
Preemptor	To gain possession of by prior right or opportunity, especially to settle on (public land) so as to obtain the right to buy before others.
Protraction Diagram	The diagram is prepared for the purpose of describing unsurveyed land areas. It is approved for the Director by the Chief, Division of Cadastral Survey, and filed in the respective satat offices of the BLM – after public notice in the Federal Register.
Public Land Order	An order effecting, modifying or canceling a withdrawal or reservation. Such an order is issued by the Secretary of the Interior pursuant to powers delegated to the Secretary by the Federal Land Policy and Management Act of 1976.
Quarter Corner	A corner at an extremity of a boundary of a quarter section. Written as $\frac{1}{4}$ section corner, not as one fourth section corner. The township boundaries that run north and south are termed " <i>range lines</i> ;" with

Terminology	Description
Range Line	few exceptions the range lines are run on cardinal and have been intended to be on cardinal.
Rectangular Survey System	A system inaugurated by the Continental Congress on May 20, 1785, for the survey of the public lands of the United States. Its distinguishing characteristic is that in the main, and in all cases where practicable, its units are in rectangular form.
Reliction	The gradual and imperceptible uncovering of existing soil by the recession of water.
Right of Way	The legal right to cross the lands of another. Also, used to indicate the strip of land for a road, railroad or power line. In BLM, a permit or an easement which authorizes the use of public lands for certain specified purposes, commonly for pipe lines, roads, telephone lines or power lines. Also, the lands covered by such an easement or permit.
Section	The unit of subdivision of a township with boundaries conforming to the rectangular survey system nominally one mile square, containing 640 acres.
Section Corner	A corner at the extremity of a section boundary.
Senior Corner Senior Rights	A point established and monumented by an approved prior survey. The rights which take precedence. The first patent issued usually takes precedence in a situation where a later survey is in conflict with an earlier survey. The first patent issued usually has the superior (senior) right or title regardless of the dates of the surveys.
Senior Survey	The oldest of two or more surveys which fixed the position of the line and is controlling unless officially superseded by a subsequent survey.
Small Scale Maps	BJ to provide link to definition.
Standard Parallel	Also called "correction line." A line extended east or west from the principal meridian, usually at intervals of 24 miles north and south of the base line, along a parallel of latitude. Standard parallels are established to correct for the convergence of range lines and to maintain a workable adherence to the requirement that each township be 6 square nominal miles. They are surveyed in the manner prescribed for the survey of the base line.
Subdivision	Verb <ol style="list-style-type: none"> 1. Subdivision of a township into sections. 2. Subdivision of a section into half-sections, quarter-sections, sixteenth-sections, or into lots, according to the Manual of Surveying Instructions. 3. The process of surveying such subdivisions. 4. In the private practice of land survey, subdivision is the division of an area into lots, streets, rights-of-way, easements and accessories, usually according to State law and local regulations. Noun

Terminology	Description
Subdivision (cont.)	1. A particular aliquot part, lot, or parcel of land described according to the official plat of its cadastral survey.
Township	The unit of survey of the public lands; normally a quadrangle approximately 6 miles on a side with boundaries conforming to meridians and parallels within established limits, containing thirty-six sections, some of which are designed to correct for the convergence of meridians or range lines.
Township Line	The township boundaries running east and west are termed " <i>township lines.</i> " By law, they were intended to be on true parallel of latitude.
Townsite	An area of public lands which has been segregated for disposal as an urban development, often subdivided into blocks, which are further subdivided into town lots.
Tract	Generally, a metes-and-bounds survey of an area at large within a township. In modern public land surveys, the term is used specifically to mean a parcel of land that lies in more than one section or that cannot be identified completely as a part of a particular section.
Unsurveyed Lands	Lands not yet surveyed. Fractional section surveys, for example, leave unsurveyed land within a section. The land is known to exist, but the survey has either not yet been authorized or has not yet, for whatever reason, been completed.