

# Riparian Boundaries

Compiled  
by

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**Summary:** Properties bordering streams, ponds, lakes, tidal water, etc. are often the most valuable property because of their proximity to the water. Unfortunately, the descriptions of these properties often cause title problems and questions on access to the water. This workshop will introduce pertinent considerations in identifying, analyzing, and resolving title and boundary issues along water bodies.

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### Typical Scenarios:

1. Accretions — Land is added by silt or soil deposited by actions of water.
2. Avulsion - The sudden shift of the location in the flowing water.
3. Erosion — Soil is removed by action of water.
4. Relictions — The addition of upland caused by the gradual dry up or removal of water.
5. Submergence — The gradual rise of the lake causing more land to be covered by water.  
Note: Reliction and submergence are usually associated with lakes.
6. Boundary Uncertain — Original survey never encompassed the area or the description fails to clearly indicate the extent of title.

### General Principles:

1. The conveyance of the uplands will include the riparian lands unless the contrary is intended and appears.
  - a. Non-navigable streams, rivers, creeks, etc. - Title extends to the center.
    - 1) Line equal-distance between the banks (see e.g. *Warren v. Thomaston*, 75 Me. 329 (1883))
    - 2) Line that follows the low point of the channel (thalweg) (see e.g. *State v. Ecklund*, 147 Neb. 508, 23 N.W.2d 782 (1946))
  - b. Navigable streams, rivers, creeks, etc. - Title extends to the low water line with an easement between the low and high-water line for public use.  
Note: In Maine and Ohio title extends to the center of navigable streams, rivers, creeks, etc. (line equal-distance between the banks).  
Note: In Pennsylvania title extends to the ad medium filum aquae. *Lakeside Park Co. v. Forsmark*, 396 PA. 389, 153 A.2D 486 (1959)
  - c. Navigable Lakes and Ponds — Title extends to the water's edge with the title remaining in the sovereign.
  - d. Non-navigable Lakes and Ponds — Title extends to the center.
2. When water boundaries are slowly and imperceptibly changed, the riparian boundaries will follow the water. (see e.g. *State v. Ecklund*, 147 Neb. 508, 23 N.W.2d 782 (1946))
3. Avulsion — When water boundaries are changed suddenly in a short period of time (e.g. severe storms), the boundary remains where it stood prior to the sudden change. (see e.g. *State v. Ecklund*, 147 Neb. 508, 23 N.W.2d 782 (1946))
4. A surveyor is charged with following in the footsteps of the original surveyor but it is understood that the original surveyor did not wade into the water but rather took the most expedient and easiest route along the side of the water body leaving some land to be included in

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the title by common law and the boundaries to be defined later.

"[a] surveyor usually cannot go into a stream to make a corner, so he makes a corner on the bank in order to identify the place where he stopped--the rule being an exception to the one which requires following the footsteps of the surveyor." *State of Texas v. Brazos River Harbor Navigation District*, 831 S.W.2d 539 (Tx.App. 1992)

5. Extending sidelines to the limit of ownership is governed by state law:
  - a. Extension of Lot Lines
  - b. Perpendicular
  - c. Apportionment
  - d. Colonial Method

### Riparian Terms:

1. Low Water Line — The low water line is a line that is established by the normal water level during periods of summer and fall that are not occasioned by unusual conditions such as drought or obstructions upstream.

"The term 'low-water mark,' when applied to nontidal, navigable waters, should delineate ordinary or regularly recurring level, not lowest level" *County of Lake v. Smith*, 228 Cal.App.3d 214, 278 Cal.Rptr. 809 (1991)
2. High-water Line — The high-water line is a line that is fixed by the normal high-water level during periods of winter and spring that are not occasioned unusual conditions such as flooding or obstructions downstream. It is the line between vegetation and the exposed soil and rock caused by the scour of the river.

"[T]he line on the river bank reached by the water when the river is ordinarily full and the water ordinarily high. Not the highest point touched by the water in a freshet ... but the highest limit reached when the river is unaffected by freshets and contains its natural and usual flow; the highest limit at the ordinary state of the river ... Sometimes it may be "the line which the river impresses upon the soil by covering it for sufficient periods to deprive it of vegetation and to destroy its value for agriculture", while in other cases "it can only be ascertained by careful observation." *Proctor v. Hinkley*, 462 A.2d 465 (Me. 1983)
3. Bank — The term bank is synonymous with the term 'shore' when referring to freshwater. However, it is more commonly used to signify the high point of a slope leading to or from a water body. In many cases where the slope is steep, the bank refers to the exposed soil between the low and high-water.

"The reference to "bank" in a deed may be limited by other calls to ordinary high-water mark or it may include to the low-water mark. ...Whether the deed conveys the flats or bed adjacent to the bank of a body of water, tidal or nontidal, must be determined by deciding from the terms of the deed whether they are intended to be included or excluded." *Proctor v. Hinkley*, 462 A.2d 465 (Me. 1983)
4. Shore — The shore is that area between the high and low water line that may occasionally be submerged during period of high-water and is generally free of shrubs, trees, and woody vegetation.

"The 'shore' is the ground between the ordinary high and low water mark the flats

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and is a well defined monument." *Hodgdon v. Campbell*, 411 A.2d 667 (Me. 1980)  
"Technically speaking, the 'shore' refers to the ground alternatively covered and exposed by the flow and ebb of the tide, the flats between the ordinary high and low water mark. ... it is synonymous with the term 'bank'." *Proctor v. Hinkley*, 462 A.2d 465 (Me. 1983)

5. Beach — The beach is a shore area covered by fairly uniform gravel or sand.
6. Thalweg (thread of the stream) — The majority has described the thalweg to be synonymous with the thread of the stream. The thread of the stream is the deepest channel. In other words, the line of the water when the water is barely flowing.  
The 'thread or center of channel' as used in the rule that where title to an island in a non-navigable stream is conveyed by government patent and the land so conveyed is bounded by the waters of such stream, the grantee's ownership carries with it the bed of the river to the center or thread of each surrounding channel, must be the line which would give the owners on each side access to the water, whatever its stage might be, and particularly at its lowest flow." *State v. Ecklund*, 147 Neb. 508, 23 N.W.2d 782 (1946)  
"The 'thread of a non-navigable river' is the line of water at its lowest stage." *Gibson v. Cobb*, 236 Cal.App.2d 226, 46 Cal.Rptr. 57 (1965)

However, a minority of states hold the thread of the stream to be the geographic center or a line equal distance from the banks of the stream.

"But, the thread of a stream is the middle line between the shores, irrespective of the depth of the channel, taking it in the natural and ordinary stage of the water. The channel and the thread of the river are entirely different. The channel may be one side of the thread of the river or the other." *Department Of Natural Resources v. France*, 277 Md. 432, 357 A.2d 78 (1976)

7. Middle of the Stream — The middle of the stream is frequently interchanged with thalweg (see e.g. *Gibson v. Cobb*, 236 Cal.App.2d 226, 46 Cal.Rptr. 57 (1965)). However, some jurisdictions place it equal distance between the low water line. (see e.g. *Department Of Natural Resources v. France*, 277 Md. 432, 357 A.2d 78 (1976)).
8. Avulsion — Avulsion is the sudden or perceptible addition or loss brought about by the action of water (see e.g. *Valder v. Wallis*, 196 Neb. 222, 242 N.W.2d 112, 114; *State of Arkansas v. State of Tennessee*, 246 U.S. 158, 38 S.Ct. 301, 304, 62 L.Ed. 638; *Stull v. U. S.*, C.C.A.Neb., 61 F.2d 826, 830).
9. Navigable: Water can be navigable in fact or navigable by law. Navigable in fact is water that can be used, or is susceptible of being used, in its ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water. (see e.g. *Lakeside Park Co. v. Forsmark*, 396 Pa. 389, 395, 153 A.2d 486, 488 (1959)) Navigable by law is water that has been designated as such by the legislature. Water that is

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navigable in fact is also navigable by law.

Note: While it has often occurred in the past that even the smallest streams were used in commerce oftentimes the largest lakes were not used in commerce making the size of the water body irrelevant.

Note: In Maine bodies of standing water greater than 10 acres are classified as “Great Ponds” and considered navigable by law — regardless of their actual or available use.

Note: In Pennsylvania many rivers and streams have been designated by the legislature as navigable.

“Navigation and navigability are portentous words. They mean more than the flotation of buoyant vessels in water: if it were otherwise, any water capable of floating a canoe for which a charge could be made would make the water navigable. They mean more than some commercial use to which collected water is put: if this were not so, every spring-fed pool capable of being bottled and sold for drinking water would be navigable. No single factor can control.” *Lakeside Park Co. v. Forsmark*, 396 Pa. 389, 395, 153 A.2d 486, 488 (1959)

“We think that the concept of navigability should not be limited alone by lake or river, or by commercial use, or by the size of water or its capacity to float a boat. Rather it should depend upon whether water is used or usable as a broad highroad for commerce and the transport in quantity of goods and people, which is the rule naturally applicable to rivers and to large lakes, or whether with all of the mentioned factors counted in the water remains a local focus of attraction, which is the rule sensibly applicable to shallow streams and to small lakes and ponds. The basic difference is that between a trade-route and a point of interest. The first is a public use and the second private.” *Lakeside Park Co. v. Forsmark*, 396 Pa. 389, 395, 153 A.2d 486, 488 (1959)

“The difference in modes of trade and travel upon a long thin roadway of water joining regions and communities, which a river is, and upon a small lake, is obvious. Commerce may exist on both and it may move on both, but such movement on a 150-acre lake, unless it is an adequate link in a chain of commercial intercourse, remains local and insignificant in comparison with the argosies of transport that move along the great rivers of the Commonwealth.” *Lakeside Park Co. v. Forsmark*, 396 PA. 389, 393, 153 A.2D 486, 487 (1959)

**Riparian Monuments:** The intent of the parties is to be ascertained from the language of the deed. Where the intent is not clear, rules of construction are applied.

1. Shore — Along the shore is to be construed as a line coincident with the high-water line.

“As a matter of law, a deed reference “by the shore” calls for a measurement along the contour of the high-water mark.” *Hodgdon v. Campbell*, 411 A.2d 667 (Me. 1980)

The exception to this rule is where the deed description calls for the shore and subsequent wording would be meaningless if the boundary were stopped at the high-water line.

“The ‘including-the-shore-adjoining-the-lot’ language operated to convey the flats excluded in the grant ‘by the shore.’” *Hodgdon v. Campbell*, 411 A.2d 667 (Me. 1980)

2. Plat — Generally boundaries that appear to coincide with water bodies on a plat are presumed to coincide.

3. Measurements — Measurements are assumed to have been made from the side or the edge of the water even though title goes to the center.

“A majority of the court is of opinion, that it is a common method of measurement

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in the country, where the boundary is a stream or way, to measure from the bank of the stream or the side of the way; and that there is a reasonable presumption that the measurements were made in this way, unless something appears affirmatively in the deed to show that they began at the centre line of the stream or way." *Smith v. Hadad*, 314 N.E.2d 435, 366 Mass. 106 (1974)

4. Artificially Induced — Artificially induced changes in the low, high, or location of the water body will not affect the boundary.

### Typical Methods:

1. Apportionment — The actual frontage is divided in proportion to the original (record) distances.  
Note: This method is equitable
  - a. Costly to apply - In some cases the requirement that the actual frontage be applied to the original frontage will require in depth research and extensive surveying.
  - b. Impossible to apply in some situations — This method requires that at some point the original boundary and actual boundary coincide to provide a point of reference to apply the proportioned measurements. The situation or lack of historical records may make this task impossible.
2. Extend the Original Lines — The original boundaries are extended in the same direction until they intersect the water or another boundary.
  - a. This method is easy to comprehend.
  - b. This method is easy to apply without burdensome research and surveying.
  - c. This method may result in the riparian owner being cut off from the water.
3. Perpendicular — A straight line is drawn from the original corner to the water line along the shortest distance (perpendicular to the water line).  
Note: This is the most equitable method and will always result in riparian frontage. In addition this is the most economical and expedient method to extend the boundaries.
4. Colonial Method — An average direction is struck between lines perpendicular to the boundary.
  - a. This may result in property being excluded from access to water.
  - b. The record boundary has to be fixed by using corners established on or prior to the corner in question.
  - c. This method is difficult because of the research and extent of

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the survey required.

### **Erosion:**

1. Erosion will cause the riparian boundaries to gradually recede. The side boundaries will stay the same while the riparian boundary will follow the receding shoreline.
2. In some cases, the entire property may disappear then reappear as a result of accretion or reliction.
3. In other cases, the entire property may disappear regardless of subsequent events.

### **Surveyor's Responsibility:**

1. Determine if the boundary calls for the water as a monument.
2. Determine where on the water the boundary should go (high, low, shore, bank, center, thread, etc.).
3. Determine the location of the boundary (water) at the time of the operative conveyance.
4. Use the proper method to fix the boundaries.
  - a. This may vary depending upon the equity involved.
  - b. This may vary depending upon the situation:
    - 1) apportionment of accretions
    - 2) determining the boundary beyond the original survey
5. If there is some doubt as to the proper method, show the results that would occur using alternative methods.
6. If litigation is pending regarding the proper apportionment of accretions, all parties may have to be joined. Therefore, the surveyor may have to determine ownership along the entire extent of accretions.

“One exception, recognized in Washington, is that when property lines are uncertain for all owners of shoreline property situated on an irregular cove, all owners are necessary parties to a boundary line dispute. A related exception concerns apportionment of an excess or deficiency of property as compared with the area indicated in the original plan or plat. In such a case all owners in the affected block must be joined because ‘[a] proper allocation of excess or deficiency cannot be made until the owners of all the lots are in court.’” *Reitz v. Knight*, 814 P.2d 1212 (Wa.App. 1991)