## **ALLOCATION OF RIPARIAN RIGHTS**

The Bureau of Survey and Mapping sponsored a study of the effect of shoreline and channel geometry on the division of riparian rights. This study was prepared by David Gibson, Associate Professor, University of Florida.

The research was intended to analyze existing methods for making allocations of riparian rights together with a study of different shoreline configurations. The result was a set of recommended procedures to be followed in order to maintain legal validity.

Following are conclusions from the study and examples of riparian rights allocations.

## **CONCLUSIONS FROM LITERATURE SEARCH**

(1) Docking is a near-shore consideration and is limited by the line of deep water (line of navigability or line of navigation).

The great weight of research indicates that when docking is the primary issue, courts will usually apportion the space between the shore and the line of navigability.

(2) In considering docking when the shore is relatively straight on a large body of water (one without a nearby channel or thread), such as the ocean, a large lake, ocean bay, or wide river, the dominant construction makes division lines perpendicular with the general direction of the shore extended to the line of navigable water.

In a wide river, the opposite bank, channel, and thread are so far away from the property in question, that there is little effect of the shape of those features on a localized problem of docking.

The shore's general direction requires smoothing of smaller indentations and projections.

(3) Along a straight river without a marked channel and the opposite bank is in proximity to the area of concern, the dominant technique is to construct dividing lines perpendicular with the stream's thread.

The stream's thread should be found as the median line of the water surface during ordinary stages of water height. Detailed mathematical techniques exist for finding threads of water bodies (Simpson, 1986).

(4) Along a river or other water body with a nearby marked navigation channel and a regular shore, most courts construct perpendiculars with the nearest limit of the channel as opposed to the thread.

It appears that the proximity of any established outer line will most likely be used by courts for the apportionment using perpendiculars if the shore is relatively straight.

(5) The direction of upland boundaries is largely ignored when apportioning riparian rights, but if there is a minor deviation in direction from that recommended for riparian rights division, they may be extended.

This recognizes that extension of upland boundaries is still the most natural method for riparian rights allocation and that in some cases, minor variations from the perfect direction will not cause inequities.

(6) When the shore is irregular in the form of a cove or projection into an ocean, ocean bay, lake, or river, most courts apportion the line of deep water to divide docking rights as opposed to any perpendicular method.

(7) Methods of apportionment designed for the whole water body, such as the center point method in lakes, thread of 1akes, perpendiculars to channels or threads, should be used mainly for those riparian rights that require appropriation of the entire water surface.

They may also be used to determine direction but not the terminus of near-shore division lines when they give substantially the same apportionment as a near-shore method. This would be true in round lakes with concentric water depth contour lines, along rivers with parallel banks and parallel channel, and along long lakes with consistent water depth contours.

(8) Riparian rights may conflict with each other, and an order of priority is implied in court decisions. The right to view has not been ranked very high in Florida case law and usually resides in the same area of a more dominant riparian right.

This indicates that techniques should be developed for apportioning the nearshore right of ingress and egress to navigable waters as a primary riparian right. The right of view will occupy the same limits provided no obvious inequity results.

(9) The apportionment of the line of deep water is the most universal technique for division of docking rights that will give the same solution as more traditional techniques in many cases and will follow dominant national case law where the shore is irregular.

This technique is recommended for further development.

## **RECOMMENDED PROCEDURES AND WATER BODY CLASSIFICATIONS**

In explaining allocation procedures, reference will be made to the sketch on page <u>7</u> which was constructed rather at random to show numerous cases of water boundaries. It is presumed that the main considerations are docking, view, and access to navigation channels. Lots surrounding the water show a typical pattern in which a series of lots with parallel lines is created along a relatively straight portion of shore. Another group of lots further along the shore having parallel lines will meet the first subdivision creating an odd-sized lot that is a prime candidate for a riparian rights dispute.

Along the river from the south upstream from point "a," the body would be classified firstly as being a narrow stream where the opposite bank is of a consideration and secondly as having parallel banks without coves and projections. There are two distinct regions identified: (1) a broad sweeping curve, and (2) a relatively straight section.

The main technique to be applied here is the "perpendicular with the stream's thread" method. The banks being the limit of water at its ordinary stage would be determined. A median line would be constructed exactly midway between the banks. Perpendiculars would be constructed at the thread and produced back to the shore points. Private docking rights would stop at the line of deep water.

On the broad curve, the thread would be an arc, and normals with that thread would essentially be radial lines. On the straight section, and in the series of small curves approaching point "a," the thread would be a series of straight lines. Immediately before point "a" the shallow cove on the east bank would be a consideration. Assuming that the deep portion of river is all suitable for navigation, then the thread would still be determined and perpendiculars constructed.

Downstream of point "a," a maintained and marked channel exists that would take over from the thread for the apportionment base line. The channel probably has an east and west edge, and perpendiculars would be constructed at the nearest edge and run back to shore.

The deep cove on the east bank could be termed a pocket and would require special treatment. Inequities are obvious: if lot lines were extended, person "A" would be entirely cut off from navigable water and the channel. If the previous technique of perpendiculars from the channel were applied, then person "B" would receive nothing. Therefore, the line of navigability should be apportioned.

Finding the cove limits would be the critical decision. The headlands of the cove would be identified as points "b" and "c," the places where the east river bank departs its generally parallel course and enters the cove. Points b' and c' would be established directly opposite shore points using perpendiculars with the line of navigability. Between b' and c', the line of navigability would be divided in proportion to frontage. Straight lines would run back to shore points. The deep water portion of the cove would not be apportioned.

Now, on the east side of the ocean bay, it is recognized that the shore and channel are diverging from each other. since docking is a near-shore consideration, then a near-shore solution is called for. The choices here would be: (1) project lot lines, (2) dividing lines perpendicular with the shores, or (3) proportional division of the line of navigability. The rather drastic dip in the shoreline at lot line "e" would cause some problems with the perpendicular method because it is to be used only when the shore is relatively straight. Once that problem area is identified, go each direction to places where the basic methods of perpendicular with shore or lot line projection cause no problems, and between those points proportion the line of deep water. The deep water area out to the channel would not be apportioned.

At the inlet the proximity of the channel is an important consideration, and perpendiculars would be dropped from it such as at point "d."

The large cove on the north side of the bay calls for apportioning the line of navigability. Again, the main question would be determining the apportionment limits. There is a well-defined headland on the cove's west end at "h," but on the east side, the cove's beginning is not so well defined. As a guideline for thought, there is no use apportioning lots in which a more basic method works; therefore, start at the point of greatest inequity, point "i" in this case, and go in each direction until straight-line projections will intersect the line of navigability at nearly right angles well clear of the problem area, such as at "j" in this case. Apportionment between "h" and "j" will give each owner a portion of the line of deep water for constructing a dock.

A problem is found for the lot at point "i." Due to small frontage, that lot will receive a very small portion of deep water frontage, perhaps not enough on which to build a dock without conflict with adjoiners. Research has not found cases that have spoken to this situation in particular, so future considerations may be made here.

The west side of the bay duplicates situations already discussed until the small non-navigable cove is reached at "k." Apportionment of the line of navigability would give the lot at "k" practically no deep water frontage. At this point some severe questions arise. Perhaps the owners around that marshy cove do not have the right of ingress and egress to navigable waters. Apportionment of the right of access to the non-navigable waters would be an easy matter of using the centerof-a-Lake in conjunction with the thread-of-a-lake as done for long lakes. However, to solve this question, several legal questions would need addressing outside of the scope of this report. At point "I, " the channel becomes proximate, and perpendiculars with the channel would be used along the west river bank until that line was replaced with the thread upstreams of "a."

The fresh water lake has numerous docking problems due to upland boundary configurations. Two approaches are possible. The more traditional one would establish center points in the semi-circular lake ends together with a thread midway between the banks as shown. Around the lake ends lines would radiate from center points to shore points, and along the thread perpendiculars would be constructed and run back to shore points.

However, such a division will produce an inequity at the cove on the west side for the lot at "s." Joining the lot corners with the center with the center point will yield a slim region of access to deep water. Therefore, on irregular lakes such as this one, apportioning the line of navigability would solve the cove problems. Places are identified where mere extension of lot lines intersection the deep water line at right angles, such as at "m," "n," "0," "p," "q," and "r." Between those limits the line of navigability would be proportioned to shore frontage. Such a technique localizes a solution to the precise area of inequity.

It must be mentioned that the size of the lake determines whether a "whole lake apportionment" is used or a near-shore method applies. In this case the lake would be termed a smaller style lake in which the threads and center points are not completely remote to the near-shore situation. On larger lakes apportioning the line of navigability should become dominant to solve the near-shore problems of docking. On the other hand, if the lake is small with regular shoreline, the two techniques give the same result.

## SUMMARY

Riparian rights allocation requires a multitude of considerations, but for docking courts have usually turned to apportionment of a line of navigability except where a nearby river thread or navigation channel will call for a perpendicular construction. Even for the more regular water bodies, such as rivers, round lakes, and long lakes without shore indentations, apportioning the line of navigability will give substantially the same results as other methods that apportion the entire water surface. It is believed that this technique could be applied with geometric certainty to the wide majority of situations, and due to the near-shore characteristics of the docking process, a near-shore solution such as this is most suitable. A significant amount of national case law backs up the technique.

Care should be taken when apportioning riparian rights from a safe upland line as because parallel shift of the riparian rights lines may result.

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