

Valuation of Submerged Lands.(below tidal waters)

Source:  Appraisal Journal

Publication Date: 01-JUL-01

Abstract

This article addresses recognized valuation techniques based on property rights inherent with the ownership of real estate. The public lands are held in fee simple estate until an encumbrance is created through a lease or other vehicle. The bundle of rights is allocated to the lessor (public domain) and the lessee (private use), which establishes a leased fee estate when a usage fee (lease amount) is created for the tidal lands. These techniques are the subject of this article.

"Submerged lands" are public lands lying below tidal waters in the continental United States. These lands cannot be owned by private entities; they are owned by the states adjacent to the submerged lands. However, the tidal water above the submerged land may be used by private entities. This potential use by private entities has generated the need for a method of valuing submerged lands by private entities for leasing purposes.

Due to the nature of the market, valuation is best accomplished by means other than the sales comparison approach. However, this approach may suggest a value for the improvements to the land and establishes the typical rent-setting procedures.

Each state values its submerged land differently. There is no universal formula; there are only broad generalizations that apply to all tidal lands. This makes adherence to the principles of sound appraisal practice critical in the final analysis. States apply varying percentages of the upland value to the submerged land based on the laws and procedures followed by the state. Customarily, the percentage of upland value depends on use. Generally, a higher value will be placed on a use that is more water-dependent. This analysis is then used to establish the appropriate rental rates for the use of the submerged land. This is done with recognized income analysis from the market using a capitalization rate for the year's revenue.

The methodology for submerged lands may be summarized as follows. First, the upland is valued based on recognized sales comparison techniques applied indirectly. Second, a rental survey is completed of public jurisdictions that lease submerged land to private entities, and a submerged fee rate is reconciled. The submerged fee rate, when applied to the upland value, provides an implied submerged land value. Third, a separate sales comparison approach is completed to determine a land capitalization rate. This land capitalization rate is then applied to the implied submerged land value to determine the annual lease payment for use of the tidal water above the submerged land.

The Public Trust Land Concept

Understanding the concept and history of submerged land is critical, since these define issues related to ownership and use of the land. It is also critical to understand the interests, benefits, and rights inherent with the concept of submerged land and how these are considered in determining the final value.

The concept of public trust land, and the peoples' right to access to such lands, is thoroughly entrenched in western culture and American legal history. It was defined as early as 533 AD in the Institutes of the Roman Emperor Justinian, which dealt with the Roman law applying to air, running water, the sea, and the seashores. [1] By the time of the Magna Carta in England, the crown held public lands in trust for the people.[2] The concept of public rights to public water was observed in America in 1641 with the Great Pond ordinance of the Massachusetts Bay Colony. This ordinance guaranteed the right to fish and fowl in ponds greater than ten acres, along with the freedom to pass on private property to gain access to them. [3]

When the original thirteen states took over sovereignty of their land from the British after the Revolutionary War, the states became the owners of the public lands underlying "navigable waters." [4] The concept of public trust land was articulated in 1821 in the New Jersey case of *Arnold v. Mundy*, in which the doctrine of public trust land was extended and clarified. In this case the court ruled that under "natural, civil, and common law the sovereign in trust reserved those lands for the people of the state." [5] The sovereign ownership of public lands was articulated again in 1869 with *Illinois Central Railway v. Illinois*. The United States Supreme Court invalidated the ownership rights of the Illinois Central Railway to the deeded bed of Lake Michigan along the Chicago waterfront. [6]

Laws Governing Submerged Lands

There are two bodies of well established custom and law relating to water rights in the United States. The first relates to nontidal, usually potable, water found in rivers, streams, wells, and lakes. These water rights generally have been considered as real estate, running with the land. There is a fairly well-developed and orderly market for these nontidal property rights in the United States, as well as customary valuation techniques. This article does not consider nontidal water rights and their valuation, but rather focuses on tidal waters.

The second body of custom and law relates to waters over submerged lands. [7] The right to use the waters above these offshore, submerged lands is generally held as public trust. Further, these tidal waters are not completely bounded by land and are subject to federal law.

The definition and ownership of public trust land beneath tidal, submerged, or navigable waters is set forth in the United States Code, Title 43, which defines sovereign submerged land as, "all lands within the boundaries of each respective state which are covered by nontidal waters that were navigable under the laws of the United States at the time such state became a member of the Union, or acquired sovereignty over such lands

and waters thereafter, up to the ordinary high water mark as modified by accretion, erosion, and reliction." [8]

The land is further described as being held in trust for the use and benefit of the people of the state. The United States Code clarifies that the land may be "permanently or periodically covered by tidal waters from the line of mean high tide out three geographical miles distant from the coast or the Gulf of Mexico." [9] The land also may be "filled in, made, or reclaimed lands." [10] The United States Code excludes streambeds lawfully conveyed to private citizens. Ownership, and the right and power to manage, administer, lease, develop, and use these lands is also established in the United States Code. These submerged lands are held in trust for the use and benefit of the people of the particular state, as set forth in Tide 43, U.s. Code, Section 1311. [11]

Most states have included definitions of public lands and the rights of public access to these lands in their constitutions and codes. For example Article X, Section 4, of the California State Constitution "guarantees the free navigation of the state's water." The power to govern over these lands is given to the State Lands Commission. These codes also define the authority of the State Lands Commission. Article 9 of the code defines a lease involving grant tide and submerged land, while Sections 2801-2803 explain procedure, commission criteria, and approval criteria respectively.

The Oregon State Constitution, Article 8, Section 5, grants the Division of State Lands the responsibility of overseeing public trust lands. Oregon Revised Statute places all tidally influenced and navigable waterways under the jurisdiction of the Division. The Public Trust Doctrine of Oregon provides that the state must hold submerged and submersible land in trust for the benefit of all the people, and that the general public has a right to frilly enjoy these waters for most uses.

Washington State's Constitution, Article XVII, declares state ownership of the shores of all navigable water, except where federal patent was perfected prior to statehood. Article XXVII, Section 2, invalidates prior acts of the territorial legislature granting tidelands to railroad companies, establishing the riparian rights of the public. [12] Article XV of the state constitution establishes harbor boundaries, and places a restraint on the disposition of beds underlying navigable waters outside certain harbor lines.

Legal Background

Further clarification of the boundaries on which a state may have jurisdiction is detailed in the federal Outer Continental Shelf Lands Act of 1953. This statute defines the Outer Continental Shelf (OCS) as all submerged lands lying seaward of state coastal waters (three miles offshore) that are under United States jurisdiction. The statute authorizes the secretary of the interior to promulgate regulation to lease the OCS in an effort to prevent waste and conserve natural resources and to grant leases to the highest responsible bidder as determined by competitive bidding procedures. [13] Thus, rights to and ownership of submerged land and the use of the tidal water are within the public domain. These rights can, however, be leased by the state to private entities for economic, social, and

environmental purposes. Examples of purposes upon which leases for private uses are based include:

- * Boat docks, marinas and off-shore storage
- * Shipping lanes for trade and commerce
- * Communication easements for cable, fiber optics, or other
- * Recreation (boating, swimming, special events) and harvesting
- * Mitigation

There are recognized valuation techniques based on property rights inherent with the ownership of real estate. The public lands are held in fee simple estate until an encumbrance is created through a lease or other vehicle. The bundle of rights is allocated to a lessor (public domain) and the lessee (private use), which establishes a leased fee estate when a usage fee (lease amount) is created for the tidal lands.

Submerged Land Valuation Methodology

The methodology to determine the value of submerged land and corresponding lease rates starts with the highest and best use analysis. This is consistent with the accepted highest and best analysis as though vacant and specific to the upland. However, local ordinances and uses of tidal land vary among individual states and ports. The value may be found by applying the direct sales comparison or income approach based on an investigation of various port authorities' lease pricing schedules. While differences in lease pricing schedules occur between each port area, the underlying valuation principles are the same in the selection and analysis of the comparable data regarding the legal, physical, financial, and maximally productive uses. Although regional differences do exist, a common formula can be used to determine the value of submerged land leases and ownership.

The sales comparison approach can only be used indirectly, since there are few, if any, comparable sales of actual submerged lands. This is compounded by the fact that if actual sales do occur, they are typically inter-agency transfers within the public sector and are less reliable because of their non-economic use. Therefore, submerged land is usually valued as a percentage of the upland fee simple value.

In valuing the upland, the sales and/or listings of properties similar to the subject's upland characteristics are used to indicate and provide a basis for determining the upland value. "Upland" is defined as land that is directly adjacent to the submerged land in question.

As in typical land appraisals, comparisons are made between the subject land and comparable properties. Percentage or dollar adjustments are then made to the selling price of each comparable for property rights, financing, time of sale, and unusual sales

conditions. Qualitative or quantitative adjustments are made for physical differences between the comparable and the subject properties.

A range of values is the result of this approach. The appraiser must then correlate the range into a final indicated value by selectively rating the comparables to their overall comparative values. Therefore, if an upland fee simple value is supported at \$22.00 per square foot and the appropriate submerged fee rate (see discussion below) is 25%, the indicated value for the submerged land would be:

$$\$22.00 \times 0.25 = \$5.50 \text{ per square foot}$$

The submerged fee rate varies and is based on intended or current uses. If the submerged land use derives income and the adjacent upland is dependent on the operation, then the submerged fee rate is placed at the higher end of the range. If the adjacent upland use is less dependent, the submerged fee rate is placed at the lower end of the range. This co-dependency is consistent with most port authorities.

To determine the submerged fee rate, a complete market survey is applied to the upland value. The submerged fee rate is determined by surveying public agencies, including port authorities and state agencies. As noted, the rates will vary based on the interdependence of the upland use and the submerged land (tidal water) use.

For example, if the submerged land is being used for boat docks that derive income and the adjacent upland is dependent on the boat dock operation (such as a yacht club), the submerged fee rate will be placed at the higher end of the range. In some jurisdictions, the interdependence is considered 100%, and therefore, the submerged fee rate is 100% of the upland value. In this instance, the preserved submerged land value is the same as the reconciled upland value.

If the adjacent upland use is less dependent on the submerged land, the submerged fee rate is placed at the lower end of the range. This "dependence" structure is consistent with all agencies. Some exceptions may apply on a jurisdictional basis, but are not common.

Examples of actual submerged fee rates from port districts in the western United States are listed in Table 1. Overall, submerged fee rates were found to range from 25% to 50%, with the majority falling between 40% and 50%.

By applying the submerged fee rate to the upland value, the submerged land is valued with market data. However, an additional step is applied because submerged land cannot be owned by private entities. It can, however, be leased by private entities from the public agency that owns the submerged land. The lease amount reflects the usage fee to the private entity.

To determine the lease amount, a lease rate is applied to the land. The land capitalization rate (lease rate) is based on the market and determined through a sales comparison approach. The sales comparison approach uses sales of land that sold with ground leases.

In doing so, an appropriate land capitalization rate can be supported. The land capitalization rate is then applied to the submerged land value to determine the annual lease payment for using the tidal water. The valuation scenario in Table 2 can then be applied.

Conclusion

Submerged lands are defined as public lands that lie below tidal waters in the continental United States. Submerged lands cannot be owned by private entities; they are owned by the states adjacent to the submerged lands. However, the tidal water above the submerged land can be used by private entities. This use has created a methodology for valuing submerged lands to determine the public's right to lease land for private use.

Because of the nature of the market, valuation is best accomplished by means other than the sales comparison approach. However, this approach may suggest a value for the improvements to the land. Customarily, the value of submerged land is a varying percentage of the upland value, depending on use. Generally, a higher value will be placed on a use that is more water dependent. Sometimes a capitalization rate is applied for the year's revenues, typically stated in the lease. Each state values its submerged land differently, applying a range of percentages of the upland value to its submerged land based on the laws of the state. Therefore, there is no universal formula, only generalizations that one could apply to all tidal lands.

The methodology suggested in this article may be summarized as follows. First, the upland is valued based on recognized sales comparison techniques applied indirectly. Second, a rental survey is performed of public jurisdictions that lease submerged land to private entities, and a submerged fee rate is reconciled. The submerged fee rate, when applied to the upland value, provides an implied submerged land value. Third, a separate sales comparison approach is completed to determine a land capitalization rate. This land capitalization rate is then applied to the implied submerged land value to determine the annual lease payment for use of the tidal water above the submerged land.

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(*.) This article is printed in memory of Phillip Mitchell, who passed away before this final publication.

(1.) Ralph W. Johnson, Craighton Goepple, David Jansen, and Rachael Paschal, The Public Trust Doctrine and Coastal Zone Management in Washington State, prepared for the Shorelands and Coastal Zone Management Program, Washington State Department of Ecology. Version 1.0 (October 1991): 7.

(2.) Ibid.

(3.) Jan S. Stevens, deputy attorney general of California, The Public Trust Doctrine in California.

(4.) A commonality in law exists between all states in that each was given the ownership of public trust lands as they entered the union based on the United States Constitution, Article IV, Section 3, of the Equal Footing Doctrine and the United States Code. The original thirteen states took sovereignty over their land from the British after the American Revolution. Those states became the owners of the land underlying what are termed navigable waters as well as the land underlying tidal waters. The courts ruled that other states entering the union had the same rights as the original thirteen states.

(5.) 6 N.J. L 1, 76-77 (1821).

(6.) 146 U.S. 387 (1892).

(7.) 43 U.S.C. [section] 1301 defines the property that is the subject of this article by providing that "lands beneath navigable waters" means:

1. all lands within the boundaries of each of the respective states which are covered by nontidal waters that were navigable under the laws of the United States at the time such state became a member of the Union, or acquired sovereignty over such lands and waters thereafter, up to the ordinary high water mark as heretofore or hereafter modified by accretion, erosion, and reliction;

2. all lands permanently or periodically covered by tidal waters up to but not above the line of mean high tide and seaward to a line three geographical miles distant from the coast line of each such state; and

3. all filled in, made, or reclaimed lands which formerly were lands beneath navigable waters.... The term "lands beneath navigable waters" does not include the beds of streams in lands now or heretofore constituting a part of the public lands of the United States if such streams were not [identified] in connection with the public survey of such lands under the laws of the United States.

(8.) 43 U.S.C.[section] 1301(a)(1).

(9.) 43 U.S.C.[section] 1301 (a)(2). The Outer Continental Shelf (OCS) Lands Act of 1953 established U.S. ownership of the lands beyond the three mile point and stipulates the Department of the Interior as the regulatory agency in preventing waste and conserving nature by obtaining the highest 'responsible bidder.' An amendment to the OCS Lands Act provides for the cancellation of leases if the use is injurious to any marine life or habitats.

(10.) 43 U.S.C.[ss] 1301 (a)(3).

(11.) In 43 U.S.C. [ss] 1311, the United States established ... "title and ownership of lands and resources; management, administration, leasing, development, and use of such lands as follows: (1) title to and ownership of the lands beneath navigable waters within the boundaries of the respective states, and the natural resources [including ... oil, gas, and all other minerals, fish, shrimp, oysters, clams, crabs, lobsters, sponges, kelp, and other marine animal and plant life but does not include water power, or the use of water for the production of power ...] within such lands and water, and (2) the right and power to manage, administer, lease, develop, and use the said lands and natural resources all in accordance with applicable state law be, and they are, subject to the provisions hereof, recognized, confirmed, established, and vested in and assigned to the respective states or the persons who were on June 5, 1950, entitled thereto under the law of the respective states in which the land is located, and the respective grantees, lessees, or successors in interest thereof ... The right, powers, and titles hereby recognized, confirmed, established and vested in and assigned to the respective states and their grantees are subject to each lease executed by a state' The terms "grantees" and "lessees" were broadly defined, including all political subdivisions, municipalities, public and private corporations, and other person holding grants or leases from a state or its predecessor sovereign, if valid. Title 43 retains the authority and rights of the United States respecting navigation, flood control, and the generation of power.

(12.) johnson, Goepple, Jansen, and Paschal, 11.

(13.) Later amendments to the Outer continental Shelf (OCS) Lands Act were detailed in 1978 where Title II provides for the cancellation of leases or permits if continued activity is likely to cause serious harm to life, including fish and other aquatic life, It also stipulates that economic, social, and environmental values of the renewable and nonrenewable resources are to be considered in management of the ocs. Issues regarding the timing and leasing of activities are to be based on several factors, including the relative environmental sensitivity and marine productivity of different areas of the OCS.

Table 1 Submerged Land Fee Rates
Submerged Fee Rate
Location (Reciprocal of Discount)

San Diego	25-35%	
Long Beach	50%	
Los Angeles	33%	
Oakland	50%	
Tacoma	30-50%	
Seattle	30%	
Table 2 Submerged Land Value		
Upland value (sales comparison)		\$10.00 per sq. ft.
Submerged fee rate (rental survey)	50%	
Implied submerged land value		\$5.00 per sq. ft.
Land cap rate (sales comparison)	10%	
Annual rental rate		\$0.50