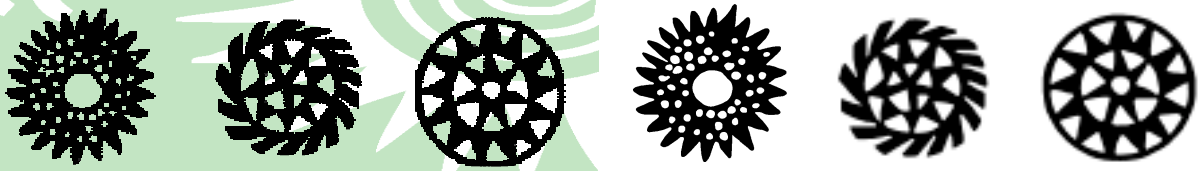
He Mau Moʻolelo Kanawai o ka ʻAina

"Stories of the Law of the Land"



Where's the Beach?: Drawing a Line in the Sand To Determine Shoreline Property Boundaries in the United States and the Resulting Conflict Between Public and Private Interests

~ Jean K. Campbell
Class of 2000

Hawaiʻi Environmental Law Program Paper Series

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FOREWORD

The Environmental Law Program ("ELP") of the William S. Richardson School of Law is pleased to present the inaugural issue of its new occasional paper series: *He Mau Moʻolelo Kānāwai o ka ʻĀina* ("Stories of the Law of the Land"). Established through the generous support of the Pōhaku Fund of the Tides Foundation, *He Mau Moʻolelo Kānāwai o ka ʻĀina* allows us to share with our friends and colleagues in the Hawaiian, mainland, and international legal communities a selection of the best papers written by our law students on environmental, land use, and indigenous peoples law issues.

As part of the Law School's intensive writing program, law students in the spring semester of their second year are required to research and write a law review-type article on a scholarly topic of their choice. Under the guidance of the school's full-time faculty who teach this Second-Year Seminar, students are encouraged to write on topics that result in publishable quality papers of benefit to practitioners, judges, scholars, and others who interact regularly with the law. Although many excellent papers are written each year for Second-Year Seminar, relatively few are published or distributed to those who could benefit from the thoughtful work of our students. The *Moʻolelo* paper series is designed to provide students a wider audience for their excellent work (without the formal constraints of a law review format), and to contribute to the legal community through scholarship. We are mailing each issue to a select group of colleagues and organizations that may find these student articles of particular interest.

He Mau Moʻolelo Kānāwai o ka ʻĀina complements the ELP's Pōhaku Fund Competitive Travel Grant Program, which funds travel in 2000-2002 for selected ELP students to present papers on Hawaiʻi environmental law issues at the Western Public Interest Environmental Law Conference (University of Oregon Law School). In addition, with support from the grant, ELP is posting on its web site (http://www.hawaii.edu/elp/) a wider variety of outstanding student papers on environmental law topics from other courses at the Law School. The grant has also allowed us to hire two student ELP Research Associates, Paul C. Lin-Easton and Kim Moffie, to whom we are grateful for their stellar work designing and publishing this first issue and the on-line series. We are excited about the expanded opportunities that these projects provide for our students to interact with the legal community as we continue to strengthen the ELP and its Community Outreach and Education ("CORE") program.

For coastal states, determining shoreline boundaries is a constant legal challenge with significant implications. Finding the line between the interests of private property ownership and public access is a delicate balancing act fraught with historical, political, social, and legal difficulties. Jean Campbell's paper, "Where's the Beach?: Drawing a Line in the Sand to Determine Shoreline Property Boundaries in the United States and the Resulting Conflict Between Public and Private Interests," provides an excellent example of student scholarship that deserves to be shared with the legal community. In summarizing the mind-boggling array of beach-boundary rules for thirty ocean and Great Lakes states, Ms. Campbell succeeds in bringing new coherence to diverse doctrines. Her paper provides scholars, practitioners, and shoreline experts a handy reference tool for continued work in the field.

Ms. Campbell wrote her paper for Second-Year Seminar in the Spring of 1999. She demonstrated extraordinary persistence in tracking down the multitude of sometimes obscure state beach-boundary statutes and case law. She struggled to find a way to organize thoughtfully what may be an impossibly complex and distinct set of rules. The challenges she faced may explain why there has not been, until now, any apparent attempt to digest this area of environmental and land use law. The task was, at times, daunting (particularly given the page and format constraints of the seminar), yet with the unique and indomitable spirit of a student hot on the scholarship trail, she succeeded in bringing new coherence to the topic.

Ms. Campbell, a *kamaʻāina* (born and raised in Hawaiʻi), attended the University of Hawaiʻi (B.A., 1992), San Diego State (M.A., 1995), and received her J.D. from the William S. Richardson School of Law in 2000. She was awarded a Certificate in Environmental Law for her concentrated coursework in environmental and land use law, served as a Research Assistant for Professor David Callies, and was Comments Editor of the *Hawaiʻi Law Review*. In the Fall of 2000, she will join the Honolulu law firm of Carlsmith Ball. We are proud of her accomplishments while at the Richardson School of Law and know that she will continue to contribute in many ways to our diverse legal community.

We encourage you to take the time to review this inaugural paper of *He Mau Moʻolelo Kānāwai o ka ʻĀina*, to share it with interested colleagues, to check our website for more information about our program and our future on-line publications, and to let us know what you think! *Me ke aloha pumehana* - with warm regards,

Professor M. Casey Jarman
Director, Environmental Law Program

Asst. Professor Denise Antolini
(Second-Year Seminar Instructor
for Ms. Campbell)

WHERE'S THE BEACH?: DRAWING A LINE IN THE SAND TO DETERMINE SHORELINE PROPERTY BOUNDARIES IN THE UNITED STATES AND THE RESULTING CONFLICT BETWEEN PUBLIC AND PRIVATE INTERESTS

Jean K. Campbell

I. INTRODUCTION

"Where is the beach?" seems like a simple factual question. As a legal question, however, it is actually quite complicated.[1] Due to the ever-increasing value of most shoreline properties along the roughly 90,000 miles of American coast, the question is of great importance today.[2] Most people think of the beach as a sandy, publicly accessible area between the water and the privately owned property further landward. Where a public beach legally begins and ends, however, varies greatly from state to state.

"Beaches are a unique resource and are irreplaceable."[3] Because beaches are so attractive,[4] tension is created regarding the boundary between public and private property due to often-conflicting public and private interests. One of the most prevalent conflicts is between the public interest in free and open access to the shoreline and private property owners' interest in excluding the public from their property. Where on the beach this property boundary line is drawn contributes to determining how public and private owners can exercise their respective rights.[5]

The actual boundary will depend on what state the land is in, when the property title was issued, and whether state or federal law applies. Generally, a presumption exists that state law, rather than federal law, governs property issues.[6] Whether federal or state law is applied depends on when title to the land was issued and by whom.[7] When a federal land grant is involved, federal law is generally applied,[8] whereas, without a federal grant, state law applies.[9] State laws vary from Hawai'i's vegetation line boundary, the furthest landward, to Massachusetts' extreme low water mark, the furthest seaward.

Part II of this paper will introduce the significance of shoreline boundaries and present each of the state's shoreline boundary rules, found in the states' codes and case law. Next, Part III will interpret the varying rules, comparing them on the spectrum of most seaward to most landward, and examine the different definitions the states employ for the common boundary terms "low water mark" and "high water mark." Part IV will discuss conflicts that arise between public and private interests in the shoreline, including: the effect of the various boundaries on public access to the shoreline; the theories courts use to expand public access; and the effect the time of enactment has on where the boundary is drawn.

II. EACH STATE'S SHORELINE PROPERTY BOUNDARY RULES

A. *Origins of the Public Shore*

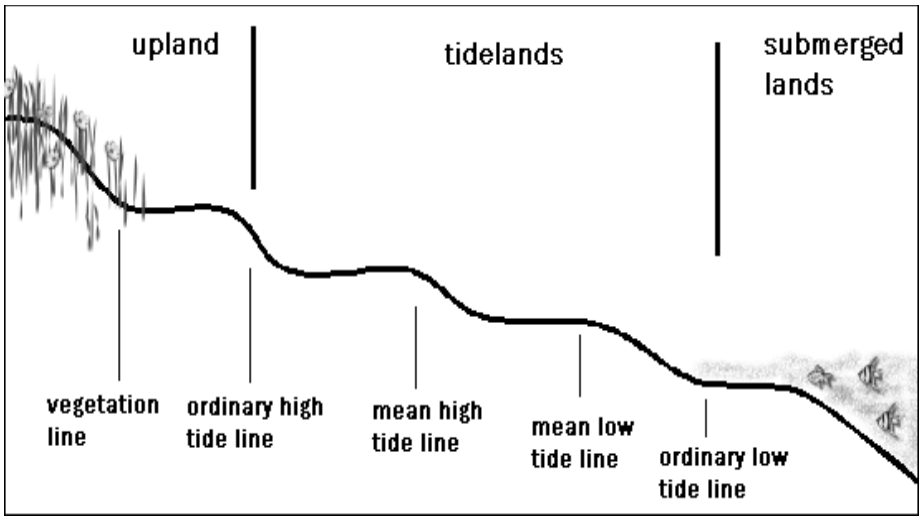
The notion of public coastal waters and perhaps a public shore has deep roots in two aged bodies of law. "In general, the public trust waters are the 'navigable waters' in a State, and the public trust lands are the lands beneath these waters, up to the ordinary high water mark."[10] The public trust doctrine was first codified in ancient Roman law.[11] The Institutes of Justinian delineated the rights protected by the public trust: the right to fish in the sea from the shore, the right to dry nets on the shore, and the right to navigate on rivers as well as oceans.[12] English common law also recognized public rights in the shore and waters.[13] The King owned all tidelands and the navigable waters above them as a *jus publicum*[14] interest.[15] Tidelands could be conveyed to a private owner, but the *jus privatum*[16] interest remained forever subject to the dominant *jus publicum* interest.[17] When the original thirteen American colonies adopted English common law, the public nature of the coast was adopted as well.[18] The Equal Footing doctrine applied this same body of law to all the other states entering the Union.[19] "The states have primary responsibility for defining the limits of the public trust doctrine."[20]

The law of accretion and reliction, sometimes commonly called the law of erosion, also suggests that the government has an obligation to keep beaches open to the public.[21] "According to the law of accretion and reliction, [riparian] ownership migrates inland when shores erode [slowly]."[22] By combining the "rolling easement" recognized by the law of erosion with the trust duty of the state to protect the *jus publicum* of all public trust lands,[23] one can argue that state allowance of any encroachment on public trust lands is a violation of the public trust doctrine.[24] Therefore, a seawall or bulkhead that permanently fixes the boundary between private land and public land and does not allow erosion to move this boundary landward is a violation of the public trust.[25]

B. Important Terms Describing Shoreline Boundaries

The description of shoreline boundaries utilizes many terms of art with which readers may not be familiar. A short explanation will aid the reader in the interpretation of this overlapping area of law and meteorology. "The mean high tide is the average of all the high tides over an 18.6 year period,"[26] the time period of a complete lunar cycle.[27] This is in contrast to the seemingly similar term, the ordinary high water mark. The ordinary high water mark is a line "usually signified by a physical feature such as a line of seaweed or debris."[28] The mean low tide is more difficult to determine and can only be an approximation because the line spends most of the time under water, leaving no perceivable mark.[29] To prevent undue delay,[30] mean tides are calculated using tidal data kept by the U.S. Coastal and Geodetic Survey.[31]

Figure 1: A Profile of Beach Boundaries[32]



Not only tidal movement but other natural forces affect the location of a mean tide, including erosion, avulsion, accretion, sea level rise, and submergence.[33] Tidelands are those lands alternately covered and uncovered by the tides, or the area between the ordinary high and low water marks.[34] Submerged lands lie further seaward, below the ordinary low water mark.[35]

Other meteorological terms used to describe the conditions of shoreline boundaries include neap and spring tides.[36] Neap tides are the tides between full and new moon phases that attain the smallest extremes of high and low.[37] Spring tides, in contrast, occur at the full and new moon phases and involve the largest tidal rise and fall.[38]

C. *The Significance of Shoreline Boundaries*

Much of the significance of a shoreline boundary lies in the way it is utilized. If shoreline boundaries were never enforced, no one would be interested in where they were drawn.[39] An enforced boundary, however, has many different impacts, direct and indirect.[40] The boundary determines the size of private littoral, or shoreline, property, which in turn dictates development rights by serving as the basis for measuring setbacks and defining building size limitations.[41] The boundary also delineates the area available for public access or, conversely, the area from which a private property owner can exclude the public.[42]

How each particular state defines what rights are protected by the public trust doctrine[43] also determines what level of access the public is allowed. In some states, the public trust is strictly construed to allow access only for fishing, fowling and navigation,[44] and in other states the doctrine has been expanded to include access for recreational activities.[45]

Because the shoreline boundary defines the limits of public property, it also constrains a government's ability to preserve the shoreline environment.[46] The public trust doctrine is a powerful management tool,[47] but this power is restricted by the boundary of public trust lands.[48] For example, once permanent structures such as seawalls and bulkheads are built, fixing a formerly mobile shoreline in place, the landward limits of the public trust have been solidified and no longer move landward as the shoreline erodes.[49]

The construction setback requirements measured from the shoreline boundary have a tremendous effect on natural hazard mitigation.[50] The closer to the ocean that littoral owners are able to build homes and other improvements, the more damage occurs in the inevitable event of a hurricane, tsunami, or large surf.[51] Because the vast majority of shoreline properties are insured by national flood insurance, the economy at large is affected by the use of taxpayer money to pay the cost of rebuilding shoreline structures after they have been damaged.[52]

Some states use beach replenishment[53] as an erosion mitigation method.[54] How a state determines the shoreline boundary will define the rights of the littoral property owner and the public in the newly created land.[55] If the boundary is measured to the mean high tide line, then the private property will have expanded. If the boundary is expressed as the vegetation line, however, then the public property will have increased.

An enforced shoreline boundary serves as the fulcrum to balance competing public and private interests. The differing states' rules defining this boundary indicate that public and private interests can be reconciled many ways. Because of the tremendous value of the interests on either side of the boundary equation, how the boundary is drawn is significant not only to littoral property owners, but also to the public as a whole and to the many different governmental entities whose jurisdictions include shoreline. The rights protected under each state's definition of the public trust, and which lands are identified as public trust lands, is the greatest determiner of public access to the shoreline. While the boundary between public and private property bears less on public access than does the boundary of public trust lands, the public/private property boundary still heavily impacts development and environmental protection and, as a result, public access.

For example, when the boundary of public trust property is the high water mark, if a private littoral owner is allowed to build a seawall to protect his property from erosion, that permanent structure then fixes the furthest landward high water mark as the lateral line of the wall across the beach, which is naturally an ever-changing system.[56] Since the system itself is still changing, the usual result is the loss of the beach fronting the wall.[57] While the legal boundary of the public trust has not changed, in practical effect, the public no longer has access to a beach for the length of the wall.[58]

To complicate the situation, the explication of the shoreline property boundary as a black letter rule is an oversimplification of what is often a complex set of rules governing not only property boundaries, but also including: construction and hazard mitigation setbacks; development rights for other shoreline structures such as jetties, docks and seawalls; and leases for submerged lands to engage in activities such as oyster culturing, mining, and mineral rights, and oil and gas development. Each of these interests may be defined by a separate boundary. The following table is, nevertheless, an attempt to clarify these interests and define the private/public property boundary and public trust boundary. This may, however, be a futile attempt to turn Medusa into a single snake, as it seems that more exceptions to each rule exist than applicable generalities. Nonetheless, it is still informative to examine the wide variation among the states' rules and the theories behind them.

D. *Table of Property Boundary Rules*

For simplicity's sake, the states are organized geographically into two categories: (1) ocean states, those bordering the Pacific, Gulf of Mexico, or Atlantic, and (2) Great Lakes states. In Figure 2, the list of ocean states begins with Hawai'i, then moves to the continental U.S. and proceeds in counter clockwise order around the country beginning with Alaska and ending with Maine. The list of Great Lakes states begins at New York, the closest to Maine, and continues westward. Not every state has fully addressed the issue of shoreline property boundaries or the boundaries of public trust land, especially the Great Lakes States. As a result, the data in this table are not complete.

Figure 2: Shoreline Property Boundaries

JURISDICTION	PRIVATE OWNERSHIP RULE	DEFINITION OF PROPERTY BOUNDARY	DATE	PUBLIC TRUST DOCTRINE RULE
Federal	Mean or ordinary high tide[59]	Mean of all high tides over a period of 18.6 years[60]	1935	As the state sees fit[61]
Hawaii	High wash of the waves[62]	Evidenced by the vegetation line[63]	1968	Vegetation line[64]
Alaska	Mean high water[65]	Mean of all high tides over a period of 18.6 years[66]	1966	Lands below the ordinary high water mark are subject to public easements for navigation, commerce, fisheries, recreational purposes and any other public purpose consistent with the public trust.[67]
Washington	Ordinary high tide[68]	Average high tide of all high tides during a tidal cycle[69]		Ordinary high tide[70]
Oregon	Mean high tide line[71]	Mean of all high tides over a period of 18.6 years[72]	1969	Vegetation line[73]
California	Generally, high water mark[74]	Neap tide is ordinary high water mark.[75] If grant indicates contrary intent, can be a line other than high water (example: grant from Mexican Government predating statehood)[76]		Ordinary high tide line[77]
Texas	High water mark[78]	Mean of all high tides over a period of 18.6 years[79]		Vegetation line[80] for swimming, fishing, boating, camping, and public way for vehicular and pedestrian travel[81]
Louisiana	High water mark[82]	land over which the waters of the sea spread in the highest tide during the winter season[83]		High water mark[84]
Mississippi	High water mark[85]	In undeveloped areas the current mean high tide line, in developed areas the determinable mean high water line nearest the effective date of the Coastal Wetlands Protection Act[86]		Mean high water line[87]
Alabama	High water mark[88]			High water mark[89]
Florida	Mean high water mark[90]	Limit reached by the daily ebb and flow of the tide, the usual tide or the neap tide that happens between the full and the change of the moon[91]		High water mark[92] including the rights of navigating, fishing, bathing, and commerce[93]
Georgia	Ordinary high water mark[94]	Mean of all high tides over a period of 18.6 years[95]		

South Carolina	High water mark[96]			High water mark,[97] includes any property accreted since the time oceanfront property was initially developed[98]
North Carolina	High water mark[99]	Mean of all high tides over a period of 18.6 years[100]		High water mark for navigation, fishing and commerce[101]
Virginia	Low water mark[102]	Ordinary low water mark, not spring or neap tide, but normal, natural, usual, customary or ordinary low water, uninfluenced by special seasons, winds or other circumstances.[103]	1819[104]	The shore is subject to the public's right to fish, fowl and hunt.[105]
Maryland	High water mark[106]			High water mark[107]
Delaware	Low water mark[108]	Average daily height of all low water marks over a 23 year period beginning January 1, 1942.[109]		Rights of fishing and navigation to the high water mark[110]
New Jersey	Mean or ordinary high tide[111]	Intersection of the tidal plane of mean high tide with the shore at the mean of all high tides over a period of 18.6 years[112]		High water mark for navigation, fishing and recreational uses, including bathing, swimming and other shore activities.[113]
New York (both the Atlantic and Lake Ontario)	High water mark[114]	Mean of all high tides over a period of 18.6 years[115]	1965[116]	High water mark[117] for the purposes of fishing, bathing, boating and using for other lawful purposes[118]
Connecticut	High water mark[119]	Mean of all high tides over a period of 18.6 years[120]		High tide line[121]
Rhode Island	Mean high tide line[122]	Average height of all high waters at a given location over a long period of time. Not the highest point ever reached by tides.[123]	1881	High water mark[124]
Massachusetts	Low water mark or more than 100 rods below natural mean high water, whichever is further landward[125]	Either (1) low water mark or (2) extreme low water mark due to usual conditions. Not extreme low water due to unusual conditions, as defined in tidal charts.[126]	1641-1647	Easement in fishing, fowling, and navigation between high and low water marks.[127]
New Hampshire	High water mark[128]	Furthest landward limit reached by the highest tidal flow, commonly referred to as the highest spring tide occurring during the 19-year Metonic cycle[129]	1889	High water mark[130] for uses including boating, bathing, fishing, fowling, skating, and cutting ice[131]
Maine	Low water mark[132]	100 rods seaward of the high water mark or the mean low water mark, whichever is further landward.[133]	1641-1647	Broadly construed easement permitting public use only for fishing, fowling, and navigation and any other uses reasonably incidental or related thereto.[134]
Pennsylvania	Low water mark[135]		1837, 1869	Public right of passage at high tide.[136]
Ohio	Usual water mark[137]	The line at which the water usually stands.[138] The court will consider the type of plant life growing on the shore of marshes[139]		Navigation and fishing[140]
Michigan	Ordinary high water mark[141]			Fishing, navigation, swimming and bathing[142]
Indiana	High water mark[143]			High water line[144]
Illinois	High water mark[145]	The line at which the water usually stands[146]	1900	High water mark[147]
Wisconsin	High water mark or bulkhead line[148]			Riparian use is subject to public right of navigation, fishing, recreation, the preservation of scenic beauty and water quality maintenance,[149] and possibly right to establish public water supply.[150]
Minnesota	Low water mark[151]			High water mark[152] for navigation, the drawing water for the public water supply[153] and "ordinary purposes of life, such as boating, fowling, skating, bathing, taking water for domestic or agricultural purposes, and cutting ice."[154]

III. INTERPRETATION OF THE RULES

While the states can be classified by their property boundary laws as either high water or low water states, it is difficult to determine just what those terms really mean. Some states have uniformly followed the federal rule but many have not. This makes general, national definition of the terms used to describe shoreline boundaries impossible. Each state must be considered individually in order to discover its rule and how it has defined the terms involved.

A. *The States Can Be Generally Classified as High and Low Water Boundary States*

"Where is the dividing line between the property of the State and that of the littoral property owner? The States are divided on that question, and the groups may be conveniently labeled 'high-tide' or 'low-tide' states."[155] The two extreme ends of this spectrum are Hawai'i at the high end and Massachusetts at the low end, both, interestingly, based on old traditions.[156]

The high water mark states are Alaska, Washington, Oregon, California, Texas, Louisiana, Mississippi, Alabama, Florida, Georgia, South Carolina, North Carolina, Maryland, New Jersey, New York, Connecticut, Rhode Island, New Hampshire, Ohio,[157] Michigan, Indiana, Illinois, and Wisconsin. The low water mark states include Virginia, Maryland, Delaware,[158] Massachusetts, Maine, Pennsylvania, and Minnesota.

Hawai'i is the only state to use the vegetation line as the boundary between public and private property.[159] For public access purposes, Texas and Oregon attain the same result as Hawai'i, but both use an easement to create public access, one statutory and one based in case law.[160] This removes from the littoral owner only the right to exclude, not the whole fee. Other states grant an easement in public access in limited situations. Delaware, for example, provides public access to newly formed beach wherever publicly funded beach nourishment is done.[161]

B. *Despite the Seeming Simplicity of High and Low Water Categorization, the Differing Definitions Employed by Each State Complicate the Two Categories*

The high or low water states may not be as similar as they appear in the simple grouping presented in Figure 2. While states use similar language to delineate their shoreline boundaries, they do not define the terms consistently. Part of this inconsistency may arise from the complicated scientific and meteorological terms used and the difficulty of pinpointing any describable line on the shore. Generally, a shoreline boundary can be described as movable freehold or ambulatory due to its ever-changing nature.[162] "It is important to understand that the 'mean' or 'ordinary' high water marks are concepts used to fix the water line at a particular point at a particular moment in time within a dynamic hydrological system."[163] These concepts are both variously defined by the courts and difficult to pinpoint on the shore.[164]

The United States Supreme Court, in *Borax Consolidated v. City of Los Angeles*,[165] established the federal rule by employing the 18.6-year lunar cycle, sometimes rounded off to 19 years,[166] to determine the mean high tide line.[167] Sixteen states follow the federal *Borax* rule:[168] Alaska, Washington, Oregon, California, Texas, Mississippi, Alabama, Florida, Georgia, South Carolina, North Carolina, Maryland, New Jersey, New York, Connecticut, and Rhode Island.[169] Maine uses the same lunar cycle to determine its low water boundary.[170] Of the sixteen states employing the *Borax* high tide line rule, twelve identify the line as the high water mark or ordinary high water mark.[171] The other four states term their boundary the mean or ordinary high tide line and use the *Borax* rule to define the boundary.[172] This shows the confusion among courts and practitioners not familiar with the scientific and meteorological terms, thus leading to the misapplication of these discrete terms as if they were interchangeable. One Florida court stated that "[t]he ordinary high water mark has been deemed synonymous with mean high tide."[173] For legal purposes this may be becoming true.

Two states use the term high water mark and define the term using means other than the *Borax* 19-year rule. Louisiana defines its high water mark as including any land over which the waters of the sea spread in the highest tide during the winter season.[174] New Hampshire's definition of the high water mark seems to be a hybrid of

the Louisiana rule and the *Borax* rule, similar to the Louisiana highest tide and the *Borax* 19-year time frame. New Hampshire considers the high water mark the furthest landward limit reached by the highest tidal flow, commonly referred to as the highest spring tide, occurring during the 19-year Metonic cycle.[175]

The low water states also define the low water mark inconsistently. Massachusetts defines its boundary as either the low water mark or the extreme low water due to usual conditions.[176] The court explained that the extreme low water mark does not consider unusual conditions.[177] The line may be 100 rods below the high water mark if that line is further landward than the ordinary low water line.[178] This complicated rule is also used in Maine, although the Maine court has determined that the low water mark is measured using the 19-year lunar cycle.[179] Delaware, in contrast, defines its low water mark using a 23-year period that began on January 1, 1942 and considers the average of all low water marks during that time span.[180] Of the ocean coastal low water states, Virginia has the simplest definition. Virginia defines its low water mark as the ordinary low water mark and does not include in the calculation spring or neap tides or unusual conditions such as special seasons or winds.[181] The result is that the low water states exhibit even more inconsistency than the majority high water states do. This may be due to the fact that the low water states were departing from the English common law high water mark,[182] giving each state the opportunity to revise its shoreline boundary and its definition independently.

Since the Great Lakes are not influenced by tides, the Great Lakes States cannot use the *Borax* rule to determine the high water mark. Instead, some states have developed a "usual water line" rule.[183] The effect of this rule is similar to the mean or ordinary water mark rules. It takes into consideration only normal conditions in an effort to determine the usual level of the lake, and does not consider high wind events or other conditions that would abnormally raise or lower the water level.[184] Minnesota cases describe the high water mark, which the state uses as the boundary of the public trust, as the point at which a physical mark is left on the land by the water level over a long period of time, which can be evidenced by the type of vegetation growing, either aquatic or terrestrial.[185]

IV. Private/Public Conflict Regarding Shoreline Boundaries

> In the late 1960s the public in the United States dramatically changed its attitudes toward our nation's environment and the uses to which our lands and resources should be put. The public developed an increased awareness of the relationship between the environment and human health and welfare, and became intensely concerned about the quality of its physical environment and the appropriate regulation of land and resource use.[186]

Several state legislatures in the late 1960s and early 1970s reacted to this awareness by enacting statutes to protect the environment and control development on the shoreline.[187] This increased environmental awareness also created a demand for access to natural areas, for recreational and cultural activities, including access to shorelines.[188] The demand for access challenged the private property owners' right to exclude the public from their property.[189] Due to this pressure to expand public access, courts have had to address not only their state's shoreline property boundary law, but also the extent of the public trust doctrine in their state.[190] The resulting decisions reflect the balancing of the public and private interests the courts believed appropriate under the law at the time.

A. *Public Access, the Public Trust Doctrine, and the Shoreline Property Boundary*

"[T]he public trust doctrine defines the intersection of private ownership and public trust rights, as well as the intersection of public ownership and public trust duties."[191] Since public trust lands can be privately held, yet still are subject to the *jus publicum*, a state's definition of the boundary of its public trust lands has a greater effect on public access to the shoreline than does the boundary between publicly and privately owned land. The combination of the two boundaries, however, can preclude public access to beaches.

Virginia, Delaware, Massachusetts, Maine, and Pennsylvania all have private beaches.[192] This is due to the combination of a low water boundary of private ownership and a limited set of protected public trust rights. In Massachusetts and Maine, in particular, the courts have explicitly held that the public has no right to access the beach for any purposes beyond the traditional fishing, fowling, and navigation interests.[193] The result is that beach-goers

looking to sunbathe, swim, or beachcomb cannot access privately owned shorelines above the low water mark.

A Delaware statute puts an interesting twist on this notion. If a private beach is restored by publicly funded beach nourishment, the resulting new shore area is fixed with a public easement requiring access for uses beyond traditional public trust interests.[194] The expanded uses include the traditional rights of navigation and fishing as well as the rights of swimming and sunbathing on the beach to "the dune vegetation line or structure line, whichever is further seaward."[195] This seems an equitable outcome; because the private property owners are receiving a publicly funded benefit from the beach nourishment, the public ought to be able to enjoy the new beach as well.[196]

In contrast, many states use the public trust to provide beach access, even over privately owned property. California recognizes the right of the public to use public trust lands to the ordinary high tide line and has done so since 1879.[197] In 1913, the Supreme Court of California, citing to the state constitution adopted in 1879, ruled that state grants of land "carry, at most, only the title to the soil subject to the public right of navigation."[198] The court went on to note that the public trust obligation of the state extended to the entire California coast, from Oregon to Mexico, and not simply to the parcels at issue in the litigation before the court.[199] The Supreme Court of California has more recently relied on the California Constitution's enunciated policy favoring public access to the shoreline and expanded the enumerated public interests to include, among other interests, the right to fish, hunt, bathe, swim, and boat.[200]

Texas has taken public access one step further landward. The Texas Open Beaches Act allows private ownership to the mean high tide subject to an easement for public access, acquired by prescription, dedication, or custom, to the vegetation line for the entire Gulf of Mexico coast.[201] Therefore, a Gulf Coast property owner in Texas can hold title to the mean high tide line, but that estate does not include the right to exclude the public from the dry sand area between the high tide line, and the vegetation line.[202]

In Hawai'i, the boundary of the public trust is the same as the private property boundary. However, Hawai'i still provides as much public access to the beach as states with the most expansive public trust interests.[203] This occurs because Hawai'i is the only state that allows private ownership only to the vegetation line.[204]

In 1972, the Wisconsin Supreme Court[205] announced an expansive rule for the application of the public trust doctrine.[206] The Wisconsin court articulated an "affects public trust interests" rule that could be applied to wetlands and related uplands.[207] One expert has argued that this affects public interests test could be applied in Washington to include in its public trust lands the dry sand area to the vegetation line.[208] This theory has not been argued before a court, so its success is uncertain. The very existence of such arguments, however, serves as evidence that the extent of the public trust is still open to debate in many areas.[209]

B. The Legal Theories Supporting Required Beach Access

"Courts have employed numerous legal doctrines, including the public trust doctrine and custom, to recognize public rights in the dry sand area of ocean beaches."[210] In the attempt to secure and define public access, courts have also used prescription, dedication, and legislatively enumerated policies and rights in state statutes and constitutions.[211] Some theories have met with more judicial acceptance than have others.[212]

The doctrine that has created the most controversy as applied to the shoreline is that of custom. The Oregon and Hawai'i Supreme Courts both use the doctrine of custom to recognize the public right to use the dry sand area of the beach to the vegetation line.[213]

In 1969, the Oregon Supreme Court, in *Thornton v. Hay*,[214] revived the law of custom in Oregon, finding that all the elements for a customary public easement to the vegetation line had been met.[215] The court considered using the law of prescriptive easement as the basis for public access to the beach, but was concerned that the resulting "tract-by-tract litigation" would fill the courts for years.[216] The resulting custom-based statewide public right to recreational use was then called into question by two cases, one state and one federal.

In 1989, in *McDonald v. Halvorson*,[217] the Oregon Supreme Court held that the public had no customary recreational use of the dry-sand area particular to the cove in question, suggesting that the custom-based access right may not be statewide.[218] The court stated that there was no "factual predicate for application of the doctrine [of custom]" and therefore there "may also be areas to which the doctrine of custom is not applicable."[219]

Five years after *McDonald*, the United States Supreme Court denied a petition for certiorari for *Stevens v. Cannon Beach*.[220] The dissenting Justices, Scalia and O'Connor, objected that the Supreme Court of Oregon had "misread Blackstone in applying the law of custom to the entire Oregon coast" as "'customs . . . affect only the inhabitants of particular districts.'"[221] The two Justices suggested that, because the petitioners in *Stevens* were not parties to *Thornton*, the application of the *Thornton* rule to them raised a valid due process claim.[222] Despite this skeptical examination by both state and federal courts, the Oregon Legislature has passed legislation defining the vegetation line along its entire Pacific coast.[223]

Likewise, Hawai'i's vegetation line rule, established in 1968 by *In re Ashford*[224] and further defined in 1973 in *County of Hawai'i v. Sotomura*,[225] has been questioned by the federal court. The Hawai'i Supreme Court based the vegetation line rule on ancient Hawaiian custom and usage.[226] The rule was first announced in *Application of Ashford* as "the upper reach of the wash of the waves evidenced by the edge of vegetation or by the line of debris."[227] In making this determination, the court heard testimony from witnesses testifying to ancient tradition, custom and usage.[228] The rule was further defined in *County of Hawai'i v. Sotomura* to locate the upper reach of the wash of the waves at the vegetation line, not the debris line.[229] Specifically, the court held: "where the wash of the waves is marked by both a debris line and a vegetation line lying further *mauka*,[230] the presumption is that the upper reaches of the wash of the waves over the course of a year lies along the line marking the edge of vegetation growth."[231]

The challenge to the Hawai'i rule came in the form of a Federal District Court case. In *Sotomura v. County of Hawai'i*, Judge Wong held that the application of the vegetation line rule to the Sotomura's property was a procedural due process violation.[232] In the meantime, the Hawai'i Supreme Court had decided *Application of Sanborn*,[233] applying the vegetation line rule to property registered in Hawai'i's Land Court.[234] In neither Oregon nor Hawai'i have later cases ruled on these alleged due process violations by the state courts.

A Florida court drew mixed conclusions about the use of custom to establish public rights to the beach. In *City of Daytona v. Tona-Rama, Inc.*,[235] the Supreme Court of Florida split over the use of the doctrines of custom and prescriptive easement as applied to the dry-sand property in question.[236] The majority wrote that no prescriptive right had been established in favor of the public in the case, despite the fact that prescriptive easements had been previously recognized on Florida's beaches, because beach users on the property occupied by a commercial pier were not adverse to the owner but were instead welcome guests. The court went on to cite the use of custom by Hawai'i and Oregon courts in support of its own decision to hold that "[t]he general public may continue to use the dry sand area for their usual recreational activities . . . because of a right gained through custom."[237] The dissenting justices, however, concluded that a prescriptive right had vested in the public.[238] The dissenters were concerned that, by not recognizing a prescriptive easement, the court was not providing adequate protection for the public's right to enjoy the shoreline.[239]

The Supreme Court of New Hampshire advised against the application by statute of a prescriptive easement to expand public access to the dry sand area between the high water mark and the vegetation line of that state.[240] The state legislature had proposed a bill that would have "recognize[d] and confirm[ed] the historical practice and common law right of the public to enjoy the existing public easement . . . extending to the line of vegetation" of coastal beaches.[241] The court noted that no taking would occur as a result of the application of the bill to the tidelands below the high water mark, but application of the bill to the dry sand area of the coast would require just compensation to property owners.[242]

Instead of applying the law of custom or prescription, California has adopted statutory policies protecting beach access for the entire state ocean coastline.[243] California has a constitutional provision and legislation that indicate the state's strong policy of protecting public access to the shoreline.[244] The California Constitution reads, "[n] o individual, partnership, or corporation, claiming or possessing the frontage or tidal lands of a harbor, bay, inlet, estuary, or other navigable water in this State, shall be permitted to exclude the right of way to such water whenever it is required for any public purpose."[245]

The Supreme Court of California, in *Gion v. Santa Cruz*,[246] accepted the doctrine of implied dedication as a means to open privately owned beach lands to public access.[247] Noting both the California Constitution's policy of favoring beach access and the United States Constitution's limitations on the taking of property, the court explained that it "should encourage public use of shoreline areas" and that "courts of this state must be as receptive to a finding of implied dedication of shoreline areas as they are to a finding of implied dedication of roadways."[248]

New York has similarly applied the law of dedication to municipally owned beaches.[249] The New York Court

of Appeals held that not only had the municipality completely dedicated the property to the entire public, not just residents of the municipality, but the beach was held in trust for the public, thus imbuing the area with all the requirements of the public trust doctrine.[250]

The Texas Legislature suggested the use of custom, prescription, or dedication in the Texas Open Beaches Act with an eye to providing more access to the coast.[251] In 1959, the Texas Legislature enunciated a policy favoring[252] public access to beaches on the entire Gulf of Mexico coast, including the state-owned area below the high water mark and the privately-owned area between the high water mark and the vegetation line.[253] The Open Beaches Act created a presumption in favor of the existence of a public easement and allowed the easement to be based in the law of custom, prescription, or dedication.[254] This allowed the court to step in and expand access using the stated legislative policy.[255] Since that time, several lawsuits have challenged this imposition of the public interest on shoreline property owners' rights.[256] In contrast to the New Hampshire court's opinion advising against the expansion of the geographic scope of the public trust, the Texas courts have repeatedly ruled that public easements exist landward to the vegetation line.[257]

One commentator has argued that the Open Beaches Act opened the door for the Texas courts to engage in judicial takings in these cases.[258] Whether or not that is true, the Open Beaches Act puts all shoreline property owners on notice that they may lose their homes if they are found to interfere with an area of beach to which the public has acquired an easement by way of prescription, dedication, or custom.[259] Because the vegetation line is part of the ever-changing shoreline environment, this can have tragic results for property owners. In *Matcha v. Mattox*,[260] the Court of Appeals of Texas held that once the vegetation line had moved landward due to a hurricane, beachfront homeowners could not legally rebuild because the public had acquired a customary easement to the new vegetation line and rebuilding would interfere with the public's right to use the beach.[261] The appellate court specifically affirmed the trial court's holding that the public easement was based in the law of custom, not the Texas Open Beaches Act.[262]

The public trust doctrine, by contrast, is challenged less frequently as a method to expand access to coastal areas by the augmentation of the protected public interests.[263] Some courts have suggested that the expansion of the geographical scope of the public trust without just compensation is a taking of private property.[264] A few states have retained traditional interpretations of the interests protected by the public trust,[265] but most states have continued to expand protected interests and, as a result, have expanded access to all public trust lands, including beaches.[266]

The 1970s activist Supreme Court of New Jersey[267] directed that "[e]xtension of the public trust doctrine to include bathing, swimming and other shore activities is consonant with and furthers the general welfare."[268] In fact, the court seemed to see itself as having a duty to protect New Jersey's "priceless beach areas."[269] The court not only extended the specific uses the public could make of the tidelands, but also held that the public had a right to reasonable access across privately held dry sand areas to reach the beach.[270] To determine what access was reasonable, the court suggested a balancing approach, taking into consideration both public needs and private rights.[271]

Although one commentator has suggested that the beach access law developed by courts over the last several decades amounts to a judicial taking,[272] not every case to expand public access succeeds. In *Department of Natural Resources v. Mayor and Council of Ocean City*,[273] the plaintiffs argued all four doctrines -- implied dedication, prescription, custom and the public trust -- yet the court found for the defendant.[274] The often-successful application of these four doctrines, alone and in combination, through case law and state constitutions and statutes, however, evidences the favorable light in which courts view public shoreline access.[275] While the law of custom has been most severely called into question, it has also been used to make the most drastic changes in beach access.[276]

C. *The Predominant Values of the Historical Time Period Affect the Uses Protected by the Shoreline Boundary and the Access Provided by the Public Trust*

1. *Shoreline Boundary*

Massachusetts' low water shoreline boundary was established in 1641 and 1647 in an effort to encourage the building of wharves and docks to commercialize the waterfront of the growing colony.[277] This encouragement of business and commerce is in stark contrast to the awareness of the needs of the public and the environment evidenced by much of the case law that developed later. In 1889, the Supreme Court of New Hampshire, in recognition of the importance of the public trust, rejected the Massachusetts move to the low water line.[278] The court stated, "no serious inconvenience has arisen from the adoption of the [high water mark] as the boundary of public and private ownership . . . [and t]he experience of more than 250 years has shown no practical difficulty in the question of the abutters 'reasonable private use'."[279] As early as 1939, the Supreme Court of Florida recognized the value of "wholesome recreation" in "refreshing breakers," "healing waters," and "clear dustfree air" found on the shoreline.[280] Nonetheless, some growing states were still intent on emphasizing economic development. "Washington State was eager to encourage growth and development, so it transferred approximately sixty-one percent of its tidelands and thirty percent of its shorelands into private hands between 1889 and 1979."[281]

The late 1960s and early 1970s saw a greater awareness of environmental problems that triggered the shifting of land use management to state control.[282] There was a concurrent movement in Hawai'i culture to slow down and take control of the continued Westernizing of the values governing Hawai'i society.[283] Hawai'i scholars have argued that the Hawai'i Supreme Court's then-Chief Justice Richardson intended to re-introduce Native Hawaiian tradition, which provided greater protections for common people, into the American law governing Hawai'i[284] when he stated in 1968 that "Hawai'i's laws are unique in that they are based on ancient tradition, custom, practice, and usage."[285]

No other states made such apparently dramatic changes to their shoreline property boundaries during this time, but other states have slowly expanded the public interests protected by the public trust to expand beach access.

2. *Public Trust*

Illinois Central Railroad Co. v. Illinois[286] is the "lodestar in American public trust law."[287] In 1900, the United States Supreme Court ruled that submerged lands were subject to the public rights of navigation, fishing, and commerce.[288] The Court specifically noted that navigation and commerce may be improved by the construction of wharves, docks, and piers.[289] While America's early public trust doctrine emphasized the importance of commerce, some states have since transformed the interests protected by their public trusts to reflect the growing interest in the natural environment.[290] "[T]he public trust doctrine is a true common law doctrine – it is flexible, and courts enlarge and diminish it according to changing public needs on the one hand, and legitimate private expectations on the other."[291] The interests protected by state interpretations of the public trust doctrine vary from states limiting the interests to traditional fishing, fowling, and navigation, to states that have expanded the doctrine to include recreational and environmental concerns.

Massachusetts, Maine, and Virginia are examples of states that have strictly limited their public trust interests and as a result have limited access to public trust shores. Both the Supreme Judicial Court of Massachusetts and the Massachusetts state legislature have recognized that the only public interests in the shoreline protected by that state's public trust are those of fishing, fowling, and navigation.[292] The Massachusetts court has specifically stated that there is no "public on-foot free right-of-passage" or protected interest in water quality.[293] The goal of the 1641-1647 Ordinance, which first enumerated protected interests, was to encourage trade and commerce by giving shoreline owners convenient access to the sea by means of wharf and dock construction,[294] not to provide recreation to the public.

Maine and Virginia[295] have similarly limited their protected shoreline uses. The Supreme Judicial Court of Maine has stated that while it has "given a sympathetically generous interpretation" to the terms fishing, fowling, and navigation, these three terms do "delimit the public's right to use this privately owned land."[296]

Most other states are following a general trend to expand the interests protected by the public trust and are

thus expanding access to public trust lands.[297] In recognition of the growing importance of recreation and a clean natural environment in an increasingly crowded society, states have expanded access under the public trust to varying degrees.[298] Some have only further explained uses related to traditionally protected interests,[299] while others have expanded the doctrine to include extensive recreational uses and environmental protections.[300]

In an early nineteenth century case, the New Jersey Supreme Court recognized access for "fishing, fowling, sustenance, and all other uses of the water and its products."[301] The New Jersey Supreme Court has since expanded the list of public rights to include "navigation, fishing and recreational uses, including bathing, swimming and other shore activities."[302] The court reasoned that the extension of the public trust doctrine to include recreational activities was "consonant with and furthers the general welfare."[303] In fact, the New Jersey court had an outwardly activist approach to the public trust.[304] Recognizing an approaching crisis caused by decreasing beach access, the court proclaimed, "[t]he situation will not be helped by restrained judicial pronouncements. Prompt and decisive action by the Court is needed."[305]

California has also expanded its public trust doctrine to include the right to "fish, hunt, bathe, swim, [and] to use [navigable waters] for boating and general recreation purposes."[306] Also recognized as interests protected by California's public trust are water quality and environmental preservation, as well as the protection of scenic views.[307]

The Washington Supreme Court has noted that the extent of the public trust in Washington has not been fully explained, and the court has left open the possibility for further extension of the doctrine in the future.[308] Since the public trust doctrine is a flexible common law concept, it is capable of encompassing the needs of the time period during which it is applied.[309] One commentator has suggested courts should consider factors such as public access, potentially harmful effects from outside the currently regulated area, and the conflicting protected interests of commerce, recreation, and environmental preservation when determining the balance of public trust interests.[310]

The interpretations state courts have adopted make clear that courts consider not only stare decisis, but changing social needs, and science and technology issues, as they choose to follow their state's precedent or to expand their interpretation of the public trust. It is interesting to note that, generally, the states that have retained the most traditional interpretations of the public trust are older East Coast states.[311] The Western states, by comparison, have more modern renderings of the doctrine.[312] There are, however, several East Coast states with expansive interpretations of the public trust.[313] Nationwide, there seems to be no clear pattern to the expansion or limitation of the public trust.

V. CONCLUSION

The demarcation of the shoreline property boundary and the definition of the limit of public trust land vary with each individual state. As a result, there are both high and low water states, with a variety of definitions of the boundaries. This variety stems from either adherence to or departure from the English common law, important societal values at the time of adoption, and misunderstanding of the scientific and meteorological terms used in this complicated area of law. It turns out, much to this author's surprise, that the shoreline property boundary bears little on the extent of public beach access. State definition of public trust land and the public interests protected by that definition are the true measure of available public shoreline access. Some states have strictly adhered to traditionally protected interests, resulting in very limited public shoreline access. Other states have taken a more liberal approach to their interpretation of the public trust doctrine, both expanding its geographic scope and the type of protected public interests, resulting in extensive access to those states' coasts. In the process, each state has had to weigh the public and private interests that come into conflict in order to draw that line in the sand.

[1] Peter K. Nunez, *Fluctuating Shorelines and Tidal Boundaries: An Unresolved Problem*, 6 SAN DIEGO L. REV. 447 (1969). *See also* Frank E. Maloney and Richard C. Ausness, *The Use and Legal Significance of the Mean High Water Line in Coastal Boundary Mapping*, 53 N. C. L. REV. 185, 186 (1974) (discussing various factors which increase the difficulty of determining shoreline boundaries).

[2] Peter K. Nunez, *Fluctuating Shorelines and Tidal Boundaries: An Unresolved Problem*, 6 SAN DIEGO L. REV. 447 (1969).

[3] *Matthews v. Bay Head Improvement Ass'n*, 95 N.J. 306, 323, 471 A.2d 355, 364 (1984). *See also City of Daytona Beach v. Tona-Rama, Inc.,* 294 So. 2d 73, 75 (Fla. 1974) (recognizing "the propriety of protecting the public interest in, and right to utilization of, the beaches and oceans if the State of Florida").

[4] Marc R. Poirier, *Takings and Natural Hazards Policy: Public Choice on the Beachfront*, 46 RUTGERS L. REV. 243, 259-60 (1993). "Although [the American coast] comprises less than ten percent of the land mass of the United States, more than seventy-five percent of the population now lives within fifty miles of coastal areas, and that percentage is growing." Ronald J. Rychlak, *Coastal Zone Management and the Search for Integration*, 40 DEPAUL L. REV. 981 (1991). "Over 90% of the adjacent uplands [of America's coasts] are privately owned." DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 2 (2d ed. 1997).

[5] The boundary may vary even within a state as it defines differing interests. For example, the limit of private ownership will not necessarily be the same line that defines the point from which construction setbacks are measured or where mineral mining rights accrue. In Maine, construction setbacks are measured on salt water bodies from the high water mark despite possible ownership to the low water mark. *Mack v. Municipal Officers of the Town of Cape Elizabeth,* 463 A.2d 717, 719 (Me. 1983); *Bell v. Town of Wells*, 557 A.2d 168, 169 (Me. 1989). In Louisiana, there is a "defined coastline" that serves as "a baseline along the entire coast of the State of Louisiana from which the extent of the territorial waters under the jurisdiction of the State of Louisiana" is measured. *United States v. Louisiana*, 422 U.S. 13, 13, 95 S. Ct. 2022, 2023 (1975). Beyond this three-mile limit, the federal government holds all rights, including mineral rights and the right to explore the continental shelf. *Id*. at 14, 95 S. Ct. at 2023. This defined coastline is different from the shoreline boundary defining the public trust and the extent of private ownership.

[6] *Mason v. United States*, 260 U.S. 545, 43 S. Ct. 200 (1923). An attempt was made to federalize beach access law in the 1960s and 1970s. No proposal for national open beaches was ever passed, however. *See* Marc R. Poirier, *Environmental Justice and the Beach Access Movement of the 1970s in Connecticut and New Jersey: Stories of Property and Civil Rights*, 28 CONN. L. REV. 719, 748-49 (1996).

[7] *See Hughes v. Washington*, 389 U.S. 290, 292, 88 S. Ct. 438, 440 (1967) (holding that question of title to federally owned land is federal question but federal government may choose to apply state law); *Borax Consolidated, Ltd. v. Los Angeles*, 296 U.S. 10, 22, 56 S. Ct. 23, 29 (1935) (holding that question about boundary of property under U.S. patent is governed by federal law); *Los Angeles v. Venice Peninsula Properties*, 205 Cal. App. 3d 1522, 1532, 253 Cal. Rptr. 331, 336 (Cal. App. 2d Dist. 1988) (holding that "inasmuch as California never acquired sovereign title to land which was the subject of a prior grant by the Mexican government, the public trust easement, which is an adjunct of sovereignty and a creation of United States and California law, never arose"); *Cinque Bambini Partnership v. State of Mississippi*, 491 So. 2d 508, 513 (Miss. 1986) (holding that, as to lands with title granted prior to statehood, "the question of what lands were given to the state in trust is necessarily a question of federal law").

[8] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 69 (2d ed. 1997). *See Borax Consolidated, Ltd. v. City of Los Angeles,* 296 U.S. at 22, 56 S. Ct. at 29; *Hughes v . Washington*, 389 U.S. at 292, 88 S. Ct. at 440; *California ex rel. State Lands Commission v. United States*, 457 U.S. 273, 102 S. Ct. 2432 (1982); *United States v. Alaska*, 521 U.S. 1, 117 S. Ct. 1888 (1997). See also Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 564 (1992), for an explanation of the application of federal grants in Washington.

[9] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 69 (2d ed. 1997); *Wilson v. Omaha Indian Tribe*, 442 U. S. 653, 99 S. Ct. 2529 (1979).

[10] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 13 (2d ed. 1997).

[11] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK (2d ed. 1997). "The Public Trust Doctrine dates back to the sixth century Institutes and Digest of Justinian, which collectively formed Roman civil law." *Id.* at 1. For a through discussion of the history of public trust doctrine and its early application in the United States, see Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 529-33 (1992).

[12] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 4 (2d ed. 1997).

[13] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 4-5 (2d ed. 1997).

[14] The ownership of coastal waters and underlying lands by the sovereign was called *jus publicum* and was a partially transferable property interest. JACK H. ARCHER, ET AL., THE PUBLIC TRUST DOCTRINE AND THE MANAGEMENT OF AMERICA'S COASTS 6 (1994).

[15] *Shively v. Bowlby*, 152 U.S. 1, 11-13, 14 S. Ct. 548, 551-53 (1894) (explaining the public trust doctrine at English common law).

[16] The *jus privatum* was a privately held interest in land. If this interest involved public trust lands, the *jus privatum* was secondary to any public trust rights, for example, the rights of navigation and fishing. JACK H. ARCHER, ET AL., THE PUBLIC TRUST DOCTRINE AND THE MANAGEMENT OF AMERICA'S COASTS 7 (1994).

[17] *See* DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 13 (2d ed. 1997); Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 524 (1992). In some instances, the public trust interest could be extinguished by "1) lands conveyed prior to statehood; 2) federal acquisitions of state public trust lands; and 3) lands

covered by Indian treaties." Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 564 (1992). Johnson goes on to point out that extinguishment "requires [an] express and unequivocal statement in the words of the original grant," *id*. (citing *City of East Haven v. Hemingway*, 7 Conn. 186, 199 (1828)), and that some states continue to apply the public trust to pre-statehood grants of land. *Id.*

[18] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 13 (2d ed. 1997).

[19] *Pollard's Lessee v. Hagan*, 44 U.S. (3 How.) 212 (1945); *Hardin v. Jordan*, 140 U.S. 371, 382, 11 S. Ct. 808, 812 (1891); DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 13 (2d ed. 1997). *See also* JACK H. ARCHER, ET AL., THE PUBLIC TRUST DOCTRINE AND THE MANAGEMENT OF AMERICA'S COASTS 5-13 (1994) (documenting the development of the public trust doctrine in the United States from its inception in Massachusetts in 1641, through its expansion by the Northwest Ordinance to current Supreme Court cases defining the public trust doctrine today); Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 549 (1992) (noting that the federal government held navigable waters in trust for future states and granted title to trust lands to each state upon entry to the Union).

[20] Frank E. Maloney & Richard C. Ausness, *The Use and Legal Significance of the Mean High Water Line in Coastal Boundary Mapping*, 53 N.C. L. REV. 185, 193 (1974).

[21] James G. Titus, *Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners*, 57 MD. L. REV. 1279, 1356 (1998).

[22] James G. Titus, *Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners*, 57 MD. L. REV. 1279, 1356 (1998); Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 561, 562 (1992). For a detailed discussion of the law of accretion, see POWELL ON REAL PROPERTY § 66.01 (1999).

[23] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 278-80 (2d ed. 1997) (describing the State's duties and limitations on power under the public trust doctrine); *id.* at 326-29 (listing several state constitutional provisions recognizing the state's responsibility to manage and preserve public trust lands).

[24] James G. Titus, *Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners*, 57 MD. L. REV. 1279, 1361-84 (1998).

[25] Titus argues that "[t]he public trust doctrine's requirement that tidelands must not be privatized unless the sovereign indicates otherwise is effectively an ancient determination that tidelands are more valuable to society as public lands." James G. Titus, *Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners*, 57 MD. L. REV. 1373 (1998).

[26] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 151 (2d ed. 1997).

[27] Eric C. F. Bird, COASTS: AN INTRODUCTION TO COASTAL GEOMORPHOLOGY 11 (3d ed. 1984) (explaining that tides respond, in long-term variations, to the position of the moon, which is in the exact same place once every 18.6 years). For a discussion of the process of determining the tidal data that makes up the mean high tide line, see Peter K. Nunez, *Fluctuating Shorelines and Tidal Boundaries: An Unresolved Problem*, 6 SAN DIEGO L. REV. 447, 450-53 (1969). *See also* Frank E. Maloney & Richard C. Ausness, *The Use and Legal Significance of the Mean High Water Line in Coastal Boundary Mapping*, 53 N.C. L. REV. 185, 195-98 (1974) (explaining the definition of shoreline boundaries using tidal datum).

[28] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 151 (2d ed. 1997).

[29] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 151 (2d ed. 1997) (citing A. L. SHALOWITZ, SHORE AND SEA BOUNDARIES, Vol. 2).

[30] It would be impractical to wait and measure the tide at a particular location for 18.6 years.

[31] *Borax Consolidated, Ltd. v. City of Los Angeles*, 296 U.S. at 26-27, 56 S. Ct. at 31. *See, e.g., Thornton v. Hay*, 254 Or. 584, 586, 462 P.2d 671, 672 (1969). "The mean high tide line in Oregon is fixed by the 1947 Supplement to the 1929 United States Coast and Geodetic Survey data." *Id*.

[32] This image has been adapted from an image in DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 26 (2d ed. 1997).

[33] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 152 (2d ed. 1997); Eric C. F. Bird, COASTS: AN INTRODUCTION TO COASTAL GEOMORPHOLOGY 34-35 (3d ed. 1984). Erosion is the gradual wearing away of the soil by the tides. BLACK'S LAW DICTIONARY 542 (6th ed. 1990); POWELL ON REAL PROPERTY § 66.01[1] (1999). Avulsion is a sudden and observable change to the boundary of a body of water. BLACK'S LAW DICTIONARY 137 (6th ed. 1990); POWELL ON REAL PROPERTY §66.01[1] (1999). Accretion is an addition of land, by natural causes, that is so slow as to not be observable. BLACK'S LAW DICTIONARY 20 (6th ed. 1990); POWELL ON REAL PROPERTY § 66.01[1] (1999). Sea level rise is the gradual upward movement of the surface of the sea caused by the heating of the Earth's surface. David Schneider, *The Rising Seas,* SCIENTIFIC AMERICAN PRESENTS 28 (1998). Submergence is the lowering of the land so the soil disappears underwater. BLACK'S LAW DICTIONARY 542 (6th ed. 1990). *See also* Frank E. Maloney & Richard C. Ausness, *The Use and Legal Significance of the Mean High Water Line in Coastal Boundary Mapping*, 53 N.C. L. REV. 185, 224-27 (1974) (explaining accretion, reliction, and erosion, and their effect on ambulatory property boundaries).

[34] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK xv (2d ed. 1997).

[35] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK xv (2d ed. 1997).

[36] A California court explained the tides: "The law takes notice of three kinds of tides, namely: 1. The high spring tides, which are fluxes of the sea, and those tides which happen at the two equinoctials; 2. The spring tides which happen every month at the full and change of the moon; 3. The neap or ordinary tides which happen at the change and full of the moon twice every twenty-four hours." *Bolsa Land Co. v. Vaqueros Major Oil Co., Ltd.,* 25 Cal. App. 2d 75, 78, 76 P.2d 519 (1938) (citing *Eichelberger v. Mills Land & Water Co.,* 9 Cal. App. 628, 100 P. 117 (1908)).

[37] WEBSTER'S ENCYCLOPEDIC UNABRIDGED DICTIONARY OF THE ENGLISH LANGUAGE (New Revised ed. 1983); Eric C. F. Bird, COASTS: AN INTRODUCTION TO COASTAL GEOMORPHOLOGY 11 (3d ed. 1984).

[38] WEBSTER'S ENCYCLOPEDIC UNABRIDGED DICTIONARY OF THE ENGLISH LANGUAGE (New Revised ed. 1983); Eric C. F. Bird, COASTS: AN INTRODUCTION TO COASTAL GEOMORPHOLOGY 10 (3d ed. 1984).

[39] Telephone Interview with Charles Fletcher, Professor of Geology and Geophysics, University of Hawai'i at Mānoa (Apr. 1, 1999).

[40] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 68-99 (2d ed. 1997) (noting that the boundary between public and private lands is important because of the great interests on both sides); Peter K. Nunez, *Fluctuating Shorelines and Tidal Boundaries: An Unresolved Problem*, 6 SAN DIEGO L. REV. 447, 453 (1969) (pointing out that the definition of tidal boundaries delineates tidal ownership).

[41] Telephone Interview with Charles Fletcher, Professor of Geology and Geophysics, University of Hawai'i at Mānoa (Apr. 1, 1999). *See Rockwood v. Snow Inn Corp*., 409 Mass. 361, 566 N.E.2d 608 (1991) (recognizing that the ability to develop property is dependent on the size of the property, as measured by the shoreline boundary for littoral properties). *But see Mack v. Municipal Officers of the Town of Cape Elizabeth*, 463 A.2d 717, 719 (1983) (measuring construction setback from the high water line on salt water bodies instead of the low water shoreline property boundary).

[42] Telephone Interview with Charles Fletcher, Professor of Geology and Geophysics, University of Hawai'i at Mānoa (Apr. 1, 1999); Telephone Interview with Dennis Hwang, Attorney, Honolulu, Hawai'i (Apr. 1, 1999).

[43] *See Phillips Petroleum Co. v. Mississippi,* 484 U.S. 469, 475, 108 S. Ct. 791, 794-95 (1988) (citing *Shively v. Bowlby*, 152 U.S. 1, 26, 14 S. Ct. 548, 557 (1894), for the proposition that "it has been long established that the individual States have the authority to define the limits of the lands held in public trust and to recognize private rights in such lands as they see fit"). *See also* Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521 (1992). "The public trust doctrine is a state law doctrine, and its geographical scope and the interests it protects vary from state to state." *Id*. at 526. "Subsequent developments in state law, however, control the scope of the doctrine in each state." *Id*. at 549 (citing *Phillips Petroleum Co. v. Mississippi*, 484 U.S. at 475, 108 S. Ct. at 794-95).

[44] *See Opinion of the Justices to the House of Representatives*, 365 Mass. 681, 313 N.E.2d 561 (1974) (in Massachusetts, while private ownership extends to the mean low water mark, the area below the mean high water mark is subject to an easement for the public in fishing, fowling and navigation); Act of February 16, 1819, Acts of 1818-19, Ch. 28 ("nothing in this section contained shall be construed to prohibit any person or persons from the right of fishing, fowling and hunting on these shore of the Atlantic ocean"); *Bell v. Town of Wells*, 557 A.2d 168, 169 (Me. 1989).

[45] *See Matthews v. Bay Head Improvement Ass'n*, 95 N.J. at 312, 471 A.2d at 358 (enumerating the protected public trust rights to include navigation, fishing, bathing, swimming, and other shore activities); *Seaway Co., Inc. v. Attorney Gen. of the State of Texas,* 375 S.W.2d 923 (Tex. 1964) (listing the protected interests of swimming, fishing, boating, camping, and public way for pedestrian and vehicle travel).

[46] Telephone Interview with Charles Fletcher, Professor of Geology and Geophysics, University of Hawai'i at Mānoa (Apr. 1, 1999).

[47] Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 532 (1992) (noting that courts are using the public trust doctrine to preserve access to the coast and as an environmental protection tool). *See generally* JACK H. ARCHER, ET AL., THE PUBLIC TRUST DOCTRINE AND THE MANAGEMENT OF AMERICA'S COASTS (1994); DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK (2d ed. 1997); Kent D. Morihara, *Hawai'i Constitution, Article XI, Section 1: The Conservation, Protection, and Use of Natural Resources*, 19 U. HAW. L. REV. 177 (1997).

[48] *See* Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 558-59 (1992) (explaining state regulation of public trust lands in Washington).

[49] *See Antoine v. California Coastal Comm'n*, 8 Cal. App. 4th 641, 10 Cal. Rptr. 2d 471 (1992), *cert. denied*, 507 U.S. 1018, 113 S. Ct. 1814 (1993) (discussing the problems created when seawalls restrict public access to the shoreline).

[50] Not every state measures its construction setbacks from the shoreline property boundary. Maine, for instance, allows private ownership to the low water mark but measures its construction setback on salt water bodies from the high water mark. *Mack v. Municipal Officers of the Town of Cape Elizabeth,* 463 A.2d 717, 719 (Me. 1983).

[51] Telephone Interview with Charles Fletcher, Professor of Geology and Geophysics, University of Hawai'i at Mānoa (Apr. 1, 1999). John Bay & Maile Bay, Reducing Hazards in Shoreline Areas: Policy and Legal Options 2 (1996) (on file with author); Marc R. Poirier, *Takings and Natural Hazards Policy: Public Choice on the Beachfron*t, 46 RUTGERS L. REV. 243, 256-59 (1993) (discussing the risks of shoreline development). An example of the tragic effect of a hurricane can be found in *Matcha v. Mattox,* 711 S.W.2d 95 (1986), *cert. denied*, 481 U.S. 1024, 107 S. Ct. 1911 (1987), where a beachfront home was completely destroyed by a hurricane and, because of the public trust law in place, the homeowners could not legally rebuild their home.

[52] Telephone Interview with Charles Fletcher, Professor of Geology and Geophysics, University of Hawai'i at Mānoa (Apr. 1, 1999). John Bay & Maile Bay, Reducing Hazards in Shoreline Areas: Policy and Legal Options 3 (1996) (on file with author) (discussing the National Flood Insurance Program requirement); Marc R. Poirier, *Takings and Natural Hazards Policy: Public Choice on the Beachfront*, 46 RUTGERS L. REV. 243, 260-69 (1993) (reciting recent costs of National Flood Insurance Program subsidies).

[53] Beach replenishment is the process of putting sand on an eroding shoreline to slow the erosion process. Eric C. F. Bird, COASTS: AN INTRODUCTION TO COASTAL GEOMORPHOLOGY 175 (3d ed. 1984).

[54] *See* James G. Titus, *Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners*, 57 MD. L. REV. 1279, 1284 (1998) (noting a study by the U.S. Army Corps of Engineers that found beach nourishment has gained broad acceptance).

[55] Telephone Interview with Dennis Hwang, Attorney, Honolulu, Hawai'i (Apr. 1, 1999).

[56] *See Antoine v. California Coastal Comm'n*, 8 Cal. App. 4th 641, 10 Cal. Rptr. 2d 471 (1992), *cert. denied*, 507 U.S. 1018, 113 S. Ct. 1814 (1993) (discussing the problem of a seawall restricting beach access).

[57] Charles H. Fletcher, et al., *Beach Loss Along Armored Shorelines on Oahu, Hawaiian Islands*, 13 J. COASTAL RES. 209 (1997).

[58] *See Matcha v. Mattox*, 711 S.W.2d at 100 (discussing the need to allow easements to migrate along moving shorelines; a fixed easement, "meant to preserve the public right to use and enjoy the beach, would then cease functioning for that purpose").

[59] *Borax Consolidated, Ltd. v. City of Los Angeles*, 296 U.S. at 22, 56 S. Ct. at 29.

[60] *Borax Consolidated, Ltd. v. City of Los Angeles*, 296 U.S. at 26-27, 56 S. Ct. at 31 (considering the definition of mean high tide as given by the United States Geodetic Survey ("U.S.G.S.") and concluding that the mean includes all high tides, spring and neap, over a considerable period of time). For a comprehensive discussion of the USGS definition and its application to legal boundaries, see *Smith v. Georgia*, 284 Ga. 154, 282 S.E.2d 76 (1981).

[61] *Phillips Petroleum Co. v. Mississippi*, 484 U.S. at 475 (citing *Shively v. Bowlby*, 152 U.S. 1, 26, 14 S. Ct. 548, 557 (1894), for the proposition that the limits of public trust lands are for states to recognize as they see fit and extending the doctrine to include all tidal waters, navigable and non-navigable).

[62] *In re Ashford*, 50 Haw. 314, 315, 440 P.2d 76, 77 (1968); *King v. Oahu Ry. & Land Co.,* 11 Haw. 717, 725 (1899); HAW. REV. STAT. § 1-1 (1998). One potential exception exists to this rule, still-existing fishponds that were granted as part of an original land grant from the Hawaiian Monarchy. *Boone v. U.S.,* 944 F.2d 1489 (9th Cir. 1991).

[63] *County of Hawai'i v. Sotomura*, 55 Haw. 176, 517 P.2d 57 (1973). The U.S. District Court for the District of Hawai'i has suggested that the application of the vegetation line rule to property recorded in Hawai'i's land court is a due process violation. *Sotomura v. County of Hawai'i*, 460 F. Supp. 473 (D. Haw. 1978). Hawai'i's land court is a modified Torrens system, which is very rare in the United States. Codified in H.R.S. Chapter 501, it requires all real property within the land court to file certified title based on perfect paper title. Property descriptions filed with the bureau of conveyances become land court reference numbers, to which the property is referred to thereafter. Minnesota also uses a statutory Torrens system. *See Park Elm Homeowner's Ass'n v. Mooney*, 398 N.W.2d 643, 646 (Minn. 1987) (explaining that "every decree of registration shall bind the land described in it, forever quiet the title to it, and be forever binding and conclusive upon all persons") (citing MINN. STAT. § 508.22 (1984)).

[64] *County of Hawai'i v. Sotomura*, 55 Haw. 176, 517 P.2d 57; *In re Ashford*, 50 Haw. at 315, 440 P.2d at 77; *King v. Oahu Ry. & Land Co.,* 11 Haw. at 725; HAW. REV. STAT. § 1-1 (1998).

[65] *Hawkins v. Alaska Freight Lines, Inc*., 410 P.2d 992, 994 (Alaska 1966). "[T]he meander line is generally not the boundary lint [sic] of the property along the shore—the boundary being marked by the actual line of mean high water." *Id. See also* ALASKA STAT. § 38.05.965(21) (1998).

[66] *Hawkins v. Alaska Freight Lines, Inc*., 410 P.2d at 994 (citing *Niles v. Clear Point Club*, 175 U.S. 300, 308, 20 S. Ct. 124, 174 (Alaska 1899); *Horne v. Smith*, 159 U.S. 40, 42-43, 15 S. Ct. 988 (1895); *Shively v. Bowlby*, 152 U.S. at 39, 14 S. Ct. at 562; *St. Paul & Pac. R. R. v. Schurmeier*, 74 U.S. (7 Wall.) 272, 286-87 (1869); *Nordale v. Waxberg*, 84 F. Supp. 1004, 1006 (D. Alaska 1949); *Den v. Spaulding*, 39 Cal. App. 2d 623, 104 P.2d 81, 83 (1940); *Trustees of Internal Improvement Fund v. Toffel*, 145 So. 2d 737, 741 (Fla. Dist. Ct. App. 1962); CLARK, SURVEYING & BOUNDARIES §§ 199-201 (2d ed. 1939)). It is interesting to note that in *Hawkins*, the court was willing, for the sake of fairness, to relocate the plaintiff's property boundary from the mean high water mark to the meander line. *Id.* at 994.

[67] *CWC Fisheries, Inc. v. Bunker*, 755 P.2d 1115, 1118 (Alaska 1988) (citing ALASKA STAT. ch 82, § 1(c) (Temporary and Special Acts and Resolves) 1985).

[68] WASH. CONST., art. XVII, § 1 (1999).

[69] *Hughes v. Washington*, 67 Wash. 2d 799, 410 P.2d 20 (1966), *rev'd on other grounds*, 389 U.S. 290, 88 S. Ct. 438 (1967). "[W]e deem the word ordinary to be used in its everyday context. The 'line of ordinary high tide' is not to be fixed by singular, uncommon, or exceptionally high tides, but by the regular, normal, customary, average, and usual high tide." *Id.* at 810, 410 P.2d at 26. Ralph W. Johnson suggested that the language of the opinion implies the high tide line is synonymous with the vegetation line and that this "lacked both significant legal precedent and practical justification." Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 552 n.180 (1992) (citing Charles E. Corker, *Where Does the Beach Begin, and to What Extent Is This a Federal Question*, 42 WASH L. REV. 33, 43-54 (1966)). The Washington Legislature has defined a line that is essentially the same as the case law defined line with different language. The "ordinary high water mark . . . is that mark . . . where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland. . . . The ordinary high water mark adjoining salt water shall be the line of mean higher high tide . . . ." WASH. REV. CODE § 90.58.030 (1999).

[70] WASH. CONST., art. XVII, § 1 (1999). Private interests may be sold from the public trust lands, subject to the dominant *jus publicum*. *Ghione v. State*, 26 Wash. 2d 635, 175 P.2d 955 (1946).

[71] *Hay v. Bruno*, 344 F. Supp. 286, 287 (D. Or. 1972) (citing *Borax,* holding the boundary between private and public ownership is the mean high tide line).

[72] *Hay v. Bruno*, 344 F. Supp. at 287.

[73] *Thornton v. Hay*, 254 Or. 584, 597, 462 P.2d 671, 677 (1969); *Hay v. Bruno*, 344 F. Supp. at 287.

[74] *Gion v. City of Santa Cruz*, 2 Cal. 3d 29, 42, 465 P.2d 50, 58 (1970). For a discussion of the development of California's shoreline property boundary law, see Peter K. Nunez, *Fluctuating Shorelines and Tidal Boundaries: An Unresolved Problem*, 6 SAN DIEGO L. REV. 447 (1969).

[75] *People v. William Kent Estate Co*., 242 Cal. App. 2d 156, 161, 51 Cal. Rptr. 215 (1966) (citing *Borax Consolidated, Ltd. v. City of Los Angeles*, 296 U.S. 10, 26, 56 S. Ct. 23, 31 (1935)); *Bolsa Land Co. v. Vaqueros Major Oil Co., Ltd*., 25 Cal. App. 2d 75, 78, 76 P.2d 519 (1938) ("Tidelands are such as are covered and uncovered by the flow and ebb of the ordinary neap tides.") (citing *Eichelberger v. Mills Land & Water Co*., 9 Cal. App. 628, 100 P. 117 (1908)).

[76] *Gion v. City of Santa Cruz*, 2 Cal. 3d at 42, 465 P.2d at 58.

[77] *People v. California Fish Co.,* 166 Cal. 576, 589, 138 P. 79, 84 (1913).

[78] *Matcha v. Mattox,* 711 S.W.2d at 99; *Luttes v. Texas,* 159 Tex. 500, 324 S.W.2d 167 (1958). The Supreme Court of Texas distinguished the high water mark of land acquired under a Mexican land grant from the mean high tide of the Anglo-American law. *Id.*

[79] *Luttes v. Texas,* 159 Tex. at 512, 513, 324 S.W.2d at 173, 174.

[80] TEX. NAT. RES. CODE § 61.012 (1990). Under the Texas Open Beaches Act, the dry sand area of all beaches along the Gulf of Mexico coast are subject to a public access easement. The dry sand area is the area "extend[ing] landward from the line of mean high tide to the line of vegetation." *Hirtz v. Texas,* 773 F. Supp. 6, 8 (S. D. Tex. 1991).

[81] *Seaway Co., Inc. v. Attorney General of the State of Texas,* 375 S.W.2d 923 (Tex. 1964).

[82] *Dardar v. Lafourche Realty Inc.,* 985 F.2d 824, 830 (5th Cir. 1993) (citing LA. CIV. CODE ANN. art 450 (1993)).

[83] *Dardar v. Lafourche Realty Inc.,* 985 F.2d at 830 (citing LA. CIV. CODE ANN. art 451 (1993)); *State ex rel. Plaquemines Parish School Bd. v. Plaquemines Parish Gov't*, 652 So. 2d 1, 7 (La. App. 1995).

[84] *Dardar v. Lafourche Realty Inc*., 985 F.2d at 830 (citing *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 483, 108 S. Ct. 791, 799 (1988); *Shively v. Bowlby*, 152 U.S. at 26, 14 S. Ct. at 557).

[85] *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 108 S. Ct. 791. For a comprehensive discussion of public trust law in Mississippi, see M. Casey Jarman, *A Higher Public Purpose? The Constitutionality of Mississippi's Public Trust Tidelands Legislation*, 11 MISS. C. L. REV. 5 (1990).

[86] *Phillips Petroleum Co. v. Mississippi*, 484 U.S. at 483, 108 S. Ct. at 799.

[87] MISS. CODE § 29-15-7(1) (1972); *Cinque Bambini Partnership v. State of Mississippi*, 491 So. 2d 508 (Miss. 1986).

[88] *United States v. Property on Pinto Island*, 74 F. Supp. 92, 104 (S.D. Ala. 1947); *City of Mobile v. Eslava*, 9 Port. 577, 603 (1839), *aff'd*, 41 U.S. (16 Pet.) 234 (1942).

[89] *City of Mobile v. Eslava*, 9 Port. at 603. "The navigable waters extend not only to low water, but embrace all soil that is within the limits of the high water mark." *Id*. However, *jus privatum* interests exist in Alabama's public trust lands. "All the beds and bottoms of [shorelands] . . . within the jurisdiction of Alabama are the property of the state of Alabama to be held in trust for the people thereof, but the owners of land fronting on such waters where oysters may be grown shall have the right to plant and gather same in the waters in front of their land to the distance of 600 yards from the shore measured from the average low water mark . . . ." ALA. CODE § 9-12-22 (1998).

[90] *Rhoads v. Virginia-Florida Corp.,* 549 F.2d 985, 986 (5th Cir. 1977); *Hayes v. Bowman*, 91 So. 2d 795 (Fla. 1957).

[91] *Rhoads v. Virginia-Florida Corp.,* 549 F.2d at 987 (citing *Miller v. Bay-to-Gulf, Inc.,* 141 Fla. 452, 193 So. 425 (1940)). The court in *Rhoads* noted that "marks upon the ground" could be considered in determining the boundary. *Id.* (citing *Martin v. Busch,* 93 Fla. 535, 112 So. 274, 283 (1927)).

[92] *Thiesen v. Gulf, F & A Ry. Co.,* 75 Fla. 28, 57, 78 So. 491, 500 (1918); *Perky Properties v. Fulton*, 113 Fla. 432, 151 So. 892, 895 (1934); FLA. STAT. § 253.03(d) (1998).

[93] *Thiesen v. Gulf, F & A Ry. Co.,* 75 Fla. at 57, 78 So. at 500.

[94] *Johnson v. Georgia*, 114 Ga. 790, 40 S.E. 807 (1902). See *Georgia v. Ashmore*, 236 Ga. 401, 224 S.E.2d 334 (1976), for a historical discussion of the adoption of Georgia's shoreline boundary law.

[95] *Smith v. Georgia*, 284 Ga. 154, 157, 282 S.E.2d 76, 81 (1981) ("We adopt the definition of mean high tide or water given by the U. S. Coast and Geodetic Survey and hold that the mean high water at any given point along the coast is the elevation of the mean level of high water calculated by averaging the height of *all* the high waters at that place over a period of 19 years. We further hold that the mean high water *mark* is to be determined by projecting the tidal plane of the mean high water to the point of its intersection with the shore.").

[96] *Cape Romain Land & Improvement Co. v. Georgia-Carolina Canning Co.,* 148 S.C. 428, 146 S.E. 434 (1928); *State v. Hardee*, 259 S.C. 535, 193 S.E.2d 497 (1972).

[97] *Coburg Dairy, Inc. v. Lesser*, 318 S.C. 510, 458 S.E.2d 547 (1995); *Hobonny Club, Inc. v. McEachern*, 272 S.C. 392, 252 S.E.2d 133, 135 (1979) (citing *Cape Romain Land & Improvement Co. v. Georgia-Carolina Canning Co.,* 148 S.C. 428, 146 S.E. 434; *Rice Hope*

Plantation v. South Carolina Public Service Auth., 216 S.C. 500, 59 S.E.2d 132 (1950)).

[98] S.C. CODE § 48-39-120(B) (1998).

[99] *Carolina Beach Fishing Pier, Inc. v. Town of Carolina Beach*, 277 N.C. 297, 177 S.E.2d 513 (1970).

[100] *Carolina Beach Fishing Pier, Inc. v. Town of Carolina Beach*, 277 N.C. at 297, 177 S.E.2d at 513.

[101] *State ex rel. Rohrer v. Credle*, 322 N.C. 522, 369 S.E.2d 825 (1988); *Development Co. v. Parmele*, 235 N.C. 689, 695, 71 S.E.2d 474, 479 (1952); *Land Co. v. Hotel*, 132 N.C. 517, 44 S.E. 39 (1903); *Ward v. Willis*, 51 N.C. (6 Jones) 183, 185-86 (1858). The North Carolina Constitution reads: "It shall be the policy of this State to conserve and protect its lands and waters for the benefit of all its citizenry, and to this end it shall be a proper function of the State of North Carolina and its political subdivisions to acquire and preserve park, recreational, and scenic areas, to control and limit the pollution of our air and water, to control excessive noise, and in every other appropriate way to preserve as a part of the common heritage of this State its forests, wetlands, estuaries, beaches, historical sites, open- lands, and places of beauty." N.C. CONST. art. XIV, § 5 (amend. 1972). The North Carolina General Statutes also recognize a presumption in favor of public ownership of tidelands. N.C. GEN. STAT. § 113-206(d) (1987). The drilling of wells for public water is specifically not protected by the public trust. *Friends of Hatteras Island National Historic Maritime Forest Land Trust For Preservation, Inc. v. Coastal Resources Comm'n of North Carolina,* 117 N.C. App. 556, 452 S.E.2d 337 (1995).

[102] *Bradford v. Nature Conservancy*, 224 Va. 181, 197, 294 S.E.2d 866 (1982); VA CODE § 28.2-1202 (1998); VA CODE § 62.1-2 (Repl. Vol. 1987). For a complete discussion of the early development of Virginia's shoreline boundary law, see *Miller v. Commonwealth of Virginia*, 159 Va. 924, 166 S.E. 557 (1932).

[103] *Scott v. Doughty*, 124 Va. 358, 97 S.E. 802 (1919).

[104] Due to the complicated nature of early Virginia shoreline boundary law, the current low water mark rule was not firmly established until 1819 by an act of the General Assembly. *Miller v. Commonwealth of Virginia*, 159 Va. at 950-51, 166 S.E. at 566. The earliest suggestion that all property boundaries extended to the low water mark was made in the 1679 *Robert Liny Case*. *Id*. at 936-37, 166 S.E. at 561. A modern court, however, has rejected this "order" as not having the force of law. *Id.* at 940-41, 166 S.E. at 562.

[105] *Bradford v. Nature Conservancy*, 224 Va. at 197, 294 S.E.2d at 874; *Miller v. Commonwealth of Virginia*, 159 Va. at 949, 166 S.E. at 566 (citing a 1819 act of the General Assembly for extending title of shoreline properties to the low water mark, subject to the limitation that no person shall be prohibited from fishing, fowling, and hunting).

[106] *Board of Public Works v. Larmar Corp.,* 262 Md. 24, 47, 277 A.2d 427, 437 (1971). "It is well established that the title of land below the high water, as well as river or streams within the ebb and flow of the tide, belong to the public." *Id. See also Day v. Day*, 22 Md. 530, 537 (1865) (ruling that all land below the high water mark belongs to the public).

[107] *Board of Public Works v. Larmar Corp.,* 262 Md. at 47, 277 A.2d at 437; *Day v. Day*, 22 Md. at 537.

[108] *State ex rel. Buckson v. Pennsylvania R.R. Co.,* 228 A.2d 587, 600 (1967).

[109] *State ex rel. Buckson v. Pennsylvania R.R. Co.,* 228 A.2d at 601.

[110] *New Jersey v. Delaware,* 291 U.S. 361, 374, 54 S. Ct. 407, 411-12 (1934); *Bickel v. Polk,* 5 De. 325, 326 (1851).

[111] *Matthews v. Bay Head Improvement Ass'n,* 95 N.J. at 321, 471 A.2d at 363.

[112] *Matthews v. Bay Head Improvement Ass'n*, 95 N.J. at 321, 471 A.2d at 363 (citing *O'Neill v. State Hwy. Dep't*, 50 N.J. 307, 323, 324, 235 A.2d 1, 10 (1967); *Borax Consolidated, Ltd. v. City of Los Angeles,* 296 U.S. at 26-27, 56 S. Ct. at 31).

[113] *Matthews v. Bay Head Improvement Ass'n*, 95 N.J. at 312, 471 A.2d at 358 (citing *Borough of Neptune v. Borough of Avon-by-the-Sea*, 61 N.J. 296, 309, 294 A.2d 47, 54 (1972)). The public trust doctrine was first applied to the New Jersey shoreline in *Arnold v. Mundy*, 10 Am. Dec. 356, 368 (N.J. 1821).

[114] *Commonwealth of Massachusetts v. State of New York*, 271 U.S. 65, 46 S. Ct. 357 (1926) (regarding Lake Ontario); *Marba Sea Bay Corp. v. Clinton St. Realty Corp.,* 272 N.Y. 292, 297, 5 N.E.2d 824, 826 (1936) (citing *Tiffany v. Town of Oyster Bay*, 209 N.Y. 1, 102 N.E. 585 (1913)). "Bounding property by the ocean . . . carries title no further than high-water mark, and excludes the foreshore." *Id*.

[115] *Dolphin Lane Associates, Inc. v. Town of Southampton,* 339 N.Y.S.2d 966, 983 (1971).

[116] The court in *Marba Sea Bay Corp.* discussed a grant made in 1685 and determined that, at that time, the grant could extend no further than the high water mark. *Marba Sea Bay Corp. v. Clinton St. Realty Corp.,* 272 N.Y. at 297-98, 5 N.E.2d at 826.

[117] *Commonwealth of Massachusetts v. State of New York,* 271 U.S. 65, 46 S. Ct. 357 (1926) (regarding Lake Ontario).

[118] *Tucci v. Salzhauer*, 40 App. Div. 2d 712, 336 N.Y.S.2d 721 (1972).

[119] *Bloom v. State Water Resources Comm'n*, 157 Conn. 528, 254 A.2d 884 (1969); *State v. Knowles-Lombard Co.,* 122 Conn. 263, 265-66, 188 A. 275, 276 (1936); *Mihalczo v. Borough of Woodmont*, 175 Conn. 535, 538, 400 A.2d 270, 271 (1978) (citing *Shorefront Park Improvement Ass'n, Inc. v. King,* 157 Conn. 249, 251, 257, 253 A.2d 29 (1968)).

[120] *Mihalczo v. Borough of Woodmont*, 175 Conn. at 538, 400 A.2d at 271 (citing *U.S. v. Pacheco*, 69 U.S. (2 Wall.) 587, 590 (1864); *Freeman v. Bellegarde*, 108 Cal. 179, 41 P. 289 (1895); *Borax Consolidated, Ltd. v. City of Los Angeles*, 296 U.S. at 26, 56 S. Ct. at 29, 31).

[121] CONN. GEN. STAT. § 22a-93(6) (1997); *Simons v. French*, 25 Conn. 346, 352 (1856).

[122] *State v. Ibbison*, 448 A.2d 728, 732 (1982); *Jackvony v. Powel*, 67 R.I. 218, 21 A.2d 554 (1941); *Allen v. Allen*, 19 R.I. 114, 32 A. 166 (1895).

[123] *State v. Ibbison*, 448 A.2d at 732.

[124] R.I. CONST., art. 1 § 17; *Folsom v. Freeborn*, 13 R.I. 200, 204-05 (1881); *Bailey v. Burges*, 11 R.I. 336 (1876); *Gerhard v. Seekonk River Bridge Commissioners,* 15 R.I. 334, 334-35, 5 A. 199, 200 (1889). The Supreme Court of Rhode Island, in *State v. Ibbison*, stated that the alternate use of terms "high water mark" or "mean high tide line" were inconsequential because both were measured in terms of the high tide. *State v. Ibbison,* 448 A.2d at 733.

[125] *Storer v. Freeman,* 6 Mass. 435, 438 (1810); *Opinion of the Justices to the House of Representatives*, 365 Mass. 681, 685, 313 N. E.2d 561, 565 (1974).

[126] *Rockwood v. Snow Inn Corp.,* 409 Mass. 361, 369-70, 566 N.E.2d 608, 613 (1991).

[127] *Opinion of the Justices to the House of Representatives*, 365 Mass. at 681, 313 N.E.2d at 561; MASS. ANN. LAWS ch. 91, § 1 (Law Co-op 1998).

[128] *Opinion of the Justices (Public Use of Coastal Beaches*), 139 N.H. 82, 88-89, 649 A.2d 604, 608 (1994) (citing *Concord Mfg. Co. v. Robertson*, 66 N.H. 1, 26-27, 25 A. 718, 730-31 (1889)).

[129] *New England Naturist Ass'n, Inc. v. Larsen,* 692 F. Supp. 75, 78 (D.R.I. 1988).

[130] *Concord Mfg. Co. v. Robertson*, 66 N.H. at 27, 25 A. at 730-31 (specifically rejecting the Massachusetts low water rule); *St. Regis Paper Co. v. New Hampshire Water Resources Bd.*, 92 N.H. 164, 169, 26 A.2d 832, 837 (1942); N.H. REV. STAT. § 483-C:1(II) (1999).

[131] *Hartford v. Gilmanton*, 101 N.H. 424, 425-26, 146 A.2d 851, 853 (1958).

[132] *Bell v. Town of Wells*, 557 A.2d 168, 169 (1989).

[133] *Bell v. Town of Wells*, 557 A.2d at 169.

[134] *Bell v. Town of Wells*, 557 A.2d at 169. The Supreme Judicial Court of Maine held that state legislation establishing the right to recreation on the beach between the high and low water marks was an unconstitutional taking of private property. *Id.*

[135] *Tinicum Fishing Co. v. Carter*, 61 Pa. 21, 30 (1869); *Ball v. Slack*, 2 Whart. 508, 539 (1837).

[136] *Tinicum Fishing Co. v. Carter*, 61 Pa. at 30.

[137] *Sloan v. Biemiller*, 34 Ohio St. 492 (1878). The court discusses cases identifying the boundary as both high water and low water lines, but does not conclusively rule which terms the "usual" line will incorporate. *Id.* at 512-13.

[138] *Sloan v. Biemiller*, 34 Ohio St. at 512.

[139] *James v. Howell*, 41 Ohio St. 696 (1885).

[140] *Sloan v. Biemiller*, 34 Ohio St. at 492. Again, the court discusses cases identifying the boundary as both high water and low water lines, but does not conclusively rule which will be the public trust boundary; rather, it once again uses the "usual" line. *Id.* at 512-13.

[141] MICH. STAT. § 324.30111 (1998).

[142] *People v. Hulbert*, 131 Mich. 156, 159, 91 N.W. 211, 219 (1902); MICH. STAT. § 324.30111 (1998).

[143] *Illinois Central R.R. v. City of Chicago*, 176 U.S. 646, 20 S. Ct. 509 (1900). However, private entities may obtain title to submerged lands bordering on Lake Michigan. *See* IND. CODE § 14-18-6-4 (1998).

[144] *Illinois Central R.R. v. City of Chicago*, 176 U.S. 646, 20 S. Ct. 509.

[145] *Illinois Central R.R. v. City of Chicago*, 176 U.S. 646, 20 S. Ct. 509; *Seaman v. Smith*, 24 Ill. 521.

[146] *Seaman v. Smith*, 24 Ill. 521; *Sloan v. Biemiller*, 34 Ohio St. at 512 (describing the *Seaman v. Smith* holding; "It was held that the line at which the water usually stands, when free from disturbing causes, is the boundary of lands in a conveyance calling Lake Michigan as a line").

[147] *Illinois Central R.R. v. City of Chicago*, 176 U.S. 646, 20 S. Ct. 509; *Lake Michigan Fed. v. U.S. Army Corps of Engineers*, 742 F. Supp. 441 (N. D. Ill. 1990); *People ex rel. Scott v. Chicago Park Dist.,* 66 Ill.2d 65, 360 N.E.2d 773 (1977) (discussing the history of the public trust doctrine in Illinois).

[148] The Wisconsin court has not specifically held that the shoreline boundary is the high water mark, but most of Wisconsin's zoning and other shoreline regulation is measured from the high water mark. *See, e.g.,* WIS. STAT. § 30.01-121 (1997) (regarding navigable waters and navigation in general); WIS. STAT. § 295.33 (1997) (regulating oil and gas mining). *But see* WIS. STAT. § 30.11 (1997) (describing bulkhead lines as legislatively established shorelines, citing *State v. McFarren*, 62 Wis. 2d 492, 215 N.W.2d 459 (1974)).

[149] *Just v. Marinette County*, 56 Wis. 2d 7, 18, 201 N.W.2d 761, 768-69 (1972) (citing *Muench v. Public Service Comm'n*, 261 Wis. 492, 53 N.W.2d 514, 55 N.W.2d 40 (1952)).

[150] *Fox River Paper Co. v. Railroad Comm'n of Wisconsin*, 274 U.S. 651, 47 S. Ct. 669 (1927); *Kaukauna Water-Power Co. v. Green Bay & M. Canal Co.*, 142 U.S. 254, 12 S. Ct. 173 (1891); *Village of Pewaukee v. Savoy*, 103 Wis. 271, 79 N.W. 436 (1899).

[151] *Mitchell v. City of St. Paul*, 225 Minn. 390, 394, 31 N.W.2d 46, 49 (1948); *Park Elm Homeowner's Ass'n v. Mooney*, 398 N.W.2d 643 (Minn. App. 1987) (citing *State v. Slotness*, 289 Minn. 485, 486, 185 N.W.2d 530, 532 (1971)); *Reads Landing Campers Ass'n, Inc. v. Township of Pepin*, 546 N.W.2d 10 (Minn. 1996); *Miller v. Mendenhall*, 43 Minn. 95, 44 N.W. 1141 (1890).

[152] *Mitchell v. City of St. Paul,* 225 Minn. at 394-99, 31 N.W.2d at 49-51 (detailing cases defining Minnesota public trust boundaries, including cases defining the high water mark); *Lindberg v. Department of Natural Resources*, 381 N.W.2d 494, 496 (Minn. App. 1986); *Determining the Natural Ordinary High Water Level of Lake Pulaski*, 384 N.W.2d 510 (Minn. App. 1986).

[153] *Mitchell v. City of St. Paul*, 225 Minn. at 398, 31 N.W.2d at 51.

[154] *Nelson v. De Long*, 213 Minn. 425, 431, 7 N.W.2d 342, 346 (1942).

[155] *West v. Slick*, 313 N.C. 33, 60, 326 S.E.2d 601, 617 (1985).

[156] The Hawai'i Supreme Court noted in *Ashford* that the law was based on ancient Hawai'i tradition, custom, practice and usage. *In re Ashford*, 50 Haw. 314, 315, 440 P.2d 76, 77 (1968). The Massachusetts law is based on a 1641 Colonial Ordinance.

[157] Ohio actually describes its boundary as the usual level of the water. *Sloan v. Biemiller*, 34 Ohio St. at 512.

[158] Under certain circumstances, the Delaware public holds an easement for access to the vegetation line. DEL. CODE tit. 7, § 6810(c) (1998).

[159] Ralph W. Johnson suggested that the language of the Washington law could be interpreted as the vegetation line and also argued that a boundary drawn at the vegetation line was based on no legal precedent or practical justification. Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 552 n.180 (1992) (citing *Hughes v. Washington*, 67 Wash.2d 799, 803, 410 P.2d 20, 22 (1967), *rev'd on other grounds*, 389 U.S. 290, 88 S. Ct. 438 (1967); Charles E. Corker, *Where Does the Beach Begin, and to What Extent Is This a Federal Question*, 42 WASH. L. REV. 33, 43-54 (1966)).

[160] Texas allows the property owner to hold title to the high water mark, with a public access easement to the vegetation line. TEX. NAT. RES. CODE § 61.012 (1990). Under the Texas Open Beaches Act, the dry sand area of all beaches along the Gulf of Mexico coast are subject to a public access easement. The dry sand area is the area "extend[ing] landward from the line of mean high tide to the line of vegetation." *Hirtz v. Texas*, 773 F. Supp. 6, 8 (Tex. 1991). Oregon littoral owners hold fee to the high tide mark with a customary public easement to the vegetation line. *Thornton v. Hay*, 254 Or. 584, 597, 462 P.2d 671, 677 (1969); *Hay v. Bruno,* 344 F. Supp. at 287.

[161] DEL. CODE tit. 7, § 6810(c) (1998).

[162] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 150 (2d ed. 1997). *See also Matcha v. Mattox*, 711 S. W.2d at 100 ("[T]he vegetation is not a static line which can be conclusively located and adjudicated for all time.").

[163] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 150 (2d ed. 1997).

[164] *See* Peter K. Nunez, *Fluctuating Shorelines and Tidal Boundaries: An Unresolved Problem*, 6 SAN DIEGO L. REV. 447 (1969) (discussing the difficulty of pinpointing the actual boundary line on the beach, especially in situations of extensive seasonal accretion and erosion); Frank E. Maloney & Richard C. Ausness, *The Use and Legal Significance of the Mean High Water Line in Coastal Boundary Mapping*, 53 N.C. L. REV. 185, 250-61 (1974) (explaining demarcation of the shoreline using surveys).

[165] *Borax Consolidated, Ltd. v. City of Los Angeles,* 296 U.S. 10, 56 S. Ct. 23.

[166] *See, e.g., New England Naturist Ass'n, Inc. v. Larsen*, 692 F. Supp. 75, 78 (D.R.I. 1988); MAINE DEP'T CONSERVATION RULES, ch. 3, § 1.3(J).

[167] *Borax Consolidated, Ltd. v. City of Los Angeles*, 296 U.S. at 26-27, 56 S. Ct. at 31.

[168] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 151 (2d ed. 1997).

[169] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 151 n.12 (2d ed. 1997).

[170] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK (citing MAINE DEP'T CONSERVATION RULES, ch. 3, § 1.3(J)).

[171] Alaska, California, Texas, Mississippi, Alabama, Florida, Georgia, South Carolina, North Carolina, Maryland, New York, and Connecticut.

[172] Washington, Oregon, New Jersey, and Rhode Island.

[173] *Kruse v. Grokap, Inc.,* 349 So. 2d 788 (Fla. App. 1977) (citing *Borax Consolidated, Ltd. v. City of Los Angeles*, 296 U.S. 10, 56 S. Ct. 23).

[174] *Dardar v. Lafourche Realty Inc.,* 985 F.2d 824, 830 (5th Cir. 1993) (citing LA. CIV. CODE art. 451 (1993)).

[175] *New England Naturist Ass'n, Inc. v. Larsen*, 692 F. Supp. at 78.

[176] *Rockwood v. Snow Inn Corp.,* 409 Mass. 361, 369-70, 566 N.E.2d 608, 613-14 (1991).

[177] *Rockwood v. Snow Inn Corp.,* 409 Mass. at 369-70, 566 N.E.2d at 613-14.

[178] *Storer v. Freeman,* 6 Mass. 435, 438 (1810)*; Opinion of the Justices to the House of Representatives,* 365 Mass. at 685, 313 N. E.2d at 565.

[179] DAVID C. SLADE, ET AL., PUTTING THE PUBLIC TRUST DOCTRINE TO WORK 151 n.12 (2d ed. 1997) (citing MAINE DEP'T CONSERVATION RULES, ch. 3, § 1.3(J)).

[180] *State ex rel. Buckson v. Pennsylvania R.R. Co.,* 228 A.2d 587, 601 (Del. Super. 1967).

[181] *Scott v. Doughty,* 124 Va. 358, 97 S.E. 802 (1919).

[182] Frank E. Maloney & Richard C. Ausness, *The Use and Legal Significance of the Mean High Water Line in Coastal Boundary Mapping,* 53 N.C. L. REV. 185, 200-01 (1974).

[183] *See, e.g., Sloan v. Biemiller*, 34 Ohio St. at 512. Both Ohio and Illinois follow this "usual" water level rule. *See* Figure 2, *supra*.

[184] *Seaman v. Smith*, 24 Ill. 521; *Sloan v. Biemiller*, 34 Ohio St. at 512.

[185] *Mitchell v. City of St. Paul*, 225 Minn. at 394-99, 31 N.W.2d at 49-51; *Lindberg v. Department of Natural Resources*, 381 N.W.2d at 496; *Determining the Natural Ordinary High Water Level of Lake Pulaski*, 384 N.W.2d 510.

[186] JACK H. ARCHER, ET AL., THE PUBLIC TRUST DOCTRINE AND THE MANAGEMENT OF AMERICA'S COASTS 1 (1994).

[187] Frank E. Maloney & Richard C. Ausness, *The Use and Legal Significance of the Mean High Water Line in Coastal Boundary Mapping*, 53 N.C. L. REV. 185, 186 (1974) (citing as examples: CAL. PUB. RES. CODE §§ 27000-650 (West Supp. 1974); N.C. GEN. STAT. §§ 113A-100 to -128 (1974 Advance Legislative Service, pamphlet no. 3); R.I. GEN. LAWS ANN. §§ 46-23-1 to -16 (Supp. 1973); WASH. REV. CODE ANN. §§ 90.58.010-.930 (Supp. 1972)).

[188] Marc R. Poirier, *Environmental Justice and the Beach Access Movement of the 1970s in Connecticut and New Jersey: Stories of Property and Civil Rights,* 28 CONN. L. REV. 719, 742 (1996). *See also* Barton H. Thompson, Jr., *Judicial Takings*, 76 VA. L. REV. 1449, 1507 (1990) (discussing public pressure to expand beach access in Oregon and Texas).

[189] Marc R. Poirier, *Environmental Justice and the Beach Access Movement of the 1970s in Connecticut and New Jersey: Stories of Property and Civil Rights,* 28 CONN. L. REV. 719, 742-43 (1996).

[190] Barton H. Thompson, Jr., *Judicial Takings*, 76 VA. L. REV. 1449, 1507 (1990).

[191] Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State,* 67 WASH. L. REV. 521, 526 (1992).

[192] Other states may have private beaches as well when the land was granted with enough specificity to indicate that the grantor intended to grant title to the tideland not subject to the public trust. *Hobonny Club, Inc. v. McEachern*, 272 S.C. 392, 252 S.E.2d 133 (1979).

[193] *Opinion of the Justices to the House of Representatives*, 365 Mass. 681, 313 N.E.2d 561; *Bell v. Town of Wells*, 557 A.2d at 169.

[194] DEL. CODE tit. 7, § 6810(c) (1998).

[195] DEL. CODE tit. 7, § 6810(c) (1998).

[196] *Compare Dep't of Natural Resources v. Mayor & Council of Ocean City*, 274 Md. 1, 332 A.2d 630 (1975). "There was no evidence that the public had acquired any interest in lots 4 and 5, nor is any authority cited in support of the notion that such an interest may come into being simply as a consequence of the expenditure of public funds." *Id.* at 14, 332 A.2d at 638.

[197] *People v. California Fish Co.,* 166 Cal. at 587-88, 138 P. at 83-84.

[198] *People v. California Fish Co.,* 166 Cal. at 588, 138 P. at 84.

[199] *People v. California Fish Co.,* 166 Cal. at 591, 138 P. at 85. "The tide lands embraced by these statutes, under the generally accepted meaning of that term, include the entire sea beach from the Oregon line to Mexico and the shores of every bay, inlet, estuary, and navigable stream as far up as tide water goes and until it meets the lands made swampy by the overflow and seepage of fresh water streams." *Id.*

[200] *Marks v. Whitney*, 6 Cal. 3d 251, 259, 491 P.2d 374, 380 (1971); *Gion v. City of Santa Cruz*, 2 Cal. 3d at 42, 465 P.2d at 58-59 (citing CAL. CONST. art XV, § 2).

[201] TEX. NAT. RES. CODE § 61.011-2 (1990).

[202] TEX. NAT. RES. CODE § 61.001 (1990).

[203] Michael Anthony Town & William Wai Lim Yuen, *Public Access to Beaches in Hawai'i: "A Social Necessity,"* 10 HAW. B. J. 3, 5 (1973).

[204] *In re Ashford*, 50 Haw. at 315, 440 P.2d at 77; *County of Hawai'i v. Sotomura*, 55 Haw. 176, 517 P.2d 57; *Application of Sanborn*, 57 Haw. 585, 591, 562 P.2d 771, 775 (1977).

[205] In *Just v. Marinette County*, 56 Wis. 2d 7, 201 N.W.2d 761 (1972), the court held that the state had an active duty to preserve water

quality that implicated public trust duties. As a result, filling wetlands without a permit triggered the State's public trust duties.

[206] Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 555 (1992).

[207] *Just v. Marinette County*, 56 Wis. 2d 7, 18-19, 201 N.W.2d 761, 769 (1972). The court held that "lands adjacent to or near navigable waters exist in a special relationship to the state. They . . . are subject to the state public trust powers." *Id.* (citing *Wisconsin P. & L. Co. v. Public Service Comm'n*, 5 Wis. 2d 167, 92 N.W.2d 241 (1958)).

[208] Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 555 (1992) (proposing that the Washington court adopt the Wisconsin "affecting public trust interests" rule). While acknowledging that Washington's public trust land definition and the Shoreline Management Act are distinct, Johnson suggests they are symbolically related and therefore provide a basis, by following the Wisconsin application, to extend the public trust to the vegetation line. *Id.* at 557.

[209] In fact, the Washington court has explicitly stated that the extent of the public trust in that state is open to future expansion. *Orion Corp. v. State*, 109 Wash. 2d 621, 641, 747 P.2d 1062, 1073 (1987).

[210] Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 555 (1992). *See also Dep't of Natural Resources v. Mayor & Council of Ocean City*, 274 Md. at 6-7, 332 A.2d at 634 (listing cases where courts have used dedication, prescription, and custom to expand beach access); Marc R. Poirier, *Environmental Justice and the Beach Access Movement of the 1970s in Connecticut and New Jersey: Stories of Property and Civil Rights*, 28 CONN. L. REV. 719, 727-28 (1996) (explaining that "property-based exceptions to an owner's right to exclude others . . . [include] (1) dedication or implied dedication; (2) prescription; (3) custom; and (4) public trust"). Poirier also briefly explains each doctrine. *Id.* at 728.

[211] TEX. NAT. RES. CODE § 61.011-2 (1990); CAL. CONST. art XV, § 2; CAL. CONST. art I, § 25; CAL. GOV'T CODE §§ 54090-93; CAL. GOV'T CODE §§ 39933-37; CAL. FISH AND GAME CODE § 6511; CAL. PUB. RES. CODE § 6088; CAL. PUB. RES. CODE § 6210.4; CAL. PUB. RES. CODE § 6323; R.I. CONST., art. 1 § 17; N.C. CONST. art. XIV, § 5 (amend. 1972).

[212] One commentator discusses the limited success that civil rights arguments have had in ensuring beach access. *See* Marc R. Poirier, *Environmental Justice and the Beach Access Movement of the 1970s in Connecticut and New Jersey: Stories of Property and Civil Rights,* 28 CONN. L. REV. 719 (1996).

[213] *Thornton v. Hay*, 254 Or. 584, 462 P.2d 671; *County of Hawai'i v. Sotomura*, 55 Haw. 176, 517 P.2d 57.

[214] *Thornton v. Hay*, 254 Or. at 584, 462 P.2d at 671.

[215] *Thornton v. Hay*, 254 Or. at 598-99, 462 P.2d at 678.

[216] *Thornton v. Hay*, 254 Or. at 595, 462 P.2d at 676; *Hay v. Bruno,* 344 F. Supp. at 288 (discussing the *Thornton* court's use of the doctrine of custom in place of the law of prescriptive easement).

[217] *McDonald v. Halvorson,* 308 Or. 340, 780 P.2d 714 (1989).

[218] *McDonald v. Halvorson,* 308 Or. at 360, 780 P.2d at 724.

[219] *McDonald v. Halvorson,* 308 Or. at 359-60, 780 P.2d at 724.

[220] *Stevens v. Cannon Beach,* 510 U.S. 1207, 114 S. Ct. 1332 (1994) (denying petition for a writ of certiorari).

[221] *Stevens v. Cannon Beach,* 510 U.S. at 1207, 114 S. Ct. at 1335 n.5 (quoting W. BLACKSTONE, COMMENTARIES 74).

[222] *Stevens v. Cannon Beach,* 510 U.S. at 1207, 114 S. Ct. at 1336.

[223] OR. REV. STAT. § 390.770 (1997).

[224] *In re Ashford*, 50 Haw. 314, 440 P.2d 76. *Ashford* was the first case holding that the high wash of the waves was evidenced by the vegetation line or debris line. For a complete discussion of *Ashford*, see Michael Anthony Town & William Wai Lim Yuen, *Public Access to Beaches in Hawai'i: "A Social Necessity,"* 10 HAW. B. J. 3 (1973).

[225] *County of Hawai'i v. Sotomura*, 55 Haw. 176, 517 P.2d 57 (holding that the property boundary is the vegetation line, not the debris line).

[226] *In re Ashford*, 50 Haw. 314, 440 P.2d 76. "Hawai'i's laws are unique in that they are based on ancient tradition, custom, practice and usage." *Id.* at 315, 440 P.2d at 77.

[227] *In re Ashford,* 50 Haw. at 314, 440 P.2d at 76.

[228] Michael Anthony Town & William Wai Lim Yuen, *Public Access to Beaches in Hawai'i: "A Social Necessity,"* 10 HAW. B. J. 3 (1973).

[229] *County of Hawai'i v. Sotomura*, 55 Haw. at 182, 517 P.2d at 62.

[230] *Mauka* is the Hawaiian term for landward or toward the mountains.

[231] *County of Hawai'i v. Sotomura*, 55 Haw. at 182, 517 P.2d at 62.

[232] *Sotomura v. County of Hawai'i*, 460 F. Supp. 473 (D. Haw. 1978).

[233] *Application of Sanborn,* 57 Haw. 585, 562 P.2d 771 (1977).

[234] *Application of Sanborn,* 57 Haw. 585, 562 P.2d 771 (1977). See *supra* note 63 for a discussion of Hawai'i's Torrens system. The unalterable nature of Torrens titles was also discussed in *Ahern v. Larson*, where the court noted that a Torrens title certificate may be interpreted to more clearly define an easement, but shall not be reformed to alter the substantive rights of the parties. *Aherns v. Larson*, 1993 WL 71532, *2 (Minn. App.) (citing *Nolan v. Stuebner*, 429 N.W.2d 918, 922-23 (Minn. App. 1988)).

[235] *City of Daytona v. Tona-Rama, Inc.,* 294 So. 2d 73.

[236] The majority was made up of four Justices who agreed that no prescriptive rights had been established but customary rights had; two Justices dissented claiming prescriptive rights had been established; and the final Justice dissented in part and concurred in part, but agreed that prescriptive rights had been established. *Id.*

[237] *City of Daytona Beach v. Tona-Rama,* 294 So. 2d at 78-79.

[238] *City of Daytona Beach v. Tona-Rama,* 294 So. 2d at 80-82.

[239] *City of Daytona Beach,* 294 So. 2d at 79-81. "If this building be permitted to stand, then the owner might well next decide to erect a gargantuan hotel on the property . . . then begin to construct a series of hotels along the waterfront . . . . This would form a concrete wall, effectively cutting off any view of the Atlantic Ocean from the public." *Id.* at 79-80. "[T]he judiciary has a positive and solemn duty as a last resort to protect the public's rights to the enjoyment and use of any such lands." *Id.* at 81.

[240] *Opinion of the Justices (Public Use of Coastal Beaches),* 139 N.H. 82, 91-93, 649 A.2d 604, 610 (1994).

[241] *Opinion of the Justices (Public Use of Coastal Beaches),* 139 N.H. at 86, 649 A.2d at 606.

[242] *Opinion of the Justices (Public Use of Coastal Beaches),* 139 N.H. at 91, 94, 649 A.2d at 609, 611.

[243] Barton H. Thompson, Jr., *Judicial Takings,* 76 VA. L. REV. 1449, 1507-08 (1990).

[244] *See Gion v. City of Santa Cruz*, 2 Cal. 3d at 43, 465 P.2d at 59 (citing CAL. CONST. art XV, § 2; CAL. CONST. art I, § 25; CAL. GOV'T CODE §§ 54090-93; CAL. GOV'T CODE §§ 39933-37; CAL. FISH AND GAME CODE § 6511; CAL. PUB. RES. CODE § 6088; CAL. PUB. RES. CODE § 6210.4; CAL. PUB. RES. CODE § 6323).

[245] CAL. CONST. art XV, § 2.

[246] *Gion v. City of Santa Cruz,* 2 Cal. 3d at 29, 465 P.2d at 50.

[247] *Gion v. City of Santa Cruz,* 2 Cal. 3d at 43, 465 P.2d at 59.

[248] *Gion v. City of Santa Cruz,* 2 Cal. 3d at 43, 465 P.2d at 59. Alabama courts seem to support the use of dedication to open privately owned shorelands to public use. *See Ritchey v. Dalgo*, 514 So. 2d 808 (Ala. 1987) (dedication of access lots and community beach areas);

Jackson v. Moody, 431 So. 2d 509 (Ala. 1983) (dedication of alleyway as access to beach area); *Hoiles v. Taylor*, 278 Ala. 515, 179 So. 2d 148 (1965) (dedication of beach to public use).

[249] *Gerwirtz v. Long Beach*, 330 N.Y.S.2d 495, 508 (1974).

[250] *Gerwirtz v. Long Beach*, 330 N.Y.S.2d at 511.

[251] TEX. NAT. RES. CODE § 61.011-12 (1990). For a discussion of the Texas Open Beaches Act, see Richard J. Elliot, *Note*, *The Texas Open Beaches Act: Public Rights to Beach Access*, 28 BAYLOR L. REV. 383 (1976), and Mike Ratliff, *Comment*, *Public Access to Receding Beaches*, 13 HOUS. L. REV. 984, 993-1001 (1976).

[252] Barton H. Thompson, Jr., *Judicial Takings*, 76 VA. L. REV. 1449 (1990). Both the Oregon and Texas legislatures in the 1960s, for example, were faced with considerable pressure to expand public access to beaches. Neither legislature chose to expand access statutorily. Instead, they passed legislation emphasizing the public need for greater access, urging that the judiciary provide such access, and authorizing public lawsuits to press the issue. *Id.* at 1507.

[253] Douglas G. Caroom & Marcia Newlands Fero, *Annual Survey of Texas Law: Part I: Private Law: Water Law,* 41 SW. L.J. 365 (1987).

[254] Douglas G. Caroom & Marcia Newlands Fero, *Annual Survey of Texas Law: Part I: Private Law: Water Law*, 41 SW. L.J. 365 (1987).

[255] Barton H. Thompson, Jr.*, Judicial Takings*, 76 VA. L. REV. 1449, 1507 (1990) (citing *Arrington v. Mattox*, 767 S.W.2d 957 (Tex. App. 1989), *cert. denied*, 110 S. Ct. 119 (1990) and *Matcha v. Mattox*, 711 S.W.2d 95, as examples of the Texas court expanding access). Thompson argues that having the court expand public access rather than the legislature is a means of saving money because then the state is not required to pay just compensation for the taking of private property because "the courts had simply declared the common law property rights." *Id.*

[256] *See* Douglas G. Caroom & Marcia Newlands Fero, *Annual Survey of Texas Law: Part I: Private Law: Water Law*, 41 SW. L.J. 365 (1987) (mentioning early litigation and detailing the three 1986 suits addressing the Texas Open Beaches Act).

[257] *See, e.g., Matcha v. Mattox*, 711 S.W.2d at 95; *Feinman v. Texas*, 717 S.W.2d 106 (Tex. App. 1986); *Villa Nova Resort, Inc. v. Texas*, 711 S.W.2d 120 (Tex. App. 1986); *Moody v. White*, 593 S.W.2d 372 (Tex. Civ. App. 1979).

[258] Barton H. Thompson, Jr., *Judicial Takings*, 76 VA. L. REV. 1449, 1507 (1990).

[259] James G. Titus, *Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners*, 57 MD. L. REV.1279, 1378 (1998).

[260] *Matcha v. Mattox,* 711 S.W.2d at 95.

[261] *Matcha v. Mattox*, 711 S.W.2d at 95.

[262] *Matcha v. Mattox*, 711 S.W.2d at 101. Another case arose from Hurricane Alicia in 1983. In *Feinman v. Texas*, 717 S.W.2d 106 (Tex. 1986), the Court of Appeals of Texas held that the public had acquired a rolling easement by implied dedication to the new vegetation line so the Feinmans also could not legally rebuild their home. For a concise summary of the case, see Douglas G. Caroom & Marcia Newlands Fero, *Annual Survey of Texas Law: Part I: Private Law: Water Law*, 41 SW. L.J. 365, 369 (1987).

[263] In *Concerned Citizens of Brunswick County Taxpayers Ass'n v. Holden Beach Enterprises, Inc.,* the Court of Appeals of North Carolina noted, in dicta, that it was not inclined to use the public trust doctrine to "acquire additional rights of the public generally at the expense of private property owners." 95 N.C. App. 38, 46, 381 S.E.2d 810, 815 (1989). However, the Supreme Court of North Carolina expressly disavowed this statement. *Concerned Citizens of Brunswick County Taxpayers Ass'n v. Holden Beach Enterprises, Inc.*, 329 N.C. 37, 55, 404 S.E.2d 677, 688 (1991). *But see Bell v. Town of Wells*, 557 A.2d at 173 (declining to expand public trust interests already "given a sympathetically generous interpretation").

[264] *Bell v. Town of Wells*, 557 A.2d at 169; *Opinion of the Justices (Public Use of Coastal Beaches),* 139 N.H. at 94, 649 A.2d at 611.

[265] *See Bradford v. Nature Conservancy,* 224 Va. 181, 197, 294 S.E.2d 866 (1982); *Miller v. Commonwealth of Virginia,* 159 Va. 924, 949, 166 S.E. 557, 566 (1932) (fishing, fowling, and hunting) (Virginia); *Opinion of the Justices to the House of Representatives*, 365 Mass. 681, 313 N.E.2d 561; MASS. ANN. LAWS ch. 91, § 1 (Law Co-op 1998) (navigation, fishing and fowling) (Massachusetts).

[266] *See Seaway Co., Inc. v. Attorney Gen. of the State of Texas*, 375 S.W.2d 923 (Tex. 1964) (including swimming, fishing, boating, camping, and the public way for vehicular and pedestrian travel) (Texas); *Matthews v. Bay Head Improvement Ass'n*, 95 N.J. at 312, 471 A.2d at 358 (citing *Borough of Neptune v. Borough of Avon-by-the-Sea,* 61 N.J. 296, 309, 294 A.2d 47, 54-55 (1972) (navigation, fishing, and recreational uses, including bathing, swimming and other shore activities) (New Jersey).

[267] In his article on judicial takings, Professor Thompson prominently features the most activist courts deciding beach access issues: New Jersey, Oregon, Hawai'i, and Florida. Barton H. Thompson, Jr., *Judicial Takings*, 76 VA. L. REV. 1449, 1491 n.172 (1990). "Indeed, while paying lip service to stare decisis, the courts on numerous occasions have reshaped property law in ways that sharply constrict previously recognized property interests . . . . Beaches and waterways previously considered private property have been opened to public use or held to be state property." *Id.* at 1451.

[268] *Matthews v. Bay Head Improvement Ass'n*, 95 N.J. at 321, 471 A.2d at 363.

[269] *Van Ness v. Borough of Deal*, 78 N.J. 174, 180, 393 A.2d 571, 574 (1978). "[T]his State is rapidly approaching a crisis as to the availability to the public of its priceless beach areas. The situation will not be helped by restrained judicial pronouncements. Prompt and decisive action by the Court is needed." *Id.*

[270] *Matthews v. Bay Head Improvement Ass'n*, 95 N.J. at 324, 471 A.2d at 364.

[271] *Matthews v. Bay Head Improvement Ass'n*, 95 N.J. at 324-25, 471 A.2d at 365.

[272] Barton H. Thompson, Jr., *Judicial Takings*, 76 VA. L. REV. 1449 (1990). The primary cases from Hawai'i, Oregon, Texas, and New Jersey feature prominently in Professor Thompson's article.

[273] *Dep't of Natural Resources v. Mayor & Council of Ocean City,* 274 Md. at 1, 332 A.2d at 630.

[274] *Dep't of Natural Resources v. Mayor & Council of Ocean City,* 274 Md. at 1, 332 A.2d at 630.

[275] Joseph L. Sax, *Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970).

[276] Barton H. Thompson, Jr., *Judicial Takings*, 76 VA. L. REV. 1449, 1491 (1990) (citing *In re Ashford*, 50 Haw. 314, 440 P.2d 76; *Thornton v. Hay*, 254 Or. 584, 462 P.2d 671).

[277] *Opinion of the Justices to the House of Representatives*, 365 Mass. at 685, 313 N.E.2d at 565; *Opinion of the Justices (Public Use of Coastal Beaches)*, 139 N.H. at 88, 649 A.2d at 608.

[278] *Opinion of the Justices (Public Use of Coastal Beaches),* 139 N.H. at 88-89, 649 A.2d at 608 (citing *Concord Mfg. Co. v. Robertson,* 66 N.H. 1, 26-27, 25 A. 718, 730-31 (1889)).

[279] *Opinion of the Justices (Public Use of Coastal Beaches),* 139 N.H. at 89, 649 A.2d at 608 (quoting *Concord Mfg. Co. v. Robertson,* 66 N.H. at 26-27, 25 A. at 730-31).

[280] *White v. Hughes*, 139 Fla. 54, 190 So. 446 (1939). "There is probably no custom more universal, more natural or more ancient, on the sea-coasts, not only of the United States, but of the world, than that of bathing in the salt waters of the ocean and the enjoyment of the wholesome recreation incident thereto. The lure of the ocean is universal; to battle with its refreshing breakers a delight. Many are they who have felt the lifegiving touch of its healing waters and its clear dustfree air." *Id.* at 58-59, 190 So. at 448-49.

[281] Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State,* 67 WASH. L. REV. 521, 552-53 (1992).

[282] Daniel R. Mandelker & Annette B Kolis, *Whither Hawai'i? Land Use Management in an Island State*, 1 U. HAW. L. REV. 48, 48-49 (1979).

[283] Eric K. Yamamoto, Professor of Law, William S. Richardson School of Law, University of Hawai'i at Mānoa, Lecture on Interracial Justice (Apr. 12, 1999).

[284] Richard S. Miller & Geoffrey K. S. Komeya, *Tort and Insurance "Reform" in a Common Law Court*, 14 U. HAW. L. REV. 55, 62 (1992); Interview with Williamson Chang, Professor of Law, William S. Richardson School of Law, University of Hawai'i at Mānoa (Apr. 5, 1999) (Professor Chang points out that simple intuitive logic will result in a vegetation line rule for shoreline property boundaries in Hawai'i if the rule is based on Native Hawaiian tradition. The Hawaiian people hauled their canoes up on the beach and would have left them *above* the high water mark in order to prevent their floating away with the rising tide). An argument similar to Professor Chang's was made to the Maryland court: "The petitioners argue, with some force, that fish cannot be salted or dried, or cabins or huts constructed, or twigs and branches

gathered on the foreshore, which is subject to continuous tidal action, therefore placing some of it under water for a considerable portion of each day. A fair reading of Article XVI's provision, they say, contemplates the right of the public to carry on such activities on the littoral owned by others adjacent to the foreshore, seaward of the vegetation line, so long as there is no significant interference with an owner's rights." *Dep't of Natural Resources v. Mayor & Council of Ocean City*, 274 Md. at 12, 332 A.2d at 637. Unfortunately, the court found it unnecessary to directly address this issue in order to decide the case.

[285] *In re Ashford*, 50 Haw. at 315, 440 P.2d at 77.

[286] *Illinois Central R.R. Co. v. Illinois,* 146 U.S. 387, 13 S. Ct. 110 (1900).

[287] Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 489 (1970).

[288] *Illinois Central R.R. Co. v. Illinois*, 146 U.S. at 452, 13 S. Ct. at 118.

[289] *Illinois Central R.R. Co. v. Illinois,* 146 U.S. at 452-53, 13 S. Ct. at 118.

[290] *People ex rel. Scott v. Chicago Park Dist.,* 66 Ill. 2d 65, 79, 360 N.E.2d 773, 780 (1976).

[291] Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 526 (1992).

[292] *Opinion of the Justices to the House of Representatives*, 365 Mass. 681, 313 N.E.2d 561; MASS. ANN. LAWS ch. 91, § 1 (Law Co-op 1998).

[293] *Opinion of the Justices to the House of Representatives*, 365 Mass. at 681, 313 N.E.2d at 561; *MacGibbon v. Board of Appeals*, 340 N.E.2d 487, 490-91 (Mass. 1976).

[294] *Sparhawk v. Bullard*, 1 Met. 95, 108 (Ky. 1840); *Opinion of the Justices to the House of Representatives*, 365 Mass. at 685, 313 N. E.2d at 565; *Opinion of the Justices (Public Use of Coastal Beaches*), 139 N.H. at 88, 649 A.2d at 608.

[295] *Bradford v. Nature Conservancy*, 224 Va. 181, 194, 294 S.E.2d 866, 872 (1982) (limiting protected rights in the shore to navigation, fishing, and fowling); *Miller v. Commonwealth of Virginia*, 159 Va. 924, 166 S.E. 557 (1932).

[296] *Bell v. Town of Wells*, 557 A.2d at 173. The court has included fishing, fowling, and navigation for pleasure or for business. *Barrows v. McDermott*, 73 Me. 441, 449 (1882). The term navigation has been interpreted to include picking up and landing paying passengers, *Andrews v. King*, 124 Me. 361, 129 A.2d 298 (1925), mooring to load and unload cargo, *State v. Wilson*, 42 Me. 9, 24 (1856), traveling over frozen waters, *French v. Camp*, 18 Me. 433 (1841), and passing over property owned by other than the owner of the tidelands, *Deering v. Proprietors of Long Wharf*, 25 Me. 51, 65 (1845). Fishing includes the digging for worms, *State v. Lemar*, 147 Me. 405, 87 A.2d 886 (1952), for clams, *State v. Leavitt* 105 Me. 76, 72 A.2d 875 (1909), and for other shellfish, *Moulton v. Libbey*, 37 Me. 472 (1854).

[297] Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 567 (1992).

[298] *See, e.g., Just v. Marinette County*, 56 Wis. 2d 7, 10, 15, 201 N.W.2d 761, 765, 767 (1972) (acknowledging the recently recognized public interest in protecting natural resources from degradation and deterioration).

[299] Rhode Island and New York are examples of states that have only partially expanded their protected public trust interests. Both states have acknowledged a right of passage across public trust shorelines owned by towns but not by private land owners. *Jackvony v. Powel*, 67 R.I. at 218, 21 A.2d at 556, 558; *Tucci v. Salzhauer*, 40 App. Div. 2d 712, 713, 336 N.Y.S.2d 721, 724 (1972).

[300] Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 568 (1992) (listing states that recognize water quality and environmental protection as public trust interests: Mississippi, *Treuting v. Bridge & Park Commission of Biloxi*, 199 So. 2d 627 (Miss. 1967); Wisconsin, *Just v. Marinette County*, 56 Wis. 2d at 18, 201 N.W.2d at 768-69; and Oregon by legislation, OR. REV. STAT. §§ 537.455-500 (1991); OR. REV. STAT. §§ 537-322-.360 (1991)).

[301] *Arnold v. Mundy*, 10 Am. Dec. 356, 368 (N.J. 1821).

[302] *Borough of Neptune City v. Borough of Avon-by-the-Sea*, 61 N.J. at 309, 294 A.2d at 55; *Matthews v. Bay Head Improvement Ass'n*, 95 N.J. at 312, 471 A.2d at 358.

[303] *Matthews v. Bay Head Improvement Ass'n*, 95 N.J. at 321, 471 A.2d at 363. *Cf. Lusardi v. Curtis Point Property Owners Ass'n*, 86 N.J. 217, 430 A.2d 881 (1981) (striking down a residential zoning ordinance as contrary to the policy of encouraging recreational use of the shoreline).

[304] Barton H. Thompson, Jr., *Judicial Takings*, 76 VA. L. REV. 1449, 1491 (1990) (describing the New Jersey court's decision in *Matthews v. Bay Head Improvement Ass'n* as "cast[ing] the net of change quite broadly").

[305] *Van Ness v. Borough of Deal*, 78 N.J. 174, 180, 393 A.2d 571, 574 (1978).

[306] *Marks v. Whitney*, 6 Cal. 3d 251, 259, 491 P.2d 374, 380 (1971).

[307] *National Audubon Society v. Superior Court*, 33 Cal. 3d 419, 658 P.2d 709, *cert. denied*, 464 U.S. 977, 104 S. Ct. 413 (1983); *Marks v. Whitney*, 6 Cal. 3d at 259, 491 P.2d at 380.

[308] *Orion Corp. v. State*, 109 Wash. 2d 621, 641, 747 P.2d 1062, 1073 (1987).

[309] Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 560-61 (1992) (explaining that inconsistencies in lake and stream law are due to current social and economic needs). Some states have expanded the geographic scope of the public trust, not only beyond the navigable coastal waters to inland navigable waters, but also to non-navigable tributaries to a navigable body of water. *See National Audubon Society v. Superior Court of Alpine County*, 33 Cal. 3d 419, 658 P.2d 709 (1983) (extending the public trust to encompass non-navigable tributaries to Mono Lake in order to protect public recreational and environmental interests in the lake).

[310] Ralph W. Johnson, et al., *The Public Trust Doctrine and Coastal Zone Management in Washington State*, 67 WASH. L. REV. 521, 558, 574 (1992). For an example of a court working to balance public trust interests at odds with one another, see *New England Naturist Ass'n Inc. v. Larsen*, 692 F. Supp. at 76 (the court attempted to strike a balance "between public enjoyment of the beach and the needs of the [Piping] Plovers," a species listed as threatened under the Endangered Species Act).

[311] Massachusetts and Virginia were among the original thirteen colonies, and much of Maine's law was based on that of Massachusetts.

[312] Alaska, one of the more restrictive Western states, has included public easements for navigation, commerce, fisheries, recreational purposes, and any other public purpose consistent with the public trust. *CWC Fisheries, Inc. v. Bunker*, 755 P.2d 1115, 1118 (Alaska 1988) (citing ALASKA STAT., ch. 82, § 1(c) (Temporary and Special Acts and Resolves 1985)).

[313] Consider New Jersey, discussed *supra*, and Florida. Florida includes the "rights of navigating, fishing, bathing and commerce upon and in the waters." *Thiesen v. Gulf, F & A Ry. Co.,* 75 Fla. at 57, 78 So. at 500.

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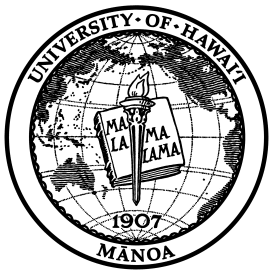

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