ENVIRONMENTAL LAW ISSUE

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DIVERSITY, SPECIFICITY AND ENVIRONMENTAL POLICYMAKING: AN INTRODUCTION

JOEL A. MINTZ*

The precise beginning of the modern era of environmental law is a matter of dispute. Some observers believe that period began with the publication of Rachel Carson's classic work *Silent Spring*, which raised alarms regarding the hazards of the pesticide DDT to the natural environment and human health. Other experts trace its beginning to the *Scenic Hudson Preservation Conference v. Federal Power Communication* case, in which a coalition of conservationists successfully challenged the federal licensing of a proposed hydro-electric pumped storage facility that was to be built at Storm King Mountain in the Hudson River Valley of New York State. Still others maintain that the modern environmental era was born in April, 1970 at the first Earth Day celebration, a widely publicized event that provided a dramatic demonstration of the depth of public concern with pollution and environmental conservation and catalyzed the passage of a host of federal environmental statutes in the early 1970s.

Whatever the date of its commencement, however, one attribute of the current regime of environmental law seems beyond dispute: the field has branched off in a variety of different directions as some longstanding environmental problems have been alleviated, new ones have been discovered, and tides of public opinion have ebbed and flowed across the American political shoreline. Since its beginnings, environmental law has gained importance—and grown in complexity—at federal, state and local levels alike. Moreover, its proliferation has not been limited to new legislation. Environmental law also consists of a voluminous body of regulations and case law. It is now a remarkably intricate, diverse, multi-faceted field, with lingering areas of indeterminacy and numerous sub-specialties.

The four articles that comprise this issue provide a good illustration of environmental law's rich variation. Professor Richard Grosso's provocative piece, "The Legality of Carrying Capacity-Based Environmental Land Use Permitting Decisions," focuses on the approach to Land Use and Environmental Law adopted by the State of Florida. Grosso begins by summarizing the broad range of federal and state laws that authorize and require planning

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2. 354 F.2d 608 (2d Cir. 1965).
and permitting decisions based upon either the limits of ecosystems or the need for public facilities to accommodate anticipated new development. He then takes an in-depth look at how Florida’s Growth Management Act takes account of population projections, environmental impacts and the need to provide ample infrastructure for new development. Finally, Grosso surveys judicial decisions that have reviewed local limited growth and moratoria ordinances and that have established standards with regard to scientific and expert witness testimony in challenges to such ordinances.

Grosso openly advocates “aggressive” use of land use regulation to stem the ongoing destruction of ecosystems and the conversion of farmlands to urban uses. Taking account of sustainability concerns and the precautionary principle, he calls for “an honest and frank discussion” regarding Florida’s finite amount of land and the state’s “financial and practical ability to sustain unlimited land development.” In Professor Grosso’s view, current federal and state laws concerning planning and environmental decisions in Florida and elsewhere provide governmental officials with “ample authority to ensure the sustainability of fiscal and ecological resources.” What is needed, he contends, are elected officials who have the political will to “act boldly to protect the future of the places over which they have jurisdiction.”

Valerio Spinaci’s piece, “Lessons from BP: Deepwater Oil Drilling Is An Abnormally Dangerous Activity,” addresses a topic that is narrower in scope, but no less important: the applicability of the common law doctrine of strict liability in lawsuits arising of the catastrophic BP oil spill blow out of 2010. In Spinaci’s view, that doctrine “constitutes the best way to remedy (the BP oil spill) and to prevent further oil spills from occurring.”

Spinaci begins his analysis by contending that the applicable federal laws do not preempt the application of tort law principles. He examines relevant provisions of the federal Clean Water Act and the Oil Pollution Act, along with pertinent case law, to demonstrate that these statutes allow for the application of state common law as a supplementary source of liability for oil spills.

Spinaci then describes the nature and historical development of the doctrine of strict liability. He considers its case law origins in the landmark case of Rylands v. Fletcher, and its evolution in various versions of the American Law Institute’s Restatement of Torts. Spinaci summarizes the state of the law of Florida with regard to strict liability. Finally, he provides a detailed discussion of the ways in which deepwater drilling for oil and gas satisfies the “abnormally dangerous activities test” of §§519 and 520 of the Restatement (2d) of Torts. As Spinaci sees it, judicial application of the doctrine of strict liability in this context provides an appropriate incentive for oil companies to take precautions to avoid oil spills. It also rightly requires them to bear the burden of spills that they do not avoid.
Sidney Ansbacher's essay, "Stop the Beach Renourishment: A Case of MacGuffins and Legal Fictions," is in part a critique of the Supreme Court of the United States' decision in *Stop the Beach Renourishment, Inc. v. Florida Department of Environmental Protection.* More substantially, however, Ansbacher's piece is a detailed examination of the evolution of the general law of private property rights in England and the United States, and the historical development of public rights in (and under) water, the public trust doctrine, and private riparian and littoral rights alongside navigable waters.

Ansbacher’s thesis is that, given the number of changes that have occurred in the law over time, it is difficult to conclude, as the Supreme Court did in *Stop the Beach Renourishment,* that there is any settled law in the State of Florida regarding “who owns what on the waterfront.” He criticizes the Court for too quickly dismissing what he believes is the most settled body of Florida law regarding riparian rights, and for choosing to cite and obscure a decision of a lower state court as the best guide to Florida law in this area. Like Valerio Spinaci's article, Sidney Ansbacher’s detailed essay serves as a reminder that, while much of the field is relatively new, environmental law is inextricably bound together with longstanding common law notions and doctrines, and that judicial decision-making remains an integral part of environmental law’s development.

Finally, Ekateryna Drozd’s article focuses on a theme also explored by Richard Grosso: the critical importance of sound science in the development of environmental policies. Drozd assays—and defends—a regulation proposed by the United States Environmental Protection Agency (EPA) requiring numerical criteria for water quality standards that address nutrient pollution. Her analysis begins with an explanation of the nature and causes of eutrophication that is human generated and that which is naturally occurring, as well as the environmental impacts of eutrophication. Drozd then describes the proposed EPA regulation (especially as it may affect the Everglades), its development, and its rationale. Finally, her essay distinguishes narrative from numerical water quality standards. She argues that numerical standards provide the certainty needed to minimize the impacts of nutrient pollution. In Drozd’s opinion, EPA’s proposed nutrient standards present “a great way to rectify many years of inaction and delay in attempting to fix the nutrient pollution problem in Florida and other states.”

This varied set of articles is likely to be of interest to readers of various sorts. Obviously, its individual pieces will interest those who desire to learn more about certain specific topics such as Florida’s approach to growth management, judicial review of limited growth and moratoria ordinances, the BP

oil spill, the applicability of strict liability to oil spills in general, judicial takings, the history of property rights, riparian and littoral rights, the Clean Water Act’s water quality standards, eutrophication, and the future of the Everglades. Beyond these narrower concerns, however, articles in this issue will also be of value to readers with an interest in such broader themes as the overall importance of environmental regulation, the criticality of sound science to the development of viable environmental policies, the continuing role of the common law and judicial decision-making in the evolution of environmental legal doctrines, the roles of federal, state and local governments in environmental policy-making, sustainability, the precautionary principle, and the environmental jurisprudence of the Supreme Court of the United States.

In sum, the articles that follow this introduction not only reflect the extraordinary variation that exists within the environmental law, but also contribute—in a number of ways—to the field’s continued growth and vitality. They merit the time and attention of scholars, students, judges, lawyers, policymakers, and general readers alike.
STOP THE BEACH RENOURISHMENT: A CASE OF MACGUFFINS AND LEGAL FICTIONS

SIDNEY F. ANSBACHER*

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  before the Supreme Court of the United States in Stop the Beach Renourishment v. Florida 
  Department of Environmental Protection.
This article attempts to place the Supreme Court of the United States’ decision in *Stop the Beach Renourishment, Inc. v. Florida Department of Environmental Protection (STBR)*, in context of Florida property law. The decision juxtaposed Florida’s riparian and littoral rights law against the state’s beach renourishment program, all in an attempt to determine whether the judicial branch can be liable for compensable takings of property rights. While the Supreme Court held that no judicial taking occurred, it perfunctorily considered the underlying issues. What were the rights of Gulffront property owners on renourished beaches funded by state and local government? The fundamental issues concerned a simple truth: “Water not only fructifies the soil, but it also delimits the boundaries of land grants.” Further, few battles over property boundaries are as heated, or yet as transitory, as those on the seashore.

The STBR court split into three blocs regarding the judicial takings issue. All eight of the justices—Justice Stevens, who owns an oceanfront condominium in Florida, recused himself—held no judicial taking occurred in the case at bar. The court split as follows: Justice Scalia wrote for Chief Justice Roberts, Justices Thomas, Alito, and himself in a plurality, opining that judicial taking is a viable doctrine. They opined that a court effects a taking if it “declares that what was once an established right of private property no longer exists.” Justice Kennedy wrote for Justice Sotomayor and himself in stating that the substantive due process doctrine sufficed to ad-

1. 130 S. Ct. 2592 (2010).
3. *Stop the Beach Renourishment, Inc.*, 130 S. Ct. at 2602 (plurality opinion).
dress the matter. Justice Breyer wrote for Justice Ginsburg and himself to say that the whole proceeding was unnecessary. Needless to say, much jousting occurred.

In particular, Justice Scalia attacked Justice Kennedy’s reliance on the substantive due process doctrine. He emphasized “that the ‘liberties protected by Substantive Due Process do not include economic liberties.’” Justice Scalia accused Justice Kennedy of “Lochner-izing,” alleging that Justice Kennedy applied the due process clause in an unseemingly activist manner. Commentators assume Justice Scalia thought he had a fifth vote in Justice Kennedy for holding that a judicial takings doctrine exists. Hence, the antipathy.

The Court gave short shrift to the underlying issue. We do not. I write elsewhere about the STBR decision’s impact on landowners’ rights to exclude and on public rights of access on Florida’s beaches. This article focuses on the myriad changes over two millennia in the law of waterfront ownership in questioning the STBR Court’s determination that there is any settled law in Florida regarding who owns what on the waterfront, let alone the purportedly settled law upon which that court relied. The most recent and most settled appeared to support the property owner.

This requires an exegesis of how waterfront ownership law developed. We turn, first, to the development of common law real property rights. From the Norman Conquest forward, we see a broadening of private property rights, followed by increasing regulation. Next, the article addresses public rights in and under navigable waters, before turning to riparian and littoral

4. Id. at 2615–16 (Kennedy, J., concurring).
5. See id. at 2619 (Breyer, J., concurring).
6. Id. at 2606 (plurality opinion).
9. Id. The plurality’s failure to gain the fifth vote rendered the underlying, significant private property and public access issues a “MacGuffin.” Alfred Hitchcock explained that a MacGuffin is the initial object of the central search in the plot. The characters will risk life and limb to get the MacGuffin. Nonetheless, the MacGuffin ultimately has no significance except to drive the plot. See, e.g., Peter Conrad, The Hitchcock Murders 10 (2001); Donald Spoto, The Dark Side of Genius: The Life of Alfred Hitchcock 145 (Da Capo Press 1999) (1941). Hitchcock would allegedly explain that a MacGuffin was a diversion, like “an apparatus for trapping lions in the Scottish Highlands.” Sidney Gottlieb, Framing Hitchcock 48 (2002).
10. See Sidney F. Ansbower et al., Stop the Beach Renourishment Stops Private Beachowners’ Right to Exclude the Public, 12 VT. J. ENVTL. L. 43 (2010).
rights alongside navigable waters, particularly as a category of property law. While the public trust in navigable waters might have originated as a "legal fiction," it is well entrenched in modern case law, and, in Florida, its constitution. We turn to property and waterfront rights law in Florida, with particular emphasis on STBR in the development of Florida's property law. The article concludes that STBR itself turns on what originated as multiple legal fictions regarding Roman, English, federal, and Florida law of both public and private property rights. Nonetheless, the law is binding, regardless of whether it originated in precedent or in social norms.

II. DEVELOPMENT OF PRIVATE REAL PROPERTY RIGHTS

A. William the Conqueror Through the Magna Carta

As we know, American real property law derives principally from English Common Law, and that, in turn, from Roman Law. While Rome deli-

11. Jane Ball, The Boundaries of Property Rights in English Law, ELECTRONIC J. COMP. L., Dec. 2006, at 1, 2, available at http://www.ejcl.org/103/art103-1.pdf; Charles P. Sherman, The Romanization of English Law, 23 YALE L.J. 318, 318 (1914). Sherman emphasized two phases of Roman law in Britain. Rome occupied from the first century, AD, through the last Roman Legion's withdrawal in 455 AD. Id. Edward Re stated, "Britain was an imperial province of the first order," which had a garrison totaling 30,000 soldiers. Edward D. Re, Speech, The Roman Contribution to the Common Law-The Brendan F. Brown Lecture, 39 LOY. L. REV. 295, 300 (1993). Three of the empire's greatest jurists sat in York at one time. Id. "It was as if the United States Supreme Court were [able] to hold sessions in Alaska." Sherman, supra, at 318. St. Augustine (that Augustine) founded the primate English See of Canterbury in 596. Id. A key convert, Ethelbert, King of Kent, required a legal code "according to the Roman mode." Id. at 318–19 (citation omitted). Sherman surmised that Augustine and Roman missionaries convinced the King of Kent of the legal primacy of the recently deceased Justinian. Id. Re explains: "It is well established that Gregory [Pope Gregory, who sent Augustine to England] knew the Digest of Justinian." Re, supra, at 302. Regardless, Roman law dominated through the eleventh century. Sherman, supra, at 319–20. The Anglo-Saxon reign in England, from Egbert in 827, followed Roman law. Id. Particularly, Alfred followed Charlemagne's Laws. Charlemagne sought to impose Roman laws, which influenced England by extension. Id. at 319. Sherman opined that Canute might have provided the most expansive legal influence when he ruled Denmark and England. Id. at 319–320. Edward the Confessor left some Roman code behind from his own restored Anglo-Saxon rule after Canute. Id. at 320.

Nonetheless, Sherman states that the turmoil of the occupations of the British Isles and the "rudeness of the Saxon invaders" combined to minimize outside influences during that period. Sherman, supra, at 321. Therefore, had the Norman conquest not occurred, "England seemed in danger of being lost to the civilizing influence of Roman law." Id. at 321.

Professor David Thomas explicates thoroughly the Roman influences on British property law. See David A. Thomas, Anglo-American Land Law: Diverging Developments from a Shared History—Part I: The Shared History, 34 REAL PROP. PROB. & TR. J. 143, 149–
neated between public and private law, England addressed both in “the same set of courts.”12 Accordingly, “the public or private status of the land [was] much less important,”13 as distinguished from France, where different courts address public and private property rights.14 Nonetheless, “the Crown owns a quantity of assets,” including those held for the common good.15 Of most significance in Florida, the Crown presumptively owns all beaches below the mean high water line.16

Supreme Court of Vermont Associate Justice, Denise R. Johnson, addressed the development of American Property Law in a 2007 article:

The intersection of governmental authority and private owners’ rights is one of the more interesting contexts in which to think about the viability of the bundle of rights. It is also the context in which American expectations about liberty and land ownership have been most seriously challenged.

Property law comes from three sources: the common law, statutes, and the Constitution. Common law principles are the primary source of property law. These are principles that have been developed by judicial decision in the United States, starting with the adoption of the common law of England at the beginning of our history.17

Professor John Orth tells us that the English real property system has been a form of “feudal” rights since the Norman invasion of 1066 AD.18 Even today, “all English owners of freehold have a ‘tenure’ because, rather

55 (1999). He tells us that Rome introduced the concept of possession of property to the island. Id. at 151. Roman law recognized private ownership, servitudes, mortgages, transfer of title and testamentary succession. Id. at 150–51. While the Romans “likely” introduced these concepts, “the extent of their influence there is unknown.” Id. at 152.

Thomas tracks Sherman in concluding that property law became entropic as the Saxon reign wore on. Id. at 159. While the ancient Celts and Britons, and the first Anglo-Saxon invaders, had a generally egalitarian society, the advent of Anglo-Saxon royalty formalized a centralized control of title. Thomas, supra, at 154–55. By 1066, when the Normans invaded, the serfs were experiencing a “general drift . . . from freedom towards servitude.” Id. at 160 (quoting Sir Frank M. Stenton, Anglo-Saxon England 463 (1943)).

13. Id.
14. Id.
15. Id. at 11.
16. Id.
confusingly, they are the Queen’s tenants in the sense that they hold (from the Latin ‘tenere’) property rights under her.”

The feudal system, after the 1066 Battle of Hastings, divided Saxon aristocrats’ lands among up to 10,000 Normans, in return for an oath of loyalty to the new king. As one commentator states: “To the conquering Normans nothing was more natural than that English nobles who resisted them should forfeit their land, and that William should grant it again to people on whom he could rely.” As Justice Bryson summed it up: “[T]he legal theory of the Normans was that with the Conquest William had become the owner of all land in England and that he granted it out to his own tenants in chief, who were in a bond of faith with him.”

Mark Senn explains the feudal system in his colorfully entitled article, *English Life and Law in the Time of the Black Death*. He says that feudalism creates a land ownership “pyramid with the king at the top beholden to no one, layers of lords in the middle beholden to their superiors, and serfs at the bottom beholden to everyone.”

The “tenement” was one’s land. The “tenant” held the land. The “tenure” was the interest that the tenant held in one’s tenement.

Senn explicates the way the tenure pyramid functioned:

Generally, a consensus on the terminology of land ownership and social status might be that the king, or crown, was at the top of the pyramid and owned all the land. Beneath the king were the barons, more commonly known as tenants-in-chief or tenants-in-capite, to whom the king granted—or enfeoffed—feoffs, foeds,
fiefs, or fees. The tenants-in-chief could either keep their lands or enfeof parts of them to their knights who held knight's fees sufficient to support their families and owed military service to their lords.28

While William and his successors owned all the land, some tenant had to be seised of the tenement at all times.29 Seisin meant possession, which was "critically important."30 Whoever was seised in the tenement was responsible to the Crown for that parcel's services or taxes.31 Senn emphasized that the greatest seisen granted only long possession.32 Only the Crown owned the property.33

Justice Bryson noted one of the fundamental flaws of feudalism:

In the logic of feudalism, the person to whom the king has granted land, who has entered into a bond of homage and fealty, is the only person who can own [or more properly, possess] that land; if that person rebels or dies, the king has no tenant and can keep the land or dispose of it.34

In application, however, the king often agreed to de facto succession by heirs who swore fealty.35 Also, sales to third parties were illegal, as only the vendor held good title.36 This was the origin of warranty deeds, as the purchaser would require the seller to warrant good title out of the king and to indemnify the purchaser against loss.37 Eventually, there were so many "sub-infeudations" from the tenant in chief down the chain that "the feudal system was becoming incoherent."38

The Domesday Book was one of William's greatest achievements. This was an "inventory of all the wealth of England."39 Senn cites authorities variously crediting "avarice, the advancement of royal taxation, or a need to put in order the made [sic] after the Conquest."40 He wraps up: "In ascribing

28. Senn, supra note 23, at 517 (footnotes omitted).
29. Id. at 518.
30. Id.
31. See id.
32. See id.
33. Senn, supra note 23, at 518–19.
34. Bryson, supra note 21.
35. See id.
36. See id.
37. See id.
38. Id.
39. See Senn, supra note 23, at 533.
40. Id.
a value to the realm, the *Domesday Book* monetized the feudal exchange of loyalty for protection and planted the seeds of royal taxation, centralized government, and a nation-state.  

King Henry I first pursued the new style of “administrative kingship” when he took the throne in 1100. At all times, however, tenure remained. The Crown allowed private ownership in return for services, which ranged from military service to rents and taxes. Henry I “transformed the treasury from a storehouse to a governmental accounting office that could keep better track of royal revenues and the activities of royal officials.” One commentator says: “The main theme of Henry [I’s] financial and judicial reforms was centralization.” He initiated broad legal reforms, “which, by virtue of their routine nature and wide applicability, were the origins of the common law.” Henry I also created the forebear to the common law judicial system. He was sometimes called the “Lion of Justice” as a result.

Henry I’s grandson, Henry II, restored order after civil wars marred the intervening reign of King Stephen. Henry II had to raise taxes for the Crusades. Professor Joseph Biancalana says Henry II was adept both as king and as feudal lord.

Due process was granted initially to common free owners under Henry II. “Novel Disseisin” replaced previously arbitrary rights of nobility to throw a freeholder off of lands based on the noble’s unilateral claim in Lords’ court that the freeholder failed to provide services or rents. Henry II created a process under Novel Disseisin where: (1) The hearing went to the royal court; and (2) the defendant enjoyed a presumption of correctness that the noble had to rebut.

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41. *Id.* at 534.
43. *See id.*
46. *Id.*
47. *Id.*
49. *See id.* at 537–38.
53. *Id.* at 94–95.
54. *See id.*
Another major step taken under Henry II was a fuller development of the rights of inheritance.\(^{55}\) The limitation on these rights? Estate tax.\(^{56}\) Additional taxes accrued on sales of land.\(^{57}\) Taxes generally became necessary as the Crown conveyed more lands and could no longer survive on income from its own property.\(^{58}\)

Justice Bryson noted a major property development under Henry II:

In some legislative act of which we do not have a record Henry made the power of the royal court available to everyone with a dispute about title to freehold land. That is, he made it the business of himself and his court to protect all freehold titles, not only those held directly of the King.\(^{59}\)

King Henry II gave land disputants a theretofore unavailable option—filing a petition for Writ of Rights.\(^{60}\) The Crown Court heard these disputes.\(^{61}\) Previously, the feudal lords themselves alone addressed disputes over the lands they had conferred.\(^{62}\) Later, Henry created the Grand Assize, which was a panel of twelve knights from the area where the land dispute arose.\(^{63}\) The panel took testimony under oath and determined the title.\(^{64}\)

Of course, the defendant retained the right to settle title disputes by combat.\(^{65}\) Exercise of that option became rarer as the Crown Court system

\(^{55}\) Assize of Northampton (George Burton Adams & H. Morse Stephens trans., 1176), reprinted in Select Documents of English Constitutional History 20, 21 (George Burton Adams & H. Morse Stephens eds., 1914).


\(^{58}\) *Id.*

\(^{59}\) Bryson, supra note 21 (emphasis added).

\(^{60}\) *Id.*

\(^{61}\) *Id.*

\(^{62}\) Joshua C. Tate, Ownership and Possession in the Early Common Law, 48 Am. J. Legal Hist. 280, 296 (2006). Tate says that the writ had antecedents back to William, but Henry II formalized it. *Id.* at 295–96; see also Senn, supra note 23, at 537–38. In addition to professional judges being less arbitrary than barons or local tribunals loyal to barons, royal courts had another advantage: “[T]hey could make new common law instead of repeatedly enforcing manorial custom.” *Id.* at 538.

\(^{63}\) Tate, supra note 62, at 296.

\(^{64}\) *Id.* “The origins of the jury system . . . go [] back at least to the assizes of Henry II, [which were] a means of taking census and collecting taxes.” Hugh H. Bownes, Should Trial by Jury be Eliminated in Complex Cases?, 1 Risk 75, 75 (1990).

\(^{65}\) Tate, supra note 62, at 296.
became more commonplace. Trial by combat remained available until 1819.

We remember King John most notably for the Magna Carta. The forces of Pope Innocent III defeated his soldiers in the battles of Normandy, Anjou, and Poitou. The “overtaxed and exasperated barons” of England then presented the Articles of the Barons to him at Runnymede in 1215. The final product was the Magna Carta.

The Magna Carta established modern English Common Law property rights. By far the most chapters devoted to any subject, thirty-eight of the total sixty-three, concerned property rights. Among the most significant issues in the Magna Carta were the Crown’s covenants that it would not take tenements arbitrarily against the desire of the freeholder and the Crown could not encroach against mesne wardships.

Moreover, among the most significant aspects of the Magna Carta that specifically addressed property were:

a) Section 39, providing, “No freeman shall be taken or imprisoned or disseised or any way destroyed, nor will we go upon him nor send upon him, except by the lawful judgment of his peers or by the law of the land.” Section 39 thereby provided the template for the Fifth and Fourteenth Amendments to the United States Constitution 575 years later, among other things;

b) Sections 12, 14, and 15, requiring the Crown to obtain consent of its tenants in the predecessor to Parliament before collecting “scuttage” (fee in lieu of military service) or “aid” (taxation).

Senn gets to the heart of the matter:

The unmistakable gravamen of the Magna Carta is the redress of problems that cost the barons money. One of the lasting results of the Magna Carta was the principle of no taxation without representation; the idea was that a tax could not be levied without a vote of the tenants-in-chief. The Magna Carta makes evident that the feudal tenure had been monetized and that the exchange of protection for loyalty had been lost in spirit, if not in word. The limita-

66. See id. at 297.
67. Senn, supra note 23, at 539.
68. See id. at 534–36.
69. Id. at 534.
70. Id.
71. Id. at 534–35.
72. Senn, supra note 23, at 535.
74. See id.
tion of reliefs to a fixed amount led to inheritability and alienability, but reliefs were destined to fall into desuetude [disuse] when inflation lowered the value of money. The nearest that the Magna Carta came to a philosophical principle was chapter 39, which may be the origin of due process: "No free man shall be taken, imprisoned, disseised, outlawed, banished, or in any way destroyed, nor will We [the Crown] proceed against or prosecute him, except by the lawful judgment of his peers and by the law of the land." 75

B. Lord Coke and His Impact on Our Colonial System

As noted above, King Henry II did far more for the general freeholders of England than did the Magna Carta. The latter document, in all iterations, focused on the rights of nobility.

Further, the Magna Carta lay increasingly fallow until Lord Coke used it in the 17th Century as a basis to challenge the despotism of the Stuart monarchy. 76 As the National Archives notes:

Lord Coke’s view of the law was particularly relevant to the American experience for it was during this period that the charters for the colonies were written. Each included the guarantee that those sailing for the New World and their heirs would have "all the rights and immunities of free and natural subjects." 77

This, combined with the 1689 English Bill of Rights, established the colonists’ reasonable expectations of, inter alia, private property rights.

Coke acknowledged that "all the lands in England were originally derived from the crowne of England, and are holden of the same mediately or immediately." 78 Nonetheless, he noted significant protections for subjects. Coke, significantly, contended that the Magna Carta’s rights extended to "all

75. Senn, supra note 23, at 535–36 (alteration in original) (footnotes omitted). I differ with his assessment that chapter 39 originated modern due process. Henry II arguably did so by creating public hearings at royal court with the presumption of correctness in the defendant under Novel Disseisen.


77. Id.

78. EDWARD COKE, 4TH PART OF THE INSTITUTES OF THE LAWS OF ENGLAND 363 (1641).

Coke, and the colonists, followed the dictate of seventeenth English philosopher, John Locke: "The reason why men enter into society is the preservation of their property."\footnote{JOHN LOCKE, THE SECOND TREATISE OF GOVERNMENT 222 (LIBERAL ARTS PRESS, 1952).}

Blackstone oversimplified matters when he stated that property is a "'sole and despotic' relationship between a person and a thing."\footnote{See Johnson, supra note 17, at 250.} He believed "the only obligation was to do no harm to others in the exercise of one's [property] rights."\footnote{Id.} Nonetheless, commentators note, accurately, that a property owner of that era held a much larger bundle of sticks than one does in today's regulatory regime.\footnote{See, e.g., Andrew P. Morris & Roger E. Meiners, The Destructive Role of Land Use Planning, 14 TUL. ENVTL. L.J. 95, 100 (2000).}

Property rights differ from positive rights [conveyed by the sovereign] in another important way: property rights are independent of the state. For example, while the Constitution created the framework for government, expressly limited the powers of government, and provided safeguards against invasions of certain rights, the Constitution did not grant us the rights we have as citizens but recognized pre-existing rights.\footnote{Id. (footnote omitted).}

C. Development of Property Rights and Vesting Law in American Jurisprudence, with an Emphasis on the Contracts Clause

As stated above, the American colonists believed that property rights were fundamental to free Englishmen. The American Revolution was fought largely to protect those rights. Locke, and therefore, the founders, contended that property rights stemmed from natural law.\footnote{See Alex Tuckness, Locke's Political Philosophy, STANFORD ENCYCLOPEDIA OF PHILOSOPHY, (July 29, 2010), http://plato.stanford.edu/entries/locke-political/. See, e.g., Thomas Jefferson, Second Inaugural Address (Mar. 4, 1805), in Inaugural Address of the Presidents of the United States, S. Doc. No. 101-10, at 22 (1st Sess. 1989). "[O]ur wish . . . is that . . . equality of rights [be] maintained, and that state of property, equal or unequal, which results to every man from his own industry or that of his father's." Id.}
The Constitution contained numerous provisions related to property. Chief among them was the Contracts Clause, which barred the states from passing any laws, "impairing the [o]bligation of contracts." This clause dominated early jurisprudence concerning property rights.

One of the most famous property rights decisions, however, focused on fundamental private property rights stemming from the natural law as framed in the Constitution—*Vanhorne's Lessee v. Dorrance.* Justice Patterson rendered a renowned charge to the jury concerning a Pennsylvania law that purported to divest property without compensation: "The constitution expressly declares, that "the right of acquiring," possessing, and protecting property is "natural, inherent, and unalienable." "It is a right not ex gratia from the legislature, but ex debito from the constitution." He stated a maxim of statutory construction that we today think of only when addressing ambiguous ordinances. Nonetheless, this is stated here as a general maxim of statutes affecting real property: "Every statute, derogatory to the rights of property, or that takes away the estate of a citizen, ought to be construed strictly." The early Supreme Court repeatedly addressed, and mostly struck down, state acts for violating allegedly vested property and contractual rights. The more significant decisions are addressed below.

In *Calder v. Bull,* Justice Chase, in one of four concurring opinions, noted that the Ex Post Facto Clause did not apply to civil cases. Rather, the Contracts Clause applied. Chase stated, however, in *dicta,* that state legislatures may not "violate the right of an antecedent lawful private contract; or the right of private property." In *Fletcher v. Peck,* Chief Justice Marshall wrote for a unanimous Court in holding that Georgia could not rescind any portion of the Yazoo Land Grant. The Court held that the Contracts Clause barred the state from doing so after title "passed into the hands of a purchaser for a valuable con-
This decision was rendered in the face of public outrage over widespread fraud. Most of the Georgia legislature was bribed to allow the sale of 30 million acres at less than two cents per acre. The next legislature tried to nullify the "sales." Marshall held the land grant was a contract and upheld the subsequent sale to Fletcher, who was an innocent purchaser.

Mark Graber reconsidered the significance of Fletcher in 2000. He says that Fletcher "is routinely treated at present as an application of Contracts Clause principles." Gruber contends that analysis is only an alternative rationale for one part of Marshall's opinion. Marshall emphasizes the purchaser's acquisition with no knowledge of the initial fraud. Gruber summarizes that "Fletcher, in Marshall's opinion, concerned the power of a state to make naked land transfers, to divest any person whose original acquisition of the property in dispute was valid under common law." This is not a Constitutional analysis. This is common law contract law. Gruber says that Marshall held that Georgia lost under either the Contracts Clause or "by general principles which are common to our free institutions," to wit, natural and common law. He points to Johnson's concurrence, which stated that natural law barred Georgia from "revoking its own grants." Johnson stated further that the Contracts Clause did not apply because the contract terminated upon conveyance. Graber concludes that Fletcher allowed a landowner to sue under the Contracts Clause or common law to challenge expropriation of property.

In Barron v. Baltimore, a wharf owner claimed that the city's diversion of streams so lowered the water level in front of his wharves that they

98. Id.
99. See id. at 88–89.
100. Id. at 87–89.
101. Fletcher, 10 U.S. (6 Cranch) at 89–90.
102. Id. at 137, 139.
104. Id. at 79.
105. Id.
106. Id.
107. Id. at 80.
108. Gruber, supra note 103, at 80.
109. Id. at 80–81 (quoting Fletcher, 10 U.S. (6 Cranch) at 139).
110. Id. at 81 (quoting Fletcher, 10 U.S. (6 Cranch) at 143 (Johnson, J., concurring)).
111. Fletcher, 10 U.S. (6 Cranch) at 144.
112. See generally Gruber, supra note 103.
became economically useless. Justice Marshall wrote for the Court in holding that there was no private cause of action under the Fifth Amendment. He opined that the then-extant Bill of Rights restrained only the federal government, so citizens had to rely on state constitutions to protect liberty and property against state action.

Graber directs us to Stephen Siegel’s explication of antebellum constitutional law to understand *Barron*. Siegel makes a key distinction. The judiciary of the era protected zealously one’s possession of property. Conversely, the courts did not protect one’s value in that same property.

The Taney Court substantially limited the then prevalent Contract Clause protections in *West River Bridge Company v. Dix*. The majority opinion held that a state charter was a contract between the issuing state and the private party, in this case a bridge company. Nonetheless, the Contracts Clause did not bar states from exercising eminent domain.

*West River Bridge* merits additional assessment. Justice Daniel, writing for the Court, acknowledged that the Contracts Clause would apply to block any impairment of contract, but he did not believe that clause applied:

> In considering the question propounded in these causes, there can be no doubt, nor has it been doubted in argument, on either side of this controversy, that the charter of incorporation granted to the plaintiffs in 1793, with the rights and privileges it declared or implied, ... under the inhibition in the tenth section of the first article of the Constitution, could have no power to impair. *Yet this proposition, though taken as a postulate on both sides, determines nothing as to the real merits of these causes.*

The majority concluded that the inherent sovereign right of eminent domain is consistent with the inviolability of contracts.

Justice Woodbury’s concurring opinion is noteworthy in stating the following:

114. *Id.* at 243–44.
115. *Id.* at 250–51.
116. *Id.* at 248–49.
118. *Id.* at 87.
120. *Id.* at 531–32.
121. *Id.*
122. *Id.* at 531 (emphasis added).
123. *Id.* at 532.
I take the liberty to say, then, as to the cardinal principle involved in this case, that, in my opinion, all the property in a State is derived from, or protected by, its government, and hence is held subject to its wants in taxation, and to certain important public uses, both in war and peace. Some ground this public right on sovereignty. Some, on necessity.\(^\text{124}\)

*Stone v. Mississippi*\(^\text{125}\) started to chip away at the primacy of the Contracts Clause doctrine.\(^\text{126}\) In 1867, Mississippi granted a twenty-five year charter to a private corporation to run a lottery.\(^\text{127}\) The next year, the state adopted a new constitution, which barred all lotteries.\(^\text{128}\) It contained a retroactive clause.\(^\text{129}\) Just as the Court had earlier in *West River Bridge* held that a state charter or franchise was not impaired by eminent domain, in *Stone*, the Court held that Mississippi did not impair the lottery charter.\(^\text{130}\) First, the Court held that the charter was a mere license, not a contract.\(^\text{131}\) Second, and more significantly, the Court held that the state could not contract away its police power obligation to protect public morals.\(^\text{132}\)

The Supreme Court turned next increasingly to substantive due process, in lieu of the Contracts Clause in state matters. The greatest blow to the doctrine occurred in *Home Building & Loan Ass’n v. Blaisdell*,\(^\text{133}\) which split the Court 5-4.\(^\text{134}\) The decision is extremely significant during today’s “Great Recession,” as it addressed a Minnesota act that authorized debtors to ask state courts for a stay of foreclosures through no later than May 1, 1935.\(^\text{135}\) The five-Justice majority upheld the act against the Contracts Clause challenge.\(^\text{136}\) The majority stated that one should not read the clause literally, but the “question is no longer merely that of one party to a contract as against another, but of the use of reasonable means to safeguard the economic structure upon which the good of all depends.”\(^\text{137}\) Justice Sutherland wrote for

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125. 101 U.S. 814 (1879).
126. See id. at 816.
127. Id. at 817.
128. Id. at 819.
129. See id.
131. Id. at 821.
132. Id. at 817.
133. 290 U.S. 398 (1934).
134. Id. at 448.
135. Id. at 418.
136. See id. at 447–48.
137. Id. at 428, 442.
FDR's hated "Four Horsemen" in stating that the clause meant what it said.\textsuperscript{138}

While the Contracts Clause remains the core of a body of law, it has never regained the primacy it enjoyed before \textit{Blaisdell}. Today, the Court has a three-prong test: (a) Is there a substantial impairment of contract; (b) Is there a significant and legitimate public interest served; and (c) Is the law narrowly tailored?\textsuperscript{139} The more highly regulated the matter subject to contract, the less likely the plaintiff is to succeed.\textsuperscript{140}

D. \textit{The Rise and Fall of Substantive Due Process in Federal Courts}

The first, notorious, federal opinion to use the term substantive due process was Chief Justice Taney's 1857 opinion in \textit{Dred Scott v. Sandford}.\textsuperscript{141} As we all know, Taney refused to acknowledge that Dred Scott, or any black, was a citizen who had any liberty interests protected by the Constitution.\textsuperscript{142} Scott was found not to be a citizen of Missouri.\textsuperscript{143} Therefore, the federal judiciary lacked jurisdiction over Scott's claim.\textsuperscript{144} Notwithstanding that jurisdictional bar, Chief Justice Taney noted in pointed dicta that the Fifth Amendment barred Minnesota or any free state from attempting to divest Scott's owner of his rightful property, to wit, Dred Scott.\textsuperscript{145} Vehement dissents by Justices argued, first, that the jurisdictional bar precluded any other substantive work; second, that the Court had no basis to overturn the Missouri Compromise; and third, that blacks were free in many states.\textsuperscript{146}

In 1868, the Fourteenth Amendment was adopted, stating in pertinent part: "[N]or shall any State deprive any person of life, liberty, or property, without due process of law . . . ."\textsuperscript{147} The states were now subject to the obligation first set forth by Henry II, and then Chapter 39 of the Magna Carta.

A Stanford publication posits that the substantive due process doctrine has two prongs:\textsuperscript{148}

\begin{footnotesize}
\begin{enumerate}
\item \textit{Home Bldg. & Loan Ass’n}, 290 U.S. at 448–49 (Sutherland, J., dissenting).
\item See id.
\item 60 U.S. (19 How.) 393 (1857), \textit{superseded by constitutional amendment}, U.S. CONST. amend. XIV.
\item Id. at 411.
\item Id. at 406.
\item Id. at 427.
\item See id. at 450.
\item U.S. CONST. amend. XIV, § 1.
\end{enumerate}
\end{footnotesize}
(a) First, Federal courts have discretion to decide what rights are protected, and the extent of the protection. There are two, alternative analyses: (i) Substantive incorporation, allowing the Supreme Court to apply selected provisions of the Bill of Rights to the States, and (ii) Fundamental rights—determination of substantive rights that are couched as fundamental "liberty" interests.

(b) Second, once the Court decides what rights are covered under Substantive Due Process, then the Court judicially reviews the state action for compliance with those rights.

Justice Field initiated use of the substantive due process doctrine under the Fourteenth Amendment in stinging dissents in the Slaughter-House Cases and Munn v. Illinois. The Slaughter-House Cases upheld a Louisiana law that created a New Orleans slaughterhouse and mandated that all butchering in that city occur there. The Republican Reconstruction legislature gave wealthy allies the lucrative business in the guise of public health, safety and welfare. Local butchers sued. Eventually, the matters made it to the Supreme Court.

The bare majority held that the Thirteenth, Fourteenth, and Fifteenth Amendments only protected Black freed men. The majority controversially held that the Privileges and Immunities Clause of the Constitution did not address the right to work. That seemingly fundamental right was delegated to the states.

Justice Field's principal dissent contended that the right to work was a fundamental right that was protected under the Privileges and Immunities clause. Further, two of the dissenters argued that the act deprived local butchers of valuable property rights without due process.

In Munn, the majority upheld Illinois' efforts to protect the Grange by setting train elevator rates only in Chicago. This was an effort by the downstate legislators in Springfield to balance the political and business cor-

149. Id.
150. Id.
151. Id.
152. 83 U.S. (16 Wall.) 36, 83 (1872).
153. 94 U.S. 113, 136 (1877).
155. See id. at 64.
156. Id. at 43.
157. See id. at 81.
158. See id. at 80.
159. See Slaughter-House Cases, 83 U.S. at 97–98 (Field, J., dissenting).
160. Id. at 115–16, 127 (Bradley & Swayne, J.J., dissenting).
ruption that set outrageous rates in that city.\textsuperscript{162} The elevator operators sued under the Commerce Clause and Substantive Due Process.\textsuperscript{163}

The Supreme Court majority opinion emphasized that grain was a heavily regulated commerce.\textsuperscript{164} It concluded that the elevator operators were performing a quasi-public function in which they should have reduced expectations of vested substantive rights.\textsuperscript{165} The majority refused to reweigh what it saw as a political function.\textsuperscript{166}

Field's dissent raised an incipient economic substantive due process position.\textsuperscript{167} His view of the majority? "If this be sound law . . . all property and all business in the State are held at the mercy of a majority of its legislature."\textsuperscript{168}

The first major decision where the majority delineated the Substantive Due Process test under the Fourteenth Amendment was \textit{Mugler v. Kansas}.\textsuperscript{169} Kansas passed a prohibition statute, which Mugler flouted as he continued to brew beer.\textsuperscript{170} After his arrest, Mugler claimed the statute was so broad that it barred his brewing for himself or for sale out of state.\textsuperscript{171} He asserted that this took his property rights without due process.\textsuperscript{172} The state contended, as Mississippi did in \textit{Stone}, that it was entitled to bar beer to protect public health, safety, and morals.\textsuperscript{173}

While the five Justice majority upheld the prohibition statute, it held that a court may examine whether there is a police power basis for a state enactment.\textsuperscript{174} Justice Field wrote for the bitter, four Justice dissent,\textsuperscript{175} contending that the seizure and prohibition \textit{did} violate the substantive due process rights of Mugler.\textsuperscript{176}

Justice Harlan, for the majority, said that the Court should not settle for the facial "pretences" of the state.\textsuperscript{177} Rather, in examining the "substance of things," the Court should determine the following:

\begin{itemize}
  \item \textsuperscript{162} See \textit{id.} at 132.
  \item \textsuperscript{163} \textit{id.} at 123.
  \item \textsuperscript{164} \textit{id.} at 132.
  \item \textsuperscript{165} See \textit{id.} at 131–32.
  \item \textsuperscript{166} See \textit{Munn}, 94 U.S. at 133–34.
  \item \textsuperscript{167} See \textit{id.} at 139 (Field, J., dissenting).
  \item \textsuperscript{168} \textit{id.} at 140 (Field, J., dissenting).
  \item \textsuperscript{169} 123 U.S. 623, 657 (1887).
  \item \textsuperscript{170} \textit{id.} at 655–57.
  \item \textsuperscript{171} \textit{id.} at 660, 674.
  \item \textsuperscript{172} \textit{id.} at 660.
  \item \textsuperscript{173} \textit{id.} at 669.
  \item \textsuperscript{174} \textit{Mugler}, 123 U.S. at 661.
  \item \textsuperscript{175} \textit{id.} at 675 (Field, J., dissenting).
  \item \textsuperscript{176} \textit{id.} at 678.
  \item \textsuperscript{177} \textit{id.} at 661.
\end{itemize}
If . . . a statute purporting to have been enacted to protect the public health, the public morals, or the public safety, has no real or substantial relation to those objects, or is a palpable invasion of rights secured by the fundamental law, it is the duty of the courts to so adjudge, and thereby give effect to the Constitution. 178

The substantive due process decision that would enjoy the most odious reputation but for the Dred Scott opinion was Lochner v. New York. 179 The Lochner Court struck a maximum working hours statute for bakers, distinguishing the statute from the Utah miners’ and smelters’ hours statute it upheld in Holden v. Hardy, 180 as one that was required for regulating a hazardous undertaking. 181 The Lochner majority stated:

There can be no fair doubt that the trade of a baker, in and of itself, is not an unhealthy one to that degree which would authorize the legislature to interfere with the right to labor, and with the right of free contract on the part of the individual, either as employer or employee. 182

Lawrence Berger states:

The Court in Lochner effectively reserved unto itself the power to [determine] whether:

(1) the proclaimed end of the statute under review was legitimate;

(2) the proclaimed end was “really” the end of the legislature at all or there was perhaps another illegitimate purpose animating the law-making body; and

(3) even if the end was a legitimate one, the means selected were truly directed toward reaching it. 183

Justice Holmes’ spirited dissent stated in most memorable part: “The Fourteenth Amendment does not enact Mr. Herbert Spencer’s Social Statics.” 184

178. Id.
179. 198 U.S. 45 (1905).
180. 169 U.S. 366 (1898).
181. Lochner, 198 U.S. at 64–65; see Holden, 169 U.S. at 396.
182. Lochner, 198 U.S. at 59.
The Court retrenched from *Lochner* in *Nebbia v. New York*,\(^{185}\) *Home Building & Loan Ass'n v. Blaisdell*,\(^{186}\) and *Ferguson v. Skrupa*.\(^{187}\) *Ferguson* in particular held:

> We refuse to sit as a “superlegislature to weigh the wisdom of legislation,” and we emphatically refuse to go back to the time when courts used the Due Process Clause “to strike down state laws, regulatory of business and industrial conditions, because they may be unwise, improvident, or out of harmony with a particular school of thought.”\(^{188}\)

Thus ended the use of substantive due process as a major tool to challenge economic legislation.\(^{189}\)

The Supreme Court clarified the “substantially advances” test under *Lingle v. Chevron U.S.A. Inc.*\(^{190}\) It noted that the formula applied to a due process challenge, but *not* to a takings claim.\(^{191}\) The Court emphasized that a strict requirement that courts review takings claims under that standard would lead to the judiciary substituting its judgment for elected legislatures and expert agencies.\(^{192}\)

J. P. Byrne states that federal courts are far less likely to entertain due process claims after *Lingle*.\(^{193}\) He sums up: “How likely is it that landowners will be able to prevail against local governments on substantive due process claims challenging land use decisions? In federal court, the answer will—and should—be virtually never.”\(^{194}\)

He concludes “that state court due process review is especially appropriate to correct local political distortions.”\(^{195}\)

Byrne quotes noted Seventh Circuit Court of Appeals Judge Posner: “No one thinks substantive due process should be interpreted so broadly as to protect landowners against erroneous zoning decisions.”\(^{196}\)

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186. 290 U.S. 398 (1934).
188. *Id.* at 731–32 (footnotes omitted).
190. 544 U.S. 528, 540 (2005).
191. *Id.*
192. *Id.* at 544.
194. *Id.*
195. *Id.*
196. *Id.*
The Eleventh Circuit, in *McKinney v. Pate*, the substantia due process rights in federal courts in its jurisdiction—including Florida. *McKinney* held that substantia due process does not apply to administrative decisions and that property rights are created by the state. Therefore, these are not fundamental constitutional rights. Since *McKinney*, Florida courts have held that substantive due process applies only where the state or local acts "shock the conscience."  

E. **Takings Law**

Until now, we have focused on police power regulation. The logical extension, of course, is which acts of police power go so far as to deprive property rights. The Fifth Amendment to the United States Constitution states in pertinent part: "No person shall be... deprived of... property, without due process of law; nor shall private property be taken for public use, without just compensation." The Fourteenth Amendment, in Section 1, extends this obligation to the states. Various state constitutions contain similar protections. Florida does so at Article I, Section 9, which guarantees due process, and Article X, Section 6, which requires full compensation for public purpose takings.

Two twentieth century Supreme Court decisions combined to establish the modern body of regulatory taking law: *Pennsylvania Coal Co. v. Mahon* and *Penn Central Transportation Co. v. New York City*.

The *Pennsylvania Coal Co.* Court analyzed a state law that barred mining in certain locations in order to protect the ground surface and structures. The Court held that two factors determine whether a regulation effects a taking: First, does the act substantially advance the public interest; and second, does the regulation "go too far?"
**Penn Central** established the following lodestar in determining whether a regulation effects a taking: The extent to which the government action interferes with the property owner's investment-backed expectations.\(^{208}\) The Court focused on the actual impact of the governmental action:

"Taking" jurisprudence does not divide a single parcel into discrete segments and attempt to determine whether rights in a particular segment have been entirely abrogated. In deciding whether a particular governmental action has effected a taking, this Court focuses rather both on the character of the action and on the nature and extent of the interference with rights in the parcel as a whole.\(^{209}\)

The law clearly establishes a cause of action against legislative or executive actions that constitute a taking. **STBR** presented the prime opportunity to address whether the judicial branch is subject as well.

### III. Vested Rights

#### A. Background of Vested Rights

There are differing views involving the origins of vested rights:

- a) Common Law,\(^{210}\)
- b) Equity,\(^{211}\) and
- c) Constitutional Basis.\(^{212}\)

In application, most of the confusion over origin is clarified by determining whether the private party is claiming vested rights or estoppel.\(^{213}\)

#### B. Summation of Vested Rights

**People v. Miller**\(^{214}\) states cogently the vested rights doctrine: "[A] 'vested right' in the particular use . . . is but another way of saying that the property interest affected by the particular [governmental act] is too substan-


\(^{209}\) Id. at 130–31.


\(^{211}\) Id.


\(^{213}\) See infra III-B.

\(^{214}\) 106 N.E.2d 34 (N.Y. 1952).
tial to justify its deprivation in light of the objectives to be achieved by enforcement of the provision.\footnote{215}

While the terms are used interchangeably, there is a substantive difference between "vested rights" and "estoppel."

(a) "Vested rights" are property rights, and as such, are transferable.\footnote{216} They arise when the property owner has obtained real property rights that the government cannot repeal or rescind.\footnote{217}

(b) "Equitable estoppel" is based on the equitable principle that it would be inequitable for government to repudiate its prior actions or inactions, including approvals, upon which the private party has relied in good faith to its detriment.\footnote{218}

The Supreme Court in \textit{Shively v. Bowlby}\footnote{219} explained the difficulties in establishing a rule governing vesting of waterfront property rights adjacent to tidelands:

\begin{quote}
[T]he... laws of the original States show[] that there is no universal and uniform law upon the subject [of property claims in submerged lands]; but that each State has dealt with the lands under the tide waters within its borders according to its own views of justice and policy, reserving its own control over such lands, or granting rights therein to individuals or corporations, whether owners of the adjoining upland or not, as it considered for the best interests of the public. Great caution, therefore, is necessary in applying precedents in one State to cases arising in another.\footnote{220}
\end{quote}

IV. DEVELOPMENT OF WATER RIGHTS IN ANTIQUITY

Hammurabi’s Code addressed water rights as a drainage obligation: "If a man open his canal for irrigation and neglect it, and the water carry away an adjacent field, he shall measure out grain on the basis of the adjacent fields.\footnote{221}

As extensive as his code was, he did not discuss private riparian rights. The Romans made up for this omission—in earnest.

\footnotesize{\bibliography{references}}
The Emperor Justinian's Code is generally credited for memorializing the concepts of the public trust doctrine as developed under Roman rule:

Thus, the following things are by the air, running water, the sea, and consequently the shores of the sea. No one, therefore, is forbidden to approach the seashore, provided that he respects habitations, monuments, and buildings, which are not, like the sea, subject only to the law of nations.

All rivers and ports are public; hence the right of fishing in a port, or in rivers, is common to all men.

The sea-shore extends as far as the greatest winter flood runs up.

The public use of the banks of a river is part of the law of nations, just as is that of the river itself. All persons therefore are as much at liberty to bring their vessels to the bank, to fasten ropes to the trees growing there, and to place any part of their cargo there, as to navigate the river itself. But the banks of a river are the property of those whose land they adjoin; and consequently the trees growing on the [sic] them are also the property of the same persons.

Justinian is interpreted by many modern scholars to confirm that the crown owns water in natural water courses and underlying lands for all of the people. One commentator stated the following concerning public trust ownership in and under navigable waters:

222. c. 534 AD.
223. J. Inst. 2.1.1–4 (Thomas Collet Sandars, trans., Chicago, Callaghan & Co. 1876). But see James L. Huffman, Speaking of Inconvenient Truths—A History of the Public Trust Doctrine, 18 Duke Envtl. L. & Pol’y F. 1, 7 (2007) (“Justinian... was merely summarizing the laws of his time...”), and 10 (“In fact there is no evidence whatsoever that the Roman concept of jus publicum [law] has even a distant relationship to contemporary concerns for the environment, nor is there any indication that Roman law had anything resembling the modern notion of trust, but I digress.”).
All systems of water law adopt the elemental idea that running water while in its natural situation is not owned; that the law regulates the use of it, but that rights of flow and use are what the law recognizes, and not property in the water itself. The water itself is "common" or "public juris."  

The public trust was not always observed in the breach. The Roman Crown regularly conveyed submerged lands to favored citizens. In fact, commentators point to numerous grants to private citizens to assert the public trust was not a remotely absolute rule. For example, Huffman emphasized: "What are these farms, monuments and buildings that the public trust must not harm doing on the seashore?" Of course, given that we are discussing the public trust doctrine, multiple champions take up the opposite position. For example, Robert Abrams cites numerous authorities for the proposition that limited private use of the foreshore actually aided public use. Or, at least, that private use was so limited that it did not impede or impair public rights. Abrams emphasized various scholars and original sources who asserted that any structures allowed were temporary huts and other minor structures:

[W. A.] Hunter, [who was a noted Roman scholar], expanded on the common use of the shores for fishing, with reference to parallel provisions of the Digests. For example, he noted a famous rescript (advisory opinion) issued to the fishermen of Formiae and Capena who had sought a ruling about use of the foreshore. In setting out their private rights of use of the foreshore, the commentator Antonius Pius stated that the right to build huts or to place pilings gave rights for only so long as the sea allowed it, for "when it fell into ruins, the soil reverted to its former state as a res communis, which any other person might build upon."
Nonetheless, Huffman’s emphasis on the original source’s reservation of rights in “farms” and “buildings” shows that, at worst, there was mixed evidence as to the extent of private rights in the foreshore. Certainly, there was no prohibition.

Supporters of private rights focus on the practical realities of urban and rural Rome. One commentator states:

Unless and until a private person or the state required exclusive control of the resource, the sea and shore should be open for the use of all. In light of the vast coastal area of the Roman Mare Nostrum, the generally low population density outside the cities, and the even lower percentage of the population with sufficient means to utilize coastal lands, such an attitude was not impractical. However, to concentrate on this aspect of Roman law to the exclusion of its complements—state grants of exclusive rights and individual acquisition of ownership by occupation—is to [misunderstand] the Roman law and to ignore the economic realities of the time.

Justinian delineated between “perennial” rivers and “private” rivers. The former flowed always, while the latter were “torrential.” Perennial rivers were subject to the public trust. Naturally enough, private rivers were not subject to public use.

Wescoat confirms one aspect of Huffman’s arguments, even as he anticipates Huffman’s critiques of Wescoat’s own article, favoring expansive public trust application. He states that Justinian’s works acted as textbooks, not as edicts:

The story generally begins with The Digest of Justinian, compiled at the great law school in Beirut at the order of the emperor Justinian in the 530s C.E. If you studied law during the late Roman era through that of early modern Europe you would begin with the Digest and textbooks such as the Institutes of Justinian and Gaius, which distinguished various classes of things and associated rights—res nullius, things owned by no one; res communes, things

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231. Baade, supra note 2, at 872.
232. Id.
233. See id.
234. See id.
open to all; *res publicae*, things held by the state on behalf of citizens; *res privatae*, things owned by persons; *res sacrae*, sacred things; and so on. The denotations and connotations of these categories, as well as the boundaries and overlaps among them, have been subjects of perennial debate.  

Nevertheless, Wescoat interprets Justinian’s impact differently from Huffman. He acknowledges that the source material “partially support[s], but also nuance[s] [Huffman’s] arguments.” In particular:

*The Digest* offers diverse jurists’ perspectives on public interests in navigable waters, banks, canals, and shorelands. It notes various constraints as well as provisions for private actions in public waters. It addresses public and private interests affected by flooding, river channel change, engineering works, and private rights adjoining public waters. *These perspectives bear comparison with legal debates in later periods and places, and serve as antecedents and analogues, if not formal precedents, for public water law.*

The Institutes of Justinian describe accretion of soils onto private waterfront property:

Moreover, whatever a river adds to your land by alluvial soil belongs to you under the Law of Nations, for this deposit is an indiscernible increase; and that which is added in this manner is held to have been added so gradually that you cannot ascertain how much is added at any moment of time.

Abrams states that awarding accretions to the riparian owner allowed “a dynamic adjustment to the realities of the shore[s].” This adjusted the boundaries to preserve “riparian locational advantage and public uses.” More to the point: “This form of adjustment of boundaries without disturbing the relative rights of the private riparian and the public has continued unbroken from the Romans to the present.”

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236. Id. at 445 (citation omitted).
237. Id. at 449.
238. Id. at 449–50 (emphasis added).
239. J. Inst. 2.1.20, supra note 223.
240. Abrams, supra note 227, at 877.
241. Id.
242. Id. (citation omitted).
Roman antecedents helped to form Spanish water law. Spain’s water law standards bore directly on Florida through colonial distribution. The three main sources of Spain’s original law of water rights were: 1) Colonial Roman standards in Spain; 2) Roman influences imported from the arid Middle East; and 3) Islamic water law transmitted across North Africa and into Spain by the Moors.

Alfonso the Wise, King of Castile, directed the drafting of Las Siete Partidas (The Seven Parts) in 1263. This edict established Spain’s first civil law containing a formal water code in the Castile region. Alfonso discussed: a) All water belonged to the Crown; b) Individuals could obtain water rights in the same manner they obtained most property—by grants from the Crown; and c) As under Roman law, private, de minimus consumption required no permission.

Eric Kunkel’s seminal law review article on Spanish water law in colonial North America discusses the expansion of Alfonso’s edicts in Spain’s colonies.

[A Royal Decree in c. 1530] provided:

"We order and command that in all causes, suits and litigation in which the laws of this compilation do not provide for the manner of their decision, . . . then the laws of this our kingdom of Castile shall be followed, in conformity with the law of Toro, both with respect to the procedure to be followed in such cases, suits and litigations, and with respect to the decisions of the same on the merits."

244. Id. at 453.
245. Id.
247. Id.
248. See id.
250. Id. at 364–65 n.135 (quoting LAS SIETE PARTIDAS liii (Samuel Scott, trans., C.C.H. 1931)).
This had the effect of extending the *Partidas* to the Spanish Colonies. 251

Most significantly, Kunkel notes that *Las Siete Partidas* confirmed the Crown’s ownership of all lands. 252 Accordingly, “rights to land and water in New Spain could only be conferred by express grant from the Crown.” 253

Charles of Spain authorized the *Recopilación de las Leyes de Reinos de Las Indias* (the Compilation of the Laws of the Kingdoms of the Indies) (the Compilation) in 1520. 254 Kunkel recites the lengthy development of frequent citations to the Compilation. 255 Philip II caused the expansion of the Compilation, and Charles II required its most comprehensive, and final codification, in 1680. 256 The Compilation addressed water rights thoroughly, but focused on irrigation rights. 257 It introduced the concept of “beneficial use,” which weighed water rights by benefit to all. 258

The Compilation directed the designation of town sites with great detail:

Having made the selection of the site where the [colonial] town is to be built, it must, as already stated, be: in an elevated and healthy location; with means of fortification; fertile soil and with plenty of land for farming and pasturage; have fuel, timber and resources; [have] fresh water, a native population, ease of transport, access and exit; [and be] open to the northwind; and, if on the coast, due consideration should be paid to the quality of the harbour and that the sea does not lie to the south or west; and if possible not near lagoons or marshes in which poisonous animals and polluted air and water breed. 259

The Seven Parts tracked Justinian’s Códex in significant part: “The things which belong in common to the creatures of this world are . . . the air,

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251. Id. at 365 n.135 (noted by Judge Lobingier, Judge of the Court of First Instance, Territory of the Philippines, 1909–1914, in his introduction to Scott’s translation of *Las Siete Partidas* and quoted by Kunkel, supra note 249, at 364 n.135).
252. Id. at 366.
253. Id.
255. Id. at 366–67 nn.141–53 (especially n.148).
256. Id. at 367.
257. Id. at 368–69.
258. Id. at 363.
the rainwater, and the sea and its shores. . . . Rivers, harbors, and public highways belong to all persons in common.'

As the author, together with Florida Department of Environmental Protection historian Joe Knetsch, has noted, "Spanish settlements were highly regulated affairs." Among other issues, the Crown favored access to river highways. Common concern for water access for the maximum number of colonists was reflected by the typical limitation of grants on highways and navigable waters to depth double the width of the parcel by the highway or navigable water.

The Supreme Court of Florida in Apalachicola Land & Development Co. v. McRae confirmed the sovereign ownership of the navigable waters:

Under the civil law in force in Spain and in its provinces, when not superseded or modified by ordinances affecting the provinces or by edict of the crown, the public navigable waters and submerged and tide lands in the provinces were held in dominion by the crown . . . and sales and grants of such lands to individuals were contrary to the general laws and customs of the realm.

. . . .

By the laws and usages of Spain, the rights of a subject or of other private ownership in lands bounded on navigable waters derived from the crown extended only to high-water mark, unless otherwise specified by an express grant.

VI. ENGLISH RIPARIAN LAW

English common law delineated principally between jus publicum, which was property that the Crown held presumptively for the people, and jus pritavum, which the Crown could freely convey into private hands.
The Black River Phosphate Court explained the Crown’s interest in *jus publicum*:

[T]he *jus publicum*, the royal prerogative by which the king holds such shores and navigable rivers for the common use and benefit of all the subjects, and, indeed, of all persons of all nations at peace with England, who may have occasion for purposes of trade. This royal right, or *jus publicum*, is held by the crown in trust for such common use and benefit, and cannot be transferred to a subject, or alienated, limited, or restrained, by mere royal grant, without an act of parliament. The King’s grant, therefore, although it may vest the right of soil in a subject, will not justify the grantee in erecting such permanent structures thereon as to disturb the common rights of navigation; and such obstruction, notwithstanding such grant, is held to be a public or private nuisance, as the case may be.267

As described above, the Magna Carta focused on the nobility’s private property rights. Nonetheless, the document addressed several crucial water law issues at Chapters 16 and 23.

Chapter 16 states: “No riverbanks shall be placed in defense from henceforth except such as were so placed in the time of King Henry, our grandfather, by the same places and the same bounds as they were wont to be in his time.”268

Huffman states that this clause was a response to the Crown’s assertion of first right to fishing in fresh and salt rivers.269 It was understood at the time to limit the Crown.270 It was ultimately interpreted to prevent the Crown from granting exclusive fisheries.271

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268. See Huffman, *supra* note 223, at 19 n.95; Magna Carta, Ch. 16, art. 20.
270. *Id.*
271. *Id.* at 19–20.
Chapter 23 stated: "All weirs for the future shall be utterly put [forth] on the Thames and Medway and throughout all England, except on the seashore."  

Patrick Deveney wrote an exhaustive analysis of English public trust law that had a limited view of Chapter 23. He interpreted the chapter to bar the Crown from impeding fish passage on the major navigable rivers, so that the riparian landowners could fish.

Huffman quotes Lord Hale and others at length to contend that Chapter 23 was limited in intent and scope to the Crown’s confirming baronial rights:

Magna Carta Chapters 16 and 23 are very thin reeds upon which to rest an expansive public trust doctrine. The modern doctrine as applied to navigable waters relies heavily upon the state’s having title to the submerged lands. But at the time of Magna Carta, and for many centuries later, there was no concept in England of lands owned by the King (who, according to the modern public trust theory, was the predecessor in title to the states) as trustee for the general public.

Huffman’s position makes sense if we recall the Magna Carta was the result of barons forcing the Crown to counter the Kings Henry I and II. Those kings granted expansive rights to commoners and created substantial taxation systems with the result thereby to undermine the nobility. The Magna Carta was compelled largely to reclaim noble rights.

Deveney cites Bracton, who is credited for implementing the Institutes of Justinian into English water law shortly after the Magna Carta was signed. He states Bracton incorporated Justinian’s language regarding the seashore except that he deleted the phrase, “the ownership of the beaches is in no one.” Huffman posits that this is “perhaps because the phrase

272. Id.; Magna Carta, Ch. 23.
274. Id. at 40.
275. Huffman, supra note 223, at 21 (quoting F. POLLACK & F.W. MAITLAND, THE HISTORY OF ENGLISH LAW 518 (2d ed. 1952)). See Lazarus, supra note 266, at 635 n.16 (“The language of the Magna Carta suggests, however, that originally it had a much more limited purpose and the current interpretation is most likely the result of a much more generous reading by commentators such as Blackstone, later picked up on by the English courts.”).
276. See Section II-A, supra.
277. Deveney, supra note 230, at 36–37. Bracton, like Hale and Shakespeare, might not have authored everything that is attributed to him.
278. Id. (citing 2 HENRY DE BRACTON, ON THE LAWS AND CUSTOMS OF ENGLAND 39–40 (Samuel E. Thorne trans., Harvard Univ. Press 1968) (1569) available at
seemed inconsistent with the existence of farms and buildings that were not to be injured by public use of the seashore and because he recognized that many beaches in England were in fact private. 279

Robert Abrams, a public trust advocate, acknowledges that Bracton had an expansive view of private rights in the foreshore. 280 He concedes that Bracton amended the language of the rights in the foreshore, to “tolerate[] the erection of private structures . . . beyond what [the] Roman[s] . . . would have allowed.” 281

Abrams notes a far more extensive modification of Justinian’s language by Bracton than does Deveney. Instead of simply deleting the phrase that the foreshore is owned by no one, Bracton changed the language barring injury to houses, monuments, and buildings to accommodate private structures consistent with the practice by nobility in the England of his time:

No one therefore is forbidden access to the seashore, provided he keeps away from houses and buildings [built there], for by the jus gentium shores are not common to all in the sense that the sea is, but buildings built there, whether in the sea or on the shore, belong by the jus gentium to those who build them. Thus in this case the soil cedes to the building, though elsewhere the contrary is true, the building cedes to the soil. 282

At least one federal Bureau of Land Management (BLM) document notes a laissez faire attitude regarding coastal boundaries in early common law England:

The original source of land titles in England is a grant from the Crown. Most titles to land on the English seashore date as far back as the grants of King John, whose reign ended in 1216. In those early days in England, the initial grants of coastal lands presented no great problems, so it is not surprising that the grants were imprecise and incomplete, particularly in their lack of description of the seaward boundary. As might have been expected, the grantee of land along the coast came to look upon his property as extending down to the sea. Either the Crown acquiesced in that view or there were matters more pressing and interesting to the Crown than the use of the barren seacoasts. No challenge was

279. Huffman, supra note 223, at 25.
280. See Abrams, supra note 227, at 880.
281. Id.
282. Id. (quoting 2 Bracton, supra note 278, at 40).
made to the private use and occupancy of the tidelands until the latter part of the sixteenth century. Until then it just never occurred to the Crown, or anyone else for that matter to be specific about seacoast boundaries in conveyances. 283

As the BLM states, the Crown's benign neglect of the foreshore ended with Queen Elizabeth in the latter half of the sixteenth century. MacGrady credits Thomas Digges with creating this prima facie rule in Digges' treatise entitled Proof of the Queen's Interest in Lands Left by the Sea and the Salt Shores Thereof.284 Both Deveney and MacGrady argue that Digges' expansive public trust analysis is neither based on English caselaw nor as expansive as it is cited for being. 285 Lazarus states that Digges acted as lawyer to Queen Elizabeth I in developing the prima facie rule.286 She sought to prevent private coastal ownership from impeding English naval power. Digges, therefore "developed the theory that without proof of specific grant of the shorezone (which almost never was found in royal deeds), the Crown was the

283. BLM PUBLIC LANDS SURVEYING CASEBOOK, CHAPTER D, BASIC LAW OF WATER BOUNDARIES, D1, "HISTORIC DEVELOPMENT" (1975) (2001 revision), www.blm.gov/cadastral/casebook/basicwater.pdf. One assumes that the BLM has no reason to understated the public trust. After all, the BLM's purposes are furthered by sovereign control of waterbodies.

284. Glenn J. MacGrady, The Navigability Concept in the Civil and Common Law: Historical Development, Current Importance, and Some Doctrines That Don't Hold Water, 3 FLA. ST. U. L. REV. 511, 559-63 (1975) (describing how the prima facie rule did not redound originally to the general public). Rather, "title hunters" would seek lands under navigable waters that had clouded titles or no clear grant, and offer payments to the Crown to obtain express grants.

285. Abrams, supra note 227, at 882-83 (citing Deveney, supra note 230, and MacGrady, supra note 284). Moore, in HISTORY OF THE FORESHORE (1888), blasted Digges regarding Crown title in submerged lands. Moore emphasized that most tidelands had been long held in private title when Diggs wrote. Id. at 24.

286. Digges was a polymath. He was a royal lawyer, surveyor, and engineer. Yet, he was not even the most talented Thomas Digges in Elizabethan England. Nor was he the only Thomas Digges who aided the Queen's navy along the English coast. The other Thomas Digges was a renaissance man who set precedents in several fields. Among several biographies of the other Thomas Digges, the most fascinating, and quite thorough, is in Chapter 2 of STEPHEN JOHNSTON, MAKING MATHEMATICAL GENTLEMEN, PRACTITIONERS, AND ARTISANS IN ELIZABETHAN ENGLAND (1994), http://www.mhs.ox.ac.uk/staff/saj/thesis/digges.htm#note2. Digges translated Copernicus' De Revolutionibus into English. He is considered a major astronomer. Additionally, the "other" Digges was accomplished in mathematics, navigation, surveying, artillery, and military science. Id. (citing inter alia, D. W. WATERS, THE ART OF NAVIGATION IN ELIZABETHAN AND EARLY STUART TIMES (1958) and A. W. RICHESON, ENGLISH LAND MEASURING TO 1800: INSTRUMENTS AND PRACTICES (1966)). That Digges was a Member of the House of Commons and a powerful figure in the Privy Council. Id. at n.41-45 and accompanying text. Johnston notes: "Digges' participation in the harbour works at Dover, arguing for their importance in terms of both economic development and national security, was closely linked to this parliamentary activity." Id. at n.46 and accompanying text.
prima facie owner of the shore to the high water mark."  

Lazarus notes that property owners “resented what they perceived to be the Crown’s blatant confiscation of private property.” Nonetheless, the Crown pushed this theory to “enhance the royal purse,” and courts eventually “fell in line.”

Moore’s evisceration of Digges is near-total:

By this treatise was first invented and set up the claim of the Crown to the foreshore, reclaimed land, salt marsh, and derelict land in right of prerogative Mr. Digges boldly affirms that no one can make title to the foreshore or lands overflowed by the sea, and says it is a sure maxim in the common law that “whatsoever land there is within the King’s dominion whereunto no man can justly make property, it is the King’s by prerogative . . . .”

But it has been decided that Mr. Digges’ argument is unsound in the law. It is now settled that the foreshore may be shown to be parcel of the manor . . . . [Y]et we find the officers of the Crown still at this day persistently asserting Mr. Digges’ contention . . . . They proceed against him by the arbitrary and unconstitutional process of information (without any previous inquisition to charge the land to the Crown), and they make him set out his title . . . . [T]hey have it in their power to crush him with costs which he is helpless to avoid, and this wholly and solely upon an allegation of a theory, a theory of fact which is untrue, and which was invented by the ingenuity of Mr. Thomas Digges in the treatise set out below.

Abrams defends Digges’ treatise as another step in the development of modern public trust law via legal fiction:

Even if these critiques of Digges are apt in pointing out its [his theory’s] lack of support in English law of his time, the critiques are immaterial in assessing the rule that Digges’ presumption plays in American law as propounded in American courts.
Digges was not acting solely for his queen. Elizabeth created a commission in 1571 to determine whether she owned certain foreshores. Not surprisingly, the commission determined that she did. She gave one member, Digges, a patent to all of her fee in those shorelands he could obtain title to within seven years.292

The first, unreported English decision to hold expressly that the Crown held presumptive title to all lands that were not granted was Attorney-General v. Philpott.293 Philpott held that the Crown held title to all navigable, tidally influenced waters.294 Huffman states that Philpott "was decided by a corrupt court doing the king’s bidding and was not cited as authority by an English court for another 164 years."295 More to the point, both Huffman and Lazarus cite Moore for citing Philpott as one ground for the beheading of King Charles I.296

Brent Austin wrote an exhaustive article in 1989 concerning the scope of sovereign submerged lands.297 Austin points out a fishing rights decision, The Royal Fisheries of the Banne.298 The Banne court delineated clearly the Crown’s submerged lands ownership:

There are two kinds of rivers; navigable and not navigable. Every navigable river, so high as the sea flows and ebbs in it, is a royal river, and the fishery of it is a royal fishery, and it belongs to the king by his prerogative; but in every other river not navigable, and in the fishery of such river, the tenants on each side have interest of common right.299

292. MOORE, supra note 266, at 212–24.
293. See id. at 895–907; Deveney, supra note 230, at 42. Neither Deveney nor Huffman believed this decision was well reasoned, and MacGrady pointed out the Philpott judges were corrupt. MacGrady, supra note 284, at 562. No court cited Philpott for over 150 years. Id. at 565.
296. Id.; Lazarus, supra note 266, at 635 n.19 and accompanying text (citing MOORE, supra note 266, at 310, who in turn cited Art. 26 of Grand Remonstrance Presented to Charles I ("Taking away of men’s rights . . . . to land between high and low water marks.").
298. Id. at 983–84 (citing The Banne, 80 Eng. Rep. 540 (1604)).
As Abrams notes, Lord Hale’s legal treatise is the primary source of English and American common law on the foreshore. Huffman explains at length Lord Hale’s analysis of coastal property in England:

Lord Hale identified three categories of coastal property. The *jus privatum* is held by individuals or by the Crown, and, as we have seen, the king’s private interests were not different from the holdings of other individuals except in amount. The *jus regium* he described as the royal right which was the equivalent of what we would call the police power today. Finally, the *jus publicum* are the rights of the general public.

Professor Lynda Butler addresses Hale’s departure from Digges in several regards. While Hale resuscitated the prima facie theory, he differed from Digges in acknowledging that private parties could obtain foreshore rights by grant, prescription or other means.

Butler’s work focuses on the public commons. She emphasizes that Hale “further refined his theory, increasingly disagreeing with Digges.” Butler shows that Digges emphasized (not surprisingly) the Crown’s interests, while Hale’s splitting of interests burdened even the Crown’s sovereign interest with the rights of the public.

Even though Hale’s acceptance of the prima facie rule was a key to the public trust doctrine’s development, Butler concludes he “did not recognize the concept of the public trust.” She states that Hale’s failure to conclude that the Crown held inalienable public trust title demonstrated this point. This is not so. As will be shown below, regarding the American law of the public trust, the ability of the sovereign to convey such lands as long as the conveyance does not wholly abrogate the duty to the public is a “soft” public trust. She does make a significant point in emphasizing the Crown’s duty to protect the *jus publicum ariscus* from its *jus reginum* duties.

300. Abrams, supra note 227, at 883.
303. Id. at 861 n.115–18 (citing various parts of Moore’s reprinting of Hale’s works).
304. Id. at 861.
305. Id. at 862–63.
306. Id.
Butler notes one major limitation on Hale’s analysis. It was unformed. Hale never explained exactly what the *jus publicum* rights were in the foreshelf. Nonetheless, Hale’s *jus publicum* was “indestructible.”

Huffman, among a myriad other water law scholars, acknowledges Hale’s primacy quite bluntly:

The treatise of Sir Matthew Hale, *De Jure Maris*, has been so often recognized in this country, and in England, that it has become the text book, from which, when properly understood, there seems to be no appeal either by sovereign or subject, upon any question relating to their respective rights, either in the sea, arms of the sea, or private streams of water.

MacGrady bristles at Hale’s imprimatur of the prima facie rule. He says that Hale’s acceptance of a doctrine that was created by the Tudors out of whole cloth shows “[t]he adoption of the prima facie rule is thus an example of lawmaking by personal reputation and treatise writing.” Nonetheless, both Huffman and Deveney state that Hale acknowledged that the Crown could convey, and often did convey, submerged and tidal lands into private lands. Accordingly, Deveney emphasizes that “[n]either the changes following the beheading of Charles I nor the revolution of 1688 reduced in any way the power of the sovereign to alienate the coastal area resources of the kingdom.”

Both Wescoat and Hope Babcock interject real politik in response to Huffman’s pedagogy. Simply stated, their response is: So what? Babcock discusses at length the use of “legal fictions,” such as the public trust doctrine, and concludes: “[T]he public trust doctrine [might be] a benign misreading of its historical provenance or a normative choice to legitimize a legal rule that has imbedded itself into property law.”

308. *Id.* at 862 n.122 (citing multiple commentators opining various and contradictory rights and limitations).

309. *Id.* at 863.


312. *Id.*


Wescoat is blunter: "Once a precedent was applied and upheld, emphasis shifted from its historical truth to its consequences."\textsuperscript{316}

It is important to recall that the English prima facie rule was stated in terms of public rights, but that was simply not the case in reality. Lazarus explains that the only lands that were inalienable categorically at common law were those of the "ancient demesne."\textsuperscript{317} As we stated above in Section II-A, such lands belonged to William the Conqueror by conquest in 1066, and were registered in the Domesday Book as "permanently annexed to the kingly office."\textsuperscript{318} Lazarus string cites authority establishing that the Crown could convey sovereign submerged lands with "at most" Parliament's concurrence.\textsuperscript{319} English Freeholders own by "tenure" as tenants holding property rights under the Crown.\textsuperscript{320} Accordingly, even today, the rights to the foreshore that Digges created in the sixteenth century to benefit Queen Elizabeth's navy are properly stated as belonging to the public only derivatively from the Crown.\textsuperscript{321}

VII. AMERICAN LAW OF NAVIGABILITY FOR TITLE PURPOSES

The original thirteen United States each took title to the submerged sovereign lands that the English Crown possessed within their respective boundaries. The Supreme Court held in \textit{Martin v. Lessee of Waddell}\textsuperscript{322} that each state took title as sovereign within its borders, subject to the federal navigational servitude.\textsuperscript{323} \textit{Pollard's Lessee v. Hagan}\textsuperscript{324} extended this sovereign submerged right to each subsequently admitted state upon statehood.\textsuperscript{325} The

\begin{itemize}
  \item \textsuperscript{316} Wescoat, \textit{supra} note 235, at 452.
  \item \textsuperscript{317} Lazarus, \textit{supra} note 266, at 635–36 n.20.
  \item \textsuperscript{318} \textit{Id}.
  \item \textsuperscript{319} \textit{Id}.
  \item \textsuperscript{320} Ball, \textit{supra} note 11, at 12.
  \item \textsuperscript{321} \textit{See id}.
  \item \textsuperscript{322} 41 U.S. (16 Pet.) 367 (1842).
  \item \textsuperscript{324} 44 U.S. (3 How.) 212 (1845).
  \item \textsuperscript{325} \textit{Id.} at 230.
\end{itemize}
Court held the “equal footing doctrine” vested each new state the same rights as the thirteen original ones. 326

Mark Graber expounds on the significance of Pollard's Lessee. He explains that Jacksonian lenders believed that “the federal government retained title (though not jurisdiction) over unappropriated and waste lands” in each territory.327 This remained the case even upon statehood.328 The federal government conveyed Pollard's family a grant to certain lands in the Mobile Bay and Mobile River.329 Hagan argued Alabama claimed as state sovereign, and the state had granted the submerged lands to him.330 Graber cites a series of Alabama decisions that had upheld the state's sovereign submerged claims without their clarifying the basis.331 Graber explains that Pollard's Lessee declared the federal law authorizing the putative federal grant unconstitutional without using those words.332 The majority decision clarified the state's sovereignty:

[First], [t]he shores of navigable waters and the soils under them, were not granted by the Constitution to the United States, but were reserved to the states respectively. Secondly, [t]he new states have the same rights, sovereignty, and jurisdiction over this subject as the original states. 333

The Daniel Ball334 established the standard for determining navigability for title purposes.335 MacGrady states four factors from The Daniel Ball in determining navigability for title purposes:

a. The waterbody needed only to be susceptible, not necessarily used, for navigation;

b. The waterbody must have been susceptible for navigable use in commerce;

c. The waterbody must be susceptible to navigation in its natural and ordinary condition; and

d. Commercial navigation must have been possible by any then customary mode of trade or travel.336

326. Id.
327. Graber, supra note 103, at 102.
328. Id.
329. Id.
330. Id.
331. Graber, supra note 103, at 102–03.
332. Id. at 103–04.
334. 77 U.S. (10 Wall.) 557 (1870).
335. Id. at 563.
Under the Equal Footing Doctrine, the date of determining navigability for title purposes in a given state is when it entered the Union as a state. 337 MacGrady notes that Utah v. United States 338 confirms this point. 339 The Supreme Court held there that the entirely intrastate Great Salt Lake was navigable for title purposes based on historical records showing that a rancher transported livestock across it at the time of Utah’s statehood. 340

The Supreme Court applied the test from The Daniel Ball in United States v. Holt State Bank. 341 The Holt State Bank Court held that federal law governs navigability for title purposes at statehood. 342 The Court explicated what constituted commerce for title purposes:

[N]avigability does not depend on the particular mode in which [trade or travel on water] is or may be had—whether by steamboats, sailing vessels or flatboats—nor on an absence of occasional difficulties in navigation, but on the fact, if it be a fact, that the stream in its natural and ordinary condition affords a channel for useful commerce. 343

While England limited sovereign ownership to lands under tidal waters, many states extended navigability for title purposes into non-tidal waters that were navigable in fact upon statehood. 344 The states did so to facilitate free commerce up and down river highways. 345 First in the new nation, then under the Equal Footing doctrine, they protected public rights to accommodate exploration and expansion. 346

States are free to alter sovereign lands boundaries or definitions after they achieve statehood. In Oregon ex rel. State Land Board v. Corvallis Sand & Gravel Co., 347 the Supreme Court confirmed Oregon’s right to limit

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337. MacGrady, supra note 284, at 593.
339. MacGrady, supra note 284, at 593.
340. Utah, 403 U.S. at 11.
341. 270 U.S. 49 (1926).
342. Id. at 55–56.
343. Id. at 56; Ansbacher & Knetsch, supra note 336, at 342 n.41 and accompanying text.
345. Holt State Bank, 270 U.S. at 56.
346. See Ansbacher et al., supra note 10, at 48–50 and decisions cited therein.
sovereign lands.\textsuperscript{348} In \textit{Barney v. Keokuk},\textsuperscript{349} the Court held that a state may select certain sovereign submerged lands to convey to private parties.\textsuperscript{350} 

\textit{Barney} exemplifies "soft public trust" states, which allow conveyances to private parties upon certain conditions.\textsuperscript{351} In that case, the conveyance was made to facilitate wharfage and attendant commerce where Keokuk, Iowa faced the Mississippi River.\textsuperscript{352} \textit{Illinois Central v. Illinois}\textsuperscript{353} is cited with reverence as establishing an overarching and strong public trust doctrine.\textsuperscript{354} In reality, it represents the paradigmatic "soft public trust" case. The \textit{Illinois Central} Court held that a state may convey submerged sovereign lands as long as the conveyance did "not substantially impair the public interest in the [submerged sovereign] lands and [overlying] waters remaining."\textsuperscript{355} The Court held that Illinois was authorized to repeal legislation conveying much of Chicago harbor's submerged lands to the Illinois Central Railroad.\textsuperscript{356} The Court concluded that the original grant was an unauthorized abdication of public ownership of the great harbor.\textsuperscript{357} Wescoat delineated the long and somewhat inconsistent subsequent development of Chicago's lakefront before and since \textit{Illinois Central}.\textsuperscript{358} He shows both that \textit{Illinois Central} is not as simple as portrayed and that it has not been honored in the breach—even in Chicago.\textsuperscript{359} Daniel Burnham and Edward Bennett published their Plan of Chicago in 1908, sixteen years after \textit{Illinois Central}.\textsuperscript{360} The Plan envisioned a continuous park along the lakefront.\textsuperscript{361} Burnham's and Bennett's work was itself a major public effort, as it reflected a plan developed by the post-fire city's leaders to develop Chicago

\begin{thebibliography}{99}
\item 348. \textit{Id.} at 378–80.
\item 349. 94 U.S. 324 (1876).
\item 350. \textit{Id.} at 342.
\item 351. See generally \textit{Id.}
\item 352. \textit{Id.} at 325.
\item 353. 146 U.S. 387 (1892).
\item 355. \textit{Ill. Cent. R.R. Co.}, 146 U.S. at 452.
\item 356. \textit{Id.}
\item 357. \textit{Id.} at 455.
\item 358. Wescoat, \textit{supra} note 235, at 436.
\item 359. See generally \textit{Id.}
\item 361. Wescoat, \textit{supra} note 235, at 437.
\end{thebibliography}
in a coordinated and magnificent manner akin to Paris.\textsuperscript{362} The work is considered the first modern comprehensive municipal plan in the United States.\textsuperscript{363}

The Plan itself culminated a series of acts that envisioned an integrated railroad access to and public parks along Chicago’s lakefront.\textsuperscript{364} Wescoat notes the original 1830 plat of the Loop, south of the Chicago River, showed a public park along the lakefront.\textsuperscript{365} The park was named “Lake Park.”\textsuperscript{366} Maps show the park in the location of today’s Grant Park, which is bounded today on the south end by the Field Museum and the Shedd Aquarium, and on the north by the area of the Art Institute, Millennium Park, and Daley Plaza.\textsuperscript{367}

\textit{Illinois Central} addressed the railroad’s access into central Chicago. The railroad’s southern entry into downtown was chosen along the lakefront.\textsuperscript{368} The 1869 Illinois legislature conveyed a massive, one-mile by one-mile grant of submerged lands along Lake Michigan to the city, with a legislative directive to the city to then flip the parcel to the railroad.\textsuperscript{369} The railroad intended to construct infrastructure to support its activities associated with the southern entry. The same year, the legislature created three park commissions in and around Chicago: the South Park Commission in Hyde Park, which would host the 1893 World’s Columbian Exposition; the Western Park Commission, which went out to Oak Park; and the Lincoln Park Commission, north of the city center.\textsuperscript{370}

The railroad sued after the 1873 Illinois legislature repealed the grant.\textsuperscript{371} Douglas Grant’s comprehensive public trust article focused on several interesting aspects of the case.\textsuperscript{372} First, this decision, which has had profound and sweeping impact on public and private rights, was itself a hotly contested 4-3 split, with two justices recused.\textsuperscript{373} Second, the massive scale of the grant is

\begin{itemize}
\item \textsuperscript{362} Carle Smith, \textit{The Plan of Chicago: Daniel Burnham and the Remaking of the American City} 11–13 (2006).
\item \textsuperscript{363} See generally id. (telling of the circumstances surrounding the development of the plan).
\item \textsuperscript{364} Id. at 24.
\item \textsuperscript{365} Wescoat, \textit{supra} note 235, at 455 & n.108–09 and accompanying text.
\item \textsuperscript{366} Id.
\item \textsuperscript{368} See \textit{Burnham & Bennett}, \textit{supra} note 360, at 5.
\item \textsuperscript{369} Wescoat, \textit{supra} note 235, at 457.
\item \textsuperscript{370} Id.
\item \textsuperscript{371} Id.
\item \textsuperscript{373} Id. at 860.
\end{itemize}
what caused Justice Field in a majority to affirm Illinois’ revocation as an inherent, reserved state power to protect the people of Chicago.\footnote{374. Id. at 861.}

Kearney and Merrill read the decision as a result of the credo that all politics are local.\footnote{375. Joseph D. Kearney & Thomas W. Merrill, The Origins of the American Public Trust Doctrine: What Really Happened in Illinois Central, 71 U. CHI. L. REV. 799, 801–03 (2004).} They assert that the decision, while couched as a public trust matter, resolved local political debates in a \textit{de facto} dispute resolution.\footnote{376. Id.} Kearney and Merrill, along with Wescoat, emphasize that each side received what it wanted: “The railroad obtained a right-of-way for its tracks that fulfilled its commercial aims and charter, and the city gained riparian rights to the valuable new public lakefront created by landfill dumped by the railroad, and by the city itself, after the great fire of 1871.”\footnote{377. Id. at 801, cited by Wescoat, \textit{supra} note 235, at 457–58 & n.125 and accompanying text.}

Let us explicate Wescoat’s quote. In 1871, two years after the grant to the railroad, and two years before the repeal, Chicago was overwhelmed by the “Great Fire.”\footnote{378. Id.; Richard J. Roddewig, \textit{Law as Hidden Architecture: Law, Politics, and Implementation of the Burnham Plan of Chicago Since 1909}, 43 J. MARSHALL L. REV. 375, 402 (2009).} Until the fire, “Lake Michigan lapped right up to the edge of Michigan Avenue.”\footnote{379. Roddewig, \textit{supra} note 378, at 402.} After the fire, the city dumped much of the charred rubble “into the shallows of the lake in what is now Streeterville and Grant Park.”\footnote{380. Id.} While the Illinois legislature in 1873 protected the public from the railroad’s use of one mile along and one mile into Lake Michigan, the city’s fill along the lake front included “an unsightly mess . . . littered with stables, squatters’ shacks, a firehouse, garbage, and debris.”\footnote{381. SMITH, \textit{supra} note 362, at 24.}

As noted above, the Plan of Chicago envisioned a continuous park along the Lake Michigan shorefront.\footnote{382. Wescoat, \textit{supra} note 235, at 437.} Chicago developed, and maintains, one of the great waterfront park systems in the world.\footnote{383. Id. at 458.} Nonetheless, the area of Grant Park, which was envisioned in some nineteenth century plats as “‘forever to remain vacant of buildings,’” is today rife with iconic structures, including massive public buildings.\footnote{384. Id. at 455 (citing Lois WILLE, \textit{FOREVER OPEN, CLEAR AND FREE: THE STRUGGLE FOR CHICAGO’S LAKEFRONT} (2d ed. 1991) (1972)).} Roddewig emphasizes that Burnham’s plan envisioned many of the museums and structures we see today.\footnote{385. \textit{See} Roddewig, \textit{supra} note 378, at 401–02.} Wes-
coat lists a “small sample” of the myriad lawsuits and projects associated with the development of the lakefront at issue in *Illinois Central* and around Chicago.386 While some courts strictly applied the decision to block divestiture of public interests, others allowed grants of submerged lands to private parties.387

Kearney and Merrill sum up the intent and impact of Justice Field’s opinion in *Illinois Central* thusly:

His public trust doctrine was designed to preserve access to the lake for commercial vessels at competitive prices, not to preserve Lake [today Grant] Park or the shoreline from further economic development. Moreover, Justice Field was not alone in these preferences among the federal judges who ruled on aspects of the controversy. When the dust finally settled, all of Illinois Central’s massive landfills and improvements had been ratified by the federal courts as being consistent with the nebulous trust identified in *Illinois Central.* Thus, the public trust doctrine, as invoked in the *Illinois Central* litigation, was scarcely an anti-development doctrine.388

Not surprisingly, Huffman raises issues aside from the “fable” of *Illinois Central*.389 He asserts that Justice Field misunderstood the legal background of the public trust doctrine.390

Huffman emphasizes the fable that Field’s opinion held that public trust property cannot be alienated—that Field confirmed the “hard” public trust.391 He counters: “Justice Field expressly states that submerged and coastal lands affected with a public interest can be alienated.”392 Huffman points to examples where Field concluded grants of sovereign lands furthered the public interest:

The interest of the people in the navigation of the waters and in commerce over them may be improved in many instances by the erection of wharves, docks, and piers therein, for which purpose the state may grant parcels of the submerged lands; and, so long as

388. Kearney & Merrill, supra note 375, at 924–25.
390. Id. at 54–60.
391. Id. at 56.
392. Id. Huffman also extracts numerous portions of Field’s text showing a “soft” public trust doctrine. Id. at 56–57 n.338 and accompanying text.
their disposition is made for such purpose[s], no valid objection[] [may] be made to the grants.\textsuperscript{393}

Huffman concludes that Field did not posit a hard public trust.\textsuperscript{394} Rather, a state could alienate sovereign submerged lands for private purposes that fostered either navigation or commerce, but no grant could interfere with public navigation, commerce and fishing.\textsuperscript{395} Field determined that the grant of a wide swath of Chicago Harbor was simply too expansive to meet the soft public trust test.\textsuperscript{396}

Huffman added his contention that Field misunderstood the source and nature of the \textit{jus publicum}.\textsuperscript{397} He asserts that the "\textit{jus publicum}, properly understood, existed [under English common law] as an \textit{easement} in properties in navigable waters and submerged lands \textit{whether held by the state or by private individuals}.\textsuperscript{398} Huffman denies Field's conclusion that state ownership of the submerged lands necessarily leads to state control of the overlying navigable waters: "[T]he original understanding of the \textit{jus publicum} denied the truth of this assertion by holding that without regard to ownership of submerged lands, the public had certain rights in the use—and therefore control to that extent—of the overlying waters."\textsuperscript{399}

Lazarus buttresses this point. He states that Field's rationale that "the state would be powerless to prevent use of the harbor" if it divested itself of title "hardly seems plausible."\textsuperscript{400} He argues that state police power authorizes the regulation of railroad impacts on the natural resources, and the "navigation[al] servitude would still provide for both maintenance of the navigability of the resource and public access."\textsuperscript{401}

Lazarus adds that the legal fictions both underlying and stemming from \textit{Illinois Central} are not necessarily fatal.\textsuperscript{402} That includes his anticipation of Huffman in questioning even the very existence of the public trust doctrine in antiquity.\textsuperscript{403} Nonetheless, he quotes Professor Lon Fuller, stating that le-

\begin{footnotes}
\item[393.] Huffman, supra note 223, at 57 n.339 (quoting \textit{Ill. Cent. R.R. Co.}, 146 U.S. at 452).
\item[394.] See id. at 57–59.
\item[395.] \textit{Id.} at 57–58 (citing \textit{Ill. Cent. R.R. Co.}, 146 U.S. at 452).
\item[396.] \textit{Id.} at 57–58. Permitted grants are under ""a very different doctrine from the one which would sanction [an] abdication of the general control of the state over lands under the navigable waters of an entire harbor or bay, or of a sea or lake."" \textit{Id.} at 58 (quoting \textit{Ill. Cent. R.R. Co.}, 146 U.S. at 452–53).
\item[397.] Huffman, supra note 223, at 59.
\item[398.] \textit{Id.} at 59 (citing Hale, supra note 301, at 336) (emphasis added).
\item[399.] \textit{Id.} at 59–60 (citing Hale, supra note 301, at 336).
\item[400.] Lazarus, supra note 266, at 639.
\item[401.] \textit{Id.} The navigational servitude is addressed at length, \textit{infra}, in Section VII.
\item[402.] \textit{Id.}
\item[403.] \textit{Id.} at 633–35, 656–57.
\end{footnotes}
gal fictions ""are, to a certain extent, simply the growing pains of the language of the law."" 404

Just two years after Illinois Central came Shively v. Bowlby,405 which a later Supreme Court public trust majority opinion cited as the ""seminal case in American public trust jurisprudence."" 406 Shively frames the soft public trust rule in Illinois Central.407 The Shively decision assumed that the State of Oregon had authority to convey submerged sovereign lands.408 Shively addressed the federal government’s prior ability to grant submerged sovereign lands in the Columbia River when Oregon was a territory.409

Shively claimed the parcel under a federal patent before Oregon’s statehood.410 Bowlby and Parker countered that a statutory deed from the state vested title in them.411 The unanimous Supreme Court upheld the Supreme Court of Oregon’s holding in favor of the claim deraigned under state statute.412

The opinion of Justice Gray cited Hale’s prima facie rule that a sovereign grant of upland oceanfront land is bounded by the high water mark ""unless either the language of the grant, or long usage under it, clearly indicates that such was the intention."" 413 Shively held Martin v. Waddell established the sovereign ownership of tidelands, which could be granted solely by express conveyance.414 Shively itself affirmed a key component to sovereign lands law in the United States.415 Each of the original thirteen states, and each successively admitted state, may alter the sovereign boundaries or

404. Id. at 657 (quoting LON L. FULLER, LEGAL FICTIONS 21–22 (1967)).
405. 152 U.S. 1 (1894).
407. See id. at 473.
408. See id. at 473–74 (explicating Shively, 152 U.S. at 57).
409. Shively, 152 U.S. at 56.
410. Id. at 2.
411. Id. at 7.
412. Id. at 58.
413. Id. at 13. Nonetheless, the private usage of submerged lands should not vest title or easement against the sovereign. Shively, 152 U.S. at 14. First, one cannot claim sovereign lands by prescription. See id. at 11–12. Second the strong legal presumption of owner consent of use undermines the adversity of use necessary to establish prescription. See id. at 12–14. Therefore, the overwhelming law, discussed throughout this article, and by Justice Gray, holds that one must deraign title to initially sovereign submerged lands by express and authorized grant from the sovereign. See id. 17–18.
414. Id. at 15–17.
415. Shively, 152 U.S. at 58.
convey sovereign lands with its jurisdiction, subject only to a soft public trust.416

Shively explained Illinois Central as confirming:

[T]he settled law of this country [is] that the ownership of and do-
minion and sovereignty over lands covered by tide waters, or na-
vigable lakes, within the limits of the several States, belong to the
respective States within which they are found, with the consequent
right to use or dispose of any portion thereof, when that can be
done without substantial impairment of the interest of the public in
such waters, and subject to the paramount right of Congress to
control their navigation so far as may be necessary for the regula-
tion of commerce.417

One must emphasize that this interpretation came but two years after Il-
linois Central, by a Court that retained three of the four justices in the Illinois
Central majority, included Justice Field, who wrote the majority opinion in
Illinois Central.418 With all due respect to the modern scholars who contend
that Illinois Central established a hard public trust doctrine, one should defer
to the actual author’s interpretation of his recent opinion.

Indeed, Professor Joseph Sax’s exegesis of Illinois Central in his land-
mark 1970 public trust article addressed the decision from pages 489 through
491.419 This provided scant coverage for what Professor Sax entitled The
Lodestar in American Public Trust Law: Illinois Central Railroad Company
v. Illinois, in a ninety-three page article that is universally regarded as the
source of the modern public trust doctrine.420 While Sax did not explore the
conflicting and myriad issues raised in the case, he did conclude that the am-
plitude of the grant drove the decision.421 Sax stated the decision means that
a sovereign may grant sovereign submerged lands—provided that there is a
public benefit.422

The Supreme Court again faced the public trust in Appleby v. City of
New York.423 The case featured similar issues to Illinois Central. The City
of New York conveyed large portions of New York Harbor to Appleby for
the private filling of submerged lands to facilitate mixed private and public

416. Id.
417. Id. at 47.
418. Huffman, supra note 223, at 77 n.464 and accompanying text.
420. See id. at 489.
421. Id. at 490–91.
422. See id. at 490.
development. Unlike Illinois, however, the City granted specific tracts for the purpose.

The State of New York later established a fill control line to protect navigation in the harbor. This halved Appleby’s available use. The City sought to implement the state program by condemning all of the private wharf parcels in the harbor. Even though the City did not acquire Appleby’s lands, it commenced a dredge operation on his submerged parcels.

Appleby sued in state court to enjoin the dredging. He claimed the City was trespassing. Appleby won at trial, but the New York Court of Appeals reversed.

Appleby petitioned the Supreme Court under the Contacts Clause. It was a decade before the 5-4 majority in Blaisdell undermined the Contracts Clause. Appleby’s theory was that the state contract with him vested rights that the joint state/city fill prohibition and dredging program eviscerated.

The Supreme Court in Appleby expounded on a key point that it mentioned in passing in Illinois Central. Which body of law controlled? Federal or State? While the Illinois Central majority opinion “referred vaguely to the use of sovereign trust language by state courts in their decisions discussing state ownership of the submerged beds,” it failed to cite any relevant Illinois precedent.

Charles Wilkinson examines the record in Illinois Central in attempting to ferret the Court’s rationale. He notes: “The federal public trust doctrine announced in Illinois Central . . . and the varying state-law based trust doc-

424. Id. at 367–68.
425. Id. at 368–69.
426. Id. at 369.
427. Id.
429. Id.
430. Id. at 371.
431. Id.
432. Id. at 364, 372–73.
436. See id. at 393–395 (citing Ill. Cent. R.R. Co. v. Illinois, 146 U.S. 387, 452–53 (1892)).
Wilkinson contends that the decision allows each state to develop its own public trust doctrine. The Appleby Court simplifies the Illinois Central Court’s substantive analysis: What is the substantive basis for the Public Trust doctrine? Wilkinson states that multiple bases could be the “settled law of this country” the Illinois Central Court holding requires that the “several states” enforce the public trust.

1. Federal common law: “not in favor, and is unlikely to be employed in light of the more specific available sources.”

2. Guaranty clause: “unlikely that a modern court would look to it as a basis.”

3. Congressional preemption: more likely, to maintain navigability.

4. Commerce Clause: probably most likely to maintain navigability.

Lazarus shows the impossible task of a modern scholar, or court, attempting to fathom the legal basis for the Illinois Central holding. He cites both text in the decision and historical antecedents that indicate the public trust sounds in property law. Lazarus notes that Sax’s article from 1970 rejected the property law basis. Sax was concerned that property law would limit the expansion of the public trust doctrine as needed to other public purposes. Sax even refers to the property law basis as a “rather dubious notion.” Yet, as stated, infra, Sax has converted to the property law school of thought. Oddly enough, he did so in his analysis of Stop the Beach Renourishment.

439. Id. at 425 n.1 (citations omitted).
440. See id. at 455–56.
441. See Appleby, 271 U.S. at 383–84.
444. Wilkinson, supra note 438, at 456.
445. Id.
446. Id. Wilkinson believes commerce clause analysis most closely aligns with the complementary navigational servitude, which is discussed more fully, infra, in the next section.
448. Id. at 642 (discussing Sax, supra note 354, at 478–83).
449. Id. at 642 n.64.
450. Sax, supra note 354, at 484.
451. See infra note 481 and accompanying text.
So, if one cannot today ferret out exactly what body of law the *Illinois Central* Court relied upon, how did the *Appleby* Court act in its own role as the Oracle of Delphi? Justice Taft stated that *Illinois Central* "was necessarily a statement of Illinois law." Huffman puzzles over this conclusion. Rather, *Illinois Central* relied on a vague, "settled law" throughout all states. What was that settled law?

*Appleby* presents a further twist. Today, both proponents and opponents of a broad public trust doctrine acknowledge that *Illinois Central* is the seminal decision, the "lodestar" in the field.

This is so principally because Professor Sax told us. Most subsequent writers, including the author of this article, agree. One just wishes Sax gave us further analysis. Yet, the *Appleby* Court relegated the *Illinois Central* decision to an almost footnote status merely thirty-four years later. Rather, Taft cited New York law in *Appleby* for the right of New York City to grant submerged sovereign lands. He took the inherent authority as a given: "Upon the American Revolution, all the proprietary rights of the Crown and Parliament in, and all their dominion over, lands under tidewater vested in the several states, subject to the powers surrendered to the National Government . . . ."

Frankly, the best analysis is Wilkinson's conclusion that *Illinois Central* confirmed a federal general public trust, which each state could modify to meet the unique needs of its jurisdiction and its people. The Supreme Court established this in 1977 as its modern rule in *Corvallis Sand & Gravel Co.*

No other major federal decisions addressed the public trust doctrine as applied to sovereign submerged lands until the doctrine crossed the Rubicon: the 1970 Sax article. Most commentators address the doctrine in its pre-Sax and post-Sax paradigms. Professor Sax drafted his article as "part of a
larger study [he was] making of citizen efforts to use the law in environmental-quality controversies.\textsuperscript{462} He concluded: "Of all the concepts known to American law, only the public trust doctrine \textit{seems to have} the breadth and substantive content \textit{which might make it useful} as a tool of general application for citizens seeking to develop a comprehensive legal approach to resource management problems."\textsuperscript{463}

In other words, he sought to implement an ancient legal doctrine in order to foster litigation to address modern environmental and natural resource issues. He was on a voyage of exploration, not making a map of known waters.

Sax cited three requirements to meet "[i]f that doctrine is to provide a satisfactory tool:"

1. "It must contain some concept of a legal right in the general public;"
2. "[I]t must be enforceable against the government;" and
3. "[I]t must be capable of an interpretation consistent with contemporary concerns for environmental quality."\textsuperscript{464}

As noted above, Sax stated the concept that the public trust sounds in property law is "dubious."\textsuperscript{465} He likewise questioned the strict application of historical antecedents, even though he did recite Roman and English law on the topic: "Certainly, the phrase "public trust" does not contain any magic such that special obligations can be said to arise merely from its incantation; and only the most manipulative of historical readers could extract much binding precedent from what happened a few centuries ago in England."\textsuperscript{466}

Nonetheless, Sax saw much promise in modern application of the public trust doctrine: "But that the doctrine contains \textit{the seeds of ideas} whose importance... might usefully promote needed legal development, can hardly be doubted."\textsuperscript{467}

Sax concluded that property law would impede the sovereign’s ability to re-allocate the resource.\textsuperscript{468} He expressed further concern that treating public trust lands as public property rights might subject the government to a takings claim if the government withdrew the right.\textsuperscript{469}

\textsuperscript{462} Sax, \textit{supra} note 354, at 473 n.1.
\textsuperscript{463} Id. at 474 (emphasis added) (citations omitted).
\textsuperscript{464} Id.
\textsuperscript{465} Id. at 484.
\textsuperscript{466} Id. at 485 (emphasis added).
\textsuperscript{467} Sax, \textit{supra} note 354, at 485 (emphasis added).
\textsuperscript{468} Id. at 482.
\textsuperscript{469} Id. at 478.
He explained that the doctrine is not substantive at all. Rather, he contended it is more of a useful tool as several states have used it:

[T]here is a great deal of ingenuity which courts can use . . . . A recognition of that potential is important . . . because it indicates that public trust law is not so much a substantive set of standards for dealing with the public domain as it is a technique by which courts may mend perceived imperfections in the legislative and administrative process. The public trust approach [that] has been developed . . . and the exercise in applying that approach to existing situations . . . demonstrate that the public trust concept is, more than anything else, a medium for democratization.

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Thus, the doctrine which a court adopts is not very important; rather, the court’s attitudes and outlook are critical. The “public trust” has no life of its own and no intrinsic content. It is no more—and no less—than a name courts give to their concerns about the insufficiencies of the democratic process.

At bottom, Sax’s public trust doctrine is not a talisman. Rather, it is but a tool.

Carol Rose’s article entitled *Joseph Sax and the Idea of the Public Trust* confirms Sax’s intent to revive and expand the public trust doctrine:

Until it was revived and re-invented by Sax, the doctrine held that some resources, particularly lands beneath navigable waters or washed by the tides, are either inherently the property of the public at large, or are at least subject to a kind of inherent easement for certain public purposes. Those purposes are foremost navigation and travel, to a lesser extent fishing, and lesser still recreation and public gatherings.

Rose also explains why Sax would not want the public trust to be explained as a property interest:

470. See id. at 509.
471. Id. at 509, 521.
473. Id. at 351.
There were good reasons for this, both as a general matter and for Sax's purposes in particular. First, a trust-based public property right would mean that the unorganized public could trump its own legislature's acts, implying that the public trust was some sort of an informal constitutional right, something certainly outside normal American legal practice. But for Sax, a second reason may have been more important: "He was most urgently concerned with extending and improving the public management of diffuse environmental resources."  

Rose infers that Sax "evidently" thought a property analysis would constrain legislative choices. She concludes that he likely wanted the legislatures to have the greatest flexibility in implementing the public trust in a myriad of modern scenarios.

As Lazarus notes, Professor Sax ultimately stated, one decade later, that the public trust doctrine is based on property law. Lazarus emphasizes that Sax's shift to acknowledging that the public trust doctrine is only sensible. "The doctrine is squarely rooted in property law." Lazarus explicates: "The trust doctrine originated with the notion of sovereign ownership of certain resources in trust for the sovereign's citizens. Controversies over the doctrine historically have concerned ownership boundaries and the existence of public access or easements. The Illinois Central opinion is replete with references to property law concepts."

Interestingly, Professor Sax wrote an article as STBR was pending that addressed this very issue in the context of that case. Sax stated that the mean high tide line demarcates the property boundary between beachfront littoral landowners and "seaward of that line is the state, a public landowner." This author did not find the words "public trust" in the recent Sax article. Rather, Sax contends: "The law is well settled that in its proprietary capacity the state is entitled to assert its ownership rights in the same

474. Id. at 357.
475. Id.
476. Id.
477. Lazarus, supra note 266, at 643 (citing Joseph L. Sax, Liberating the Public Trust Doctrine from Its Historical Shackles, 14 U.C. DAVIS L. REV. 185, 192-93 (1980)).
478. See id.
479. Id. at 642.
480. Id. n. 63 (citations omitted). Although, as noted, Illinois Central was replete with references to numerous legal doctrines, without pinning any one down.
482. Id. at 641-42.
483. See generally id.
way, and with the same vigor, as any other owner." 484 Sax emphasizes: "As a proprietor, it should be neither worse off nor better off than any other proprietor." 485 Nonetheless, Sax notes that only one amicus brief in STBR even raised the balance between the upland littoral property owner’s rights and the state’s property rights of lands seaward of the MHTL. 486

As Sax established Illinois Central as the “lodestar” public trust decision, 487 so he turns to a more recent Supreme Court decision to make his point on behalf of the state as proprietor, United States v. Mission Rock Co. 488 There, the Court upheld the state’s right to convey title lands to a third party who filled and “thereby cut[ ] off the littoral owner’s water access.” 489 The Court held the State could convey its tideland for any purpose for which it held the submerged parcel, “i.e., ‘in aid of commerce.’” 490 Interestingly, the Mission Rock Court cited Shively, not Illinois Central, as its principal authority a decade after the latter two decisions were issued. 491 Sax acknowledges that the result in Mission Rock was rather extreme. 492

Sax points to a scenario that is troubling to a sovereign proprietor, below MHTL (or MHWL, as it is known in Florida):

Another possible state proprietary claim could arise if—as the Florida Supreme Court found [In Walton County v. Stop the Beach Renourishment], the earlier loss of beach was caused by avulsion, and the public/private boundary did not move landward. In such an event, the foreshore between high and low tide (which formerly had been publicly owned and available for public use) would now be located entirely on land owned by the littoral proprietor and the public might not have a legal right of access to it. 493

Sax suggests that any public restoration could be done “assuming it could practically be [done] without also filling the littoral owner’s submerged land.” 494

484. Id. at 643.
485. Id. at 644.
486. Id. at 648.
487. Sax, supra note 354, at 489.
488. 189 U.S. 391 (1902); Sax, supra note 481, at 644.
489. Sax, supra note 481, at 644.
491. See id.
492. Id.
493. Id. at 651.
494. Sax, supra note 481, at 651.
Sax's acknowledgement that property law underlies the public trust doctrine raises a point mentioned both in his 1970 article and in the Illinois Central majority decision. What are the eminent domain implications where the state changes its mind? Justice Field mentioned that the state "ought to pay" for any "expenses incurred in improvements made under such a grant" that the state later repeals. Sax initially rejected property law underpinnings in part because of takings exposure if the state should change a public use to another purpose. The latter is a highly theoretical and unlikely scenario. The former, however, is not.

James Rasband addressed the takings issue in 1998. He argues that "compensation for [private] improvements is a small equitable price to pay for reversing the [allegedly] improvident . . . resource grants of the past." Rasband limits such claims to riparian and littoral uses that are authorized. He cites to Yates v. Milwaukee, which confirmed the common law riparian or littoral right to "wharf out" and build piers, wharves and other improvements on tidelands and submerged lands adjacent to [the riparian or littoral] property. Left unchanged in Illinois Central was Justice Harlan's holding below (while "riding the circuit") that the railroad could continue to use the portion of the harbor it had filled pursuant to the grant. Any littoral improvements could remain, as long as they did not interfere with public navigation.

Rasband states the Supreme Court's direction that the lower court on remand order removal of any littoral improvements that interfere with navigation was consistent with the 1869 act of conveyance. That act barred obstructions to the harbor or general navigation. Rasband notes that the Seventh Circuit on remand found the "piers did not interfere with navigation." Accordingly, there was no basis in Illinois Central for equitable takings compensation, both because the improvements remained and because

499. Id. at 405.
500. See id. at 342–43 n.51.
501. 77 U.S. (10 Wall.) 497 (1870).
502. Rasband, supra note 498, at 343 n.51.
505. See Rasband, supra note 498, at 342–43 n.51.
506. Id. (citing Ill. Cent. R.R. Co., 146 U.S. at 450).
507. Id. (citing Illinois ex rel. Hunt v. Illinois Cent. R.R. Co. 91 F. 955 (7th Cir. 1899)).
there would have been no compensable good faith reliance if piers were built in violation of the grant conditions.508

Rasband notes an additional and related limitation set out in Illinois Central. Where the grantee or its successor has in good faith so altered the trust property that it is no longer useful for trust purposes, the trust no longer burdens the parcel.509 The parcel vests in the private party free of any public proprietary claim.510 He states this was the correct result in Illinois Central regarding the piers that the railroad built in good faith "reliance on the 1869 grant."511

The most significant Supreme Court public trust decisions between Appleby and STBR were Oregon ex rel. State Land Board v. Corvallis Sand & Gravel Co. and Phillips Petroleum Co. v. Mississippi.512 We discussed Corvallis above. That decision confirmed the sovereign right of each state to alter its sovereign lands standards once it achieves statehood.513 Nonetheless, Illinois Central seems to provide a general backstop. While the state may convey sovereign lands, it cannot abrogate its public trust obligations.

Phillis Petroleum was a quiet title action that concerned nonnavigable tidal wetlands several miles upriver of the Gulf Coast.514 The case had a bizarre background. It originated in a 1973 Mississippi legislative directive to the state's marine resources council to map the state-owned wetlands.515 The council staff identified the wetlands at issue, and the state's Mineral Lease Commission drafted a proposed lease.516 So, the state was in the ironic position of asserting title to exploit, rather than to protect the wetlands.517

The record showed that the parcel was non-navigable, but tidally influenced when Mississippi was granted statehood.518 Phillips asserted the public trust extended to all tidally influenced navigable waters and underlying lands at statehood.519 It claimed that sovereign boundary ended at the mean

508. Id. at 342-43.
509. See Rasband, supra note 498, at 396.
510. Id. at 395 (citing Illinois v. Ill. Cent. R.R. Co., 33 F. 730, 775-76 (C.C.N.D. Ill. 1888)).
511. See id. at 342-43 n.51.
516. Id.; Phillips Petroleum Co., 484 U.S. at 472.
517. Cinque Bambini P'ship, 491 So. 2d at 511.
519. Id. at 478-79.
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High water line. Mississippi countered that it took title to all lands underlying all tidally influenced waters that had not been conveyed expressly when Mississippi became a state in 1817. The state's right to the oil lease income from the wetlands hung in the balance.

The Supreme Court cited Shively in holding that the public trust covered all tidelands. The ebb and flow test was not limited by the mean high water line. The majority stated that the English crown owned all tidal waters, and each of the original thirteen states had the right to claim all tidal lands. Some original states' decisions to reduce the scope of sovereign lands only confirmed their ability to choose their own public trust doctrines. A vigorous dissent countered that this was an issue of first impression. The dissent argued that navigability was the limiting factor, as it was the key to all common law public trust cases and treatises of consequence in England and the United States.

Austin explains that the Phillips majority completely misunderstood Shively. The Shively Court considered title in an entirely navigable area of the lower Columbia River. Therefore, "the Court never alluded to the trust's role in nonnavigable areas."

Austin notes that the Shively Court stated that "the title and dominion in [English] lands flowed by the tide water were in the King for the benefit of the nation." The Phillips majority focused on the Shively Court's statement that such tidewater rights "passed to the states." As Austin mentions, the Phillips majority contended this was a "sweeping" acknowledgment of the extent of sovereign submerged lands.

Austin concludes that the Phillips majority misread Shively. The Shively Court focused on the public trust in terms of waters' use "for highways of navigation and commerce, domestic and foreign, and for the purpose

520. Id. at 472–73.
521. Id. at 472.
522. Id.
524. Id. at 480.
525. Id. at 478.
526. Id. at 475–76.
527. Id. at 485 (O'Connor, J., dissenting).
529. Austin, supra note 297, at 967, 995–97.
530. Id. at 995 (citing Shively v. Bowlby, 152 U.S. 1, 8 (1894)).
531. Id.
532. Id. (quoting Shively, 152 U.S. at 57).
533. Id.
534. Austin, supra note 297, at 995.
535. Id.
of fishing by all the King’s subjects.” Moreover, Shively cited both Genesee and the English common law for the proposition that the ebb and flow test was merely a “convenient” navigability test in coastal jurisdictions.

Austin helpfully provides a long list of Supreme Court decisions that support the limitation of the navigability for title test. Martin and Barney were among several pre-Shively decisions. Many decisions, including one the year before Phillips, referred to navigability alone and stated the trust purpose was to protect navigation, commerce, and fishing.

At this point, I want to clarify a point from my own 1989 article on the public trust doctrine in Florida. The published text states that Phillips “confirmed the extent of the state sovereignty title to tidal lands under non-navigable waters.” That sentence was added in the editing process. An errata sheet stated that Phillips only provided for the possible maximum extent of such lands. Florida’s Constitution then limited, and still limits, public trust lands to those lying below the mean high water line. Therefore, Phillips is the Supreme Court’s most current statement of the extent of submerged sovereign lands in tidal waters upon statehood. It does not bind forever each state, as we know from Corvallis. Further, the Phillips majority decision is itself contrary to the manifest precedent of the Court.

One further point is necessary to clarify the states’ sovereign rights in coastal waters. The Supreme Court’s 1947 decision in United States v. California settled a debate between the states and the federal government regarding who owned the ocean bottom along the coasts. The Court held that the federal government owned the territorial seas. This undermined the various coastal states’ claims to the first three miles of the coastal waters. Congress undid the 1947 decision by awarding the coastal states ownership to submerged lands and resources up to three miles offshore in the Sub-

536. Shively, 152 U.S. at 11.
537. Id. at 34.
538. See Austin, supra note 297, at 991–97.
539. Id. at 993 n.238 (citing, inter alia, Barney v. Keokuk, 94 U.S. 324, 338 (1876); Martin v. Lessee of Waddell, 41 U.S. 367, 407 (1842)).
540. Austin, supra note 297, at 997 (citing, inter alia, Utah Div. of State Lands v. United States, 482 U.S. 193 (1987)).
541. Ansbacher & Knetsch, supra note 336, at 369.
542. FLA. CONST. art. X, § 11.
545. Id. at 41.
546. Id. at 40.
merged Lands Act of 1953.\textsuperscript{547} Congress simultaneously passed the Outer Continental Shelf Lands Act of 1953,\textsuperscript{548} which codified federal jurisdiction beyond three miles and established procedures for developing resources in the federal jurisdiction.\textsuperscript{549} Additionally, the state owned lands remain subject to the federal navigational servitude.\textsuperscript{550}

VIII. NAVIGABILITY FOR REGULATORY PURPOSES

One cannot segregate sovereign submerged lands law from its primary purpose—protecting the navigational servitude for the public. William Sapp, \textit{et al.}, drafted a useful outline entitled \textit{The Float a Boat Test: How to Use It to Advantage in This Post-Rapanos World} for a 2009 ALI-ABA seminar.\textsuperscript{551} They noted three different lines of federal navigability decisions: 1) Commerce Clause; 2) Admiralty; and 3) Submerged Title.\textsuperscript{552}

They further delineated Commerce Clause decisions into: a) Commercial regulation; b) Federal Power Act; c) Rivers and Harbors Act; and d) Navigational Servitude.\textsuperscript{553}

The Commerce Clause of the United States Constitution grants Congress the power to regulate navigable waters.\textsuperscript{554} Additionally, Congress may regulate non-navigable waters that affect navigation.\textsuperscript{555} Navigable servitude may be traced back to Rome. We discussed Justinian’s\textsuperscript{556} and Spain’s\textsuperscript{557} edicts that navigable or perennial waters were held by the Crown for the public use.\textsuperscript{558} England differentiated between Crown ownership and public right of navigation.\textsuperscript{559} As stated above,\textsuperscript{560} the predominant strain of English com-

\begin{itemize}
  \item \textsuperscript{547} Submerged Lands Act, ch.65, 67 Stat. 29 (1953) (codified as amended at 43 U.S.C. §§ 1301–1315 (2006)).
  \item \textsuperscript{549} \textit{Id.}
  \item \textsuperscript{550} \textit{Id.}
  \item \textsuperscript{551} William W. Sapp \textit{et al.}, \textit{The Float a Boat Test: How to Use It to Advantage in This Post-Rapanos World}, 38 ENVTL. L. REP 10439, 10439 (2008).
  \item \textsuperscript{552} \textit{Id.} at 10444.
  \item \textsuperscript{553} \textit{Id.} at 10444–47.
  \item \textsuperscript{554} U.S. CONST. art. I, § 8, cl. 3.
  \item \textsuperscript{555} U.S. CONST. art. I, § 8, cl. 3. \textit{But see}, MacGrady, \textit{supra} note 290, at 593 (citing various decisions holding that the federal authority to regulate navigation is based on the: Treaty Clause, U.S. CONST. art. II, § 2; War Powers Clause, U.S. CONST. art. I, § 8; General Welfare Clause, U.S. CONST. art. I, § 8; and Public Property Clause, U.S. CONST. art. IV, § 3).
  \item \textit{See also} Ansbacher and Knetsch, \textit{supra} note 336, at 339.
  \item \textsuperscript{556} J. INST. 2.1, \textit{supra} note 223.
  \item \textsuperscript{557} Wescoat, \textit{supra} note 235, at 453–54 and accompanying text.
  \item \textsuperscript{558} J. INST. 2.1 \textit{supra} note 223; Wescoat, \textit{supra} note 235, at 453–54.
  \item \textsuperscript{559} \textit{See} Ball, \textit{supra} note 11, at 9.
\end{itemize}
mon law authority limited Crown ownership to lands underlying navigable, tidally influenced waters. 561

Austin does an admirable job of compiling authority showing that tidal influence was *prima facie* evidence establishing a public navigational influence in common law England. 562 Austin cites *Mayor of Colchester v. Brooke.* 563

"It cannot be disputed that the channel of public navigable rivers is properly described as a common highway . . . and there is no one circumstance which more decisively affixes on a river the character of being public and navigable in this sense of a highway than the flow and reflow of the tide in it." 564

Austin cites multiple common law decisions where tidal rivers were determined nonnavigable by the public. 565 Austin notes a later English decision that "clarified" that navigable rivers for title purposes—and presumably for navigation—were tidal. 566

The Supreme Court of the United States language in *United States v. Appalachian Electric Power Co.* 567 exhibits the sweeping navigational powers of the federal government:

The state and [private riparian landowners], alike . . . , hold the [navigable] waters and the lands under them subject to the power of Congress to control the waters for the purpose of commerce. The power flows from the power to regulate, i.e., to "prescribe the rule by which commerce is to be governed." This includes the protection of navigable waters in capacity as well as use. . . . The Federal Government has domination over the water power inherent in the flowing stream. It is liable to no one for its use or non-use. The flow of a navigable stream is in no sense private property;

560. Id. and accompanying text.
561. See HUMPHRY W. WOOLRYCH, A TREATISE OF THE LAW OF WATERS: OF THE CROWN TO THE LAND BETWEEN HIGH AND LOW WATER MARK 65 (1853) ("[T]he soil of ancient navigable rivers, where there is a flux and reflux of the sea, belongs to the Crown . . . .").
562. See Austin, *supra* note 297, at 985–86.
566. Id. at 986 n.186 (citing Murphy v. Ryan, (1868) 2 Ir. R.-C.L. 143 (1868) (holding that navigable title required tidal influence). Austin also goes on to note that non-tidal waters are *prima facie* private, but can be deemed navigable by prescriptive right. Id. at 986.
567. 311 U.S. 377 (1940).
“that the running water in a great navigable stream is capable of private ownership is inconceivable.” Exclusion of riparian owners from its benefits without compensation is entirely within the Government’s discretion.\textsuperscript{568}

\textit{Gibbons v. Ogden}\textsuperscript{569} was the landmark federal navigational servitude decision.\textsuperscript{570} \textit{Gibbons} held that the Commerce Clause regulated interstate navigation.\textsuperscript{571} The Court held that the federal navigational servitude mandated free navigation:

The power over commerce, including navigation was one of the primary objects for which the people of America adopted their government, and must have been contemplated in forming it.

\ldots

\ldots

[D]eep streams . . . pass through . . . almost every State in the Union, and furnish the means of exercising this right [to regulate commerce]. If Congress has the power to regulate it, that power must be exercised whenever the subject exists.\textsuperscript{572}

The \textit{Gibbons} Court therefore upheld a steamboat license that conflicted with Robert Fulton’s (yes—\textit{that} Robert Fulton)\textsuperscript{573} and Robert Livingston’s exclusive, statewide steamboat rights granted by the State of New York.\textsuperscript{574} Dayton states: “The monopolistic grants by the states to Fulton and [Livingston] did much to delay the introduction of steamboats.”\textsuperscript{575} The state allowed them to seize any steamboat that any person attempted to operate without their exclusive license.\textsuperscript{576} The state even allowed them to collect a penalty.\textsuperscript{577} New Jersey passed responsive protectionistic legislation for its own steam-
boat operators on the Hudson. \(578\) Gibbons obtained a federal "coasting license" under which he ran his steamboat back and forth between New Jersey and New York. \(579\) When New York courts ruled in favor of the monopoly, the Supreme Court was asked to intercede. \(580\) Justice Marshall wrote the opinion upholding the navigational servitude, adopting much of the argument of Daniel Webster. \(581\)

Austin continues his thorough explication of tidal issues in navigability in analyzing early American authority concerning the "ebb and flow test." \(582\) He cites text in the seminal Commentaries on American Law, written in 1832 by James Kent, later published in 1873. \(583\) Quoting Kent, Austin wrote in turn:

> It is a [well] settled principle of the English common law, that the right of soil owners . . . bounded by the sea, or on navigable rivers, where the tide ebbs and flows, extends to [the] high-water mark . . . .

> . . .

> [I]n the common law sense of the term, . . . [the River Banne] only [was] deemed navigable in [the portion in] which the tide ebbed and flowed . . . .

> . . .

> [N]o rivers are deemed navigable . . . except those where the tide ebbs and flows. \(584\)

Kent's restatement of English common law was consistent with early Supreme Court authority. In *The Steam-Boat Thomas Jefferson*, \(585\) the Supreme Court held that federal courts lacked jurisdiction in admiralty over a claim for boatsman wages in the nontidal Missouri River. \(586\) The Court held

\[\text{References:}\]
\(578.\) *Id.* at 75.
\(579.\) *Id.* at 86.
\(580.\) *Id.* at 186.
\(582.\) *Austin, supra note 297*, at 988.
\(583.\) *Id.* (discussing 3 JAMES KENT, COMMENTARIES ON AMERICAN LAW 427 (O.W. Holmes, Jr. ed., Fred B. Rothman & Co. 12th ed. 1929) (1828)).
\(584.\) *Id.* (quoting *Kent, supra note 583*, at 540, 545, 558).
\(586.\) *Id.* at 428.
that federal maritime law concerned only the open ocean or tidal waters. The Court continued its narrow interpretation and ruled similarly in Steamboat Orleans v. Phoebus.

The Court shifted and dramatically expanded course in Propeller Genesee Chief v. Fitzhugh. Chief Justice Taney pronounced the ebb and flow test inadequate to the United States. He stated the test made sense in England, where virtually all navigable streams were tidally influenced. He concluded that the driving factor was navigability, not ebb and flow:

In England, therefore tide-water and navigable water [were] synonymous terms, and tide-water, with a few small and unimportant exceptions, meant nothing more than public rivers, as contradistinguished from private ones; and [English courts] took the ebb and flow of the tide as the test, because it was a convenient one, and more easily determined the character of the river. Hence the established doctrine in England, that the admiralty jurisdiction is confined to the ebb and flow of the tide. In other words, it is confined to public navigable waters.

Accordingly, Genesee extended admiralty—and, practically all navigability tests under federal law to navigable, nontidal waters.

The next major decision was Daniel Ball, which addressed a federal obligation that interstate steamship operators obtain a license to ply their trade. This was the logical extension of Gibbons. A steamship operator who plied solely between Grand Haven and Grand Rapids, Michigan, claimed the requirement did not apply to him. The Supreme Court rejected the argument, and created the susceptibility test for navigation:

[R]ivers must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may

587. Id. at 429.
588. 36 U.S. (11 Pet.) 175, 184 (1837).
590. Id. at 453, 455–56.
591. Id. at 454–55. But see MacGrady, supra note 284, at 570.
593. Id. at 456–58.
595. Id. at 564–65.
be conducted in [their] customary modes of trade and travel on wa-
ter.\textsuperscript{596}

The Supreme Court in \textit{United States v. Steamer Montello},\textsuperscript{597} expanded the navigability test from \textit{Daniel Ball}.\textsuperscript{598} The defense in \textit{The Montello} stated that a stretch of the Fox River in Wisconsin was so populated with rapids and waterfalls that it was incapable of interstate commerce.\textsuperscript{599} The Court found that canoes had navigated the river from the time Europeans had been in the area.\textsuperscript{600} The Court held that the \textit{mode} of transport did not affect navigability.\textsuperscript{601} Rather, the key was that \textit{any} transport was possible.\textsuperscript{602}

The capability of use by the public for purposes of transportation and commerce affords the true criterion of the navigability of a river, \textit{rather than the extent and manner of that use}. If it be capa-
ble in its natural state of being used for purposes of commerce, no
matter in what mode the commerce may be conducted, it is navig-
able in fact, and becomes in law a public river or highway.\textsuperscript{603}

Two years after the \textit{Montello} decision, and five years after the \textit{Daniel Ball} decision, the Supreme Court of the United States issued an opinion discussed above regarding the public trust title in \textit{Barney v. Keokuk}.\textsuperscript{604} We mention \textit{Barney} here because the Court applied the \textit{Genessee} test in extend-
ing the public trust far above tidal waters to a port located on the Mississippi, in the southeastern corner of Iowa.\textsuperscript{605}

Austin emphasizes the lineage in the following passage:

\begin{quote}
Since this court [declared in \textit{Genessee}] that the Great Lakes and other navigable waters of the country, above as well as below the tide, are, in the strictest sense, entitled to the denomination of navigable waters, and amenable to admiralty jurisdiction, there
\end{quote}

\begin{itemize}
\item\textsuperscript{596} \textit{Id.} at 563 (emphasis added).
\item\textsuperscript{597} 87 U.S. (20 Wall.) 430 (1874).
\item\textsuperscript{598} \textit{Id.} at 441–42.
\item\textsuperscript{599} \textit{Id.} at 439–40.
\item\textsuperscript{600} \textit{Id.} at 440.
\item\textsuperscript{601} \textit{Id.} at 441.
\item\textsuperscript{602} \textit{The Montello}, 87 U.S. (20 Wall.) at 441.
\item\textsuperscript{603} \textit{Id.} at 441–42 (emphasis added).
\item\textsuperscript{604} Austin, \textit{supra} note 297, at 970–71 (discussing \textit{Barney v. Keokuk}, 94 U.S. 324 (1876)).
\item\textsuperscript{605} \textit{Barney} 94 U.S. at 338–39; Austin, \textit{supra} note 297, at 970–71.
\end{itemize}
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seems to be no sound reason for adhering to the old rule as to the proprietorship of the beds and shores of such waters.606

Barney followed Genessee’s conclusions that navigability drove the English ebb and flow test.607 Austin cites various earlier Supreme Court decisions that Barney relied upon, all of which “reinforce the view that navigability is the sole measure of the tidelands trust.”608

The navigational servitude is a federal easement that seeks to protect public waterways.609 It has been interpreted to allow federal waterway improvements without having to compensate adjacent riparian or littoral owners under the Takings Clause.610 In Goodman v. City of Crystal River,611 the United States Middle District of Florida held that historic canoe and small craft traffic established a federal navigational servitude granting public access to swim with the manatees overlying the Goodmans’ privately held lands at Three Sisters Springs off of the lower Crystal River.612

In Kaiser Aetna v. United States,613 and the companion decision of Vaughn v. Vermillion Corp.,614 the Supreme Court held that navigability for public servitude purposes does not flow into waterways that are built on private property with private funds.615 The Court noted that a servitude would be imposed if the waterway had been navigable for title purposes.616

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606. Austin, supra note 297, at 992 n.236.
610. Id. at 1472 n.6 (citing Murphy v. Dep’t of Natural Res., 837 F. Supp. 1217, 1221 (S.D. Fla. 1993).
611. 669 F. Supp. 394 (M.D. Fla. 1987) (By way of full disclosure, I represented the Goodmans at a later time concerning the same body of water and the same parcel.).
612. Id. at 401–02. See United States v. Cherokee Nation of Okla., 480 U.S. 700, 704 n.3 (1987); J.W. Looney & Steven G. Zraick, Of Cows, Canoes, and Commerce: How the Concept of Navigability Provides an Answer If You Know Which Question to Ask, 25 U. Ark. Little Rock L. Rev. 175, 188 (2002) (My favorite title goes to this piece from Dean Looney, whom I clerked for at the University of Arkansas); Charles A. Shafer, Public Rights in Michigan’s Streams: Toward a Modern Definition of Navigability, 45 Wayne L. Rev. 9, 22–24 (1999); Russell A. Austin, Jr. & Ralph W. Johnson, Recreational Rights and Titles to Beds on Western Lakes and Streams, 7 Nat. Resources J. 1, 14 n.65 (1967).
615. Id. at 208–10; Kaiser Aetna, 444 U.S. at 179–80.
616. See Kaiser Aetna, 444 U.S. at 186.
Wilkinson questions the Court's analysis.\footnote{See Wilkinson, supra note 438, at 463 n.162.} He contrasts the navigational servitude, which holds that the federal government owes no takings compensation when it improves waterways that are navigable by the public, with the public trust.\footnote{Id.} He notes the public trust "has traditionally been used to protect the public's right of access to navigable watercourses."\footnote{Id.}

Wilkinson emphasizes that "the opinions have not always precisely distinguished among the three distinctive rules that apply to watercourses [that are] navigable for title."\footnote{Id.}

**IX. SOVEREIGN LANDS BOUNDARIES**

The navigable for title test combines with the various regulatory navigability standards to mandate a clearly understood boundary of sovereign lands. While *Corvallis Sand & Gravel Co.* confirmed each state's ability to alter the definition of, but not abrogate obligations over, sovereign submerged lands, there are currently two separate Supreme Court standards for the boundaries of sovereign lands when each state achieves statehood.\footnote{See *Phillips Petroleum Co.* v. Mississippi, 484 U.S. 469, 476 (1988); *Oregon ex rel. State Land Bd.* v. *Corvallis Sand & Gravel Co.*, 429 U.S. 363, 377 (1977); *Barney v. Keokuk*, 94 U.S. 324, 336–37 (1877).} Under *Phillips Petroleum Co.*'s bare majority decision, sovereign lands extended under all tidally influenced waters.\footnote{Phillips Petroleum Co., 484 U.S. at 476.} Under *Barney*, the boundary of sovereign submerged lands under nontidal waters was delineated by actual navigability at the time of statehood.\footnote{Barney, 94 U.S. at 338.} So let us discuss these categories in turn.

**A. Tidal Boundaries**

As stated in section VI, the Supreme Court majority in *Phillips Petroleum Co.* appears to be contrary to the weight of historical authority. Justinian's Code stated that Roman law provided that "[t]he sea-shore extends to the highest point reached by the waves in winter storms."\footnote{J. Inst. 2.1.3, supra note 223.} English com-
common law, as early as chapter twenty-three of the Magna Carta\textsuperscript{625} and Bracton\textsuperscript{626} through Digges\textsuperscript{627} and onto Hale\textsuperscript{628}; commentators from multiple decisions show that sovereign tidelands lay under navigable waters.

Austin cites a strain of English common law authority connecting navigability and tidality.\textsuperscript{629} He notes: "Where [English] authorities did not directly express a connection between navigability and tidality, they frequently spoke in terms of navigability alone."\textsuperscript{630} He acknowledges that "[i]t is not clear why the common law linked navigability and tidal influence when delineating submerged bed ownership."\textsuperscript{631}

Thomas Digges stated generally that the lands that Queen Elizabeth I claimed as foreshore lay between high and low tides.\textsuperscript{632} Nonetheless, he did not explain how to legally measure the tidal boundaries the Queen claimed.\textsuperscript{633}

Lord Chief Justice Matthew Hale’s \textit{De Jure Maris} tried to explicate the foreshores.\textsuperscript{634} He stated that the foreshore is overflowed by "[o]rinary tides or neap tides, which happen between the full and change of the moon."\textsuperscript{635} Cole states that one knows today that Hale’s equating "neap" and "ordinary" tides was at least ambiguous, and at most incorrect.\textsuperscript{636} He does not, however, explain why.\textsuperscript{637}

The neap tide is the weakest tide, which occurs twice per lunar cycle when gravitational pulls of the sun and moon are at right angles to each other.\textsuperscript{638} Neap tides occur at quarter moons.\textsuperscript{639} Neap tides are the opposite of

\textsuperscript{625}. See \textit{Magna Carta} ch.23 (William Sharp McKechnie trans., MacMillan 1905) (1225).
\textsuperscript{627}. See generally Digges, \textit{supra} note 287.
\textsuperscript{628}. See generally Hale, \textit{supra} note 301.
\textsuperscript{629}. Austin, \textit{supra} note 297, at 983–86; Digges, \textit{supra} note 87, at 183.
\textsuperscript{630}. Austin, \textit{supra} note 297, at 984.
\textsuperscript{631}. \textit{Id.} Austin makes a factual error, however, in stating: "As a matter of policy, the difference between navigable freshwater and navigable tidewater is difficult to see." \textit{Id.} Tidal influence occurs more commonly near the sea, but tides often affect waters well into freshwater rivers. For example, the St. Johns River in Florida is tidally influenced many miles upriver of any salt water.
\textsuperscript{633}. \textit{Id.} at 166.
\textsuperscript{634}. \textit{Id.; see also} Hale, \textit{supra} note 301.
\textsuperscript{635}. Hale, \textit{supra} note 301, at 393.
\textsuperscript{636}. \textit{Id.}
\textsuperscript{637}. \textit{See} Cole, \textit{supra} note 663, at 166.
\textsuperscript{639}. \textit{Id.}
Spring tides, which occur when the Earth, sun and moon align. Spring tides occur during the full moon and the new moon. Newton first explained our modern notion of the lunar tides in his 1687 *Principia*, two decades too late to be of any use to Hale.

*Attorney-General v. Chambers* is the English common law decision that is most cited for establishing the sovereign tidal boundary. Nonetheless, the decision established a "somewhat imprecise" definition of the boundary at the medium or ordinary high water mark:

This point of the shore, therefore, is about four days in every week—that is, for the most part of the year—reached and covered by the tides . . . . [T]he average of these medium tides, in each quarter of a lunar revolution during the . . . year, gives the limit . . . to the rights . . . .

. . . .

The line of the medium high tide between the springs and the neaps; all land below that line is more often than not covered at high water, and so may justly be said, in the language of LORD HALE, to be covered by the ordinary flux of the sea. This cannot be said of any land above that line . . . .

Modern surveyors have complained of numerous problems caused by the amorphous definition established by Philpott, Hale, and Chambers. McGlashan et al., note that different passages in *Chambers* recommended measurements over a week and over a quarter of an annual lunar revolution. This "could result in substantial differences in the tidal heights being used to define the foreshore boundaries."

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640. *Id.*
645. *Id.* at 187.
648. *Id.* at 187.
Surprisingly, the courts in the United States did not revisit the topic until 1935. I say surprisingly because of the presumption from the nation's birth that all lands below the high tide mark are owned by the sovereign. First the federal government, and then, at statehood, the respective state. One supposes quite reasonably, that the confusion and debate over tidal boundaries in *Phillips Petroleum* would not have occurred had the courts of the United States addressed the specific tidal boundaries when announcing repeatedly the primacy of sovereign ownership.

In 1935, the Supreme Court accepted the statistically determined mean high tide as the modern, substantial equivalent of the ordinary or medium high water mark:

In view of the definition of the mean high tide, as given by the United States Coast and Geodetic Survey, that "[m]ean high water at any place is the average height of all the high waters at that place over a considerable period of time," and the further observation that "from theoretical considerations of an astronomical character" there should be "a periodic variation in the rise of water above sea level having a period of 18.6 years," the Court of Appeals directed that in order to ascertain the mean high tide line with requisite certainty in fixing the boundary of valuable tidelands, such as those here . . . . We find no error in that instruction.

As Cole notes, this remains the general standard in the United States for determining the mean high tide or medium high water line. Cole states that Spanish and Mexican grants confirmed in the American State Papers have been held to tidal limits that differ from the medium high tide or water line:

In Spanish and Mexican grants, for example, it has been held that the limit of ownership is controlled by old Spanish law contained in *Las Siete Partidas*, written in the thirteenth century and tracking the *Roman Institutes of Justinian*, written in the sixth century. A translation of a portion of that code reads as follows: "The seashores, that is, the shore as far as the waves go at the furthest, was

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650. *Id.* at 31 (citations omitted).
considered to belong to all men. . . . The sea shore extends as far as the greatest winter flood runs up.”

Borax retains great significance in states, such as Florida, which adopt the mean high water line as the tidal boundary. Phillips Petroleum’s surprising holding that tidality trumps navigability limits Borax’s impact in other coastal states. We should note that a minority of coastal states follow the Massachusetts rule—that state and several others who follow it still use the Colonial Ordinance Standard. The 1648 Ordinance set the private boundary at the low water mark but no more than one hundred rods (1650 feet) beyond the high water mark. Additionally, Louisiana follows the Roman civil law by using the “highest winter tide” as the boundary. Louisiana is not limited by navigability. Hawaii’s laws are unique. Its upper reach of the wash of the waves standard is not based on civil law. Rather, it is allegedly derived by royal patents from King Kamehameha V.

B. Non-Tidal Water Boundaries

The sovereign submerged boundaries are often more difficult to determine in nontidally influenced waters. Borax confirms that the 18.6 year tidal “epoch” can establish mean high tide or mean high water. At worst, this requires a surveyor to determine mean high tide by extrapolating from the two closest tidal datum stations. This becomes trickier in inland tidally influenced waters, but the surveyor still has the datum stations as some, al-

652. Cole, supra note 632, at 167 (quoting J. Inst. 2.1.8, supra note 223) (citing Luttes v. State, 324 S.W.2d 167, 176 (Tex. 1958)).
654. Id. at 169–70.
655. Id. at 4.
658. Application of Ashford, 440 P.2d 76, 77 (Haw. 1968) (citing Keelilikolani v. Robinson, 2 Haw. 514 (Haw. 1862)). The upper reach of the waves rule has been declared unconstitutional in at least one federal decision, Sotomura v. Cnty. Of Haw., 460 F.Supp. 473 (D. Haw. 1978), which held that the high water mark was the actual, historical shoreline boundary, but Hawaii continues to follow it.
beit attenuated, baseline. Conversely, navigability title in non-tidally influenced waters requires a much trickier analysis.

The Supreme Court in *Howard v. Ingersoll* addressed the proper location of the riverline border between Georgia and Alabama. The 1802 Treaty of Cession between the United States and Georgia, and treaty language ceding Alabama, stated the border lay along "the western bank of the Chattahoochee River." The majority opinion in *Howard* held that the "bank" was that water line on the high banks "where the action of the water has permanently marked itself upon the soil." Justice Curtis' concurring opinion stated that the bank is neither the high nor low water mark. Rather, it is the clearest line of water on the bank. Justice Nelson dissented, and Justice Grier joined. Nelson stated that the higher bank precluded Alabama's use of the waters of the river for hydraulic purposes. The dissent raised further concerns that high water would extend the river banks by a mile inland from a low water mark.

Even though no other justices joined in Curtis' concurrence, it "has been the one [test] most frequently cited:"

This line is to be found by examining the bed and banks, and ascertaining where the presence and action of water are so common and usual, and so long continued in all ordinary years, as to mark upon the soil of the bed a character distinct from that of the banks, in respect to vegetation, as well as in respect to the nature of the soil itself. Whether this line . . . will be found above or below, or at a middle stage of water, must depend upon the character of the stream.

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662. 54 U.S. (13 How.) 381 (1851).
663. *Id.* at 397–98.
664. *Id.* at 413.
665. *Id.* at 417.
666. *Id.* at 427 (Curtis, J., concurring).
668. *Id.* at 419, 426 (Nelson, J. & Grier, J., dissenting).
While Curtis did not use the term, the non-tidal boundary is called today the Ordinary High Water Line, or the OHWL. Maloney notes that “the determination of the OHWL is as confused as it is important.” Ansbacher and Knetsch note that non-tidal waters do not flow cyclically, as do tidal waters. Surveyors must use various physical characteristics to determine the OHWL. These include “water level records, vegetation evidence, geomorphological evidence, and soil classification.”

The most common definition used is from the Minnesota Supreme Court:

[The] high-water mark, as a line between a riparian owner and the public, is to be determined by examining the bed and banks, and ascertaining where the presence and action of the water are so common and usual, and so long-continued in all ordinary years, as to mark upon the soil of the bed a character distinct from that of the banks, in respect to vegetation, as well as respects the nature of the soil itself.

One comprehends readily that the Carpenter test works well where streams are well defined. One comprehends just as readily that the test does not adapt well in the limpid swamps conditions described by Justice Nelson’s dissent in Howard. We see below, in Section X, that it does not suit well the conditions of much of inland Florida.

X. RIPARIAN AND LITTORAL RIGHTS

The property lying alongside a navigable waterbody carries appurtenant rights to that waterbody. These rights are known as “riparian” when the water is riverine, and “littoral” when the waterbody is a pond, lake or sea. Justice Field’s majority opinion in Illinois Central described riparian rights:

The riparian proprietor is entitled, among other rights, as held in Yates v. Milwaukee, to access to the navigable part of the water on the front of which lies his land, and for that purpose to make a

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673. See Maloney et al., supra note 659, at 707.
674. Id.
675. Ansbacher & Knetsch, supra note 336, at 362.
676. Id.
677. Id. (citations omitted).
678. Tilden v. Smith, 113 So. 708, 712 (Fla. 1927) (quoting Carpenter v. Bd. of Comm’rs, 58 N.W. 295, 297 (Minn. 1894)).
landing, wharf or pier for his own use or for the use of the public, subject to such general rules and regulations as the legislature may prescribe for the protection of the rights of the public. In the case cited the court held that this riparian right was property and valuable; and though it must be enjoyed in due subjection to the rights of the public, it could not be arbitrarily or capriciously impaired.\textsuperscript{681}

Justice Peckham stated in \textit{St. Anthony Falls Water Power Co. v. St. Paul Water Commissioners}:\textsuperscript{682}

The rights which thus belong to [a] riparian owner of the abutting premises [are] valuable property rights, of which he could not be divested without consent, except by due process of law, and, if for public purposes, upon just compensation.\textsuperscript{683}

Justice Peckham noted in \textit{Weems Steamboat Co. of Baltimore v. People's Steamboat Co.}\textsuperscript{684} that each state establishes the specific riparian rights and obligations in its jurisdiction: "The rights of a riparian owner upon a navigable stream in this country are governed by the law of the State in which the stream is situated."\textsuperscript{685}

Nonetheless, "These rights are subject to the paramount public right of navigation."\textsuperscript{686} \textit{Weems} reiterated that a private riparian has "property the exclusive use of which the owner can only be deprived in accordance with established law, and if necessary that it or any part of it be taken for the public use due compensation must be made."\textsuperscript{687}

As stated above, riparian or littoral rights are not unconditional. Justice Gray stated in \textit{Shively} that the riparian owner must utilize his or her rights consistently with the public rights below the high water mark:

In England, from the time of Lord Hale, it has been treated as settled that the title in the soil of the sea, or of arms of the sea, below ordinary high water mark, is in the King, except so far as an individual or a corporation has acquired rights in it by express grant, or by prescription or usage . . . .

\textsuperscript{681} \textit{Ill. Cent. R.R. Co.}, 146 U.S. at 445–46 (citation omitted).
\textsuperscript{682} 168 U.S. 349 (1897).
\textsuperscript{683} \textit{Id.} at 368 (quoting Brisbine v. St. Paul & Sioux City R.R. Co., 23 Minn. 114, 130 (1876)).
\textsuperscript{684} 214 U.S. 345 (1909).
\textsuperscript{685} \textit{Id.} at 355.
\textsuperscript{686} \textit{Id.}
\textsuperscript{687} \textit{Id.} at 355–56.
By the law of England, also, every building or wharf erected, without license, below high water mark, where the soil is the King’s, is a purpresture, and may, at the suit of the King, either be demolished, or be seized and rented for his benefit, if it is not a nuisance to navigation. 688

We cited multiple early Supreme Court decisions above, in Section II-C, that held a state cannot impair the obligations of contract by repeal or other substantial impingement on private rights. This includes a government’s act that impairs vested property rights held under government grant or charter. 689 Nonetheless, riparian rights are like any other in being held subject to the government’s policy power and right of eminent domain. 690

XI. OWNERSHIP OF LANDS INFLUENCED BY ACCRETION, AVULSION, RELICTION, AND EROSION

We discuss accretion in Section IV, above. Rome generally allowed riparian owners to take accretions that were added gradually to their parcels. 691 Common law is the same today. 692 Gradual additions of soils due to such actions as imperceptible shifting of stream channels vest the additional soils to the benefited riparian parcel. 693 Conversely, erosion changes boundaries in favor of the sovereign submerged lands. 694 Nonetheless, Sax wrote a recent article that explicated thoroughly the development of the law of accretion, together with the law of avulsion. 695 Avulsion occurs when sudden or rapid events cause soils to be deposited on riparian parcels. 696 Avulsion generally does not alter boundaries. 697 Sax questions the duality. 698 He says it

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689. See, e.g., Fletcher v. Peck, 10 U.S. (6 Cranch) 87, 90 (1810).
691. See generally Deveney, supra note 230.
693. Id. at 404.
694. Id.
695. Sax, supra note 266, at 305.
696. Id. at 306 n.2.
697. Id. at 306.
698. Id. at 307.
does not accord with actual hydrogeological changes. \textsuperscript{699} He adds that the history of law on accretion and avulsion "goes back a long way, and is more than a little obscure." \textsuperscript{700}

Modern English common law acknowledges the effects of accretion and avulsion. For example, \textit{Scratton v. Brown} \textsuperscript{701} held that the coastal foreshore is a "moveable freehold." \textsuperscript{702} The boundary shifts with gradual and imperceptible accretion. \textsuperscript{703} Conversely, sudden physical shifts do not generally alter the legal boundary. \textsuperscript{704} England delineates the impacts of public and artificial alterations similarly. Generally, sudden changes do not alter legal boundaries, while gradual and imperceptible changes do so. \textsuperscript{705}

Sax shows that English law evolved gradually. In an accretive manner, if you will. Bracton spoke of shoreline changes as he did most of water law. He lifted his analysis from Justinian:

\begin{quote}
Alluvion is an imperceptible increment which is added so gradually that you cannot perceive [what] the increase is from one moment of time to another. Indeed, though you fix your gaze on it for a whole day, feebleness of human sight cannot distinguish such subtle increases as may be seen in a gourd and other such things. \textsuperscript{706}
\end{quote}

Nonetheless, Sax tells us that Bracton did not affect "the course of the English law governing shorelines." \textsuperscript{707} Rather, the law developed in three fourteenth century court decisions. \textsuperscript{708}

The \textit{Eyre of Nottingham} \textsuperscript{709} addressed an inland, apparently nontidal river. I say apparently so, because one lord had a riparian parcel, and the other,
a facing riparian parcel and the entire river bottom. The river widened, sub-
merging some of the lands of the first landowner.\footnote{710} The court held that the 
bottom owner’s submerged parcel enlarged where the others’ riparian parcel 
submerged.\footnote{711} The decision was dictated by the imperceptible nature of the 
submergence.\footnote{712} The court stated in \textit{dicta} that no legal boundaries would 
have shifted if the submergence occurred by a “quick increase.”\footnote{713}

Sax asks reasonable questions at this point. First, why did the court dis-
tinguish between avulsion and accretion?\footnote{714} It appears the court allowed 
gradual change to alter the legal boundary because:

\begin{quote}
If no one can determine where the original boundary was, there
is no way to ascertain what the asserted loser has lost, and there-
fore the existing water boundary should be taken as the property
line, even though in retrospect it is clear that the river is not where
it once was.\footnote{715}
\end{quote}

If we take the \textit{Nottingham} decision at its face value, then it seems inap-
plicable to modern law. Granted, it is generally more difficult to ascertain 
nontidal than tidal boundaries. That concession is made to account for the 
likely nontidal water in \textit{Nottingham} because a private party owned the river 
bottom.\footnote{716} That should not affect the rationale. Regardless, modern parcels 
are far more likely to be platted, surveyed, or otherwise delineated. Accon-
grdingly, the primary rationale of \textit{Nottingham} appears inapposite to modern 
law.

Sax raises a second question that stems from the first. Why would a 
sudden river expansion, such as a flood, not alter the legal boundary?\footnote{717} He 
says that two possibilities present themselves.\footnote{718} First, the suddenness might 
 make it easier to ascertain the original boundary.\footnote{719} If so, I raise the same 
question as in the prior paragraph. Sax’s second possibility is because floods 
and storms effect typically transient change.\footnote{720} Regardless, Sax states: “I

\begin{thebibliography}{9}
\footnote{709} \textit{Sax, supra} note 266, at 357-58 (citing The Eyre of Nottingham Case, (1348) 22 Lib. 
Ass. Pl. 93).
\footnote{710} \textit{Id.} at 358.
\footnote{711} \textit{Id.}
\footnote{712} \textit{Id.} at 357-58 (citing The Eyre of Nottingham Case, (1348) 22 Lib. Ass. Pl. 93).
\footnote{713} \textit{Id.} at 358.
\footnote{714} \textit{Sax, supra} note 266, at 315–16.
\footnote{715} \textit{Id.}
\footnote{716} \textit{Id.} at 357-58 (citing The Eyre of Nottingham Case, (1348) 22 Lib. Ass. Pl. 93)).
\footnote{717} \textit{Id.} at 316.
\footnote{718} \textit{Sax, supra} note 266, at 316.
\footnote{719} \textit{Id.}
\footnote{720} \textit{Id.}
\end{thebibliography}
have found no such expressed justification for the avulsion rule in any of the early literature." 721

Sax refers us as well to Blackstone's and Moore's citations of the Abbot of Ramsey's Case. 722 The Abbot of Ramsey's decision was in 1371. 723 The Abbot defended charges that he appropriated submerged lands without permission of the Crown. 724 The Abbot defended by saying the lands in dispute "sometimes shrinks, through the influx of the sea, and at other times is enlarged by the flowing out of the sea, and so he says he holds [the] marsh in that manner." 725 The jury agreed. 726

The Abbot of Petersborough's Case was filed before Ramsey's, but not decided until 1373. 727 Petersborough argued that "local custom" justified boundary shifts with the "inflows and outflows of the sea." 728 The jury, again, agreed. 729

Sax emphasizes that neither reported decision gave any rationale for applying the rule that accretion alters legal boundaries. 730 He notes that 14th century lawyers "no doubt were aware" of Justinian, but the reports do not cite Roman law either. 731 He points us to Lord Hale's exegis of Petersborough three centuries later. 732 Hale distinguished between the incremental change here and "sudden reliction." 733 He emphasized further that the changes were "secret and gradual increases of the land," which "by custom . . . becomes a perquisite to the land." 734

Hale's explanation baffles Sax:

Hale's brief comment raised a number of issues that engaged and puzzled later commentators. Was it important that this was a case of accretion rather than reliction, or only that it was not a "sudden" reliction? What is the significance of his mention of prescription, and does it mean anything other than longstanding use? Why does
he speak of the increases as being “secret” as well as gradual?
And what does it take, legally, for accretions to become a “perquisite” (what we call an appurtenance) to the adjoining upland? 

Sax concludes that it likely “seemed natural” for shorefront owners to use accretions for grazing, agriculture and other uses. He adds that both of Abbots’ arguments regarding the “flux and ebb of the sea” acknowledged “that their clients were sometimes losers of land as well as gainers.”

Sax points us to two treatises in the seventeenth century that expounded on accretion law. Of course, there is Hale. First, however, came Robert Callis’ 1622 treatise, which is known as Callis on Sewers. Sax says Callis’ analysis is particularly cogent, because he was not writing a treatise. Rather, he was trying to address inconsistencies in the law because he sought “to come up with a coherent theory to use in a pending case where he was counsel.”

Callis cited decisions that refused to give littoral owners property where the sea relicted quickly. He contrasted these with older cases that were decided in favor of the landowner. Key among the latter was Digges v. Hamond. Sax acknowledged Moore’s disdain for Digges:

According to Moore, the Digges case was part of an effort by Elizabeth and later James I—and according to Moore continued into modern times by the English government—to claim public title to the foreshore (land between high and low tide). Digges’ theory was that no private title in the foreshore could be obtained except by explicit grant from the Crown. Moore says that theory was rejected in Digges’ case, in accord with the precedent set in the Abbot of Ramsey’s case.

735. Sax, supra note 266, at 319–20, except that Sax explains at 320, n.72 that an “appurtenance is something that has become part and parcel of the land.”
736. Id. at 320.
737. Id.
738. See id. at 321
739. Id.; Hale, supra note 301.
741. Id. at 321.
742. Id. (discussing Callis, supra note 740).
743. See id. at 322 (citations omitted).
744. Id. at 322–23.
745. Sax, supra note 266, at 322; see also Moore, supra note 266, at 218–24.
746. Sax, supra note 266, at 322–23 n.88 (citations omitted).
Callis cites the following factors that he believed caused the courts to rule one way or the other in such cases:

[1] If the decrease of the sea be by little and unperceivable means, and grown only in long tract of time, whereby some addition is made to the frontagers’ grounds, these . . . may be appertain to the subject; . . . but lands left to the shore by great quantities, and by a sudden occasion and perceivable means, accrue wholly [that is, remain in the title of] the King. 747

Sax reasons that a gradual change did not alter boundaries per se. 748 Rather, Callis treated that factor as evidence of a prescriptive use. 749 Callis’ contrasting treatment of rapid changes as leaving boundaries unchanged “assured that large tracts of strategic land at the nation’s frontier would not be lost to the sovereign.” 750 This, of course, is consistent with Digges’ goal of protecting the shores for mooring and navigation by the Royal Navy. 751

Hale similarly focused on accretion that crept so slowly that one did not know where the original boundaries lay. 752 Hale also followed Digges in worrying about the impact of shoreline shifts on access for the Crown’s naval power. 753

Sax makes as reasonable an analysis as one can from the doctrine of accretion through Callis and Lord Hale. 754 Except where a shift was so sudden that it might jeopardize the Crown’s strategic interests, one looked at several factors. 755 Was the original boundary known or knowable? 756 Did the legal boundary change effectively acknowledge that in the course of time, moved land attaches to the new parcel? 757

The last English authority of note on point before our independence was Blackstone. 758 As Sax notes: “Nowadays, one who wants to know about the

747. Id. at 324 (quoting CALLIS, supra note 740, at 65).
748. See id. at 324.
749. Id. at 324–25.
750. Id. at 325.
751. See MOORE, supra note 266, at 635 n.19.
752. Hale, supra note 301, at 380. Hale distinguished alluvial deposits, which could shift boundaries, with refraction, which Hale said did not. Id. at 397. Sax says only Hale, and perhaps Bracton, have made this argument. Sax, supra note 266, at 326–27.
753. Hale, supra note 301, at 397–99.
754. See Sax, supra note 266, at 328–30.
755. See id. at 330.
756. See id. at 329.
757. Id. at 330.
758. See generally WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND (1825).
English common law rules that shaped American law looks first to (and often not much beyond) Blackstone's Commentaries. Sax discusses that Blackstone over-generalized and was often wrong, or at least misleading, on the law of alluvial deposits.

Blackstone's Commentaries stated the following regarding alluvial deposits:

And as to lands gained from the sea, either by alluvion, by the washing up of sand and earth, so as in time to make terra firma; or by dereliction, as when the sea shrinks back below the usual watermark; in these cases the law is held to be, that if this gain be by little and little, by small and imperceptible degrees, it shall go to the owner of the land adjoining. (o) For de minimis non curat lex: and, besides, these owners being often losers by the breaking in of the sea, or at charges to keep it out, this is possible gain is therefore a reciprocal consideration for such possible charge or loss. But if the alluvion or dereliction be sudden and considerable, in this case it belongs to the king: for as the king is lord of the sea, and so owner of the soil while it is covered with water, it is but reasonable he should have the soil, when the water has left it dry. (p) So that the quantity of ground gained, and the time during which it is gaining, are what makes it either the king's, or the subject's property. In the same manner if a river, running between two lordships, by degrees gains upon the one, and thereby leaves the other dry; the owner who loses his ground thus imperceptibly has no remedy: but if the course of the river be changed by a sudden and violent flood, or other hasty means, and thereby a man loses his ground, he shall have what the river has left in any other place, as a recompense for this sudden loss. (q) And this law of alluvions and derilictions, with regard to the rivers, is nearly the same in the imperial law; (r) from whence indeed those our determinations seem to have been drawn and adopted: but we ourselves, as islanders, have applied them to marine increases; and have given our sovereign the prerogative he enjoys, as well upon the particular reasons before-mentioned, as upon this other general ground of prerogative, which was formerly remarked, (s) that whatever hath no other owner is vested by law in the king.

759. Sax, supra note 266, at 308.
760. See id. at 309–10.
761. Id. at 308–09.
Sax raises several interesting questions regarding Blackstone’s statements. Should the amount of alluvial deposits matter? If so, why? If reciprocality justifies the shifting of boundaries by accretion, why not by avulsion? Where do rising sea levels fit on the continuum? The last question is a modern one, but the text above in this section shows why Sax throws up his hands: “The more one thinks about these matters, and about Blackstone’s famous passage, the more curious this little corner of the law becomes.”

While it arose after American Independence, The King v. Lord Yarborough bears mention. The trial judge held that “imperceptible” change for purposes of boundary change meant that which was not perceptible as it occurred. The de minimus rule would scarcely be applied, as the lands in dispute totaled over 400 acres. On appeal to the House of Lords, the landowner won again. The rationale on appeal was that even a sliver of upland becomes valuable for agriculture, while the Crown loses nothing of value.

Sax emphasizes a key to historic accretion case law, which Yarborough exemplifies. He states that the primary value that shoreland had for the upland owner “was as pasturage, not for its water access.” Access is more of a modern concern to the littoral or riparian owner.

The nineteenth century featured one treatise and significant case law. Angell’s work in 1826 treated gradual and imperceptible accretion and relic- tion the same. The legal boundary generally shifted. Sax notes that Angell tracked Yarborough in emphasizing the imperceptibility of change, and not the lost boundary. While Angell adopted Blackstone’s avulsion position, Sax points out: 1. Angell did not explain why avulsion and accretion

762. Sax, supra note 266, at 310.
763. Id.
764. Id. at 310–11.
765. Id. at 311.
767. Id.
768. Id.
770. Id.
771. Id. at 1025.
772. Sax, supra note 266, at 333 n.148.
773. See id.
774. See generally Joseph K. Angell, A Treatise on the Right of Property in Tide Waters, and in the Soil, and Shores Thereof (Boston, Harrison Gray 1826).
775. See id. at vi.
should be treated differently; and 2. Why the reciprocity rationale supporting accretion could, or should, not also apply to avulsion.

Sax also asks why Angell and others did not discuss the lost boundary rationale for accretion. Sax suggests that they were satisfied by the fairness of adding accretions to littoral or riparian owners, and the general lack of harm to the sovereign. I suggest another possibility. By the nineteenth century, surveyors were generally able to better delineate boundaries. Even in the American frontier, government surveyor field notes demonstrate rather thorough boundary determinations.

The nineteenth century Supreme Court handled several matters involving alluvial deposits. Sax emphasizes a significant trend:

As one turns to the modern era and to the American cases, several features stand out. First, superficial appearances suggest that the old rules developed in England (and in the Roman law) are simply being taken up and applied to contemporary cases. The cases faithfully cite the standard rationales, such as reciprocity and de minimis; quote familiar passages from Lord Hale, Bracton, Blackstone, and Lord Yarborough’s case; and duly cite the Institutes of Justinian and Gaius. But closer examination reveals two striking departures: the definition of what constitutes accretion, as contrasted with avulsion, has dramatically expanded; and a new justification for applying the accretion rule, maintaining water access for littoral/riparian owners, has become central.

Three nineteenth century decisions combined to reduce dramatically the scope of avulsion. Parenthetically, this is probably beneficial in large part due to the long-term unwillingness of authorities to even address avulsion, let alone explain why permanent changes wrought by avulsion should be treated differently from accretion.

*Nebraska v. Iowa* acknowledged that the Missouri River’s channels and banks shifted often, quickly, and dramatically. Regardless, the Court

777. Id. at 340. Sax points out that Hall, albeit English, was more thorough than Angell. Id. at 341 (citing *Matthew Hall, Essay on the Rights of the Crown and the Privileges of the Subject in the Sea Shores of the Realm* (1830)). Nonetheless, Hall “fails to tackle the avulsion doctrine.” Sax, *supra* note 266, at 343.

778. Id. at 341.

779. Id.


781. Sax, *supra* note 266, at 343 (emphasis added).

782. 143 U.S. 359 (1892).

783. Id. at 367.
STOP THE BEACH RENOURISHMENT

held that accretion applied to such changes in the banks.\textsuperscript{784} Jefferis v. East Omaha Land Co.\textsuperscript{785} loosened the lost boundary, imperceptibility and de minimis standards so much in another Missouri River litigation that Sax concludes: "Apparently, only a single sudden event (like a hurricane, or a river breaking through an oxbow) would now qualify as avulsion."\textsuperscript{786} He notes that the Nebraska and Jefferis decisions focused not on the rapidity of the shift, but on simply following the soil.\textsuperscript{787}

The most seemingly significant of the three nineteenth century decisions as applied to STBR was County of St. Clair v. Lovingston.\textsuperscript{788} The St. Clair Court noted the majority rule that a riparian or littoral owner should not take title to alluvial deposits where the owner constructed improvements that caused or aided the accretion.\textsuperscript{789} Nonetheless, the Court held that the accretion attaches to a riparian or littoral parcel where third parties constructed the improvements or otherwise created the artificial cause leading to the accretion.\textsuperscript{790} The county asserted that alluvial deposits that originated with upstream public improvements were not accretion.\textsuperscript{791} The Supreme Court held that additions from the river constituted alluvial deposits regardless of their source.\textsuperscript{792}

Three significant holdings by the Supreme Court in the twentieth century addressed alluvial deposits. In the first, Hughes v. Washington,\textsuperscript{793} the Court addressed a Washington holding that vested alluvial deposits in the state.\textsuperscript{794} The majority held that riparian lands must generally be allowed to retain water frontage after the banks change because "[a]ny other rule would leave riparian owners continually in danger of losing the access to water which is often the most valuable feature of their property."\textsuperscript{795}

Justice Stewart’s concurring opinion in Hughes became especially significant again in STBR:

\textsuperscript{784} Id. at 369–70.
\textsuperscript{785} 134 U.S. 178 (1890).
\textsuperscript{786} Sax, supra note 266, at 345 (emphasis added).
\textsuperscript{787} Id. at 346 n.229–30 and accompanying text.
\textsuperscript{788} 90 U.S. (23 Wall.) 46 (1874).
\textsuperscript{789} Id. at 52.
\textsuperscript{790} Id. at 61–62.
\textsuperscript{791} Id. at 53.
\textsuperscript{792} Id. at 65.
\textsuperscript{793} 389 U.S. 290 (1967).
\textsuperscript{794} Id. at 291 (citing Hughes v. State, 410 P.2d 20 (1966)).
\textsuperscript{795} Id. at 293. Hughes applied federal law to address accretions on lands conveyed by the federal government prior to Washington's statehood. Corvallis Sand & Gravel Co., 429 U.S. at 378, calls that portion of the holding into question.
There can be little doubt about the impact of that change upon Mrs. Hughes: The beach she had every reason to regard as hers was declared by the state court to be in the public domain. Of course the court did not conceive of this action as a taking. As is so often the case when a State exercises its power to make law, or to regulate, or to pursue a public project, pre-existing property interests were impaired here without any calculated decision to deprive anyone of what he once owned. But the Constitution measures a taking of property not by what a State says, or by what it intends, but by what it does. Although the State in this case made no attempt to take the accreted lands by eminent domain, it achieved the same result by effecting a retroactive transformation of private into public property—without paying for the privilege of doing so. Because the Due Process Clause of the Fourteenth Amendment forbids such confiscation by a State, no less through its courts than through its legislature, and no less when a taking is unintended than when it is deliberate, I join in reversing the judgment. 796

The second major decision was Bonelli Cattle Co. v. Arizona. 797 The riparian’s lands submerged gradually into the Colorado River. 798 They became the state’s as a result. 799 The lands reemerged rapidly due to rechannelization resulting from an upstream dam. 800 The Supreme Court applied federal common law because the riparian’s title came by federal grant. 801 It applied “just principles” to treat the reemerged land as accretion vesting in the riparian upland. 802

The final decision was Corvallis, which we discussed above. 803 Corvallis is significant as to alluvial deposits, because it reversed Bonelli regarding

796. Hughes, 389 U.S. at 297–98 (Stewart, J., concurring);
Where questions arise which affect titles to land it is of great importance to the public that, when they are once decided, they should no longer be considered open. Such decisions become rules of property, and many titles may be injuriously affected by their change. Legislatures may alter or change their laws, without injury, as they affect the future only; but where courts vacillate, and overrule their own decisions on the construction of statutes affecting the title to real property, their decisions are retrospective and may affect titles [that were] purchased on the faith of their stability. Doubtful questions on subjects of this nature, when once decided, should be considered no longer doubtful or subject to change.

798. Id. at 316.
799. Id.
800. Id. at 316 n.2.
802. Id. at 330.
803. See supra Part VI, notes 529, 565, 650 and accompanying text. The BLM also represents that the modern trends support a strong presumption in favor of accretion. See BUREAU OF LAND MGMT., U.S. DEP’T OF THE INTERIOR, MANUAL OF INSTRUCTIONS FOR THE
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the applicable body of law. As discussed above, Corvallis reestablished the right of each state to apply its own public trust law after statehood, provided that the state does not wholly abrogate its public trust obligation. Sax supports a strong presumption in favor of accretion. It preserves the high water line, which accentuates water access rights for property owners and a predictable public right waterward of the ambulatory boundary. He concludes:

[The] presumption [in favor of accretion] has largely relegated the avulsion rule to a minor role, except where there is a shift of a river into a new channel or the change is temporary and of very short duration, as with flood waters, in which cases retaining the original boundary is appropriate.

Sax emphasizes that the beach “is neither wholly public nor wholly private,” and the distinction between avulsion and accretion does not address sea level rise. He believes the primary goal should be “maintaining water adjacency for riparian/littoral landowners and assuring public use of overlying water (and some part of the foreshore).” He cites to STBR, as it was still before the Supreme Court, in suggesting that the identity of the entity or person causing the change should be a factor.

XII. FLORIDA

An Act of Congress on March 3, 1845, admitted Florida as a state. Along, with Iowa, the state was “admitted into the Union on equal footing with the original states, in all respects whatsoever.” One further provision


805. See generally id.
806. Sax, supra note 266, at 350–351.
807. Id.
808. Id. at 351 (emphasis added).
809. Id. at 356.
810. Id. at 353 (emphasis added).
811. Sax, supra note 266, at 354.
813. Id.
of note existed in the Act; section seven stated in pertinent part that the two states were “admitted into the Union on the express condition that they shall never interfere with the primary disposal of the public lands lying within them."\textsuperscript{814}

A. Colonial Background

Statehood did not begin Florida’s long, storied, and tortuous water law history. We discussed Spanish colonial water law above. Spain first colonized Florida from 1565 to 1763.\textsuperscript{815} Pedro Menendez de Aviles landed near St. Augustine with soldiers and colonists.\textsuperscript{816} After slaughtering Jean Ribault’s French force from Fort Caroline (modern Jacksonville), Menendez established a colonial town in St. Augustine.\textsuperscript{817} After establishing forts and missions throughout the region, the Spanish retrenched in the face of disease, as well as Native American and British pressures.\textsuperscript{818} (The Native Americans and British looted and burned most of the Spanish holdings except for the fort in St. Augustine at one time or another.\textsuperscript{819} ) Britain exchanged Havana for Spanish Florida at the conclusion of those nations Seven Years’ War in 1763.\textsuperscript{820}

Great Britain occupied the region from 1763 to 1783.\textsuperscript{821} The British split Florida into East and West Florida at the Chatahoochee and Apalachicola Rivers.\textsuperscript{822} The capital of East Florida was St. Augustine.\textsuperscript{823} The capital of West Florida was Pensacola.\textsuperscript{824} The British surveyed the coast and befriended Creek natives who moved into the region.\textsuperscript{825} The British named the immigrants “Seminoles.”\textsuperscript{826}

\textsuperscript{814} Id. at 743.
\textsuperscript{817} Id.
\textsuperscript{818} See Worth, supra note 816.
\textsuperscript{819} See id.
\textsuperscript{820} Id.
\textsuperscript{821} Apalachicola Land & Dev. Co. v. McRae, 98 So. 505, 522 (Fla. 1923).
\textsuperscript{822} Id. at 522–23.
\textsuperscript{824} Id.
\textsuperscript{826} Id. at 28.
British grants during the twenty year reign presented early versions of Florida's swamp sale regime. For example, the 1763 Treaty of Paris was implemented by allowing Spanish settlers to stay or to sell and to leave within eighteen months. The Crown disallowed a putative sale of over ten million acres from emigrating Spaniards to Jesse Fish and John Gordon. The British Crown refused to believe that that much land had been in private Spanish hands. After all, the British and their allies, the Creeks, had pushed the Spanish back from the frontier. The British knew that precious little Spanish land remained outside of garrisons. For a frame of reference, modern Florida totals nearly thirty-eight million acres.

Many British and Tories moved to Florida after the Revolution commenced. Dr. Andrew Turnbull “established at New Smyrna 1400 Minor-
cans, Greeks, and Italians, the largest initial American colony in the history of what was later the United States.\textsuperscript{831} The Spanish in 1783 allowed British colonists the same choice the British had in 1763, stay, or sell and go.\textsuperscript{832} Colonists had to pledge loyalty and convert to Catholicism to stay.\textsuperscript{833} Some stayed, and the Spanish Crown confirmed their title.\textsuperscript{834} Most, unable to sell, abandoned their lands, principally to the Catholic Italians and Minorcans.\textsuperscript{835}

The Spanish regained the bulk of Florida in the 1783 Treaty of Paris and the related Treaty of Versailles, upon the end of the American Revolution.\textsuperscript{836} This was Spain’s due to its acting as an ally of the French in support of the Revolution.\textsuperscript{837} Spain maintained the split between East and West Florida when that nation resumed sovereignty in 1783.\textsuperscript{838}

Spain opened up Florida in the second colony.\textsuperscript{839} The WPA summed up: “Spanish land grants may thus be said to have been based upon three royal orders: that of 1786 for the English in Florida [as of 1783]; that of 1790 for strangers, of which Spanish subjects also availed themselves; and that of 1815 for patriotic service.”\textsuperscript{840}

We discussed how the 1790 order invited aliens, regardless of religion. The order allowed 100 acres to head of household and 50 additional acres for each member of the family.\textsuperscript{841} These were called “head rights.”\textsuperscript{842} The head grant could be increased by up to 1000 more acres if it was capable of cultivation.\textsuperscript{843} If maintained and cultivated ten years, the title vested.\textsuperscript{844}

These lands were to be surveyed exactly under the direction of Captain Pedro Marrot of St. Augustine and his successors.\textsuperscript{845} Joe Knetsch, the official historian of the Florida Division of State Lands, states adamantly: “There is ample evidence, however, to conclude that many surveys in East Florida, specifically those more than fifteen miles outside of St. Augustine or

\begin{flushright}
831. Id.
832. Id.
833. See id. This differs from the British, who allowed freedom of religion. Id. Nonetheless, the second Spanish colonial government allowed persons freedom of worship in private. See WPA History of the Spanish Land Grants, supra note 827.
834. Id.
835. Id.
836. See id.
837. See id.
838. WPA History of the Spanish Land Grants, supra note 827.
839. See id.
840. Id.
841. Id.
842. Id.
843. WPA History of the Spanish Land Grants, supra note 827.
844. Id.
845. Id.
\end{flushright}
Fernandina, were never performed upon the ground.\textsuperscript{846} Conversely, the WPA History asserts that the first several Spanish colony surveyors generally acquitted themselves well, and Jorge Clarke, appointed in 1811, testified that he was bound by no rules.\textsuperscript{847} A royal order of 1815 allegedly authorized grants to militia members who had defended East Florida against incursions by the United States in 1811-1812 (the "Patriotic War").\textsuperscript{848}

The WPA History tells us that a member of the United States Board of Commissioners for East Florida, Alexander Hamilton, Jr. (son of the Alexander Hamilton), questioned the authenticity of the documents supporting the putative 1815 order.\textsuperscript{849} Nonetheless, the grants were generally authorized for processing.\textsuperscript{850} We discuss the procedure below.

Additionally, the colony authorized grants for future services; those were for mills and cattle ranchers.\textsuperscript{851}

The Adams-Onis Treaty, dated February 22, 1819, conveyed East and West Florida to the United States, effective July, 1821.\textsuperscript{852} Ansbacher and Knetsch cite the authoritative federal Work Projects Administration publication on Spanish Land Grants in Florida concerning the impact of the Adams-Onis Treaty:

\begin{quote}
By Article VIII of the treaty of February 22, 1819, whereby Spain Ceded the Floridas to the United States, all Spanish grants of land made prior to January 25, 1818, the date on which the King of
\end{quote}

\begin{footnotes}
\item[\textsuperscript{846}] Ansbacher & Knetsch, \textit{supra} note 261, at 367.
\item[\textsuperscript{847}] \textit{WPA History of the Spanish Land Grants, supra} note 827.
\item[\textsuperscript{848}] \textit{Id.}
\item[\textsuperscript{849}] \textit{Id.} Of course, Hamilton would not be a figure in Florida colonial history if he were not the subject of controversy. The WPA History states that he was one of the three commissioners appointed for East Florida. \textit{Id.} The burdens of that commission were great. They had "something like 600" claims to process, which were way too many for the time allotted. \textit{Id.}

Hamilton added to that and other problems: "And finally there was such a divergence of opinion between Hamilton and the other commissioners as to procedure that Hamilton refused to participate in the sessions and bombarded President Monroe, Secretary of State Crawford, Secretary of State Adams, and the chairman of the house committee on public lands with serious charges against his colleagues and those in charge of the Public Archives." \textit{WPA History of the Spanish Land Grants, supra} note 827. The full scope of Hamilton's complaints is beyond this piece, but a representative portion is found at xliii–xliv of the WPA History. Most significantly, he made accusations of alteration, theft, and fraud on various grant processes. \textit{Id.} Not surprisingly, Hamilton generated three lawsuits. \textit{Id.}
\item[\textsuperscript{850}] \textit{Id.}
\item[\textsuperscript{851}] \textit{Id.}
\item[\textsuperscript{852}] Apalachicola Land & Dev. Co. v. McRae, 98 So. 505, 523–24 (Fla. 1923) (citing Treaty of Amity, Settlement, and Limits, Between the United States of America and His Catholic Majesty (Adams-Onís Treaty), U.S.–Spain, art. 8, Feb. 22, 1819, 8 Stat. 252 [hereinafter Adams-Onís Treaty]).
\end{footnotes}
Spain definitely expressed his willingness to negotiate, were to be 'ratified and confirmed . . . to the same extent that the said grants would be valid if the territories had remained under the domain of his Catholic Majesty.'

The upshot was that various Acts of Congress implemented the Adams-Onis Treaty by "ratifying] and confirm[ing] [Spanish Land Grants] to the persons in possession of the lands, to the same extent that the same grants would be valid if the territories had remained under the dominion of [Spain]."

The Adams-Onis Treaty extended the time grantees had to meet the terms of those grants:

But the owners in possession of such lands, who, by reason of the recent circumstances of the Spanish nation, and the revolutions in Europe, have been prevented from fulfilling all the conditions of their grants, shall complete them within the terms limited in the same, respectively, from the date of this treaty.

Congress passed various acts to facilitate grant confirmation.

The Supreme Court addressed two major Spanish grants in United States v. Arredondo and Mitchel v. United States. We discuss the Mitchel decision below, regarding its integral relationship with the turnover of Florida from Spain to the United States. The Alachua County, Florida, website describes the largest Arredondo Grant, which lies in north-central Florida:

Don Fernando de Maza Arredondo, a Spanish merchant and citizen of St. Augustine, had assisted in raising troops in 1811 for the town's protection and played a significant role in its civic life, hazarding his own fortune to aid the city when public resources failed. As a compensation for his services in 1817, the King of Spain granted him 280,000 acres . . . .

853. WPA History of the Spanish Land Grants, supra note 827 (emphasis added).
855. Id. (citing Adams-Onís Treaty) (emphasis omitted).
856. Id.
857. 31 U.S. (6 Pet.) 691 (1832).
858. 34 U.S. (9 Pet.) 711 (1835).
The *Arredondo* Court held that grants from the Spanish Colonial government and supporting surveys were deemed to be presumptively authorized by the Crown. 860 Anscher and Knetsch point to the following language to support the presumption:

Yet, in [Congress'] whole legislation on the subject (which has all been examined), there has not been found a solitary law which directs; [sic] that the authority on which a grant has been made under the Spanish government should be filed by a claimant—recorded by a public officer, or submitted to any tribunal appointed to adjudicate its validity and the title it imparted—[C]ongress has been content that the rights of the United States, should be surrendered and confirmed by patent to the claimant, under a grant purporting to have emanated under all the official forms and sanctions of the local government. This is deemed evidence of their having been issued by lawful, proper, and legitimate authority—when unimpeached by proof to the contrary.861

Graber quotes Baldwin in support of a key component of *Arredondo*.862 *Fletcher* held that a state has no right to convey the same parcel twice, effectively annulling the first conveyance. 863 *Arredondo* held unanimously that the Spanish land grant, once confirmed, barred Congress from conveying the same parcel. 864

The procedure for confirmation under the Adams-Onis Treaty and implementing acts of Congress called for application to the federal Board of Commissioners for East or West Florida, based on predominant grant location, if the grant totaled under 3500 acres, then in turn, as appropriate, to Congress. 865 The official records of these grants are found in the American State Papers. 866 These papers summarize the application and list line items

861. Id. at 723 (emphasis added); see also Anscher & Knetsch, *supra* note 261, at 365.
862. Graber, *supra* note 103, at 86.
for disposition.867 The original records often contain supporting surveys as well.868

Professor Glenn Boggs wrote two fascinating articles that bear on the Adams-Onis Treaty.869 One addresses Florida title chains deraigned to British colonial grants.870 He discusses Arredondo at length.871 While the Court addressed various issues, including fraud (as alleged by our friend Hamilton), Arredondo held for the claimant.872

The other Boggs article dealt with the Spanish records supporting land transfers in Florida.873 Boggs explains that the Adams-Onis Treaty lopsidedly favored the United States.874 We promised to pay five million dollars in debts owed by Spain to third parties.875 In return, Spain gave us La Florida.876 Spain withheld or secreted substantial records.877 Additionally, as Boggs noted, the Americans questioned Spain’s honesty regarding the land records.878 Article II of the treaty required Spain to deliver all title and sovereignty records for the two Floridas.879 The Crown failed to fully comply, as it shipped many of the records to Havana.880 Adams dealt with Spain conveying as much land as possible to avoid conveying the parcels to the federal government.881

867. See Ansbacher & Knetsch, supra note 261, at 364.
868. Id.
870. See generally Boggs, Florida Land Titles, supra note 869.
871. Id. at 26–28.
872. Id.
873. See generally Boggs, Missing Real Estate Records, supra note 869.
874. Id. at 11.
875. Id.
876. Id.
877. See id. at 11–13 (quoting President Monroe, complaining of Spain’s refusal to turn over title records). This is consistent with similar complaints cited in the definitive WPA publication. See WPA History of the Spanish Land Grants, supra note 827, at xxv.
879. Id. at 11–12.
880. Id. at 13.
881. Id. at 12. Expressing his frustrations, Adams stated:

This day, two years have elapsed since the Florida Treaty was signed. . . . Let them remark the workings of private interests, of perfidious fraud, of sordid intrigues, of royal treachery, of malignant rivalry, and of envy masked with patriotism, playing to and fro across the Atlantic into each other’s hands, all combined to destroy this treaty between the signature and the ratification, and let them learn to put their trust in the overruling providence of God. . . . An ambiguity of date, which I had suffered to escape my notice at the signature of the treaty, amply guarded against by the phraseology of the article, but leaving room to chicanery from a mere colorable question, was the handle upon which the King of Spain, his rapacious favorites,
The second major Supreme Court decision addressing Spanish land grants was *Mitchel v. United States*. Boggs gives us a detailed backstory. President Monroe sent Colonel James Gant Forbes to Havana with two goals. First, arrange diplomatic transfer of Florida to Governor Andrew Jackson. Second, recover the substantial cache of title and other records that Spain had secreted.

The King of Spain responded to Jackson by order of February 15, 1832, directing delivery of any remaining records. The Secretary of State sent James Robinson to Cuba to inspect and to retrieve the records. Robinson spent over two years pouring over the records before he died at his post. Boggs tells us that Robinson complained that Colin Mitchel stymied his efforts:

> In due course, Robinson developed a decidedly negative attitude with regard to Mr. Mitchel. In fact, one commentator said Mitchel was, according to Robinson's observations, the powerful evil force at work to prevent the accomplishment of the archive mission. A partner in John Forbes & Company, Florida traders, Mitchel maintained a large trading business in Havana . . . . When his overtures to Robinson were coldly rebuffed, he became vindictive, according to Robinson, spread malicious rumors and used his money and influence to frustrate efforts to secure the Florida papers. Robinson . . . soon became convinced that Mitchel had bribed Spanish functionaries to forge and alter records to assist him in his suit before the [United States Supreme Court].

and American swindling land jobbers in conjunction with them, withheld the ratification of the treaty, while Clay and his admirers here were snickering at the simplicity with which I had been bamboozled by the crafty Spaniard.

Id. at 12 (quoting George C. Whatley & Sylvia Cook, *The East Florida Land Commission: A Study in Frustration*, 50 FLA. HISTORICAL Q. 39 (1971) (which itself quoted John Quincy Adams' diary notes on February 22, 1821, the day of Senate ratification of the Adams-Onis Treaty)).

882. 34 U.S. (9 Pet.) 711, 725 (1835).
884. Id. at 13–14.
885. Id. at 13.
886. Id. at 14.
887. Id. (citations omitted).
889. Id. (citations omitted).
890. The Supreme Court spelled his name with one "I," while Gibbs spells it with two. See generally Mitchel v. United States, 34 U.S. (9 Pet.) 711 (1835). I will be consistent with the reported decision.
891. Boggs, (which Boggs?) supra note 869, at 15.
The lawsuit, *Mitchel v. United States*, was pending before the Supreme Court while Robinson was in Havana.\(^{892}\) Call directed Robinson to find whatever records he could to undermine the Spanish grant at issue, the John Forbes & Co. Grant.\(^ {893}\) The Forbes Grant totaled 1,250,000 acres in north Florida—principally in the Panhandle.\(^ {894}\) Robinson allegedly discovered that Forbes & Co., through its predecessor, the British company of Panton, Leslie & Company, helped the Spanish supply the Creek nation with arms and supplies that were used to kill frontiersmen.\(^ {895}\) Robinson uncovered evidence that the company demanded indemnification from the Spanish Government for losses in the trade with the Native Americans who opposed the United States.\(^ {896}\) Robinson implied that Forbes obtained huge swaths of land by forgery.\(^ {897}\) Robinson concluded that widespread collusion existed.\(^ {898}\) When he died abruptly, however, the search ended.\(^ {899}\) The Supreme Court then affirmed Mitchel’s title under his interest in Forbes & Company.\(^ {900}\)

*Fletcher* might not have availed Mitchel. The earlier Court protected innocent purchasers from the alleged fraud and bribery between the Georgia legislature and buyers who in turn sold to them.\(^ {901}\) In *Fletcher*, the private landowners were innocent of any perfidy that related to the original swindle.\(^ {902}\) Mitchel, however, was allegedly in the midst of myriad misdeeds.\(^ {903}\)

Here, Dr. Joe Knetsch disagrees categorically with Professor Boggs.\(^ {904}\) Knetsch’s job as official state historian for the Florida Division of State Lands has required him to cull thoroughly through the Forbes records over the past several decades.\(^ {905}\) In a lengthy interview, Dr. Knetsch told the author that he believes the Mitchel records were substantially legitimate.\(^ {906}\) Knetsch also emphasizes that both Call and Robinson were Jacksonian protégées, who would have been colored by Jackson’s antipathy toward the

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892. *Id.*
893. *Id.*
894. *Id.*
895. *Id.*
896. Boggs, (which Boggs?) *supra* note 869, at 15.
897. *Id.* The story of Panton, Leslie & Company, and Forbes & Company is colorful, and well beyond this piece. *Id.*
898. *Id.*
899. *Id.*
901. See *Fletcher v. Peck*, 10 U.S. (6 Cranch) 87, 139 (1810).
902. *See id.*
903. See Boggs, (which Boggs?) *supra* note 869, 15–16.
904. Interview with Dr. Joe Knetsch, (Mar. 16, 2011) (notes on file with author).
905. *Id.*
906. *Id.*
private companies and every nation with whom they dealt. Additionally, just as Spain would have wanted its friends to have as much of Florida as possible, it was even more imperative politically for the United States to have as much public domain as possible. When one thinks about it, the American courts' strong presumption in favor of the grants confirmation was quite remarkable.

Dr. Knetsch is by no means blind to the problems of grants in Florida. He wrote multiple papers and articles detailing fraud, collusion and ineptitude in the grants process. He noted that the problem in East Florida stemmed often from overly aggressive grant interpretations, and oftentimes fictitious surveys that were not run on the ground, by the Spanish Surveyor General, Jorge Clark. West Florida records, however, were disproportionately those that were spirited away to Havana, and then unavailable for United States review. Further, for many of the same problems Jesse Fish faced in East Florida, the British disallowed "practically all of the Spanish claims around Pensacola."

We discuss at Section V above the guidelines and boundaries that Spain established in its New World colonies, including Florida. Two modern decisions exemplify the significance. Dawson v. Mathews addressed a boundary dispute between claimants under Spanish land grant and the Swamp and Overflowed Lands Act. The Dawson court held that water boundaries in a subsequent federal act could not and did not affect boundaries that the Adams-Onis Treaty confirmed pursuant to Spanish Grant. Dumas v. Gar nett came to the opposite result—also based on the language of the Spanish Land Grant there. The grant was bounded on the east by the "zacat tel." Evidence established that term meant marshgrass in colonial Flori-

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910. See, e.g., KNETSCH, supra note 907.

911. See id.

912. KNETSCH, supra note 907, at 3.


914. *Id.* at 1087; see Swamp and Overflowed Land Act, ch. 84, 9 Stat. 519 (1850) (codified at 48 U.S.C. 982).

915. Dawson, 338 So. 2d at 1087.

916. 13 So. 464 (Fla. 1893).

917. *Id.* at 467.

918. *Id.* at 464.
The court held that the waterfront claimant held title only as far as the marshline.

B. Statehood

1. Sovereign Lands, Navigability, and the Public Trust

As stated above, Florida became a state on March 3, 1845. The Supreme Court of Florida Justice Whitfield drafted “Whitfield’s Notes,” which constitute one of our state’s principal repositories of legal analysis. It is considered roundly to be a lodestar of Florida water boundary law. One of the more subtly stated, yet legally significant, passages in Whitfield’s Notes is this: “The [general] common . . . law of England” as modified by statutes is in “force in this state [except where it is] inconsistent with the constitution and laws of the United States” or of the State of Florida. The problems of conflicting grant instructions and favoritism renewed in the Second Spanish colonial period.

Apalachicola Land & Development Co. v. McRae was one of Florida’s bellwether sovereign land decisions. The court held that Mitchel’s confirmed Forbes Purchase did not convey any lands below the high water mark of the Gulf of Mexico. Justice Whitfield proclaimed: “It is settled law in this state that private ownership of lands bordering on navigable waters extends only to high-water mark.” Whitfield explicated at great length that Spanish colonial law was the same. Whitfield concluded that both the letter of the Forbes Purchase and the Spanish law dictated a boundary at the high water mark.

Whitfield tells us that Florida land titles derive through three principal chains. First, there are Spanish land grants that were confirmed pursuant

919. Id. at 465.
920. Id. at 465–66.
922. See generally Whitfield’s Notes, supra note 829.
923. Id. at 231.
924. Id. at 224.
925. See id. at 215–16.
926. 98 So. 505 (Fla. 1923).
927. Id. at 523.
928. Id. at 517.
929. See id. at 517–27.
930. Id. at 528.
931. Whitfield’s Notes, supra note 829, at 230.
to the Adams-Onis Treaty. Second, there are numerous federal patents and grants. Finally, the state granted or conveyed various lands received under Congressional Acts or, in the case of submerged sovereign lands, pursuant to the state’s sovereignty.

Whitfield explained thoroughly his analysis of Florida’s sovereign submerged lands. He cited Shively v. Bowlby for the federal government’s obligation to “hold the lands under navigable waters and tide lands” in the public trust until Florida’s statehood. Clearly, Whitfield interpreted federal water law to encompass all tidelands in sovereign submerged lands. While I believe the Phillips Petroleum dissent interpreted early federal law more correctly in limiting sovereign title to navigable waters, Whitfield’s broad scope is consistent with his reputation as Florida’s leading public trust proponent.

Whitfield stated expressly that Florida “became the owner for the benefit of its inhabitants of all lands under bodies of navigable water and tide lands within its territorial limits” upon statehood on March 3, 1845. We can understand why Justice Whitfield might have broadly interpreted Shively. After all, the Court did refer to tidal lands, even though it limited the scope elsewhere by referring to riparian and littoral lands being bounded by the “high water mark.”

Regardless, the Supreme Court of Florida in Clement v. Watson considered the issue of tidal boundaries. Whitfield did not cite this already fifteen-year-old decision in his original 1927 notes. In Clement, the Supreme Court of Florida expressly rejected the ebb and flow test in favor of a high water mark boundary in tidal lands. Even odder—Justice Whitfield

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932. Id.
933. Id.
934. Id. In light of the overarching question over whether Phillips Petroleum decided properly that nonnavigable tidelands were sovereign at statehood, I feel compelled to note that the dean of Florida water law stated that “lands under bodies of navigable water or of tide lands [are] . . . two classes of lands belonging to the state by virtue of its sovereignty upon being ‘admitted into Union on equal footing with the original States in all respects whatsoever.’” Id.
935. Whitfield’s Notes, supra note 829, at 235.
936. Id.
937. Shively, read in context, does not support Whitfield. The Court stated: “The title and rights of riparian or littoral proprietors in the soil below high water mark, therefore, are governed by the laws of the several States.” Shively, 152 U.S. at 57–58.
938. Whitfield’s Notes, supra note 829, at 235.
939. 58 So. 25 (Fla. 1912).
940. Id. at 26.
941. See Clement, 58 So. at 27.
drafted the *Clement* opinion.\footnote{Id. at 26.} He stated in *Clement*: “Waters are not under our law regarded as navigable merely because they are affected by the tides.”\footnote{Id.}

Additionally, the Supreme Court of Florida decided *Miller v. Bay-to-Gulf*,\footnote{193 So. 425 (Fla. 1940).} just one year before Whitfield’s Notes were republished in the Florida laws. *Miller* held that the Mean High Water Line is “the limit reached by the daily ebb and flow of the tide, the usual tide, or the neap tide that happens between the full and change of the moon.”\footnote{*Miller*, 193 So. at 428.}

Whitfield propounds a soft public trust in Florida:

The use and disposition of [sovereign submerged] lands are within the regulating province of the legislature, subject only to the rights of riparian owners under the law of the state and to such rights as the public may have in the lawful use of the navigable waters and to the dominant power of congress over the navigable waters. It has been held that by statute, limited portions of the submerged lands may be sold to private ownership when substantial rights of the public in the use of the navigable waters are not unlawfully invaded and the authority of congress as to navigable waters is not interfered with.\footnote{WHITFIELD’S NOTES, supra note 829, at 235 (emphasis added).}

Even though Whitfield stated that the state took title on March 3, 1845, to all tidelands, he limits the scope of public trust ownership to navigable waters.\footnote{Id.} Whitfield cited various decisions, including *Illinois Central* and *Appleby* (although, curiously, not *Shively*) regarding the public trust “floor.”\footnote{Id.} While the state could convey sovereign lands, it could not thereby wholly abrogate its public trust obligations.\footnote{Id.} He defined the standard obliquely: “There are recognized limitations upon the power of the legislature to pass to private ownership the submerged lands under navigable waters when the public interests and rights are disregarded so as to produce detriment.”\footnote{Id.}
I want to point out Daniel Peyton's two-part article in the Florida Bar Journal as thoroughly dissecting the extent of the public trust in Florida.  

In *Sovereignty Lands in Florida: It's All About Navigability, Part I*, Peyton lists most of the major Florida decisions and several articles on the topic.  

Peyton cites articles by Norwood Gay and Rosanne Gervasi Capeless that contend Florida's public trust lands extend to all tidal lands. Peyton responds that Florida's Fifth District Court of Appeal in *Lee v. liams*, eviscerated the argument. Judge Griffin's opinion in *Lee* held that *Clement v. Watson* binds Florida courts. She wrote in her opinion that the appellant and amicus the Governor and Cabinet's (sitting as the Board of Trustees of the Internal Improvement Trust Fund) argument that *Phillips Petroleum Co.* controlled "must have been the result of an unexplainable aberration or the product of some terrible slip of the pen." She concluded that *Phillips Petroleum Co.*, even if decided correctly, bound the State of Florida only at the moment of statehood on March 3, 1845. Griffin's opinion confirmed that *Clement* was a sound determination of the extent of Florida's public trust doctrine, consistent with *Corvallis Sand & Gravel Co.*'s holding that each state may choose its own public trust doctrine as long as it does not abrogate public rights entirely.  

More to the point, Judge Griffin held the court was constrained by Florida's own state constitution. Article X, section 11 states:

> Sovereignty lands.—The title to lands under navigable waters, within the boundaries of the state, which have not been alienated, including beaches below mean high water lines, is held by the

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952. Peyton, *supra* note 951. I was on the Dean Frank Maloney Award panel of the Florida Bar's Environmental and Land Use Section that received and awarded Mr. Peyton's piece in 2001.  


954. 711 So. 2d 57 (Fla. 5th Dist. Ct. App. 1998).  


956. *Lee*, 711 So. 2d at 59, 62.  

957. *Id.* at 60.  

958. *Id.* at 60, 61 n.9.  

959. *Id.* at 60; Oregon *ex rel.* State Land Bd. v. Corvallis Sand & Gravel Co., 429 U.S. 363, 377 (1977).  

960. *Lee*, 711 So. 2d at 63.
state, by virtue of its sovereignty, in trust for all of the people. Sale of such lands may be authorized by law, but only when not in the public interest.\footnote{FLA. CONST. art. X, § 11.}

Even if the Florida common law left open any question of where Florida’s sovereign lands lay under tidal waters, the Florida Constitution settled the issue in 1968. The 1970 amendment clarified the scope of possible sales, but the state’s adoption in 1968 of a constitution that bounds sovereign lands by “navigable waters” and “mean high water lines” seems dispositive. The section augments this by stating all such lands are held “in trust for all the people.”\footnote{Id.} The only deviation from this standard is when the state wants to convey any sovereign lands. The Florida Constitution implicitly bars public trust sovereign lands claims in Florida above the high water mark. The only “direction” that article X, section 11 allows the boundary to move is in favor of limited private grant by the sovereign. The section limits the sovereign grant to “navigable waters,” and buttresses the limitation by express reference to beach boundaries at the “mean high water lines.”\footnote{Id.}

No one can say that the Supreme Court of Florida has not ruled in favor of property owners on this point before. In \textit{State v. Florida National Properties, Inc.},\footnote{338 So. 2d 13 (Fla. 1976).} the court rejected a statute that fixed certain non-tidal water boundaries.\footnote{Id. at 18.} The court held that statutory deviation from the common law transitory high water line would constitute a taking that violated the Fourteenth Amendment to the United States Constitution, as well as article I, section 9 of Florida’s Constitution.\footnote{See id. at 18–19; see also FLA. CONST. art. 1, § 9. That section is entitled the “Due Process” provision of article I, which is entitled “Declaration of Rights.” FLA. CONST. art. 1, § 9.}

The \textit{Florida National Properties, Inc.} majority’s rationale seemingly bore directly on \textit{STBR}. Section 253.151 of the \textit{Florida Statutes} purportedly fixed the boundary between sovereign lands and private uplands in “navigable meandered fresh water lakes.”\footnote{Fla. Nat’l Props., 338 So. 2d at 17.} The statute distinguished such water bodies from “tidal” water bodies, but many tidal water bodies are fresh water.\footnote{Id. at 14.} Regardless, the Supreme Court of Florida held section 253.151 unconstitutional, both facially and as applied.\footnote{Id. at 16, 18.}
The core holding upheld the trial court, which held that section 253.151 was indistinguishable from the Washington state statute that the Supreme Court of the United States struck in *Hughes v. Washington*. 970 The lower court, and the Supreme Court of Florida held that the fixed boundary violated due process rights under the Federal and Florida Constitutions by fixing a statutory line in lieu of the vested, common law ambulatory high water line. 971 This is particularly acute as to alluvial deposits and reliction. 972

As we stated above, Whitfield’s Notes confirmed that the British common law remain in force in Florida except where inconsistent with express law of the United States or Florida. 973 This has long been codified:

> The common and statute laws of England which are of a general and not a local nature, [with the exception hereinafter mentioned,] down to the fourth day of July, 1776, are declared to be of force in this state; provided, the said statutes and common law be not inconsistent with the constitution and laws of the United States and the acts of the legislature of this state. 974

Accordingly, the common law of riparian and littoral rights has always applied in Florida, except when and where modified by statute. Farnham confirmed the relationship of riparian or littoral rights to adjacency of water:

> The courts do not fully agree in their enumeration of these rights. Some concede more than do others; but the principles involved which will be developed in the course of this and succeeding chapters accord the owner of riparian land the right to have the water remain in place, and to retain, as nearly as possible, its natural character. 975

Florida’s common law of littoral and riparian rights follows the English and general American common law. Such decisions as *Broward v. Mabry* 976 and *Hayes v. Bowman* 977 confirm riparian and littoral rights available under

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970. *Id.* at 17 (citing *Hughes v. Washington*, 389 U.S. 290 (1967)).
971. *Id.* at 17, 18.
972. *See* *Fla. Nat’l Props.*, 338 So. 2d at 17–18.
973. *Fla. Stat.* § 2.01 (2010); *Whitfield’s Notes*, *supra* note 829, at 223 (citation omitted); *Fla. Stat.* § 2.01 (1941).
974. *Whitfield’s Notes*, *supra* note 829, at 224 (citing *Fla. Stat.* § 2.01 (1941)); *see* *Fla. Stat.* § 2.01 (2010).
976. 50 So. 826 (Fla. 1909).
977. 91 So. 2d 795 (Fla. 1957).
Florida law. Hayes is the central Florida decision on riparian and littoral rights. There, the Supreme Court of Florida held that every riparian and littoral owner holds an appurtenant property right of wharfage, access and view from the parcel’s high water line to the navigable channel or waterbody. The Supreme Court of Florida more explicitly explained these rights in Game and Fresh Water Fish Commission v. Lake Islands: “Reasonable [riparian or littoral] access must, of course, be balanced with the public good, but a substantial diminution or total denial of reasonable access to the property owner is a compensable deprivation of a property interest.”

The Supreme Court of Florida in Hayes balanced the appurtenant littoral and private rights with public rights in the Boca Ciega Bay, where the land at issue lay. The parcel was constructed by adding fill into the bay.

The court emphasized:

[The] power of the State to dispose of submerged tidal lands has assumed important proportions in recent years. Valuable subdivisions have been built on dredged-in fill. Large areas have been leased to those who would speculate in drilling for oil. Increased interest in this type of land bears forebodings of even more complex problems in the future. These lands constitute tremendously valuable assets. Like any fiduciary asset, however, they must be administered with due regard to the limitations of the trust with which they are impressed.

Even before Hayes, the Supreme Court of Florida held consistently that a riparian or littoral owner in Florida had “the right of ingress and egress to and from . . . the waters . . . unobstructed view over the waters, and in common with the public the right of navigating, bathing, and fishing.” The Florida legislature codified these rights, first in section 192.61 of the Florida Statutes, and then in today’s section 253.141 of the Florida Statutes.

Florida’s tidal boundaries were first established in Miller v. Bay-to-Gulf, Inc. The Miller Court had the opportunity to adopt a mean high tide
line, as the Supreme Court of the United States did five years before in *Borax*.

Instead of adopting a scientifically based boundary that reflected the 18.6 year lunar epoch, the Supreme Court of Florida adopted a rule in *Miller* that the tidal boundary reflected the daily ebb and flow of the local tide.

The 1974 Florida legislature retreated from *Miller* by adopting a modified version of the tidal epoch test from *Borax*. Subsection 177.27(14) of the Florida Coastal Mapping Act of 1974 defines "the average height of the high waters over a 19-year period." This rounds up the 18.6 year, technically correct epoch. Nonetheless, it dramatically improved *Miller*'s standard.

The nontidal boundary is more problematic in Florida. The test in Florida remains substantially unchanged from the 1927 Supreme Court of Florida’s decision in *Tilden v. Smith*.

David Guest explains thoroughly the sources of the Minnesota test, which we discuss above in the context of *Howard v. Ingersoll*’s three Supreme Court of the United States tests for the ordinary high water mark on nontidal waters.

While *Tilden* works where there exist sharply defined banks, the Supreme Court of Florida in the same year complained of the difficulty in implementing such a test in Florida’s swamplier and flatter regions. *Martin v. Busch* addressed the southwestern shore of Lake Okeechobee in the Moore Haven area. The *Martin* Court expounded on this problem:

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991. See FLA. STAT. §177.25 (2010).
992. *Id.* § 177.27(14).
993. 113 So. 708 (Fla. 1927).
994. *Id.* at 712 (quoting *Carpenter v. Bd. of Comm’rs*, 58 N.W. 295, 297 (Minn. 1894)) (emphasis omitted).
996. 112 So. 274 (Fla. 1927).
997. *Id.* at 277, 280.
In flat territory or because of peculiar conditions, there may be little if any shore to navigable waters, or the elevation may be slight and the water at the outer edges may be shallow and affected by vegetable growth or [by] conditions, and the line of ordinary high-water mark may be difficult of accurate ascertainment; but, when the duty of determining the line of high-water mark is imposed or assumed, the best evidence attainable and the best methods available should be utilized in determining and establishing the line of true ordinary high-water mark, whether it is done by general or special meandering or by particular surveys of adjacent land. Marks upon the ground or upon local objects that are more or less permanent may be considered in connection with competent testimony and other evidence in determining the true line of ordinary high-water mark.998

2. Background to STBR

a. The Beach and Shore Preservation Act

The 1986 Florida legislature enacted the Beach and Shore Preservation Act.999 The statutory purpose was to further “the public interest to preserve and protect [beaches and shores] from imprudent construction which can jeopardize the stability of the beach-dune system, accelerate erosion, provide inadequate protection to upland structures, endanger adjacent properties, or interfere with beach access.”1000 The day-to-day core of the act was establishment and regulation of coastal construction control lines,1001 and implementing protection further by establishing thirty-year erosion lines that are the westward boundary for any state coastal permits.1002

Chapter 161 authorizes beach restoration projects, which are deemed to be “in the public interest.”1003 The conditions to obtain state permits for such projects feature minimizing the adverse effects of erosion.1004 To obtain state funding, the project must further protect listed species and natural resources, and, of most interest in STBR, provide for public access on the renourished beach.1005

998. Id. at 283.
999. See FLA. STAT. § 161.011 (2010).
1000. Id. § 161.053(1)(a).
1001. Id.
1002. Id. § 161.053 (5)(b).
1003. Id. § 161.088.
1004. FLA. STAT. § 161.088.
1005. See id. § 161.101(12).
Core to beach renourishment under chapter 161 is the establishment of the Erosion Control Line (ECL) as the MHWL for that section of beach. The ECL acts both as the baseline for newly renourished sands and as the new and permanent property boundary. It replaces the ambulatory MHWL, which would otherwise be set by nineteen-year epochs under chapter 177.

The state must determine if the currently determined, post-erosion or avulsion MHWL is where it will locate the ECL. If engineering of the proposed project combined with the erosion or avulsion so requires, the state may select an ECL that lies upland of the MHWL. If the latter occurs, the state must condemn the strip between MHWL and the ECL.

3. The Administrative and Legal Background to STBR

STBR arose when STBR and a second group, Save our Beaches (SOB), petitioned the Florida Department of Environmental Protection (FDEP) and the Governor and Cabinet, sitting as the Trustees of the Internal Improvement Trust Fund, to challenge FDEP and Trustees issuance of a permit allowing nearly seven miles of Gulf front beach to be renourished in the City of Destin and in unincorporated Walton County. Central to the permit was the Cabinet’s adoption of and recordation in County records of the ECL as determined for the project. Neither STBR nor SOB owned any of the littoral property, but STBR’s members did so. The FDEP referred the matter to the Florida Division of Administrative Hearings (DOAH) pursuant to Florida Statutes sections 120.569 and 120.57.

The DOAH Administra-
tive Law Judge held that DOAH lacked jurisdiction to address any constitutional issues, which Florida law holds must be preserved at the administrative agency level for review by any court of appeal reviewing the administrative action.\textsuperscript{10} DOAH issued a recommended order finding and holding that the permit applicants met all applicable administrative standards, and FDEP’s subsequent final order substantially adopted DOAH’s reasoning and conclusions and issuing the permit.\textsuperscript{11}

SOB and STBR appealed the FDEP’s final order to Florida’s First District Court of Appeal.\textsuperscript{12} That intermediate appellate court discussed the DOAH record at length in concluding that the FDEP final order “unconstitutionally applie[d] Part I of Chapter 161, Florida Statutes.”\textsuperscript{13} The First District held that the severance of the littoral properties from the open waters of the Gulf of Mexico by the ECL and fill was both an unreimbursed, unconstitutional deprivation of their littoral rights and a resulting failure by the local governments to establish their own sufficient upland interest to perform the permitted renourishment.\textsuperscript{14} The First District emphasized the FDEP’s final order, which it said “expressly recognized” that section 161.191 eliminates the littoral property’s right to accretions and relictions after the ECL is established.\textsuperscript{15}

The governmental entities appealed to the Supreme Court of Florida.\textsuperscript{16} The First District certified the following question to the Supreme Court of Florida for review:

\begin{quote}
Has Part I of Chapter 161, Florida Statutes (2005), referred to as the Beach and Shore Preservation Act, been unconstitutionally applied so as to deprive the members of Stop the Beach Renourishment, Inc. of their riparian rights without just compensation for the property taken, so that the exception provided in Florida Administrative Code Rule 18-21.004(3), exempting satisfactory evidence of sufficient upland interest if the activities do not unreasonably infringe on riparian rights, does not apply?\textsuperscript{17}
\end{quote}

\begin{footnotes}
\footnotetext[10]{1016. Id. at 54 n.3.}
\footnotetext[11]{1017. \textit{Save Our Beaches, Inc.}, 27 So. 3d at 51.}
\footnotetext[12]{1018. Id. at 50.}
\footnotetext[13]{1019. Id.}
\footnotetext[14]{1020. Id. at 58.}
\footnotetext[15]{1021. Id. at 54.}
\footnotetext[16]{1022. \textit{See Walton Cnty. v. Stop the Beach Renourishment, Inc.}, 998 So. 2d 1102, 1105 (Fla. 2008).}
\footnotetext[17]{1023. Id.}
\end{footnotes}
The Supreme Court of Florida accepted jurisdiction. The court re-framed the issue as a facial challenge. A facial challenge is far harder to mount than is an as applied challenge, largely because a facial challenger must prove that the agency action cannot be constitutional under any circumstance. The Supreme Court of Florida also reframed the issue from accretion, as discussed expressly by section 161.191(2), to avulsion.

The Supreme Court of Florida majority held that the littoral owner’s right to alluvial deposits is contingent, not vested. It held further that littoral owners could gain accretions by “a rule of convenience intended to balance public and private interests by automatically allocating small amounts of gradually accreted lands to the upland owner without resort to legal proceedings and without disturbing the upland owner’s rights to access to and use of the water.” The majority concluded that the ECL and retention of access by statute virtually eliminated any risk to the littoral owner, and the amount of land needed to renourish the beach was not nominal.

The majority stated further that access to the water was a subordinate littoral right. The MHWL is based on a nineteen-year epoch, so the physical shore is sometimes in the water, and sometimes in the sand. This, the majority contended, added to retained littoral access by statute to preserve property rights.

The majority’s last point distinguished Belvedere Development Corporation v. Department of Transportation, Division of Administration. Belvedere held that a condemning authority could not sever riparian rights from a condemned parcel. The majority held that Belvedere dealt with distinguishable issues such as addressing condemnation of riparian lands. The majority reiterated its alleged irrelevance because Chapter 161, Part I of the Florida Statutes left the owner with “access, use, and view.”

1024. Id.
1025. Id.
1026. See, e.g., Fla. Dep’t of Revenue v. City of Gainesville, 918 So. 2d 250, 256 (Fla. 2005).
1027. See Walton Cnty., 998 So. 2d at 1116.
1028. Id. at 1112.
1029. Id. at 1118.
1030. Id.
1031. Id. at 1112.
1032. Walton Cnty., 998 So. 2d at 1119.
1033. Id. at 1120.
1034. 476 So. 2d 649 (Fla. 1985).
1035. Walton Cnty., 998 So. 2d at 1120 (citing Belvedere Dev. Corp., 467 So. 2d at 653).
1036. Id.
1037. Id.
Justices Wells and Lewis dissented sharply. Justice Wells stated that *Florida National, Belvedere and Board of Trustees of the Internal Improvement Trust Fund v. Sand Key Associates*\(^{1038}\) controlled.\(^{1039}\) Justice Lewis was blunter.

Justice Lewis accused the majority of having “butchered” Florida Law in seeking an equitable result.\(^{1040}\) He took offense that the majority *sua sponte* reframed the issue from as applied to facial, after all parties and lower tribunals framed the issue as an as applied matter.\(^{1041}\) He string cited Florida law in stating: “By essential, inherent definition, riparian and littoral property is that which is contiguous to, abuts, borders, adjoins, or touches water.”\(^{1042}\) He further cited Judge Hersey’s special concurrence in Florida’s Fourth District Court of Appeal’s decision in *Belvedere Development Corp. v. Division of Administration.*\(^{1043}\) “To speak of riparian or littoral rights un-connected with ownership of the shore is to speak a *non sequitur.*”\(^{1044}\)

Justice Lewis contended that the majority’s argument that the ECL and fill would separate the littoral property from the sea by a short distance missed a key point: “Under the majority’s analysis, this State has ceased to protect the condition precedent to all other littoral rights: contact with the sea.”\(^{1045}\) He lays out trenchantly his counter to the majority’s rationale: “I suggest that contact with the water by riparian or littoral property is not ancillary, independent, or subsidiary to such property but is essential and inherent to its legal definition and is an indispensable predicate for the private owners’ possession of other associated rights.”\(^{1046}\)

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1038. 512 So. 2d 934 (Fla. 1987).
1039. Walton Cnty., 998 So. 2d at 1121 (Wells, J., dissenting).
1040. Id. at 1121 (Lewis, J., dissenting).
1041. Id.
1042. Id. at 1122 (citations omitted).
1043. Id. (citing Belvedere Dev. Corp. v. Div. of Admin., 413 So. 2d 847, 851 (Fla 4th Dist. Ct. App. 1982) (Hersey, J., specially concurring) quashed by 476 So. 2d 649 (Fla. 1985)).
1044. Walton Cnty., 998 So. 2d at 1122 (Lewis, J., dissenting) (quoting Belvedere Dev. Corp. v. Div. of Admin., 413 So. 2d 847, 851 (Fla 4th Dist. Ct. App. 1982) (Hersey, J., specially concurring) quashed by 476 So. 2d 649 (Fla. 1985)).
1045. Id. at 1126–27.
1046. Id. at 1126.
1047. Id.
STOP THE BEACH RENOURISHMENT

4. **STBR's Filing**

a. **On Judicial Takings**

The principal issue **STBR** laid before the Supreme Court was whether the Supreme Court of Florida so deviated from Florida riparian and littoral precedential law that the state court's decision constituted a "judicial taking." The Supreme Court once stated, in 1897, that the state judiciary could be liable under the Fourteenth Amendment for compensable takings of property. Coincidental to our topic, the case addressed a railroad in the City of Chicago. The City took the railroad's right-of-way to connect Rockwell Street. The railroad appealed its eminent domain award of one dollar.

*Chicago, Burlington & Quincy Railroad Co. v. Chicago* considered whether the Fourteenth Amendment barred Illinois state courts from awarding a nominal sum to the railroad whose property was taken by the City of Chicago. The first Justice John Marshall Harlan wrote the opinion for the Supreme Court in holding that the Fourteenth Amendment incorporated a right to compensation for a state actor's taking. David Sarratt quotes the following, sweeping passage:

> 'In our opinion, a judgment of a state court, even if it be authorized by statute, whereby private property is taken for the State or under its direction for public use, without compensation made or secured to the owner, is, upon principle and authority, wanting in the due process of law required by the Fourteenth Amendment of the Constitution of the United States, and the affirmance of such judgment by the highest court of the State is a denial by that State of a right secured to the owner by that instrument.'

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1050. See *id.* at 230.
1051. *Id.*
1052. *Id.*
1053. 166 U.S. 226 (1897).
1054. *Id.* at 235.
1055. *Id.* at 241.
Modern courts\textsuperscript{1057} and commentators\textsuperscript{1058} cite \textit{C, Burlington & Quincy Railroad Co.} as the decision that first incorporated the Fifth Amendment Takings Clause against state actors under the Fourteenth Amendment. Professor Bradley Karkkainen counters that the decision never cited that premise.\textsuperscript{1059} Rather, he contends that \textit{Chicago, Burlington & Quincy Railroad Co.} was decided under substantive due process.\textsuperscript{1060}

The \textit{Chicago, Burlington & Quincy Railroad Co.} opinion stated that “[d]ue process of law . . . means . . . such process as recognizes the right of the owner to be compensated if his property be wrested from him and transferred to the public.”\textsuperscript{1061} The Court upheld the award just the same, because of instructions and facts in the record supporting the jury award.\textsuperscript{1062}

Karkkainen concedes that the \textit{Chicago, Burlington & Quincy Railroad Co.} opinion cites no authority for the holding that due process under the Fourteenth Amendment required just compensation for a state taking.\textsuperscript{1063} He responds that \textit{Munn v. Illinois}\textsuperscript{1064} supported \textit{Chicago, Burlington & Quincy Railroad Co.} Dicta in \textit{Munn} stated that a State could take private property consistent with the Fourteenth Amendment, but due process required just compensation.\textsuperscript{1065}

Karkkainen emphasizes that \textit{Chicago, Burlington & Quincy Railroad Co.} did not mention \textit{Barron},\textsuperscript{1066} which limited the takings clause to the Fifth Amendment.\textsuperscript{1067} He contends:

The historical record is unambiguous: \textit{Chicago B & Q} was not understood at the time it was decided, nor for many decades thereafter, to have extended the Fifth Amendment Takings Clause

\begin{thebibliography}{99}
\bibitem{1057} Dolan v. City of Tigard, 512 U.S. 374, 383–84 (1994).
\bibitem{1058} See \textit{e.g.}, Barton H. Thompson, Jr., \textit{Judicial Takings}, 76 VA L. REV. 1449, 1463 (1990).
\bibitem{1060} See \textit{id.} at 844.
\bibitem{1061} \textit{Chi., Burlington & Quincy R.R. Co.}, 166 U.S. at 236.
\bibitem{1062} \textit{Id.} at 235–36.
\bibitem{1063} Karkkainen, \textit{supra} note 1059, at 848.
\bibitem{1064} 94 U.S. 113, 145 (1877).
\bibitem{1065} Karkkainen, \textit{supra} note 1059, at 848 (citing 94 U.S. at 145).
\bibitem{1066} \textit{Barron v. Mayor of Baltimore}, 32 U.S. (7 Pet.) 243 (1833). See \textit{supra} notes 113–118 and accompanying text, which explain that \textit{Barron} might be best understood by the Supreme Court’s tendency in that era to protect property rights, but not property value.
\bibitem{1067} \textit{Id.} at 250–51; Karkkainen, \textit{supra} note 1059, at 852–54.
\end{thebibliography}
to the states. That interpretation of Chicago B & Q is a latter-day contrivance, at odds with historical understandings.\(^{1068}\)

*Muhlker v. New York & Harlem Railroad Co.*\(^{1069}\) first raised the concept of judicial takings in the context of a state judiciary's reversal of longstanding precedent.\(^{1070}\) While Justice McKenna wrote for a four justice plurality stating that the state courts could not take property rights by unwarranted reversal of precedent, he neither cited precedent nor explained why his observation was not *dicta*.\(^{1071}\)

The Supreme Court in the 1930s moved away from any judicial takings rationale.\(^{1072}\) Nonetheless, Sarratt argues that the Supreme Court left the door open a crack.\(^{1073}\)

As we have discussed above, Justice Stewart’s concurrence in the 1967 *Hughes* decision revived the doctrine—at least in theory.\(^{1074}\) Justice Scalia’s dissent from the Supreme Court’s denial of certiorari in *Stevens v. Cannon Beach*\(^{1075}\) made it clear he agreed with Justice Stewart:

As a general matter, the Constitution leaves the law of real property to the States. But just as a state may not deny rights protected under the Federal Constitution through pretextual rulings, neither may it do so by invoking nonexistent rules of state substantive law. Our opinion in *Lucas*, for example, would be a nullity if anything that a state court chooses to denominate “background law”—regardless of whether it is really such—could eliminate property rights. “[A] State cannot be permitted to defeat the constitutional prohibition against taking property without due process of law by the simple device of asserting retroactively that the property it has taken never existed at all.” No more by judicial decree than by legislative fiat may a State transform private property without compensation. Since opening private property to public use constitutes a taking, if it cannot fairly be said that an Oregon doctrine of custom deprived Cannon Beach property owners of their rights

\(^{1068}\) Karkkainen, *supra* note 1059, at 855.

\(^{1069}\) 197 U.S. 544 (1905).

\(^{1070}\) *Id.* at 574 (Holmes, J., dissenting).

\(^{1071}\) Thompson, *supra* note 1058, at 1464–65 n.61 (citing *Muhlker*, 197 U.S. at 572–76).

\(^{1072}\) Thompson’s seminal article declares that the doctrine died that decade. *Id.* at 1467.


\(^{1075}\) 510 U.S. 1207 (1994) (Scalia, J., dissenting).
to exclude others from the dry sand, then the decision now before us has effected an uncompensated taking.\textsuperscript{1076}

Professor Benjamin Barros stated that the Supreme Court’s acceptance of jurisdiction in \textit{STBR} likely portended the Court’s willingness to decide the issue of a judicial taking in favor of the property owner.\textsuperscript{1077} Barros said that Scalia had passed on “at least” fifteen petitions that argued for certiorari on the judicial takings issue between \textit{Cannon Beach} and \textit{STBR}.\textsuperscript{1078}

Justice Scalia provided fertile ground, however, for consideration of the doctrine. He is the current Court’s most zealous proponent of a robust takings doctrine.\textsuperscript{1079} One wonders how it comports with constitutional originalism,\textsuperscript{1080} but it does further Justice Scalia’s efforts to both augment and emphasize the takings doctrine\textsuperscript{1081} and to supplant substantive due process.\textsuperscript{1082}

In addition to \textit{Cannon Beach}, Scalia’s analysis in \textit{Lucas v. South Carolina Coastal Council}\textsuperscript{1083} showed a willingness to address a significant state takings case. His majority opinion held that a state that deprives an owner of all economic value of a property must pay just compensation, unless the owner’s use or proposed use violates “restrictions that background principles of the State’s law of property and nuisance already place upon land ownership.”\textsuperscript{1084} \textit{STBR} presented an ideal synergy of \textit{Cannon Beach} and \textit{Lucas}. Barros expected so, as he predicted a 5-4 victory for the property owners, with Justice Scalia writing for himself, Chief Justice Roberts, and Justices Thomas, Alito, and Kennedy, with a possible concurrence as well by Justice

\begin{itemize}
  \item \textsuperscript{1076} Id. at 1211–12 (alterations in original) (citations omitted).
  \item \textsuperscript{1078} Id.
  \item \textsuperscript{1081} \textit{See, e.g.}, Stevens v. Cannon Beach, 510 U.S. 1207, 1207–14 (1994) (Scalia, J., dissenting from denial of certiorari).
  \item \textsuperscript{1082} \textit{See, e.g.}, Aaron Shuler, \textit{From Immutable to Existential: Protecting Who We Are and Who We Want To Be With the “Equality” of the Substantive Due Process Clause}, 12 \textit{J.L. & SOC. CHALLENGES} 220, 315–16 (2010) (discussing Justice Scalia’s disdain for use of substantive due process to protect liberty, citing to \textit{Lawrence v. Texas}, 539 U.S. 558, 588–92 (2003) (Scalia, J., dissenting)).
  \item \textsuperscript{1083} 505 U.S. 1003 (1992).
  \item \textsuperscript{1084} Id. at 1029.
\end{itemize}
Kennedy on due process grounds. As it turned out, he was ever so close on his prediction. As one assumes, so was Justice Scalia.

5. The Oral Argument

My friend Gary Oldehoff wrote an extraordinary amicus brief on the other side of our amicus brief in STBR. His subsequent Florida Bar Journal article summed up the oral argument quite well: "The parties and their amici left the oral argument with no clear sense of the likely outcome. The same was clearly true for the media."

6. The STBR Decision

a. Florida Law

The Supreme Court issued its decision on June 17, 2010. The only thing the Court agreed upon was that the Supreme Court of Florida majority did not effect a judicial taking. Justice Scalia wrote for a unanimous Court. The Court held that Florida law does not require a littoral parcel to maintain direct physical contact with the navigable water to keep the appurtenant right of access to that waterbody.

This decision upheld the Supreme Court of Florida majority opinion distinguishing Belvedere Development Corp. v. Florida Department of Transportation, cited by the Petitioners and Florida’s First District Court of Appeal. Belvedere addressed the rights of a condemnee to retain riparian rights. The Supreme Court of Florida majority opinion in Walton County limited Belvedere’s application to eminent domain. Belvedere

1085. Barros, supra note 1077.
1087. Oldehoff, supra note 7, at 18, 21 & n.46 (citing news stories with vote predictions that, well, crossed the waterfront).
1089. Id. at 2613.
1090. Id. at 2592.
1091. Id. at 2598–99.
1092. 476 So. 2d 649 (Fla. 1985).
1094. See Belvedere Dev. Corp., 476 So. 2d at 650.
1095. See Walton Cnty. v. Stop the Beach Renourishment, Inc., 998 So. 2d 1102, 1120 (Fla. 2008).
was consistent with *Crutchfield v. F. A. Sebring Realty Co.*, 1096 which over a half century before *Walton County* held that riparian rights are appurtenances to waterfront parcels and may not be severed from such lands.1097

The STBR Court upheld the *Walton County* majority holding that the fill constituted an avulsive event, not accretion.1098 As the Supreme Court of Florida reframed the issue in *Walton County*, artificial avulsion would not change preexisting waterfront boundaries.1099 Nonetheless, this settled law retains none of the classic rationales for the avulsion-accretion distinction. We no longer have “lost boundary” conundrums in alluvial settings—at least we do not in most Gulf coast beaches that are surveyed by the MHWL for which historic aerial photographs are generally available. Artificial avulsion, as in renourishment, is nominally more permanent than were the classically avulsive events described in English common law that distinguished accretion and avulsion. Even Sax, whom all concede is the godfather of the modern public trust doctrine, does not support the blanket distinction. Finally, the major support of holding the traditional boundary where improvements cause “artificial” avulsion does not exist where the landowner does not participate in the improvements. The landowner does not allegedly benefit from her own activities in this adding to her physical property.

Justice Scalia stated at footnote 12 that the switch from common law property rights to those granted by statute did not have any material effect.1100 As Juras, Lincoln, and I point out in our article on the public access aspects of STBR,1101 the Eleventh Circuit’s law on-point is not comforting.1102 *McKinney v. Pate*1103 held that a government may rescind statutory rights as long as it provides procedural due process—notice and an opportunity to be heard.1104

Justice Scalia’s opinion concluded that the *Walton County* decision was controlled by a decision that the lower court nowhere mentioned:

In *Martin v. Busch*, 1105 the Florida Supreme Court held that when the State drained water from a lakebed belonging to the State, causing land that was formerly below the mean high-water line

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1096. 69 So. 2d 328 (Fla. 1954).
1097.  Id. at 329.
1099.  Id.
1100.  See id. at 2613 n.12.
1102.  Id. at 213.
1103.  20 F.3d 1550 (11th Cir. 1994).
1104.  Id. at 1567.
1105.  112 So. 274 (1927).
This followed Justice Scalia's and Justice Kennedy's questions at oral argument why Martin was not cited below. I discussed this at length in the ABA Constitutional Law Committee Newsletter.

Several major reasons come to mind. First, Martin addressed Swamp and Overflowed Lands along the shore of Lake Okeechobee. The federal and state government drained the lake through several major canals, for the "improvement" of the Everglades by large-scale reclamation. The Busch parties took title by a patent that expressly reserved to the state the right to enter their parcel for "canals, cuts, sluiceways, dikes and other work" that the state deemed appropriate to drain and reclaim. No one under that chain had a reasonable expectation of unqualified littoral rights. In fact, it was quite the opposite.

Finally, the majority decision in Sand Key expressly reversed, or at least said that Martin was dicta as related to reliction. Accordingly, it was appropriate and reasonable for littoral property owners after Sand Key to assume that alluvial deposits caused by third party governmental action incurred to them. It made imminent sense for them to assume Martin was no longer applied.

b. Judicial Takings

Justice Scalia was unable to get Justice Kennedy to join his four justice plurality. While he held that Florida did not take property here, Justice

1109. Id. at 12.
1110. Id.
1111. Id. at 16 (quoting Martin v. Busch, 112 So. 2d 274, 281 (Fla. 1927)).
1112. Id. (discussing Martin, 112 So. 2d at 280).
1113. Id.
1115. See generally Stop the Beach Renourishment, Inc. v. Fla. Dep't of Envtl. Prot., 130 S. Ct. 2592 (2010).
Scalia opined that the judiciary can be liable for a taking. He concluded that the standard for a judicial taking was not the one cited by Stewart in *Hughes*, and thus relied upon by the Petitioner in *STBR*. Rather, Justice Scalia stated that a state court should be liable where it deprives one of an established property right. He expounded: "A property right is not established if there is doubt about its existence; and when there is doubt we do not make our own assessment but accept the determination of the state court."

Justice Scalia also discussed the delicate question of whether the remedy for a judicial taking was the same as for a taking by the other two branches—just compensation. He concluded no. Rather, his opinion stated the remedy was reversal, thus allowing the state legislature to "either provide compensation or acquiesce in the invalidity of the offending features of the Act."

Justice Kennedy’s opinion, joined by Justice Sotomayor, stated that the due process clause provides the primary method of relief where a court deviates from precedent. Only when the due process clause proves inadequate should the Supreme Court consider the judicial takings doctrine. He emphasized that he believed the doctrine is "inconsistent with historical practice."

One commentary, logically enough, states: "That Justice Kennedy thoroughly denounced a judicial takings doctrine for lack of any historical, substantive, or theoretical backing makes it surprising that he left any door open to the creation of such a doctrine in the future."

Justice Kennedy’s due process analysis is understandable, and consistent with much Supreme Court precedent. Nonetheless, Justice Scalia blasted him, essentially, for not joining Scalia, and, specifically, for relying on due process.

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1116. *Id.* at 2618.
1117. *Id.* at 2610.
1118. *Id.* at 2608.
1119. *Id.* at 2609–10, n.9.
1120. *Stop the Beach Renourishment, Inc.*, at 2610.
1121. *Id.* at 2607.
1122. *Id.*
1123. *Id.* at 2613–18 (Kennedy, J., concurring in part and concurring in the judgment).
1124. *Id.* at 2618.
1125. *Stop the Beach Renourishment, Inc.*, at 2616.
1127. See Ryan C. Williams, *The One and Only Substantive Due Process Clause*, 120 YALE L.J. 408 (2010), dissects the history of substantive due process.
1128. See *Stop the Beach Renourishment, Inc.*, 130 S. Ct. at 2605–10.
Justice Scalia's castigation of Justice Kennedy's reliance on substantive due process was predictable. Constitutional originalists generally view the doctrine as a catchall with no historical basis. Justice Scalia stated that the Due Process Clause "places no constraints whatever upon this Court" in the substantive context.

Yet, Justice Scalia joined a plurality in McDonald v. City of Chicago just eleven days after STBR, which held that the Second Amendment was incorporated in the Fourteenth Amendment's Due Process Clause. Ilya Shapiro and Trevor Burrus of the Cato Institute (the former of whom was on Cato's briefs in both STBR and McDonald) sought to explain why. They contend that Scalia will use the Due Process Clause when he must, but refuses to do so "either to protect unenumerated rights or, as in [STBR], to supersede more historically rooted textual provisions."

One commentator makes a trenchant observation regarding how close Justice Scalia came to a possible majority in STBR. Professor John Echeverria notes that Justice Kennedy's concurrence focused on whether "a judicial ruling upsets 'settled principles'" regarding the state's law. While Kennedy stated that "owners may reasonably expect or anticipate courts to make certain changes in property law," a decision that disturbed established expectations would go too far. The commentator observes that Kennedy's "settled expectations" standard "seems to have a good deal in common" with Stewart's judicial takings analysis in Hughes. He suggests that Scalia might well have lost his majority by hewing to a per se takings test instead of Stewart's test.

Justice Breyer's separate concurrence wondered why the plurality even needed to address the issue. He expressed concern that federal courts...
would be called on to act as a de facto final state appellate court to address matters that are familiar to the state, but not federal judiciary.\footnote{1141}

7. STBR’s Results

a. Title Coverage

One aspect of STBR remains that received little attention in the decision or the various articles addressing the decision: title coverage. There is little doubt that a waterfront home is worth more than a waterview home.\footnote{1142} There is little doubt that an exclusive right of beach access down to the MHWL is worth more than one shared with the public. Government acts that deprive one of either water frontage or exclusive access deprive one of valuable rights.

Nonetheless, it is exceedingly rare that a Floridian can obtain title insurance for such actions as complained of in STBR. One of the most insightful briefs in the case was an amicus curiae brief of the New Jersey Land Title Association for the Petitioner.\footnote{1143} That brief discussed the key role of title insurance in “allow[ing] [parties] to invest in real estate with confidence” that title “is good and free of encumbrances,” or that such encumbrances are at least disclosed sufficiently to allow the user to make an informed decision.\footnote{1144} The association emphasizes title insurance’s “focus[] more on an analytical risk-elimination rather than a risk-assumption, such as happens with casualty insurance.”\footnote{1145} The brief summarizes the role of title insurance in protecting title conveyance as “seamlessly trac[ing] [title] backwards in time to a point beyond the statute of limitations for claims against that title.”\footnote{1146}

Nonetheless, one major limitation exists to reasonable investment backed expectations in beachfront property in Florida. Title policies typical-
ly exclude coverage for riparian and littoral rights appurtenant to the property.\textsuperscript{1147} While the exception is typical of those found in many states, it stems from a long and tortuous chain of case law in Florida. In 1973, Florida’s Fourth District Court of Appeal in Sawyer v. Modrall\textsuperscript{1148} stated in \textit{dicta} that Florida’s Marketable Record Title Act (MRTA) operated to extinguish state sovereign title.\textsuperscript{1149} Florida enacted MRTA in 1963 to “[simplify] and facilitate[ ] land title transactions by allowing persons to rely on a record title.” MRTA generally clears title to one whose chain deraigns from a “root of title” that has appeared of record for at least thirty years.\textsuperscript{1150} All conflicting claims are extinguished unless they fall under a MRTA exception.\textsuperscript{1151}

Ansbacher and Knetsch cited various authorities undermining the contention that the Florida Bar, who supported MRTA’s passage, or the legislature intended MRTA to extinguish sovereign claims and stated:

The members of the Florida Bar who supported drafting MRTA did not anticipate that the Act would affect sovereignty land titles. One commentator stated that the legislature deleted the proposed exemption of state lands from the MRTA bill when it was introduced only because it knew that the Act could not affect such state’s rights. In Professor Barnett’s 1967 review of various state MRTAs, he cited the Florida act as excepting all interests of the state from MRTA’s operation.\textsuperscript{1152} In addition, one of the Florida Bar Association proponents of MRTA wrote a letter to the MRTA Commission Chairman in 1985 stating: “I did not believe the Act could affect sovereignty lands unless it said so.”\textsuperscript{1153}

The Supreme Court of Florida in \textit{Odom v. Deltona Corp.}\textsuperscript{1155} held that MRTA extinguished sovereign claims to non-meandered waters within the legal description of a swamp and overflowed lands conveyance once thirty

\begin{footnotes}
\footnote{1147. See, e.g., Homer Duvall, \textit{Title Insurance, in Fl. Bar, Florida Real Property Title Examination and Insurance 4-13} (6th ed. 2010).}
\footnote{1148. 286 So. 2d 610 (Fla. 4th Dist. Ct. App. 1973).}
\footnote{1149. \textit{Id.} at 613.}
\footnote{1150. Ansbacher & Knetsch, \textit{supra} note 336, at 349–50 (quoting \textit{Fla. Stat.} § 712.10 (2010)).}
\footnote{1151. \textit{Fla. Stat.} §§ 712.01(2); .02.}
\footnote{1152. \textit{Id.} § 712.03.}
\footnote{1153. Ansbacher & Knetsch, \textit{supra} note 336, at 351 (citations omitted).}
\footnote{1154. \textit{Id.} (quoting Letter from Richard W. Ervin, Esq., Tallahassee, Fla., to J. Hyatt Brown, Chairman, Marketable Record Title Act Study Commission, Daytona Beach, Fla. (Sept. 30, 1985)).}
\footnote{1155. 341 So. 2d 977 (Fla. 1976).}
\end{footnotes}
years passed. The state had conveyed the parcel over fifty years before. The Odom court held further that, as meandering creates a presumption that a waterbody is navigable, the failure to meander creates a presumption of non-navigability. An adamant dissent by Justice Sundberg countered that MRTA is only a curative statute, which cannot per se divest the state of sovereign lands held in the public trust.

Governor Reuben Askew called a special session of the Florida legislature to respond to Odom. The body passed into law a bill that excluded “State title to lands beneath navigable waters [that are] acquired by virtue of its sovereignty.” While the statute did not state whether it applied retroactively, its procedural posture indicated that it was intended to do so. Courts interpreted the exception to apply prospectively only until 1986. The Supreme Court of Florida in Coastal Petroleum Co. v. American Cyanamid Co. addressed 1883 deeds from the Florida Cabinet, sitting as the Board of Trustees of the then-Internal Improvement Fund of Swamp and Overflowed Lands that did not expressly reserve the state’s sovereign lands under the navigable Peace River. As was the case in the Phillips Petroleum case pending at the same time in Mississippi courts and then the Supreme Court of the United States, Coastal addressed disputes over private mineral rights and state lease fees and taxation.

1156.  Id. at 988–89.
1157.  Id. at 980.
1158.  Id. at 988–89. Note, however, that government surveyors whose records are in federal Field Notes meandered only waters that crossed government survey section lines. Ansmbach & Kentsch, supra note 336, at 371–72 n.263.
1159.  Odom, 341 So. 2d at 990 (Sundberg, J., dissenting).
1162.  Compare State v. Contemporary Land Sales, Inc., 400 So. 2d 488, 492 n.4 ( Fla. 5th Dist. Ct. App. 1981) (“It will be readily noted that this exception is patently ambiguous as relating to a case, such as this, involving lands no longer beneath navigable waters. If by this statute the Legislature intended to correct an oversight, not only did the horse in this case escape in the hiatus but the barn door is still ajar.”), with Coastal Petroleum Co. v. Am. Cyanamid Co., 492 So. 2d 339, 344 (Fla. 1986) (“[T]he legislature intended to overturn the well-established law that prior conveyances to private interests did not convey sovereignty lands encompassed within swamp and overflowed lands being conveyed.”).
1163.  492 So. 2d 339 (Fla. 1986).
1164.  Id. at 342–43.
1166.  See generally Coastal Petroleum Co., 492 So. 2d at 339.
Florida's Second District Court of Appeal held that the Trustees' 1883 conveyance without reservation implicitly determined that the submerged lands were not sovereign. Even if they were navigable, the failure to reserve estopped the state from so claiming. Finally, MRTA extinguished any state claims. The appellate court certified all three prongs of its holding to the Supreme Court of Florida as issues of great statewide significance.

The Supreme Court of Florida held, first, that the Trustees did not hold authority to convey sovereign lands in 1883. Second, estoppel did not apply because a sovereign may convey lands only by clear and express intent. The majority held that the lower court's focus on the failure to reserve sovereign title improperly reversed the burden. Last, MRTA did not apply because MRTA nowhere stated that it was intended to divest sovereign title. Further, and consistent with Illinois Central and Article X, section 11, of the Florida Constitution, the majority stated in dicta that it questioned whether the Florida legislature had authority to make an ex post facto divestiture of sovereign lands.

Therefore, while an oceanfront owner in STBR had good arguments for vesting and reasonable, investment backed expectations, the owner almost certainly lacked title insurance coverage against the state's renourishment and locking in of a new MHWL. Accordingly, title insurance was almost certainly unavailable after Coastal.

C. Constitutional Issue

As I noted above, and in the Vermont Environmental Law Journal article, the decision leaves one major issue unaddressed. How does the fixed ECL comport with Article X, section 11, of the Florida Constitution, which

1168. Id. at 9.
1169. Id.
1170. Id. at 9–10.
1171. Coastal Petroleum Co., 492 So. 2d at 342–43. Ansbacher and Knetsch cite the 1913 act authorizing conveyance of tidal lands and 1969 for nontidal submerged sovereign lands to the Governor and Cabinet, sitting as the Board of Trustees of the Internal Improvement Fund. Ansbacher & Knetsch, supra, note 336, at 357–58, n.175 and accompanying text. Until then, the Trustees did not have such lands, let alone the authority to convey them. Id.
1172. Coastal Petroleum Co., 492 So. 2d at 343.
1173. Id.
1174. Id. at 344.
1175. Id.
states that Florida holds lands below the MHWL along its beaches, together with other sovereign lands. This is by all law a transitory, not a static boundary. Consistent with Corvallis, the Constitution allows transfers from the state. It nowhere says one can transfer more sovereign lands to the state.

XIII. CONCLUSION

STBR dismissed quickly the most established body of Florida law concerning littoral rights. In the stead of that case law, the Supreme Court resuscitated a decision that most observers thought had been relegated to the dustbin. The STBR court stated that a decision that the lower court had not even cited was the seminal Florida decision supporting the Supreme Court. Of course, this all seems more logical if one assumes that the entire history of riparian rights and the public trust is an internally contradictory Rube Goldberg contraption.\footnote{1176 Which seems all the more appropriate when one realizes Rube started out as an engineer with the San Francisco Water and Sewer Department.} For every putative rule, we see multitudinous exceptions. If indeed, what we know as a rule is even the rule. Certainly, this body of the law shifts as policies and needs dictate.

For example, if Sax is correct, and the fill in STBR merely reestablished the foreshore location that preexisted multiple hurricanes, then the net effect of two sets of avulsive events would by common law have reestablished the littoral ownership out to that prior point. A literal reading of Art. X, s. 11 of Florida’s Constitution supports that result. Instead, the STBR Court decided issues as the Florida Supreme Court reframed them, and no party had preserved a record to address.

The state court was entitled to do so. Indeed, one doubts the United States Supreme Court would have asserted jurisdiction had the issues not been reframed. Regardless, there is no reason to expect today’s Supreme Court to establish a standard for the ages, any more than the ages have provided us a standard.
REGULATING FOR SUSTAINABILITY: THE LEGALITY OF CARRYING CAPACITY-BASED ENVIRONMENTAL AND LAND USE PERMITTING DECISIONS+

RICHARD GROSSO*

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I. INTRODUCTION

As applied to the issue of land use and environmental regulation, this article does not attempt to precisely define the terms "sustainability" or "carrying capacity," but borrows loosely from a variety of available definitions. The United States Bureau of Reclamation defines carrying capacity as: "[T]he ability of a resource to accommodate a user population at a reasonable threshold without the user population negatively affecting the resource sustainability." 1

A prevalent definition emanating from a 1987 U.N. conference (Sustainable developments are those that "[meet] the needs of the present without compromising the ability of future generations to meet their own needs") 2 or that of Rosenbaum, 1993 ("Sustainable means using methods, systems and materials that won't deplete resources or harm natural cycles") 3 may be most useful. For purposes of this article, sustainability is viewed as the level of development and land use impacts that impacted ecosystems can tolerate without unacceptable impacts. The government has been regulating development based on these concepts for decades. Few would argue with the basic constitutionality of zoning—assuming it does not result in a "taking" of private property—to prevent undue crowding or incompatible land uses, or the denial of an environmental permit to prevent an unacceptable impact to wetlands or endangered species.

As past and current losses and impacts to the nation's ecosystems and farmlands continue to mount, the need for more aggressive land use and permitting protection of land becomes apparent. Florida's environmental laws, and the federal laws commonly impacting the use of land in Florida, provide the government with the legal tools to protect diminishing natural and financial resources. Legal authority exists to ensure that development only proceed to the extent that it is fiscally and environmentally sustainable.

The applicable standards for governmental approval of land use plans and development permits require the government to prevent scientifically unacceptable impacts to the state's ecosystems. Agencies can, and should, exercise their discretion using the precautionary principle as they apply and implement pre-existing legal authorities and requirements to requests for planning, zoning, and permitting approval. 4 Most, if not all, land use and

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2. See WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT. OUR COMMON FUTURE 43 (Oxford University Press 1987).
4. See discussion infra pp. 767-75.
environmental laws provide a legal basis to prevent development that "goes too far" and causes or contributes to an unacceptable environmental or other public impact. Our entire system of environmental and land use laws is based upon the premise that some environmental degradation must be allowed in favor of property rights and population growth. Yet, each of those laws sets standards, or thresholds, beyond which adverse impacts are not to be allowed. Environmental permitting agencies should not issue permits that could result in unsustainable individual or cumulative impacts. Planning agencies should not approve land use plans that are not financially or environmentally sustainable.

Land use plans now commonly restrict the timing of new development to the availability of public facilities and services. As public service and ecological capacity limits become more apparent, land use plans may increasingly need to restrict the overall number of approvals that can be granted, in terms of annual or total amounts. Such planning efforts are controversial and are likely subject to legal challenge by landowners and developers unenthusiastic about the denial or strict limitation on whether, how much, or when they can develop, and of course lend themselves to strong political debate.

The most stringent land use and environmental regulations—those which facially preclude or severely limit development or intensive uses of land, and those which, as applied, allow a landowner little or no such uses—face acute property rights limitations. Yet, government regulations necessary to ensure sustainability are not inherently invalid in the face of constitutionally protect private property rights, the right to travel, or other rights. Such regulations raise those issues, as well as those related to "fair share" affordable housing responsibilities, basic substantive due process considerations, and just plain uneasiness on the part of some judges and courts. But government's right to require full mitigation for public impacts, regulate to prevent unacceptable impacts to human health and ecosystems, and limit development stringently without violating private property rights is clear. The most effective approach begins with large scale land use planning and ecosystem preservation, and implements permitting programs to prevent significant adverse fiscal and ecological impacts resulting from planned development.

5. This is the standard enunciated in Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 415 (1922), for determining when a regulation amounts to a taking of private property.
6. See id. at 415–16.
8. Id. at 123.
Rhetoric such as "We can’t put up a gate; we have to put them somewhere," is inadequate to describe the reality of the government’s options in the face of population growth, or the importance of exercising those options. There is no basic constitutional or human right for all who might want to live in Florida to have their home in (a rapidly degraded or paved-over) paradise subsidized by the government or the ecosystem. At the same time, there will be continued population growth, and important decisions need to be made about where, when, and how that growth takes place, and government can and must make those decisions. Constitutional and statutory law do not render government helpless to sit back and allow land use impacts to reduce the amount of ecosystem or farmlands beyond their essential thresholds and overload its public facilities beyond acceptable limits. Environmental and land use laws may validly preclude environmental impacts that are not sustainable.

Section II of this article will provide a brief summary of the major land use and environmental laws in Florida, including applicable federal law, and how they authorize, and in most cases require, planning and permitting decisions based upon the limits of ecosystems or public facilities to accommodate the expected impacts. Section III will explore in more depth the details of Florida’s land use planning law—the Community Planning Act as it addresses the role of population projections, environmental and other impacts, and the provision of infrastructure and service demands of development. Next, the article will discuss cases around the country and Florida that have ruled upon the legality of limited growth and moratoria ordinances and discuss the property-rights-related implications of such ordinances. Finally, the article will discuss the application of judicial standards of review to land use and environmental permitting laws and individual actions that spring from or require the application of scientific or technical professional judgment in fields that are inherently subject to professional debate.

II. LEGAL FRAMEWORK IN FLORIDA LAW FOR ECOLOGICAL AND FISCAL SUSTAINABILITY

Florida’s natural resources are severely threatened by development, roads, mines, and other impacts. Florida’s water resources are suffering significant harm, water quality continues to degrade, wetland loss has been

9. See id. at 132–35. See infra pp. 755–56, for a discussion of the constitutional “right to travel.”
dramatic, and rare and endangered wildlife habitat continues to dwindle. Its wildlife face dreary prospects in a long, narrow peninsula fragmented by roads, development, mines, large-scale active agriculture, and other uses inconducive to the movement patterns of large and small wildlife. "As in the rest of the world, the loss of habitat quality and quantity is the biggest threat to listed species in Florida." Florida has been identified as the state at greatest risk of losing its native habitats.

Achieving sustainability requires the combined exercise of land use planning authority by local governments and the state, and permitting decisions by regional and state agencies, as well as the federal government. It starts with land use decisions of local governments about potential maximum use and intensity based on the inherent suitability of the land under Chapter 163 of the Florida Statutes. The most fundamental questions about sustainability must first be asked at the planning stage where the big picture is in focus and where land use impacts can be evaluated in conjunction with the broad array of issues that are relevant under Chapter 163. Planning decisions determine the type and intensity of land use and development, and therefore set the course for sustainability or not. Bad planning decisions which create inappropriate development expectations and corresponding property values can render the permitting process little more than window-dressing. Good planning allows environmental laws to effectively protect the public interest at the detailed development approval level, allowing permitting agencies, based on the standards applicable to environmental permits, to ensure that the end result of development that is potentially suitable to the natural character of the land and other characteristics does not result in unacceptable environmental impacts. As to fiscal sustainability, the law provides ample

13. See id. at 183, 189.
15. Id. (citing U.S. Fish & Wildlife Serv., Introduction, in Multispecies Recovery Plan for South Florida 1:1, 1:16 (1999)).
support, particularly for local governments, for requiring that the fiscal impacts of new development are fully mitigated by the developer.\(^{17}\)

A. **The Florida Constitution**

“It shall be the policy of the state to conserve and protect its natural resources and scenic beauty. Adequate provision shall be made for the abatement of air and water pollution and of excessive and unnecessary noise.”\(^{18}\)

B. **Private Property Rights**

The Supreme Court of Florida, in *Graham v. Estuary Properties, Inc.*,\(^{19}\) held that a landowner does not possess an inherent property right to substantially change the essential natural character of land and put it to a use for which it is not inherently suitable: “An owner of land has no absolute and unlimited right to change the essential natural character of his land so as to use it for a purpose for which it was unsuited in its natural state and which injuries [sic] the rights of others.”\(^{20}\)

In 1995, the Supreme Court of Florida upheld a local land-use ordinance, which precluded the erection of fences around single-family lots, enacted to allow the endangered Florida Key deer to roam freely around its spatially-diminished natural habitats.\(^{21}\) Reversing the Third District Court of Appeal’s ruling that a landowner’s property rights always trump the rights of the public in environmental protection, the Supreme Court of Florida ruled that, under the Florida Constitution, one does not trump the other and that private property rights and the public interest are to be balanced.\(^{22}\)

The Court held, “Landowners do not have an untrammeled right to use their property regardless of the legitimate environmental interests of the State.”\(^{23}\) Citing Article II, Section 7 of the Florida Constitution—the natural

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17. See discussion of the Community Planning Act’s provisions concerning the provision of adequate infrastructure, concurrency, and the efficient provision of public facilities and services, infra p. 754.
18. FLA. CONST. art. 11, § 7.
19. 399 So. 2d 1374 (Fla. 1981). In this case, the Supreme Court of Florida upheld a development order that required half of the owner’s property (a large mangrove forest) to remain in its natural state. *Id.* at 1382. Because the action served a legitimate governmental purpose and allowed the landowner to enjoy an economically viable use, the court rejected the takings claim. *Id.*
20. *Id.*
21. Dep’t of Cmty. Affairs v. Moorman, 664 So. 2d 930, 932, 934 (Fla. 1995).
22. *Id.* at 933.
23. *Id.*
resource protection clause—the Court found that “the State has a legitimate interest in protecting the natural habitat of the Keys and most especially of the Key deer,” which the Court observed was “perilously close to extinction.”

Citing the natural resource provision of the Florida Constitution, the Court observed: “The clear policy underlying Florida environmental regulation is that our society is to be the steward of the natural world, not its unreasoning overlord.”

Citing *Sarasota v. Barg*, the Court remarked: “There is an obvious public interest in such a policy, given the fact that environmental degradation threatens not merely aesthetic concerns vital to the State’s economy but also the health, welfare, and safety of substantial numbers of Floridians.”

C. Florida Law Protecting Wetlands and Water Quality and Quantity

Florida’s Water Resources Development Act governs the use of Florida’s water resources. “Under the Act, the Florida Department of Environmental Protection (DEP) supervises five ‘water management districts’ . . . [which] have the responsibility for entire watersheds, which enhances their ability to address ecosystemwide problems.”

1. Environmental Resource Permit Laws: Chapter 373 of the *Florida Statutes*

Florida’s Environmental Resource Permitting laws—combined wetland and storm water permitting—protect water resources from development impacts by precluding permitting authorization for ecological harm, which goes beyond a point of acceptability.

24. *Id.* at 932. The Court stated, “The fact the land in question sits in an area of critical state concern is crucial to the result in this case, because it identifies an environmental concern unique to Big Pine Key.” *Id.* at 932 n.1.

25. *Moorman*, 664 So. 2d at 931.

26. “It shall be the policy of the state to conserve and protect its natural resources and scenic beauty. Adequate provision shall be made for the abatement of air and water pollution and of excessive and unnecessary noise . . ..” *Fla. Const.*, art. II, § 7.

27. *Moorman*, 664 So. 2d at 932.

28. 302 So. 2d 737 (Fla. 1974).

29. *Moorman*, 664 So. 2d at 932.


31. *Id.* (citing *Fla. Stat.* § 373.044 (2010)).

REGULATING FOR SUSTAINABILITY

a. The Environmental Resource Permit Public Interest Standard

The statutory "Public Interest" criteria for the approval of an Environmental Resource Permit, which emphasizes the protection of natural systems, requires cumulative and secondary impact analysis and mitigation for unavoidable impacts, and requires projects to be not contrary to or clearly in the public interest, protecting the state against unacceptable impacts to wetlands and other water resources. On their face, these criteria support a determination that a proposed project is not in the public interest if, based on a preponderance of the evidence, its adverse environmental impacts exceed those which the affected ecosystem can handle.

Section 373.414, Additional Criteria for Activities in Surface Waters and Wetlands, provides:

(1) As part of an applicant's demonstration that an activity regulated under this part will not be harmful to the water resources or will not be inconsistent with the overall objectives of the district, the governing board or the department shall require the applicant to provide reasonable assurance that state water quality standards applicable to waters as defined in s. 403.031(13) will not be violated and reasonable assurance that such activity in, on, or over surface waters or wetlands, as delineated in s. 373.421(1), is not contrary to the public interest. However, if such an activity significantly degrades or is within an Outstanding Florida Water, as provided by department rule, the applicant must provide reasonable assurance that the proposed activity will be clearly in the public interest.

(a) In determining whether an activity, which is in, on, or over surface waters or wetlands, as delineated in s. 373.421(1), and is regulated under this part, is not contrary to the public interest or is clearly in the public interest, the governing board or the department shall consider and balance the following criteria:

1. Whether the activity will adversely affect the public health, safety, or welfare or the property of others;

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2. Whether the activity will adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats;

3. Whether the activity will adversely affect navigation or the flow of water or cause harmful erosion or shoaling;

4. Whether the activity will adversely affect the fishing or recreational values or marine productivity in the vicinity of the activity;

5. Whether the activity will be of a temporary or permanent nature;

6. Whether the activity will adversely affect or will enhance significant historical and archaeological resources under the provisions of s. 267.061; and

7. The current condition and relative value of functions being performed by areas affected by the proposed activity.  

These criteria are to be considered and balanced. While a negative affect on any particular criteria does not necessarily render a project contrary to the public interest, in any given case, one criterion may well be more critical than the other six. An applicant must also prove compliance with the public interest test on the whole.

The law supports a denial of a wetland permit in cases of extreme damage to environment that cannot be mitigated. Florida’s Department of Environmental Protection Water Management Districts, when given authority by the Legislature, can heighten permit requirements. For example, the St. Johns River Water Management District has authority to adopt proposed rules defining areas within the district as hydrologic basins and establishing more restrictive standards for issuing permits and development requirements within those basins, where the Legislature provided “authority to identify
geographic areas that require greater environmental protection and to impose
more restrictive permitting requirements in those areas.\textsuperscript{40}

In Florida Power Corp. \textit{v. Department of Environmental Regulation},\textsuperscript{41}
the court upheld the Department’s rejection of a hearing officer’s recommend-
ation that a power company’s project would have no adverse impact
and was not contrary to the public interest.\textsuperscript{42} The court found competent,
substantial evidence to support the Department’s emphasis on the lack of
type–for–type mitigation and the importance of ensuring actual offset for the
proposed destruction of six acres of forested wetlands for the benefit of the
plants and animals solely dependent on forested wetlands.\textsuperscript{43} One of the fac-
tors the court considered was the “edge effect,” referring to the negative or
positive influences one ecosystem may have on adjacent ecosystems.\textsuperscript{44}
The court noted that the Department properly determined that the extent of the
impact on the environment from the destruction of the forest was a policy
matter and not a question of fact to be resolved by a hearing officer.\textsuperscript{45}

b. Minimization and Avoidance

State ERP rules emphasize requiring a permit applicant to make all
practicable modifications to the development proposal that would avoid or
eliminate wetland impacts.\textsuperscript{46} These rule requirements that try to avoid wet-
land impacts altogether, and then require full mitigation to offset unavoidable
impacts are policy decisions to ensure the sustainability of wetland and water
resources.\textsuperscript{47}

\begin{itemize}
\item \textsuperscript{40} St. Johns River Water Mgmt. Dist. \textit{v. Consolidated-Tomoka Land Co.}, 717 So. 2d 72, 81 ( Fla. 1st Dist. Ct. App. 1998).
\item \textsuperscript{41} 638 So. 2d 545 ( Fla. 1st Dist. Ct. App. 1994).
\item \textsuperscript{42} \textit{Fla. Power Corp.}, 638 So. 2d at 561.
\item \textsuperscript{43} \textit{Id.} at 561–62.
\item \textsuperscript{44} \textit{Id.} at 560.
\item \textsuperscript{45} \textit{Id.} at 561.
\item \textsuperscript{47} The Rules of the South Florida Water Management District state, “[P]rotection of wetlands and other surface waters is preferred to destruction and mitigation due to the temporal loss of ecological value and uncertainty regarding the ability to recreate certain functions associated with these features.” \textit{BASIS OF REVIEW FOR ENVIRONMENTAL RESOURCES PERMIT APPLICATIONS}, SFWMD § 4.3 (2010).
\end{itemize}
c. Mitigation Requirements to "Offset" Wetland Impacts

Florida’s statutory approach to wetland mitigation fosters the sustainability of wetlands and water resources. If an application does not meet the public interest test, the Department must consider mitigation.48 The Department “shall consider measures proposed by or acceptable to the applicant to mitigate adverse effects that may be caused by regulated activity.”49 “[M]itigation must offset the adverse effects caused by the regulated activity.”50 The rules require that the mitigation offset the impacts to the specific functions of the specific wetlands being impacted.51 The mitigation must address the negative factors in the public interest test which tipped the balance against the public interest.52

In Florida Power Corp. v. Florida Department of Environmental Regulation,53 the Department held that, although there is no absolute “no net loss” standard for mitigation, the avoidance or minimization of net loss is an important guiding principle of mitigation.54 Since mitigation by preservation necessarily results in loss of jurisdictional wetlands, the Department generally accepts preservation mitigation only after on-site wetland creation and/or enhancement is shown to be not feasible or not sufficient to tip the public interest balancing test “scales” in favor of permit issuance.55

Florida law recognizes that some wetlands cannot be mitigated because they are particularly unique or provide functions that cannot be re-created.56 As Section 4.3 of the South Florida Water Management District’s Basis of Review makes clear:

In certain cases, mitigation cannot offset impacts sufficiently to yield a permittable project. Such cases often include activities which significantly degrade Outstanding Florida Waters, adversely impact habitat for listed species, or adversely impact those wet-

49. Id.
50. Id. (emphasis added).
54. Id. at 20 (remanding for determination on the adequacy of proposed mitigation).
55. Id. at 17.
56. BASIS OF REVIEW FOR ENVIRONMENTAL RESOURCE PERMIT APPLICATION § 4.3 (2010).
lands or other surface waters not likely to be successfully re-created.\textsuperscript{57}

In these instances, water management districts and the DEP have the discretion to reject a mitigation plan and deny a permit for any project that otherwise does not eliminate or reduce harm to wetlands.\textsuperscript{58}

d. Cumulative Impact Analysis

The cumulative impact analysis required for Florida wetland permitting agencies is a sustainability threshold requirement for the wetland, water, and related resources that would be impacted by proposed development projects.\textsuperscript{59} Environmental Resource Permitting agencies must consider the cumulative impacts of their permitting decisions.\textsuperscript{60}

Section 373.414 (8)(a): Additional criteria for activities in surface waters and wetlands:

The governing board or the department, in deciding whether to grant or deny a permit for an activity regulated under this part shall consider the cumulative impacts upon surface water and wetlands, as delineated in s. 373.421(1), within the same drainage basin as defined in s. 373.403(9), of:

1. The activity for which the permit is sought.

2. Projects which are existing or activities regulated under this part which are under construction or projects for which permits or determinations pursuant to s. 373.421 or s. 403.914 have been sought.

\textsuperscript{57} Id.

\textsuperscript{58} See Brown v. So. Fla. Water Mgmt. Dist., DOAH Case No. 04-000476 (Final Order Sept. 13, 2004) (denying an ERP where it was determined that the proposed mitigation for a dock project would not adequately offset impacts to a listed species of seagrass); Charlotte Cnty. v. IMC-Phosphates Co., 4 E.R. F.A.L.R. 20 (Final Order Sept. 15, 2003) (denying an application for an ERP where the applicant failed to provide reasonable assurances that its mitigation proposal would maintain or improve the natural functions of the diverse types of wetland systems present at the site prior to commencement of the project); Kramer v. Dep’t of Envtl. Prot., 2 E.R. F.A.L.R. 225, 236 (Final Order Feb. 26, 2002) (denying an ERP where the mitigation plan was found inadequate and “experimental”).


\textsuperscript{60} Id. at 689.
3. Activities which are under review, approved, or vested pursuant to s. 380.06, or other activities regulated under this part which may reasonably be expected to be located within surface waters or wetlands, as delineated in s. 373.421(1), in the same drainage basin as defined in s. 373.403(9), based upon the comprehensive plans, adopted pursuant to chapter 163, of the local governments having jurisdiction over the activities, or applicable land use restrictions and regulations.

Reported cases amply support the view that this consideration of cumulative impacts is designed to prevent an end result for the impacted environment that exceeds its tolerance thresholds. In *Florida Power Corp. v. Department of Environmental Regulation*, the First District rejected an asserted "de minimis exception" to the cumulative impact analysis requirement, finding that such an exemption "would completely undercut the purpose of the cumulative impact analysis required by section 403.919."  

In *McCormick v. City of Jacksonville*, Florida's Governor and Cabinet, sitting as the Florida Land and Water Adjudicatory Commission (FLWAC), recognized that cumulative impact analysis is necessary to "prevent piecemeal destruction of the environment." FLWAC stated, "without the ability to consider the long term impacts of a project in combination with past and reasonably likely similar projects in the area, the permitting agency would be helpless to prevent the gradual elimination of environmental resources through [] permits."  

Perhaps the most explicit "sustainability" discussion is found in the case of *Broward County v. Weiss & South Florida Water Management District*, which defined unacceptable cumulative impacts as those which would place the fish and wildlife dependant on the functions to be lost in jeopardy of collapse. "Collapse would occur when the population no longer is sustainable . . . [and] could lead to extirpation of the population from the Basin."

61. FLA. STAT. § 373.414(8)(a) (2010).
63. Id. at 561.
67. DOAH Case No. 01-3373 (SFWMD Final Order No. 2002-184 FOF ERP, Nov. 14, 2002).
68. Id.
69. Id.
2. Coastal Permitting

Florida also has a special dredge and fill permitting process for coastal development. Among other things, it is the intent of Florida’s coastal development permitting process “to preserve and protect them from imprudent construction which can jeopardize the stability of the beach-dune system, accelerate erosion, . . . or interfere with public beach access.”70 The statute also expresses a legislative finding and intent that “[d]evelopment of coastal areas should be both economically and environmentally sustainable, and inappropriate growth in ecologically fragile or hazard-prone areas should be discouraged.”71 The Legislature recognizes that the sand resources are an “exhaustible resource.”72

In order for a coastal permit to be issued, the application must meet the Chapter 62B-33 design and siting requirements, which include a review of the potential impacts to the beach dune system, adjacent properties, native salt resistant vegetation, and marine turtles.73 An applicant for a coastal permit must “provide the Department with sufficient information . . . to show that [any] adverse and other impacts associated with the construction have been minimized and that the construction will not result in a significant adverse impact.”74

Florida Administrative Code Rule 62B-41.003(2) prohibits coastal construction resulting in a “significant adverse impact.”75 Florida Administrative Code Rule 62B-41.005(2) provides that coastal construction shall be “limited” and requires the applicant to state the necessity and justification for coastal construction and the potential benefits or impacts to the coastal system.76

“Adverse Impacts” are impacts to the coastal system that may cause a “measurable interference with the natural functioning of the coastal system.”77 “Significant Adverse Impacts” are impacts of such magnitude that they may:

1. Alter the coastal system by:
   a. Measurably affecting the existing shoreline change rate;

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71. Id. § 161.72(m).
72. Id. § 161.144.
73. See FLA. ADMIN. CODE ANN. r. 62B-33.005(4)(a)-(h) (2010).
74. Id. r. 62B-33.005(2).
75. Id. r. 62B-41.003(2).
76. Id. r. 62B-41.005(2).
77. Id. r. 62B-41.002(19)(a).
b. Significantly interfering with its ability to recover from a coastal storm;

c. Disturbing topography or vegetation such that the dune system becomes unstable or suffers catastrophic failure.  

In *Leto v. Florida Department of Environmental Protection*, construction permits were denied because, among other reasons, "the structure, as designed, failed to adequately protect local marine turtles."  

In *Surfrider Foundation, Inc. v. Town of Palm Beach*, the Department of Environmental Protection denied a coastal permit for a proposed beach renourishment project based on several findings of adverse environmental impact to the nearshore coastal resources. Among the findings supporting the denial was that:

In the final revision of the Permit, Palm Beach and DEP removed the monitoring requirements for the offshore reef. The uniqueness of this resource has been detailed above. Because of the rare confluence of conditions required for its creation, the Florida Reef Tract cannot be replaced in any timeframe short of geologic time, so its protection, even from remote risks, must be a matter of exceptional regulatory concern.

3. Water Quality

Florida Law states that "[e]xisting uses and the level of water quality necessary to protect the existing uses shall be fully maintained and protected."  

Chapter 403 of the *Florida Statutes*—Florida Air and Water Pollution Control Act—recognizes that water bodies serve multiple beneficial uses that must be protected to promote the public welfare, and established a policy to "conserve the waters of the state and to protect, maintain, and improve the quality thereof for public water supplies, for the propagation of wildlife and fish and other aquatic life, and for domestic, agricultural, industrial, recreational, and other beneficial uses." The Act empowers the Department of

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78. *Id.* r. 62B-33.002(33)(A)-(B).
79. 824 So. 2d 283 (Fla. 4th Dist. Ct. App. 2002).
80. *Id.* at 284.
82. *Id.*
83. *Id.* at 231.
Environmental Protection to “[d]evelop . . . a grouping of the waters into classes . . . in accordance with the present and future most beneficial uses,” and to “[e]stablish . . . water quality standards for the state as a whole or for any part thereof.”

The administrative rule that identifies five classes of waterbodies is Florida Administrative Code Rule 62-302.400. Most waters are listed as Class III on the basis of the designated uses “Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife.” Others are classified as either Class I Potable Water Supplies, Class II Shellfish Propagation or Harvesting, Class IV Agricultural Water Supplies, or Class V Navigation, Utility, and Industrial Use. Most water quality criteria are set as quantitative concentration standards, established based on a determination of the level of pollution that can be accommodated by such water bodies while protecting their designated uses. One criterion—for nutrients—is stated qualitatively: “Nutrients—in no case shall nutrient concentrations of a body of water be altered so as to cause an imbalance in natural populations of aquatic flora and fauna.”

The rules identify a special category for waters of special recreational or ecological significance, known as “Outstanding Florida Waters” (OFWs). Under Rule 62-302.700(1), “No degradation of water quality, other than that allowed in subsections 62-4.242(2) and (3),” is permitted. The rules prohibit permits from being issued “for any proposed activity or discharge within an [OFW], or which significantly degrades” an OFW, unless the permit applicant can affirmatively demonstrate that the proposed discharge is “clearly in the public interest” and that “existing ambient water quality . . . will not be lowered.” “Existing ambient water quality” is defined as “the better . . . quality of either (1) that which could reasonably be expected to have existed for the baseline year of an [OFW] designation or (2) that which existed during the year prior to the date of [the] permit application.”

86. Id. § 403.061(10), (11).
87. FLA. ADMIN. CODE ANN. r. 62-302.400(1).
88. Id. r. 62-302.400(1), (14).
89. Id. r. 62-302.400(1).
90. See id. r. 62-302.300(3).
91. Id. r. 62-302.530 (47)(b).
92. FLA. ADMIN. CODE ANN. r. 62-302.700(9).
93. Id. r. 62-302.700(1).
94. Id. r. 62-4.242(2)(a), (2)(a)2, (2)(a)2b.
95. Id. r. 62-4.242(2)(c).
Rule 62-302.300(14) provides, "Existing uses and the level of water quality necessary to protect the existing uses shall be fully maintained and protected." 96

d. Consumptive Use Permit (CUP) Standards

The standard for the approval of a Consumptive (Water) Use Permit unambiguously precludes the allowance of harm to the state’s water resources:

The governing board or the department may require such permits for consumptive use of water and may impose such reasonable conditions as are necessary to assure that such use is consistent with the overall objectives of the district or department and is not harmful to the water resources of the area. 97

"To obtain a permit pursuant to the provisions of this chapter, the applicant must establish that the proposed use of water: (a) [i] is a reasonable-beneficial use as defined in [section] 373.019; (b) [w] ill not interfere with any presently existing legal use of water; and (c) [i] s consistent with the public interest." 98

According to section 373.019(16), "reasonable-beneficial use" is defined as "the use of water in such quantity as is necessary for economic and efficient utilization for a purpose and in a manner which is both reasonable and consistent with the public interest." 99

This standard implements the legislative "declaration of policy" set forth in section 373.016 that:

(1) The waters in the state are among its basic resources. Such waters have not heretofore been conserved or fully controlled so as to realize their full beneficial use.

(2) The department and the governing board shall take into account cumulative impacts on water resources and manage those resources in a manner to ensure their sustainability. 100

In addition, it is state policy to "promote the conservation, replenishment, recapture, enhancement, development, and proper utilization of surface

96. Id. r. 62-302.300(14).
97. FLA. STAT. § 373.219(1) (2010).
98. Id. § 373.223(1).
99. Id. § 373.019(16).
100. Id. § 373.016(1)–(2) (2010) (emphasis added).
and groundwater” and to “promote the availability of sufficient water for all existing and future reasonable-beneficial uses and natural systems.”

These standards preclude the issuance of a CUP that would cause or contribute to unacceptable environmental impacts. The St. Johns River Water Management District, for example, requires the applicant to reduce the “environmental or economic harm caused by the consumptive use . . . to an acceptable amount.” The South Florida Water Management District requires applicants to demonstrate the proposed water use will not cause significant saline water intrusion, adversely impact offsite land uses, cause pollution or cause adverse environmental impacts. Its rules also emphasize that proposed withdrawals must not cause harm to environmental features such as wetlands or other surface waters that are sensitive to the magnitude, seasonal timing, and duration of inundation. In Pinellas County v. Lake Padgett Pines, the court held that the statute requires the consideration of a proposed well field’s environmental effects beyond its impacts on the water resource.

Impacts to water quality resulting from the discharge after water has been used, may provide a basis for denial of a consumptive use permit. The adverse environmental effects of a land use supported by a proposed consumptive use are also relevant. In In re South Dade Agro Homes, Inc., a consumptive use permit was denied for an agricultural operation in undisturbed wetlands that were critical habitat for an endangered species because significant harm to the habitat would result. In Osceola County v. St. Johns River Water Management District, a wellfield permit was denied because of the likelihood of significant harm to wetlands.

101. Id. § 373.016(3)(b).
102. FLA. STAT. § 373.016(3)(d).
104. FLA. ADMIN. CODE ANN. r. 40C-2.301(4)(d) (2010).
105. Id. r. 40E-2.301(1)(a)–(e).
106. BASIS OF REVIEW FOR WATER USE PERMIT APPLICATION WITHIN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT, § 4.2.2.4 (2010).
108. Id. at 479.
111. Id. at 3647–48.
113. Id. For a more in-depth discussion of Florida’s consumptive use permitting law and cases, see generally Hamann, supra note 109; Hamann & Ankersen, Water, Wetlands and Wildlife: The Coming Crisis in Consumptive Use, 67 FLA. BAR J. 41 (March 1993).
a. Water Reservation Rules

In addition to the criteria that govern individual applications for consumptive use permitting, the State’s Department of Environmental Protection and its five water management districts are authorized to affirmatively “reserve” water (make unavailable to consumptive users) to protect fish and wildlife. Section 373.223(4) of the Florida Statutes states: “The governing board or the department, by regulation, may reserve from use by permit applicants, water in such locations and quantities, and for such seasons of the year, as in its judgment may be required for the protection of fish and wildlife or the public health and safety.”

This statute provides the agencies “with a broad grant of authority to reserve water in order to protect fish and wildlife or to protect the public health and safety.” In this case, the District Court upheld an administrative order finding a reservations administrative rule valid. The Order upheld by the Court’s opinion had specifically found that restoring an environmental condition required for the health and sustainability of existing fish and wildlife communities was authorized by the statute.

In Marion County v. Greene, Florida’s Fifth District Court of Appeal upheld the issuance of a Consumptive Use Permit, finding that the record supported a determination that the permitting agency had complied with the statutory conditions of approval in section 373.223(1) of the Florida Statutes, which the opinion appears to characterize as requiring the “sustainable use” of water. The court rejected the permit challenger’s claim that the agency “has a duty to manage the water resources . . . to ensure their sustainable use, including future increases in demand, and that the District violated that duty by granting [the permit],” by noting that the evidence demonstrated that the proposed use “would have little or no impact on other wa-

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115. Id. (emphasis added).
117. Id.
118. See id.
119. 5 So. 3d 775 (Fla. 5th Dist. Ct. App. 2009).
120. Id. at 779–80. The agency St. Johns River Water Management District’s formally adopted rules stated that “In determining the public interest in consumptive use permitting proceedings, the Board will consider whether an existing or proposed use is beneficial or detrimental to the overall collective well-being of the people or to the water resources in the area, the District and the State.” Id. at 778.
ter users because of the [limited allowable] withdrawal, even taking into account increased future water demand." 121

b. SFWMD Regional Water Availability Rule

A recent example of a “sustainable” policy decision in the context of Consumptive Use Permit decisions is the adoption by the South Florida Water Management District of a “Regional Water Availability Rule” (RWA) in April 2007. Based on a determination that it was not in the public interest to allow the ecological impacts of additional water withdrawals from the Everglades and the Biscayne Aquifer, the South Florida Water Management District adopted the RWA rule, capping withdrawals from the Biscayne Aquifer, the Lower East Coast’s primary drinking water source. 122 This cap requires the development of alternative water supplies to accommodate growth in water supply beyond 2006 levels. 123

c. Minimum Flows and Levels

The statutory requirement for the establishment of “minimum flows and levels” for surface and ground waters in the state to prevent significant harm resulting from additional withdrawals 124 seems clearly aimed at preventing consumptive use demands that are unsustainable for the natural system. Water management districts are required by the Florida Water Resources Act of 1972 to establish minimum flows and levels for surface waters and aquifers within their respective jurisdictions. 125 Section 373.042(1) states that:

Within each section, or the water management district as a whole, the department or the governing board shall establish the following:

(a) Minimum flow for all surface watercourses in the area. The minimum flow for a given watercourse shall be the limit at which further withdrawals would be significantly harmful to the water resources or ecology of the area.

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121. Id. at 779.
122. BASIS OF REVIEW FOR ENVIRONMENTAL RESOURCES PERMIT APPLICATIONS § 3.2.1 (2010).
123. Now codified in THE DISTRICT’S BASIS OF REVIEW SECTION 3.2.1 [RESTRICTED ALLOCATION AREAS]; Id. § 3.2.1E(3).
124. F.LA. STAT. § 373.042 (2010).
(b) Minimum water level. The minimum water level shall be the level of groundwater in an aquifer and the level of surface water *at which further withdrawals would be significantly harmful to the water resources of the area.*

Each water management district is required to adopt a priority list of waters for the adoption of MFLs, and must address MFLs in their regional water supply plans for any area where water sources are not sufficient over a twenty year period "to supply water for all existing and projected reasonably anticipated future needs and to sustain the water resources and related natural systems." These plans must include prevention or recovery strategies if water levels are currently below MFLs or are projected to fall below MFLs within twenty years.

Minimum flows and levels provide a tool for planning and allocation of water resources by specifying the extent and limits of the availability of the State's surface and ground water. Minimum flows and levels are just a part of a comprehensive water resources management approach geared toward assuring the sustainability of the water resources. They must be considered in conjunction with all other resource protection responsibilities granted to the water management districts by law, including consumptive use permitting, water shortage management, and water reservations.

D. Federal Clean Water Act—Water Quality Standards and Section 404 Permits

1. Water Quality Standards

The Clean Water Act (CWA) is designed "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." It sets a national goal, "wherever attainable," to achieve "water quality which provides for the protection and propagation of fish, shellfish, and wildlife and

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127. Id. § 373.036(2)(b)(4)(b).
128. Id. § 373.0421(2).
131. Id. § 1251(a).
provides for recreation in and on the water."\textsuperscript{132} "[T]he House Report on the legislation states that 't[he word 'integrity' as used is intended to convey a concept that refers to a condition in which the natural structure and function of ecosystems is maintained.'\textsuperscript{133}

The CWA requires states to establish water quality standards for all of their waterbodies.\textsuperscript{134} A water quality standard consists of "the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses."\textsuperscript{135} The term "designated use" is defined by EPA's implementing regulations as "those uses specified in water quality standards for each water body or segment whether or not they are being attained."\textsuperscript{136} The term "criteria" is defined as: "[E]lements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use."\textsuperscript{137}

In order to be approved under the CWA, state water quality standards must include: (1) the designated uses for each body of water; (2) what methods were used and analyses conducted to support the revisions to state water quality standards; (3) water quality criteria, which constitutes specific limits on pollutants that protect the designated uses for each water body and which may be expressed as either a narrative standard or a numeric concentration level; and (4) an anti-degradation policy to protect existing uses of bodies of water and high-quality water.\textsuperscript{138} A state may only implement a water quality standard that creates a standard that is as stringent, or more protective, than the federal guidelines.\textsuperscript{139} EPA's duty under the Act "is to ensure that the underlying criteria, which are used as the basis of a particular state's water quality standard, are scientifically defensible and are \textit{protective of designated uses}."\textsuperscript{140}

Under EPA regulations, a state's water quality standards must include an antidegradation policy to ensure that "[e]xisting instream water uses and

\begin{itemize}
\item \textsuperscript{132} Id. § 1251(a)(2).
\item \textsuperscript{133} Sierra Club, Inc. v. Leavitt, 488 F.3d 904, 921 (11th Cir. 2007) (citation omitted).
\item \textsuperscript{134} Id. § 1313(a)–(c).
\item \textsuperscript{135} Id. § 1313(c)(2)(A).
\item \textsuperscript{136} 40 C.F.R. §131.3(f).
\item \textsuperscript{137} Id. § 131.3(b).
\item \textsuperscript{138} 33 U.S.C. § 1251(a)(2); Water Quality Standards, 40 C.F.R. § 131.3, 131.6, 131.12 (2009).
\item \textsuperscript{139} Dubois v. U.S. Dep't of Agric., 102 F.3d 1273, 1300 (1st Cir. 1996) ("[S]tates may not set standards that are less stringent than the CWA.").
\end{itemize}
the level of water quality necessary to protect the existing uses shall be maintained and protected."141

2. Total Maximum Daily Load Requirements (TMDLs)

The CWA requires states to develop Total Maximum Daily Loads for all surface waters within their boundaries that do not meet specified water quality standards, and prohibits the issuance of permits that would cause or contribute to violations of water quality standards.142 This approach is intended to keep pollution levels in impacted water bodies to sustainable levels, but is not triggered until a waterbody is impaired.143

3. Dredge and Fill Activities

Dredged or fill materials are pollutants under the CWA.144 Section 404 of the CWA authorizes the Corps to issue permits to discharge or place "dredged or fill materials" into waters of the United States, including wetlands, only at specified sites and under prescribed circumstances and conditions.145

Under the Act, the U.S. Army Corps of Engineers is required to give wetlands the highest possible level of protection.146 "[W]etlands constitute a productive and valuable public resource, the unnecessary alteration and destruction of which should be discouraged as contrary to the public interest."147

The EPA's "guidelines" for the issuance of dredge and fill permits articulate a presumption against allowing any damage to wetlands: "From a national perspective, the degradation or destruction of . . . wetlands is considered to be among the most severe environmental impacts."148 "The guiding

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143. See Sierra Club v. Meiburg, 296 F.3d 1021, 1025 (11th Cir. 2002).
147. Id. § 320.4(b).
principle should be that degradation or destruction of [wetlands] may represent an irreversible loss of valuable aquatic resources."\textsuperscript{149}

The EPA guidelines provide that "dredged or fill material should not be discharged into the aquatic ecosystem [wetlands], unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern."\textsuperscript{150} The EPA guidelines further provide that the Corps may not issue a dredge and fill permit "which will cause or contribute to significant degradation of [wetlands]," and that effects "contributing to significant degradation considered individually or collectively, include . . . loss of fish and wildlife habitat."\textsuperscript{151}

A permit may not be issued if: (i) there is a practicable alternative which would have less adverse impact and does not have other significant adverse environmental consequences; (ii) the "discharge will result in significant degradation;" (iii) the discharge does not include all appropriate and practicable measures to minimize potential harm; or (iv) there does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with the Corps’ Guidelines for permit issuance.\textsuperscript{152} A permit may not be issued "unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem."\textsuperscript{153}

The EPA’s guidelines also strictly prohibit the Corps from issuing any permit "if there is a practicable alternative . . . which would have less adverse impact on the aquatic ecosystem."\textsuperscript{154} The EPA Guidelines also provide for "advanced identification" by the EPA Administrator of areas not suitable for the disposal of fill due to "unacceptable adverse affects on . . . water supplies, shellfish beds and fishery areas . . ., wildlife or recreational areas."\textsuperscript{155}

While commentators and observers have been critical of the implementation by the U.S. Army Corps of Engineers of the Clean Water Act and its implementing regulations,\textsuperscript{156} the Act and rules clearly authorize and require

\textsuperscript{149} Id.
\textsuperscript{150} Id. § 230.1(c).
\textsuperscript{151} Id. § 230.10(c)(3).
\textsuperscript{152} Id. § 230.12(a)(3)(i–iv).
\textsuperscript{154} Id. § 230.10(a).
\textsuperscript{155} 33 U.S.C. § 1344(c).
\textsuperscript{156} The use of mitigation in Florida has resulted in substantial destruction of wildlife and habitat and does not guarantee “no net loss” of wetlands. See Jason Totoiu, Building a Better State Endangered Species Act: An Integrated Approach Toward Recovery, 40 ENVTL. L. REP. 10299, 10307 (2010).
the USACOE to deny permits that would authorize impacts on waters or associated wetlands of the United States that are not sustainable.157

E. Federal Endangered Species Act

The Endangered Species Act (ESA) was enacted in 1973 with the express purpose of “provid[ing] a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved” through the development of a program to protect such endangered and threatened species, and through the enforcement of various treaties and conventions within the Act, which set forth national and international standards.158 The overarching policy of the ESA is that “all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes [of the ESA].”159

The ESA “represent[s] the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.”160 “[T]he language, history, and structure of the [Endangered Species Act showed] beyond doubt that Congress intended endangered species to be afforded the highest of priorities.”161 The Court observed that “[t]he plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost.”162 The ESA reflects “an explicit congressional decision to require agencies to afford first priority to the declared national policy of saving endangered species” and “a conscious decision by Congress to give endangered species priority over the ‘primary missions’ of federal agencies.”163 The “benefit of the doubt” should be given to an endangered species when deciding what course of action will best conserve such species.164

159. Id. § 1531(c)(1); Forest Conservation Council v. Rosboro Lumber Co., 50 F.3d 781, 785 (9th Cir. 1995) (citing 16 U.S.C. § 1531(b)).
161. Id. at 174.
162. Id. at 184.
163. Id. at 185.
164. See id. at 174.
Two key provisions of the ESA seek to prevent impacts on listed species which go too far. Under the ESA, the Fish and Wildlife Service cannot issue an incidental take permit (ITP) for private land use activities if they will “appreciably reduce the likelihood of the survival and recovery of the species in the wild.”

Next, section 1536(a)(2) commands each federal agency to “insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species.” If the Fish and Wildlife Service finds a federal agency action will jeopardize a listed species or adversely modify or destroy that species’ critical habitat, the Service must suggest those reasonable and prudent alternatives which it believes would avoid jeopardy or adverse modification of critical habitat. “In response to an opinion finding ‘jeopardy or adverse modification,’ the acting agency must comply with the substantive mandate of section 7(a)(2) and either ‘terminate the action, implement the proposed alternative, or seek an exemption from the Cabinet-level Endangered Species Committee pursuant to 16 U.S.C. § 1536(e).”

The ESA requires government actions that promote sustainability. In Gifford Pinchot Task Force v. United States Fish & Wildlife Services, the Ninth Circuit invalidated a U.S. Forest Service regulation because, although it protected species habitat necessary for “survival” of the spotted owl, it did not provide the additional level of protection needed for “recovery” of the species to the point where it would no longer be considered “endangered.”

In Trout Unlimited v. Lohn, the District Court stated that the purpose of the ESA is to:

[O]r promote populations that are self-sustaining without human interference . . . . The protection of the ecosystems upon which endangered and threatened species depend is explicitly recited as the statute’s purpose . . . . If the ESA did not require that species be re-

166. Id. § 1536(a)(2).
167. Id. § 1536(b)(3)(A).
170. 378 F.3d 1059 (9th Cir. 2004), amended by 387 F.3d 968 (9th Cir. 2004).
171. See id. at 1069–70.
turned to a state in which they were naturally self-sustaining, pre-
servation of the habitat of the species would be unnecessary. 173

The Habitat Conservation Planning process under the ESA is perhaps
the best example of a comprehensive regulatory approach to the sustainabili-
ty of ecosystems. A number of examples demonstrate how the HCP process,
when coordinated with the comprehensive land use planning authority of
local governments, can be an extremely effective tool for the preservation of
biodiversity and sustainability, consistent with the property rights of private
landowners. The best example may be the Sonoran Desert Conservation
Plan (Plan), an HCP that has been integrated into Pima County’s comprehen-
sive land use plan. The Plan covers an expansive and biologically diverse
landscape of both public and private land, and prioritizes the biological re-
sources of the county, providing a guidepost for local government in both
short-term and long-term land use actions and decisions in the County. 174
By integrating natural resource protection and land use planning into one com-
prehensive plan, the Plan provides an innovative mechanism for the local
government to regulate the development and sustainability of the commu-

Unlike most HCPs that are created for the incidental take of a single
species, the Sonoran Desert Conservation Plan seeks to conserve biodiversi-
ty. 176 The Plan requires large areas of land to be dedicated to conservation—
including private land. 177 Integrated HCPs, which affect private property
rights, raise Fifth Amendment regulatory takings issues. 178 However, a plan
that is based on science and community involvement, such as the Sonoran
Desert Conservation Plan, can avoid such issues. 179

173. Id. at *15.
CMO/SDCP/ (last visited Aug. 1, 2011).
176. See id.
177. See id.
178. Regulations that prohibit development of undeveloped land “carry with them a high
risk that private property is being pressed into some form of public service under the guise of
(permit denial for house construction on undeveloped coastal property based on beach setback
line regulation was treated as a physical taking).
179. Sonoran Desert Conservation Plan Introduction, supra note 174. For a discussion of
why the ultimate impact of the ESA on the conservation and recovery of species remains
uncertain, see Totoiu, supra note 14, at 10308–10.
F. **Land Use Planning**

Sustainability principles are perhaps most comprehensive and effectively enacted and implemented by government at the comprehensive land use planning stage, where development expectations are created and agencies act with the greatest amount of discretion. "Land Use planning in essence chooses particular uses for the land; environmental regulation, at its core, does not mandate particular uses of the land, but requires only that, however the land is used, damage to the environment is kept within prescribed limits."\(^{180}\) Comprehensive planning decisions are legislative, subject to the most deferential standards of judicial review.\(^ {181}\) They will only be overturned if not fairly debatable, and will be upheld when any valid planning rationale supports the decision.\(^ {182}\) Environmental permitting decisions, in contrast, are made pursuant to established legislative criteria, and the denial of permits for land which has previously been designated for such uses in comprehensive plans and or zoning codes can create a heightened potential for private property rights claims.

"[I]n the 1970s and 1980s, several states enacted statutes that provided states with a significant role in land use planning."\(^ {183}\) "Under these growth management laws, states require local land use plans to be consistent with larger statewide or regional land use plans. Thirteen states have adopted growth management laws. These states are: California, Delaware, Florida, Georgia, Hawaii, Maine, Maryland, New Jersey, Oregon, Rhode Island, Tennessee, Vermont, and Washington."\(^ {184}\)

"Land use planning and the evolving body of American land use law originates from the notion that cities, towns, and regions must look at the ‘big picture’ to plan adequately for the future."\(^ {185}\) "[M]any states . . . require municipalities to prepare so-called comprehensive, master, or general plans."\(^ {186}\)

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181. Martin Cnty v. Yusem, 690 So. 2d 1288, 1295 (Fla. 1997).
182. Id.
183. Totoiu, supra note 14, at 10305 (citations omitted).
184. Id.
City or town planning is a constitutional concept... has in view the physical development of the municipality 'to conserve and promote the public health, safety, morals and general welfare.' Municipal planning... is the accommodation, through unity in construction, of the variant interests seeking expression in the local physical life to the interest of the community as a social unit. Planning is a science and an art concerned with land economics and land policies in terms of social and economic betterment. The control essential to planning is exercised through government ownership or regulation of the use of the locus. But the governmental regulatory power has its limits.188

1. Limited or Timed Growth and Carrying Capacity-Based Ordinances

Since the 1970s some local governments across the country have adopted and implemented growth and development-limiting ordinances, typically to address concerns related to the loss or degradation of ecosystems or farmland, the public and social costs of urban sprawl, and limitations on the capacity of public facilities.189 Some were responding to patterns of "random development" resulting from "unplanned growth," resulting in "unfettered expansion," resulting in the "waste of valuable land resources."190 Legislation that enacts growth limits or caps come under constant scrutiny as landowners argue that they are unconstitutional, on a variety of grounds.

One method for limiting growth to acceptable levels is to apply a carrying capacity analysis.191 "A carrying capacity analysis assesses the ability of a built resource (such as roadways, wastewater treatment plants, municipal swimming pools) or natural resource (such as aquifers, surface water bodies, or coastal estuaries) to absorb population growth and related physical development without degradation."192 "Understanding the carrying capacity or constraints of these resources can be an effective method for identifying the areas of the community that are suitable for new or expanded development."193 By completing a carrying capacity analysis, the government, and

188. Id.
190. 3 LOCAL GOVERNMENT LAW § 16:58 (citing A Zoning Program for Phased Growth: Ramapo Township’s Time Controls on Residential Development, supra note 189, at 724).
191. See Witten, supra note 185, at 584–85.
192. See id. (citing DEVON SCHNEIDER ET AL., THE CARRYING CAPACITY CONCEPT AS A PLANNING TOOL (Am. Planning Ass.1978)).
193. Witten, supra note 185, at 586.
local governments in particular, gain a powerful and legally defensible tool with which to make decisions,\textsuperscript{194} and this analysis may also help local governments to resolve conflicts between competing development and preservation goals.\textsuperscript{195} One excellent example of environmental regulation based upon the “carrying capacity” of natural resources is the Tahoe Regional Planning Compact and implementing ordinances, jointly administered by the States of California and Nevada, five counties, several municipalities, and the United States Forest Service. The Compact has developed regional “environmental threshold carrying capacities,” or “thresholds”—environmental standards “necessary to maintain a significant scenic, recreational, educational, scientific, or natural value of the region or to maintain public health and safety within the region” and “shall include but not be limited to standards for air quality, water quality, soil conservation, vegetation preservation, and noise.”\textsuperscript{196} The Compact is to regulate development in the region in order to achieve these thresholds “while providing opportunities for orderly growth and development consistent with such capacities.”\textsuperscript{197}

One of the earliest and leading cases on the subject of limited growth ordinances is \textit{Construction Industry Ass’n of Sonoma County v. City of Petaluma},\textsuperscript{198} which reviewed the City of Petaluma’s strict cap on growth, which had been enacted as a response to its rapid development and expansion in the 1970s.\textsuperscript{199} The ordinance limited yearly development to 500 housing units, but exempted projects of four units or less, and was limited to a five-year period.\textsuperscript{200} Developers and landowners challenged the ordinance as an arbitrary and unreasonable action that was exclusionary, and lacked a legitimate governmental interest.\textsuperscript{201} Important to its ultimate validity, the quota was based on a careful study which substantiated the city’s restrictions.\textsuperscript{202} The Ninth Circuit upheld the ordinance because “the concept of the public welfare is sufficiently broad to uphold Petaluma’s desire to preserve its small town character, its open spaces and low density of population, and to grow at an orderly and deliberate pace.”\textsuperscript{203}

\begin{thebibliography}{9}

\bibitem{195} \textit{Id.}
\bibitem{196} League to Save Lake Tahoe and Sierra Club v. Tahoe Reg’l Planning Agency, 739 F. Supp. 2d 1260, 1265 (E.D. Cal. 2010).
\bibitem{197} \textit{Id.}
\bibitem{198} 522 F.2d 897 (9th Cir. 1975).
\bibitem{199} \textit{Id.} at 900.
\bibitem{200} \textit{Id.} at 901.
\bibitem{201} \textit{Id.} at 905-06.
\bibitem{202} See \textit{id.} at 900.
\bibitem{203} \textit{Constr. Indus. Ass’n of Sonoma Cty.}, 522 F.2d at 908-09.
\end{thebibliography}
In reaching these conclusions, the court was persuaded by two previous cases in which both it 204 and the Supreme Court of the United States 205 had upheld municipal ordinances that, as a result of prohibitions on land uses other than single-family homes, "had the purpose and effect of permanently restricting growth." 206

In another case, the Supreme Court of Nevada upheld, against state law claims of inconsistency with the state’s planning law, a citizen-initiated county ordinance which limited the number of new dwelling units in the county to 280 per year. 207 The Court rejected a substantive due process claim because the 2% annual growth rate limit was based on a master plan and “reflects County residents’ desire to protect and conserve their natural resources.” 208 The Court ruled that:

As stated by the United States Supreme Court, “[t]he police power is not confined to elimination of filth, stench, and unhealthy places. It is ample to lay out zones where family values, youth values, and the blessings of quiet seclusion and clean air make the area a sanctuary for people.” Protection of a community’s character is substantially related to legitimate state interests. 209

2. Limited Growth Ordinances in Florida

Limited Growth Ordinances have been upheld by Florida courts. In *City of Hollywood v. Hollywood, Inc.* 210 the city had adopted an annual cap on density based on its concerns for water and sewage capacities, fire and police protection, hurricane evacuation, ecological and environmental protection, aesthetics, and public access to the ocean. 211 Under the cap, the specific number of permits to be issued each year was based specifically and solely on the calculations concerning traffic capacity, due to the fact that there was

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204. *Ybarra v. City of Los Altos Hills*, 503 F.2d 250, 252 (9th Cir. 1974).
208. *Id* at 38. Every line drawn by a legislature leaves some out that might well have been included. We cannot say that just because the 280-unit per annum cap leaves some out that might have been included, the 280-unit figure is arbitrary and capricious.” *Id.* (citing *Village of Belle Terre v. Boraas*, 416 U.S. 1, 6, 9, 1974).
211. *Id* at 1334–35.
no existing method that would yield a specific number to represent the limitations that existed relative to the other factors. Upon challenge, the court upheld the density cap even though it found that the traffic study upon which the overall density cap was based was flawed. The court found that the number of permits chosen by the City to be allocated was a reasonable approximation of its actual, but un-quantified growth limits, including aesthetics, and thus the growth cap, even given the flawed traffic numbers, was not unreasonable or arbitrary. In addition, the court gave great weight to the fact that the City Commission had held countless hearings and meetings on the issue before adopting the ordinance. Based on the reports, public meetings, studies, and comprehensive plans, the cap was ruled to be a valid “exercise of police power, which contributed substantially to the public health, morals, safety, and welfare of [its] citizens” and therefore was not arbitrary.

In contrast, where the City of Boca Raton established a cap on permits by referendum, which was not based on any analysis or even consultation with the City Planning Department, it was invalidated by the court. There was no evidence presented by the City that public facilities and infrastructure were insufficient to handle the impacts of future growth. The court found that no substantial competent evidence existed to support a finding that the cap was rationally related to valid municipal purposes of “public health, morals, safety, and welfare.” Thus, the cap was arbitrary and unreasonable.

The “sustainability” arguments raised by the City and rejected by the court in City of Boca Raton v. Boca Villas Corp., can be instructive. The City had argued that its population should be limited by the budget of rain-water falling within city limits. The court found this theory valid as a matter of regional planning, but rejected it as a rational basis for a growth limit in an individual municipality when several governmental agencies were responsi-

212. Id.
213. Id. at 1334.
214. Id. at 1334–35.
216. Id. at 1336.
218. See generally id.
219. Id. at 157.
220. Id.
221. 371 So. 2d 154 (Fla. 4th Dist. Ct. App. 1979) (per curiam).
222. Id. at 156.
ble for providing sufficient water from other sources and were presently doing so. The court explained that:

Water resources will not depend upon a 'budget' which Boca Raton or other cities may impose, but rather will depend upon hard social choices involving agricultural priorities, environmental demands, quantity of water used in various sectors, and the cost which society is willing to pay. . . . A [c]ap predicated upon preservation of water resources is a preliminary and unnecessarily drastic solution to an area-water resource issue.

Concerns for air quality and noise levels were raised by the City but also rejected by the court, because the City's noise and air pollution levels were "normal for a community of [Boca Raton's] size and are well within state and federal standards and regulations." The court found it "unnecessary," and insupportable for the City to enact growth caps based on a desire to have noise and air pollution levels that were superior to averages across the country.

On each of these issues, the court's rejection of the ordinance and its underlying justifications appears to have stemmed from its determination that the greater the limitation on the use of property, the more specific—as opposed to conceptual or abstract—the supporting scientific, technical, or planning case needed to be to support the measure.

The appellate court was clearly troubled by an ordinance that limited growth before the city's facilities and resources were fully maximized. And, despite twenty-one volumes of testimony taken at trial, the court felt that Boca Raton depended upon justifications that were "largely presented in [the] abstract and without [a] specific factual showing of real necessity."

The court's analysis has been criticized as a "simplistic" one, inappropriately applied to a "complex problem." Surely, it can be seen as an example of how the judicial system in general can be ill-equipped to resolve complex scientific or technical disputes, and valid to surmise that the court

223. Id.
224. Id.
225. Id.
226. Boca Villas Corp., 371 So. 2d at 158.
227. See id. at 159.
228. Pierce, supra note 7, at 114 (quoting City of Boca Raton v. Boca Villas Corp., 371 So. 2d 154, 157 (Fla. 4th Dist. Ct. App. 1979) (per curiam)).
229. Id. at 114.
over-stepped its judicial role in second-guessing the technical and scientific support for the City’s ordinance. But it is also reasonable to read this case as simply the result of a court’s determination that there is a sliding scale of support needed to support regulations and in that, on these facts, the City had not shown even the basic rational basis for its specific growth caps. In another situation, with more scientific and technical support for a determination that continued population growth in a certain community, at least cumulatively, had an important adverse impact on regional water supplies, the outcome may well be different. For example, the current water shortage situation in south Florida, with limitations on the regional water supply and municipalities being limited in the amount of water the state will permit them to withdraw from the Biscayne (surficial) Aquifer, which connects to the Everglades, such scenarios are real, and not conceptual. For example, as noted by Pierce, “conserving water would prove important to the public health and safety if the city’s own aquifer became contaminated in the future.”

Another case that invalidated a land use density cap was Innkeepers Motor Lodge, Inc. v. City of New Smyrna Beach, where the Fifth District found a “flat density cap” enacted by a citizens’ referendum, supported by no study or methodology, and allowing of no variances, to be arbitrary and invalid. The density cap limited multifamily dwellings to twelve dwelling units per acre and hotels/motels to twenty-four dwelling units per acre, which figures, said the Court “apparently materialized ‘out of the air.’” The density caps applied to the entire city, without regard to any specific planning considerations in any particular regions of the city. They were invalidated, not because they were too strict, but because they were arbitrarily adopted.

3. Florida’s Community Planning Act

Florida’s modern comprehensive planning law, adopted in 1985, requires each local government to adopt and maintain a comprehensive plan that meets identified standards in state law and which governs all subsequent zoning and development decisions subsequently taken by the local govern-

230. Id. at 117.
231. Id. at 114.
232. 460 So. 2d 379 (Fla. 5th Dist. Ct. App. 1984).
233. Id. at 380.
234. Id.
235. Id.
236. Id. For a discussion of various judicial responses to “no growth” ordinances in general, see generally Pierce, supra note 7.
The Act is controversial and constantly the subject of legislative proposals to reduce state oversight of local planning decisions and/or make the applicable standards more flexible. In general, the Act authorizes and requires local governments to plan for projected growth, ensures the adequate provision of necessary infrastructure and services, and protects environmental resources. The Act’s provisions related to the role of population and growth projections vis a vis timing of allowable development are debated and controversial. Its provisions concerning the provision of or payment for necessary infrastructure by developers, and its provisions concerning the factors used to determine the appropriate amount, location and types of development are important legislative requirements for the financial and ecological sustainability of land use plans.

a. Future Land Use Plan Requirements

Under the Florida Act, how many people are expected to live and use land in a community is a key issue. Where, and how, they will live and use land are separate questions. At least until the 2011 Legislative session, the law gives the government the ability to not accommodate the full projected population if doing so would have unacceptable impacts on other required planning factors. In 2011, the Legislature made a policy determination to require, with an exception for Areas of Critical State Concern under section 380.05 that the “amount of land designated for future land uses should allow the operation of real estate markets to provide adequate choices for permanent and seasonal residents and business and may not be limited solely by the projected population. The element shall accommodate at least the minimum amount of land required to accommodate the medium projections of the [state] for at least a 10-year planning period . . . .”

The Act requires that, whatever amount of the projected population is accommodated by the plan, basic land use decisions about the type and intensity or density of development to be allowed are determined by a variety of factors, including, among other things, the character of undeveloped land, the availability of water supplies, public facilities, and services, and the discouragement of urban sprawl. Comprehensive Plans must include a conservation element for the “conservation, use, and protection of natural re-

238. Id. § 163.3161(4).
sources.... including factors that affect energy conservation. A Conservation Element must protect air and water quality, water quantity, minerals, soils, and native vegetation, fisheries, wildlife, wildlife habitat, and marine habitat, and direct incompatible future land uses away from wetlands.

Coastal local governments must include a Coastal Management Element which “[m]aintain[s], restore[s], and enhance[s] the overall quality of the coastal zone environment”, “use[s] ecological planning principles and assumptions in the determination of the suitability of permitted development”, “[l]imit[s] public expenditures that subsidize development in coastal high-hazard areas”, and “[p]rotect[s] human life against the effects of natural disasters”.

G. The Florida Keys Example

Florida’s land use planning laws, when applied in the early 1990s to the local governments making up the Florida Keys, resulted in comprehensive land use plans for Monroe County and its cities which imposed annual and overall caps on new development approvals that are well below population projections. A 1995 Order of the Administration Commission (Florida’s Governor and Cabinet) required and approved the “carrying capacity”—based Monroe County Plan and found that comprehensive plans are not required to accommodate projected population regardless of the impacts to other planning issues, and must be based on a full analysis of all growth limitations.

Originally, those growth caps were the result of hurricane evacuation constraints, but in recent years, the growth rate was reduced in response to ecosystem protection concerns.

This Order resulted from the application of the Act to Monroe County (the Florida Keys) in the early 1990s. The original adopted plan adopted by the county was greatly deficient and was disapproved by the state. The County agreed to completely re-write the plan, based upon an overall “carrying capacity” approach. The amended plan was still deficient, and a second legal challenge resulted in dramatic findings by a state administrative law judge that the carrying capacity of the Keys’ near shore waters to assimilate additional nutrient (wastewater and storm water) pollution had been exceeded. The Order ruled that the amount of development allowed in the ini-

244. Fla. Stat. § 163.3177(6)(g)1, 5-7.
tial Plan was "excessive because of the inability . . . to evacuate people in the event of a Category 3, 4, 5 hurricane and because the ability of the near shore waters and sea grasses to sustain development had been exceeded."246

The plan was again invalidated and the next re-write limited annual and overall new permitting to that which could meet a "no net nutrient increase" pollution standard, and be accommodated within a 24-hour evacuation time. Because the health of the marine and terrestrial systems were also known limitations on development—but not as easily quantified as hurricane evacuation times—the amendments also conditioned each year’s permit allocations on "substantial progress" on tasks in an annual Work Program, making such progress a condition precedent to maintaining the existing growth rate.247

The Order discussed how these provisions were required in order to bring the plan into compliance with the Act.248

The approved plan changes required that each year, the Commission "shall determine . . . whether substantial progress has been achieved toward accomplishing the tasks of the work program."249 If "substantial progress has not been made, the unit cap for new residential development shall be reduced by at least 20 percent for the following year."

The Commission found a lack of "substantial progress" in 1999 and reduced the annual permit allocation by 20 percent and extended the five-year Work Program to seven years.250 Key among the Work Program requirements was that an overall carrying capacity study be performed and that the land use plan be amended by 2003 to implement the findings of that study.251

The specific legal requirement for the study was as follows:


248. ld. at *10. Remedial amendments are required to bring a plan into compliance with Chapter 163.


251. Id. at 35.

252. Id. at 37.
The carrying capacity analysis shall be designed to determine the ability of the Florida Keys Ecosystems, and the various segments thereof, to withstand all impacts of additional land development activities . . . . The carrying capacity analysis shall consider aesthetic, socioeconomic (including sustainable tourism), quality of life and community character issues, including the concentration of population, the amount of open space, diversity of habitats, and species richness. The analysis shall reflect the interconnected nature of the Florida Keys' natural systems, but may consider and analyze the carrying capacity of specific islands or groups of islands and specific habitats, including distinct parts of the Keys' marine system. 253

Upon completion of the study, Monroe County was, by July 2003, to:

Implement the carrying capacity study by, among other things, the adoption of all necessary plan amendments to establish a rate of growth and a set of development standards that ensure that any and all new development does not exceed the capacity of the county's environment and marine system to accommodate additional impacts. Plan amendments will include a review of the County's Future Land Use Map series and changes to the map series and the "as of right" and "maximum" densities authorized for the plan's future land use categories based upon the natural character of the land and natural resources that would be impacted by the currently authorized land uses, densities and intensities. 254

The Study was completed in late 2002. Among its chief findings were:

'Development in the Florida Keys has surpassed the carrying capacity of upland habitats to maintain [further development].'

'Secondary and indirect impacts of development further contribute to habitat loss and fragmentation' and that 'any further development in the Florida Keys would exacerbate secondary and indirect impacts to remaining habitat.'

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253. Id.
‘Any further encroachment into areas dominated by native vegetation would exacerbate habitat loss and fragmentation.’

‘Development in the Florida Keys has surpassed the carrying capacity of [several protected species] to maintain [the effects of further development activities].’

‘[T]he Lower Keys marsh rabbit [and silver rice rat are highly restricted and likely could not withstand further habitat loss without facing extinction. It makes a similar finding relative to the Key Deer, and finds that any further habitat loss would place the Stock Island tree snail in jeopardy].’

H. Property Rights Implications of the Monroe County Rate of Growth Ordinance

Monroe County’s annual growth caps were upheld against a property rights challenge in *Burnham v. Monroe County*,257 Upholding a summary judgment order granted in favor of the County, Florida’s Third District upheld the constitutionality of the ordinance, holding: (1) The county did not affect a taking by denying the owners’ request for building permit based on their failure to incorporate design features that ordinance sought to encourage, and (2) The rate of growth ordinance was constitutional.258 The court ruled that the “trial court correctly determined that the ROGO ordinance was constitutional, as it substantially advances the legitimate state interests of promoting water conservation, windstorm protection, energy efficiency, growth control, and habitat protection.”259

There are two key features of the County’s ordinance that likely play an important role in avoiding property rights violations. First, no properties are

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255. *Id.* at 6–12.
256. *See Grosso, supra* note 33.
257. 738 So. 2d 471, 472 (Fla. 3d Dist. Ct. App. 1999) (per curiam).
258. *Id.*
259. *Id.*
facially precluded from receiving a permit allocation. Instead, allocations are based on a competitive scoring system under which the highest scoring applications (based on a suite of planning considerations related to ecological impacts, infrastructure availability, surrounding development, etc.), and thus, all properties have the potential to receive an award. The Burnham opinion stressed that the landowner had not availed himself of the opportunity to increase the competitiveness of his application by incorporating available design features. Next, the ordinance grants applicants who have been denied an allocation for four years the right to either receive a permit allocation or have their land acquired by the County.

I. The Applicability of the Florida Keys Precedent to Other Communities

A subsequent case under Florida's Growth Management Act, and involving Palm Beach County, interpreted the Monroe County Orders, making the following observations:

According to expert planning testimony for DCA and the County, the County is obligated to plan for growth in accordance with [the statute and rule] up to its "sustainable carrying capacity," which has not been reached. Whether or not they believe the County has the option to plan to slow or stop growth before reaching "sustainable carrying capacity," it is clear from the evidence that the County is not doing so, but instead is planning for continued growth within the framework of its Plan until reaching what it considers to be "build-out" conditions.

The Monroe County orders recognize that the [statute and administrative rule] require a sustainable carrying capacity analysis in appropriate situations. The experts cited in paragraph 63 testified that Palm Beach County is not yet facing such a situation.

In any event, the [Act] accords a local government the flexibility to make a variety of planning decisions regarding how its jurisdiction should grow. Section 163.3177(6)(a), Florida Statutes, recognizes that the future land use plan should be based on a number of factors, including not just population projections, but also

260. See id.
261. See id.
262. Burnham, 738 So. 2d at 472.
The character of undeveloped land, availability of public services and other planning objectives.264

The outcome in the Keys springs from the compelling nature of the planning facts—the “surveys, studies and data” under Chapter 163—in the Keys.265 The extreme ecological and infrastructure limits on growth in the unique and fragile Florida Keys—as evidenced by their status as an Area of Critical State Concern under Chapter 380 of the Florida Statutes were the dominant factor in this outcome.266 Yet the basic legal principle would apply anywhere in Florida. To the extent that the data and analysis reveals significant natural or other constraints on development and land use impacts in other local governments, a similar outcome—in the context typically of either comprehensive plan updates or the denial of applications for Future Land Use Map or policy amendments—is possible in other jurisdictions. While the Act was amended in 2011 to require comprehensive plans in the most of the state (those areas not designated as Areas of Critical State Concern) to accommodate the minimum population projections for at least a 10-year planning period,267 the balance of the Acts, provisions, many of which are describe above, allow and require that population to be accommodated in a sustainable manner. A 2003 letter from the Department of Community Affairs (DCA) regarding Palm Beach County’s population forecasts stated:

Local governments are not required to convert agricultural lands based solely on population trends without consideration for other planning objectives and needs.

Local governments are not compelled to authorize unlimited or unchecked urbanization simply to accommodate past growth trends resulting from rapid urbanization.268

In the clearest example of this principle, the comprehensive plans of Monroe County and its cities impose annual caps on new development approvals that are well below population projections.

In the Keys, the limits are the ability of its fabled marine system to handle more nutrient pollution, its limited evacuation capacity (obviously a compelling public safety issue) and the minimum spatial needs of several endangered and other listed species. On mainland south Florida, there is a minimum spatial extent of land needed to restore the Everglades and maintain a water supply. In other places the issue may be the necessary critical mass of farmland to sustain an agricultural economy, the critical spatial mass, quality or function of ecosystems and natural features, or agricultural industries, the maximum allowable pollution loads in rivers, lakes or springs, minimum flows and levels for water bodies, or habitat needs similar to those in south Florida. Development can also be limited as a result of the inability to provide critical public facilities or services such as evacuation capacity, safe, efficient transportation, wastewater, potable water, flood protection, solid waste, or other necessities. As Florida continues to grow, and forests, swamps, watersheds, wildlife habitats, water bodies, and other natural features grow more degraded or fragmented, as farming acreage falls below the critical mass needed to support long-term investment, and as expansion of key public facilities becomes increasingly constrained or precluded, such circumstances are likely to appear farther up the state.

J. Adequate Public Facilities Requirements

Florida is among the states that statutorily require development be served with “adequate” public facilities. Florida’s “concurrency” law requires all local governments to adopt minimum level of service standards, consistent with state law, for solid waste, storm water, and wastewater, and precludes the approval of a development that will cause a “concurrency standard” to fail to be met. Local governments are authorized to make transportation, parks and recreation, schools and other public facilities the subject of concurrency requirements.

The Act requires that the future land uses allowed in local government comprehensive plan be based upon, among other things, the “availability of

269. See e.g., FLA. STAT. § 163.3178(2)(d) (2011) (requiring a comprehensive plan’s coastal management element to include “principles for hazard mitigation and protection of human life against the effects of natural disaster, including population evacuation, which take into consideration the capability to safely evacuate the density of coastal population proposed in the future land use plan element in the event of an impending natural disaster.”).

270. FLA. STAT. §§ 163.3180(1) and (2).

271. Id.
water supply.".272 This requirement is key to coordinating land and water planning.

Finally, the Act includes provisions that promote fiscally efficient development. One of the factors to be considered when determining if a land use change would inappropriately promote urban sprawl is whether it “[a]llows for land use patterns or timing which disproportionately increase the cost in time, money, and energy of providing and maintaining facilities and services, including roads, potable water, sanitary sewer, stormwater management, law enforcement, education, health care, fire and emergency response, and general government.”273

The Act requires the Capital Improvements Element of comprehensive plans to “[l]imit public expenditures that subsidize development in high hazard coastal areas.”274 Section 163.3178(1), concerning coastal management, declares “the intent of the Legislature that local government comprehensive plans restrict development activities where such activities would damage or destroy coastal resources, and that such plans protect human life and limit public expenditures in areas that are subject to destruction by natural disaster.”275

III. STRICT PLANNING AND DEVELOPMENT ACTIONS, GROWTH CAPS, EXACTIONS AND THE CONSTITUTION

A. Private Property and the Takings Clause

Growth controls are potentially subject to claims that they deprive owners of their property without just compensation.276 Land use or environmental regulations which “go too far” and require a private landowner to bear a burden that should be borne by the public are a taking of private property.277 A regulatory taking occurs when the legislation (1) does not advance a legitimate governmental interest or (2) denies the landowner all or virtually all economically viable use of his or her land.278

273. See FLA. STAT. §163.3177 (6)(a) 9.a.(VIII)
274. See FLA. STAT. §163.3177 (6)(g)6.
276. The Fifth Amendment Takings Clause states: “[N]or be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.” U.S. CONST. amend. V.
The most stringent land use and environmental regulations—those which facially preclude or severely limit development or intensive uses of land, and those which, as applied, allow a landowner little or no such uses—face heightened property rights limitations:

Regulations that leave the owner of land without economically beneficial or productive options for its use—typically by requiring land to be left substantially in its natural state—carry with them a heightened risk that private property is being pressed into some form of public service under the guise of mitigating serious public harm.\(^\text{279}\)

A landowner who “has been called upon to sacrifice all economically beneficial uses in the name of the common good, that is, to leave his property economically idle, has suffered a taking.”\(^\text{280}\)

B. The Right to Travel

In addition to the private property rights implications, the so-called, “right to travel” is arguably implicated by limited or no growth ordinances.\(^\text{281}\) The Privilege and Immunities Clause of the Constitution states: “The citizens of each state shall be entitled to all privileges and immunities of citizens in the several states.”\(^\text{282}\) One of the Privileges recognized is the right to travel, held to be the “right of free ingress into other States, and egress from them.”\(^\text{283}\) This clause protects the right to travel from state infringement.\(^\text{284}\) The right to travel includes the right of foreign residents to be treated the same as native-born residents,\(^\text{285}\) so as to preclude unequal licensing fees. A

\(^\text{280.}\) Id. at 1019. Florida’s statutory Property Rights Act establishes a standard for landowner compensation that is intended to provide relief to landowners in a greater number of cases that would be under the Constitution, but has not been interpreted by commentators and cases as setting the standard for compensation significantly lower than the Constitutional line. See Richard Grosso & Robert Hartsell, Old McDonald Still Has a Farm: Agricultural Property Rights After the Veto of S.B. 1712, FlA. B.J. Mar. 2005, at 41, 43; see also Holmes v. Marion Cnty., 960 So. 2d 828, 829–30 (Fla. 5th Dist. Ct. App. 2007); Citrus Cnty. v. Halls River Dev., Inc., 8 So. 3d 413, 415 (Fla. 5th Dist. Ct. App. 2009).
\(^\text{281.}\) See Baldwin v. Fish & Game Comm’n of Mont., 436 U.S. 371, 378 (1978).
\(^\text{282.}\) U.S. CONST. art. IV, § 2, cl. 1.
\(^\text{283.}\) Paul v. Virginia, 75 U.S. (8 Wall.) 168, 180 (1868).
\(^\text{285.}\) See Baldwin, 436 U.S. at 390.
state could not set a cap on growth which would prohibit non-residents from purchasing land or moving to the state.\textsuperscript{286}

Even if a Comprehensive Plan only allows enough growth for town residents, it does not violate the right to travel so long as out-of-town residents are not banned.\textsuperscript{287} In \textit{York}, a District Court judge upheld a growth cap:

> which does not on its face ban or direct reduction in sale or lease of new housing to non-residents and does not impact sale or lease of existing housing, is sharply distinguishable from legislation that has been held to impose a penalty, such as durational residency requirements that flatly deny eligibility for vital benefits or reduce the quantum of benefits available until a person has resided in a state for a certain period of time. . . . Even granting that such an ordinance discourages migration, it does not penalize it in a constitutional sense. . . . [The Court is] 'unable to find that a zoning ordinance creates a barrier to interstate migration merely by limiting options and increasing costs for persons wishing to reside in a particular locality.'\textsuperscript{288}

In \textit{Construction Industry Ass'n of Sonoma County v. City of Petaluma},\textsuperscript{289} the Ninth Circuit upheld the City of Petaluma's strict cap on growth against a right to travel argument, because "the concept of the public welfare is sufficiently broad to uphold Petaluma's desire to preserve its small town character, its open spaces and low density of population, and to grow at an orderly and deliberate pace."\textsuperscript{290} The court noted that all land use regulation can have potential exclusionary tendencies and impacts on citizens of surrounding communities, but should be upheld so long as they bear a rational relationship to a legitimate state interest.\textsuperscript{291}

C. \textit{Adequate Public Facility and Other Moratoria}

Ordinances that limit development approvals based on the availability of public services and facilities, or based on appropriately supported annual
growth caps, are temporary restrictions, or a form of moratoria. Courts will uphold moratoria that are necessary to protect the public health, safety, and welfare. Accordingly, courts have upheld moratoria based on the need to plan to avoid problems caused by future growth, or to cure existing problems caused by prior development.

Moratoria that are reasonably limited in scope and duration, and have a firmly fixed termination point will be upheld. This is to be distinguished from moratoria of excessive or unlimited duration, which are generally held to be unreasonable. Government has a duty to expeditiously take steps to rectify the problem upon which the moratorium is based.

A transportation concurrency moratorium under Florida law was upheld in WCI Communities, Inc. v. City of Coral Springs. The City of Coral Springs enacted a nine month temporary moratorium on the processing of site plan applications for townhouse and multi-family development. WCI filed suit claiming that the moratorium constituted procedural and substantive due process, and property rights violations, and that it prevented WCI from using its multi-family parcels for multi-family residential development.

The court held:

[T]he city’s use of zoning in progress and its adoption of a temporary moratorium in the processing of multi-family development applications did not deprive WCI of any substantive due process rights or affect a temporary taking. Under both substantive due process and equal protection, when the legislation being challenged does not target a protected class, the rational basis test is applied. The rational basis standard is highly deferential [and as

298. 885 So. 2d 912 (Fla. 4th Dist. Ct. App. 2004).
299. Id. at 913.
300. Id. at 913–14.
such a] court should not set aside the determination of public officers in land use matters unless it is clear that their action has no foundation in reason and is a mere arbitrary or irrational exercise of power having no substantial relation to the public health, the public morals, the public safety or the public welfare in its proper sense. The question is only whether a rational relationship exists between the ordinance and a conceivable legitimate governmental objective. If the question is at least debatable, there is no substantive due process violation. 301

The court found it to be "well-settled that permissible bases for land use restrictions include concern about the effect of the proposed development on traffic, on congestion, on surrounding property values, on demand for city services, and on other aspects of the general welfare." 302 The moratoria served the valid purpose of preventing development inconsistent with pending changes in development regulations, and thus was rationally related to city's attempt to preserve status quo while it formulated regulatory land use scheme and so did not violate due process. 303

Cases in which development moratoria have been upheld include Bradfordville Phipps Ltd. Partnership v. Leon County, 304 which observed that moratoria are a vital, valid part of a Florida local government's zoning power. 305 Bradfordville rejected a claim that a court-ordered injunction requiring a moratoria (and the subsequent moratoria enacted by the local government) constituted a taking. 306 The temporary nature of the restriction, and the fact that the Plaintiff purchased its property with actual or constructive notice of the highly restrictive land use environment that existed, were factors in the court’s decision. 307

The court noted that:

The widespread invalidation of temporary planning moratoria would deprive state and local governments of an important land-use planning tool with a well-established tradition. Land-use planning is necessarily a complex, time-consuming undertaking for a community, especially in a situation as unique as this. In several ways, temporary development moratoria promote effective planning. First, by preserving the status quo during the planning

301. Id. at 914 (citations omitted).
302. Id. at 915.
303. WCI Cmty's., Inc., 885 So. 2d at 915–916.
305. Id. at 470.
306. Id. at 471–72.
307. Id. at 468.
process, temporary moratoria ensure that a community’s problems are not exacerbated during the time it takes to formulate a regulatory scheme. Relatedly temporary development moratoria prevent developers and landowners from racing to carry out development that is destructive of the community’s interests before a new plan goes into effect. Such a race-to-development would permit property owners to evade the land-use plan and undermine its goals. Finally, the breathing room provided by temporary moratoria helps ensure that the planning process is responsive to the property owners and citizens who will be affected by the resulting land-use regulations.

D. Strict Planning and Zoning Allowances in Florida

Local governments in Florida can maintain existing planning and zoning designations and deny requested use, density, and intensity increases, as a means of protecting the carrying capacity and sustainability of its natural and public resources.

Decisions to deny requested land use amendments based on these considerations are likely to be upheld if challenged. The Supreme Court of Florida has upheld local government authority to decline requested plan amendments to allow an increase in density. Such decisions are legislative in character, and will only be overturned if not “fairly debatable,” a highly deferential standard for local governments. A local government’s decision not to change its plan will be upheld when any valid planning rationale supports the decision.

In determining whether a regulation denies a landowner all economically viable use, the focus is on the existence and value of permissible uses. There is no right to any level of development land use, such as residential, commercial, or industrial, as long as the allowed uses are economically viable. As long as agricultural or some other non-construction use is economically viable, regulations may preclude any substantial, or even all, development. In Martin County v. Yusem, the Supreme Court of Florida upheld

308. Id. at 470 (quoting Keshbro, Inc. v. Miami, 801 So. 2d 864, 874 (Fla. 2001)).
309. See Bd. of Cnty. Comm’rs of Brevard Cnty. v. Snyder, 627 So. 2d 469, 471 (Fla. 1993).
310. Id. at 475.
311. Id. at 472.
312. Martin Cnty. v. Yusem, 690 So. 2d 1288, 1295 (Fla. 1997); Martin Cnty. v. Section 28 P’ship, 668 So. 2d 672, 677 (Fla. 4th Dist. Ct. App. 1996).
315. See generally Yusem, 690 So. 2d 1288 (Fla. 1997).
a county’s decision to deny a request to “up-zone” agricultural lands, finding that the county was not required to amend its comprehensive plan at the landowner’s request. The court held that landowners do not have a right to density increases and ruled that decisions to deny requests for comprehensive plan changes “are legislative decisions subject to the [deferential] fairly debatable standard of review.”

In *Martin County v. Section 28 Partnership*, the Fourth District rejected a taking claim against Martin County’s decision not to amend its comprehensive plan to change agricultural zoning. The court held that such decisions “will not be considered arbitrary and capricious if [they have] ‘a rational relationship with a legitimate general welfare concern.’” The Court found that “The record contains sufficient evidence establishing that the County’s comprehensive plan policies are based on rational and sound planning principles, designed to preserve agricultural lands, protect wetlands and environmental resources, ensure the efficient use of public resources, and discourage urban sprawl” and that because of the extent of the impact from the proposed density increase, the refusal to amend the plan bore “a substantial relationship to a legitimate governmental interest.”

Thus, if agricultural or other non-intensive development uses are economically viable, local governments will typically be well within their police power and without takings liability if they decline to approve rezoning or comprehensive plan amendments on agricultural lands. Beyond maintaining existing planning and zoning designations, local governments may also reduce allowable uses, densities, and intensities so long as the reductions do not “go too far.” As a matter of constitutional takings law, landowners do not have a vested right to the continuation of current zoning, which can be reduced for valid reasons. Because an owner is not guaranteed the most profitable use of his land but simply some use that can be economically carried out, an action which “down-zones” land or increases legitimate restrictions is not invalid simply because it denies the highest and best use of the property. Regulatory actions have been upheld against takings claims even

316. 690 So. 2d 1288 (Fla. 1997).
317. Id. at 1290.
318. Id. at 1295.
319. 772 So. 2d 616 (Fla. 4th Dist. Ct. App. 2000).
320. Id. at 621.
321. Id. at 620 (quoting Restigouche, Inc. v. Town of Jupiter, 59 F.3d 1208 (11th Cir. 1995)).
322. Id. at 621.
where they dramatically diminished the value of the property, including im-

pacts potentially as great as 95 percent. In Florida, so long as the approved zoning allows some economically viable use, a landowner is not entitled to more favorable or economically valuable zoning. In Lee County v. Morales, the Second District rejected a takings claim against a “down-zoning” because the resulting densities were economically viable and the reductions were not made arbitrarily, but for valid planning reasons based on a study. The court found that the county acted within its discretion to revise the zoning allowances based upon the new information presently available.

Changes to local government comprehensive plans that reduce allowable densities have specifically been addressed as potential takings. In Glisson v. Alachua County, plan amendments that reduced density from one unit per acre to one unit per five acres, were not held to be takings since the change was not arbitrary, and the remaining uses were economically viable. The validity of the amendments was strongly supported by the fact that they were adopted pursuant to the authority of Florida’s growth management laws. “Down-zoning” or increasing land use restrictions are a viable, legal option for ensuring that the impacts of development or other land uses do exceed the capacity of natural or man-made systems to accommodate their impacts.

Thus, local governments’ hands are not tied when it comes to changing existing planning and zoning provisions. If existing rules are no longer appropriate, government is not precluded from making changes that reflect current information. Planning and zoning is not a perfect science and is

325. Susan L. Trevarthen, Advising the Client Regarding Protection of Property Rights: Harris Act and Inverse Condemnation Claims, Fla. B. J. July/August 2004, 61, 61; see Hadacheck v. Sebastian, 239 U.S. 394 (1915) (reducing property value by over 90 percent); Graham v. Estuary Properties, 399 So. 2d 1374, 1382 (Fla. 1981) (75 percent reduction of value not a taking); Penn Cent. Transp. Co., 438 U.S. at 124 (in some cases regulations may result in a 95 percent loss without justifying compensation as a taking).


328. Id. at 655–56.

329. Id. at 656.


331. Id. at 1037–38.

332. Id. at 1036.


334. See, e.g., Good v. United States, 189 F.3d 1355 (Fed. Cir.1999) (ruling that the denial of a permit under the Endangered Species Act did not interfere with the landowner’s reasonable investment backed expectation, even though the landowner had purchased the land prior to
often dependant on predicting the future and contingent on unknown factors. Government has significant flexibility to reduce use or density or increase restrictions, so long as the resulting rules allow some economically viable use and are not arbitrary.

E. Transferrable Development Rights

Transferrable Development Rights are a potential mechanism that will allow local governments to make substantial areas of ecological importance off limits to development, while still retaining value in the impacted lands.335 If the enacted regulation permits most existing uses of the property, and provides a mechanism whereby individual landowners may transfer development rights, the regulation does not deny individual landowners all economically viable uses of their property.336 In Glisson, the court acknowledged that the county regulations diminished the economic value of the property; however, diminution in value is not the test.337 Rather, a challenger must demonstrate denial of all or a substantial portion of the beneficial uses of the property.338

F. Growth Caps, Carrying Capacity Planning, and Property Rights

In Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency,339 the Supreme Court of the United States upheld a thirty-two month moratorium that temporarily prohibited construction without compensating affected landowners while studying the carrying capacity of the area and formulating a regional plan for development.340 The Court rejected the claim that “a moratorium on development imposed during the process of devising a comprehensive land-use plan constitutes a per se taking of property requiring the enactment of the ESA because, the owner could not have been “oblivious” to the rising environmental awareness that occurred during the years between the purchase and the application for a permit.).

335. A “TDR” program allows a private landowner to “sever his development rights in an area where development is objectionable and transfer them to an area where development is less objectionable.” Andrew J. Miller, Transferrable Development Rights in the Constitutional Landscape: Has Penn Central Failed to Weather the Storm?, 39 NAT. RESOURCES J. 459, 465 (1999).
337. Glisson, 558 So. 2d at 1037.
338. Id. at 1035.
340. Id. at 342–43.
compensation under the Takings Clause of the United States Constitution.\textsuperscript{341} The Court held that so long as some future interest remained, the per se rule under \textit{Lucas}\textsuperscript{342} did not apply to temporary building restrictions.\textsuperscript{343} The Court refrained from adopting an absolute rule regarding moratorium and instead, suggested that an ad hoc analysis must be conducted using the \textit{Penn Central} factors to determine whether a taking had occurred.\textsuperscript{344}

A number of observations from the reported cases can be made about the property rights implications of growth caps.

First, the contrast between the Florida cases of \textit{Boca Raton} and \textit{Innkeepers Motor Lodge} cases and the \textit{City of Hollywood} case makes clear that the established caps—be they density or intensity-related, or building permit-related—must have resulted from some valid analysis or methodology related to a facility capacity, scientific determination of acceptable impact limits, or other non-arbitrary approach other than pulling numbers “out of the air.”

Next, as noted by Pierce,\textsuperscript{345} courts are likely to strike growth limits that respond to regional concerns beyond the strict limits of local government boundaries unless a demonstration is made as to the important connection of local impacts to the regional issue.

Third, like the Rate of Growth Restrictions in the Florida Keys, the analysis of building permit caps discussed in \textit{Currier Builders v. Town of York},\textsuperscript{346} suggests that such annual caps on the number of permits may be viewed as somewhat unlike moratoria (in that they are not temporary), and upheld even if permanent if they are based on an articulated methodology, and provide an owner with some potential to make a viable use of his or her land at some reasonable time in the future. In \textit{Currier Builders}, a local ordinance, enacted by citizen referendum, and limiting the monthly and annual number of building permits (issued under a lottery system) was challenged, among other basis, as a taking of private property.\textsuperscript{347} The case was ultimate-

\begin{itemize}
\item \textsuperscript{341} \textit{Id.} at 306.
\item \textsuperscript{342} \textit{Lucas v. S.C. Coastal Council}, 505 U.S. 1003, 1018 (1992) (A taking occurs as a matter of law when the landowner is denied all economic beneficial uses in his land).
\item \textsuperscript{343} \textit{Tahoe-Sierra Pres. Council}, 535 U.S. at 337.
\item \textsuperscript{344} \textit{Id.} at 342.
\item \textsuperscript{345} Pierce, \textit{supra} note 7, at 115. Pierce criticized the Court’s analysis as “shallow,” noting that “certain aspects of Florida’s geography and environment might make it suffer more under national air quality standards—possibly because poor air quality affects the production of oranges, or because it deters tourist travel to the city.” \textit{Id.}
\item \textsuperscript{346} 146 F. Supp. 2d 71 (D. Me. 2001).
\item \textsuperscript{347} \textit{Id.} at 72.
\end{itemize}
ly dismissed on ripeness grounds, but its long history included a Magistrate Judge’s analysis that rejected the takings challenge.348

Ultimately, a court will look at the overall validity of the growth ordinance in conjunction with whether there is a taking of property from the landowner in making its determination of whether the government entity can limit growth and development. Growth limiting ordinances will remain an important tool for local governments as demand for developable land increases and encroachment on environmentally sensitive lands becomes imminent. Such ordinances should serve to promote infill development and protect our natural resources.

G. **Large Scale Rural Planning**

Florida’s *Community Planning Act* encourages large-scale rural development planning, expressly providing for two types of projects—Sector Plans349 and Rural Land Stewardship Projects350—which authorize local land use plan amendments for very large parcels which allow substantial urban development in exchange for substantial set-asides of farmland or environmentally sensitive lands.

These provisions are controversial from the standpoint of whether, by its terms or in application, the public benefits in terms of long-term preservation of important resources are equal to the private benefits resulting from substantial increases in development potential on lands typically far from existing urban areas. Yet, they offer an exceptionally useful vehicle for the large-scale preservation of ecosystem lands in locations, amounts and quality that are adequate to ensure the sustainability of ecosystems. The ability to essentially “site plan” a several thousand acre parcel in single ownership, in terms of where development will happen and where preservation will occur, at the development approval stage (a comprehensive land use plan amendment) where government enjoys the greatest amount of discretion351 and landowners have not already been granted substantial development rights, and before land has been parceled off into small units owned by dozens, hundreds or even thousands of owners, offers the most effective method for governmental decision-making that ensures the sustainability of ecological functions. Surely, as described above, the ability of permitting agencies to deny or limit permits based on ecosystem sustainability requirements exists in the law. Yet, in many instances, the denial or the grant of a very limited

348. *Id.*
350. *Id.* § 163.3177.
351. See discussion at pp. 759–62.
wetland or wildlife "incidental take" permit, for example, for land that is entirely or nearly all wetlands or protected wildlife habitat—as a result, perhaps, of subdivision and sales—and which has already been planned or zoned for urban uses, can be very difficult or impossible as a result of perceived or real property rights violations.

IV. IMPACT FEES AND EXACTIONS: MAXIMIZING THE PUBLIC'S ABILITY TO RECoup ITS COSTS IN THE FACE OF PRIVATE PROPERTY RIGHTS

A. Florida Laws and Programs Designed To Have Development Pay For Itself

Neither constitutional nor statutory law requires Florida to subsidize financially new development and population growth. Government (local, county, municipal, or special district)-imposed impact fees equal to 100 percent of development costs are not constitutionally (Federal or Florida) or statutorily prohibited. Thus, while we may not be able to "build a fence at the state line," we can build a toll plaza and charge the full amount that it will cost to provide the full range of public facilities and services required to meet the needs of all new population.

1. Impact Fees, the Constitution, and Florida Statutes

No Federal or Florida statute specifically caps, or sets a maximum monetary limit, for impact fees imposed by a counties, municipalities, or special districts. Section 163.31801, the "Florida Impact Fee Act," does not set a cap on impact fees. Rather, under section 163.31801(3), impact fees are subject to requirements regarding their form of adoption, advance notice, method of calculation (based on the most recent and localized data); accounting and reporting; and other procedural and accountability requirements.

In Florida, the amount of allowable impact fees are governed primarily by case law, rather than by statute. Impact fees are analyzed legally under the Takings Clause as exactions. The Takings Clause, Amendment V of the U.S. Constitution, made applicable to the states through amendment XIV of the U.S. Constitution, provides: "[N]or shall private property be taken for public use, without just compensation." The Florida Constitution, under Article X, section 6(a), is essentially the same, but requires "full" compensation. Analyzed together, the Supreme Court of the United States' opinions

353. U.S. CONST. amend. V.
354. FLA. CONST. art. X, § 6(a).
in the *Nollan v. California Coastal Commission*\(^{355}\) and *Dolan* cases, require that an exaction, such as a mandated developmental impact fee, must meet two tests: 1) There must be an “essential nexus” between the exaction and a legitimate state interest that it serves; and 2) The exaction must be “roughly proportional” to the nature and extent of the project’s impact.\(^{356}\)

In determining whether the imposition of an impact fee is constitutionally permissible, the Supreme Court of Florida has adopted the “dual rational nexus test,” similar to the Supreme Court of the United States’ “rough proportionality” test, which requires the local government to demonstrate “a reasonable connection, or rational nexus, between the need for additional capital facilities and the growth in population generated by the [development]” and “a reasonable connection, or rational nexus, between the expenditures of the funds collected and the benefits accruing to the [development].”\(^{357}\)

Thus, so long as the impact fee or exaction is in fact calculated to offset no more than 100 percent of the development’s public facility and service requirements, government may charge that amount.\(^{358}\) Under Florida law, a municipality, county, or special district does not violate constitutional restraints by levying impact fees equal to 100 percent of development costs.\(^{359}\) The courts, however, must review each assessed impact fee on a case by case basis by applying the “dual rational nexus test” to ensure that the fee charged is proportional to the anticipated impact on jurisdictional resources and services.\(^{360}\)

V. JUDICIAL STANDARDS OF REVIEW SUPPORT PLANNING AND REGULATION BASED ON ECOLOGICAL OR OTHER THRESHOLDS

At least one commentator has concluded that municipalities seeking to implement no-growth controls “must create an irrefutable link between land use management and the science of sustainability so that courts may see sus-

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356. See *Dolan* v. City of Tigard, 512 U.S. 374, 386 (1994) (holding the city failed to establish that in issuing a permit to petitioner, its property dedication requirement was roughly proportionate to its land use plan and the impact of petitioner’s proposed development).
358. See *Dolan*, 512 U.S. at 391.
359. See *id*.
360. Save Our Septic Sys. Comm., Inc., 957 So. 2d at 673.
tainability concepts as rational and conclusive. While that author's view on this point may reflect his valid, realistic view of the judiciary's gut-level reactions to such ordinances, an analysis of the standards for judicial review of land use regulations demonstrates that a mere "rational basis" for such regulations, and not an "irrefutable link," is necessary to uphold such land use restrictions in the face of most facial constitutional challenges however. In determining whether regulations are arbitrary, or legitimate subjects of regulations, courts give significant deference to the judgment of the regulating body. Property rights claims, on the other hand, may be the greatest obstacle to the adoption of "no growth" ordinances that truly and permanently prevent any reasonable use of individual parcels of land.

"The State is given wide range in exercising its lawful powers to regulate land use for environmental reasons, and any such land-use regulations thus are valid if supported by a rational basis consistent with overall policies of the State."

As long as an ordinance or regulation bears a substantial relationship to the promotion of the public health, safety, morals, or general welfare, it is constitutional. Local governments have a statutory right and responsibility to enact comprehensive plans and such plans, like legislative acts, will be presumed valid when challenged. Absent a showing that the comprehensive plan is unreasonable and is an arbitrary exercise of police power without any relationship to the public health, safety, morals, or welfare, the courts will not overturn the plan. The burden is on the party challenging an ordinance to make this demonstration.

To resolve this issue, courts utilize the "fairly debatable" test, under which, if reasonable minds could differ as to the reasonableness or rationality of an ordinance, the ordinance will be upheld. A plan will be deemed fairly debatable if there is competent, substantial evidence to support the local

361. See Pierce, supra note 7, at 96.
362. Id.
364. Dep't. of Cmty. Aff. v. Moorman, 664 So. 2d 930, 933 (Fla. 1995)
365. Id.; see also Bd. of Cmty. Comm'rs of Brevard Cnty. v. Snyder, 627 So. 2d 469, 473 (Fla. 1993).
367. Id.; City of Miami Beach v. Lachman, 71 So. 2d 148, 150 (Fla. 1953) (en banc) (per curiam).
369. City of Miami v. Kayfetz, 92 So. 2d 798, 802 (Fla. 1957).
370. Davis, 318 So. 2d at 217.
government's decision.371 If the plan is found to be fairly debatable, then its application cannot be disturbed by the courts.372 Only where a plan is not supported by any substantial evidence and is not fairly debatable, will it be deemed arbitrary, capricious, and a denial of due process.373 To show that a land use restriction is unreasonable and arbitrary, the challenging party must prove that the restriction has no rational relationship to the public health, morals, safety or general welfare, and is not reasonably designed to correct the adverse condition.374 Once the plan meets the fairly debatable test, the court may not substitute its judgment for that of the local government.375

The essence of these cases is that as long as there is a good reason for the regulation, it will not be struck by the Court because the challenger disagrees with that reason. In Capeletti Bros., the court upheld the denial of a rezoning on the basis that it conflicted with existing land use plans and the concern.376 Differences of opinion on this matter did not invalidate the ordinance on the basis that conclusive proof of the need to deny the rezoning did not exist. Instead, this demonstrated that the issue was fairly debatable and thus within the Commission's discretion to decide.377 Importantly, the court explained that, due to the sensitivity of decisions affecting land use, those decisions should be made by local governments, and unless the decisions are arbitrary, discriminatory, or unconstitutional, the court should let those decisions stand.378 Similarly, the court in Morales stated that because zoning is a legislative function, the courts should only intervene when the action of the zoning body is so unreasonable and unjustified as to amount to a taking.379 The Court further held that it is not for the judiciary to determine what would be the proper zoning, but to ascertain whether the zoning body's decision is fairly debatable.380

A. Regulating in the Face of Scientific Uncertainty

Scientific conclusions are, by their nature, subject to uncertainty and / or controversy and debate among experts. Federal courts and Florida courts

372. Davis, 318 So. 2d at 217.
375. Davis, 318 So. 2d at 221.
376. 375 So. 2d at 316.
377. Id.
378. Id. at 315; see also City of Miami v. Kayfetz, 92 So. 2d 798, 801 (Fla. 1957).
380. Id.
give deference to the government on such matters. Deference to an agency’s scientific expertise is mandated when the agency articulates a rational connection between the facts and its conclusion. When an agency decision involves a high level of technical and scientific expertise, a court will defer to the agency’s conclusions, so long as they are reasonable. Where the “analysis of the relevant documents ‘requires a high level of technical expertise,’” [a court] must defer to the ‘informed discretion of the responsible federal agencies.” A reviewing court should be at its most deferential in reviewing an agency’s scientific determinations in an area within the agency’s expertise.

In a Florida case, Island Harbor Beach Club, Ltd. v. Department of Natural Resources, the Florida Department of Natural Resources employed a new scientific methodology, which was allegedly unproven and unaccepted in the scientific community, in reestablishing a coastal construction control line. The court held that “selection and use of new scientific methodology was a matter of agency discretion that should not be set aside absent a showing by a preponderance of evidence that the agency’s action is either arbitrary, capricious, an abuse of discretion, or not reasonably related to the statutory purpose.” The court concluded by stating that the setting of coastal construction control lines for the purpose of adequately protecting the beaches and dunes of this state is not a matter of scientific certainty and thus, the court was compelled to give great deference to DNR.

382. Ocean Advocates, 361 F.3d at 1119.
383. Lands Council v. McNair, 537 F.3d 981, 987 (9th Cir. 2008).
386. 495 So.2d 209 (Fla. 1st Dist. Ct. App. 1986).
387. Id. at 223.
388. Id. at 217–18; see e.g., Balt. Gas & Elec., 462 U.S. at 103 (stating that the uncertainty of science only serves to emphasize the limitation of judicial review and the need for greater deference to policy making entities).
389. Island Harbour Beach Club, Ltd., 495 So. 2d at 223; accord Davis v. Sails, 318 So. 2d 214, 222 (Fla. 1st Dist. Ct. App. 1975); see also Lee Cnty. v. Morales, 557 So. 2d 652, 655 (Fla. 2d Dist. Ct. App. 1990) (The rationality and reasonableness of a downzoning, which was based upon an expert’s study and the planning staff’s assessments and recommendations that the land be rezoned in consideration of environmental, archaeological, and historical protection/preservation, was fairly debatable); see also City of Miami Beach v. Lachman, 71 So. 2d 148, 152 (Fla. 1953) (en banc) (per curiam) (If any logical deduction supports the local government’s contentions, a court may not substitute its judgment for that of the local govern-
In *Ecology Center v. Castaneda*, the court upheld the U.S. Forest Service’s approval of timber sales and restoration projects in a National Forest against a challenge from environmental interests. Upholding the agency action under the Federal Administrative Procedure Act’s “arbitrary and capricious” standard, and the applicable “best available science” rule, the court observed the rule that it should grant “considerable discretion to agencies on matters ‘requir[ing] a high level of technical expertise.’” Addressing the issue of competing scientific positions head-on, the court found that “Though a party may cite studies that support a conclusion different from the one the Forest Service reached, it is not our role to weigh competing scientific analyses.”

Short of proving that the agency’s “analysis is outdated or flawed,” the Plaintiffs could not meet their burden, said the court, by relying on other science that suggested a different scientific determination than was made by the agency.

The Supreme Court of Florida’s opinion in *Haire v. Florida Department of Agriculture & Consumer Services*, which upheld Florida’s citrus canker eradication statute and program against constitutional and scientific challenges, contains an excellent discussion of these principles. The trial court had invalidated the state’s program of destroying all citrus trees within 1900 feet of a canker-infested citrus tree, disagreeing with the study from which the 1900 foot destruction radius was derived. The trial court was

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390. 574 F.3d 652 (9th Cir. 2009).
391.  Id. at 659–60.
392.  Id. at 656. Described by the court, consistent with the prevailing precedent, as “narrow,” under which it could “not substitute [their] judgment for that of the agency.”  Id.
394.  Ecology Ctr., 574 F.3d at 659 (citing Lands Council v. McNair, 537 F.3d 981, 988 (9th Cir. 2008) (noting that it is not the proper role of the court to “act as a panel of scientists that instructs the Forest Service how to validate its hypotheses regarding wildlife viability, chooses among scientific studies in determining whether the Forest Service has complied with the underlying Forest Plan, and orders the agency to explain every possible scientific uncertainty”); Greenpeace Action v. Franklin, 14 F.3d 1324, 1333 (9th Cir. 1992) (“To set aside the Service’s determination in this case would require us to decide that the views of Greenpeace’s experts have more merit than those of the Service’s experts, a position we are unqualified to take.”).
395.  Castaneda, 574 F. 3d at 659–60.
396.  870 So. 2d 774 (Fla. 2004).
397.  Id. at 777.
398.  Id. at 786.
persuaded by the fact that the Legislature had not held fact-finding hearings related to the underlying study. On appeal, the Fourth District, and then the Supreme Court of Florida, reversed, ruling that the trial court "erred in rejecting the legislative choice based on its own view of the scientific evidence and improperly substituted its judgment for that of the Legislature, which determined that the 1900-feet eradication zone was justified by the best available science." The Court noted that the legislation has a rational basis and was not scientifically arbitrary, as it was supported by published, peer-reviewed scientific studies, the recommendation of a technical advisory board, and the state’s practical experience with citrus canker. That this science was disputed did not invalidate the resulting regulation:

The fact that the Legislature did not subject the [report to an adversarial trial or the requirements of courtroom admissibility under the Frye test does not make the Legislature's action in adopting the 1900-foot removal radius arbitrary or capricious, or not reasonably related to the goal of citrus canker eradication. In addition, the fact that the trial court heard testimony during a ten-day hearing, whereas the Legislature did not, is not a significant consideration under rational basis review. That there was conflicting evidence presented to the trial court regarding the appropriateness of [the Study's] methods indicates that the issue of whether to adopt [the Study's] conclusions was a matter of debate for the Legislature.

Citing federal law, the Court unequivocally rejected the notion that government could not regulate in the face of scientific debate or uncertainty: "[L]egislatures are not limited to acting only where there is scientific certainty." To make scientific precision a criterion of constitutional power would be to subject the state to an intolerable supervision hostile to the basic principles of our government . . . ."

In a case decided under state law, a New Mexico appellate court upheld the state’s adoption of a numeric human health standard for uranium in groundwater, rejecting a challenge to its scientific basis. The standard had been the subject of extensive public hearings and debate, and reflected the

399. Id.
400. Id.
401. Haire, 870 So. 2d at 786.
402. Id. (citing Johnson v. City of Cincinnati, 310 F. 3d 484, 504 (6th Cir. 2002)).
403. Id. (quoting Sproles v. Binford, 286 U.S. 374, 388 (1932)).
opinions of human health experts employed by the relevant state agency. The Court rejected the challenge to the underlying science:

[The agency] is not required to support its finding that a significant risk exists with anything approaching scientific certainty. . . . [The statute] specifically allows the Secretary to regulate on the basis of the ‘best available evidence.’ . . . [T]his provision requires a reviewing court to give [the agency] some leeway where its findings must be made on the frontiers of scientific knowledge. Thus, so long as they are supported by a body of reputable scientific thought, the [a]gency is free to use conservative assumptions in interpreting the data with respect to carcinogens, risking error on the side of overprotection rather than underprotection.

The precautionary principle suggested in the Haire and Amend Ground Water Quality Standards cases was explicated at length by the Supreme Court of Hawaii in its rulings on challenges to a state agency’s actions regulating the consumptive use of water. The court upheld the Hawaii Commission on Water Resources Management’s limited grant of water use rights based on its invocation of “precautionary principles,” which was defined as meaning that: “[W]here there are present or potential threats of serious damage, lack of full scientific certainty should not be a basis for postponing effective measures to prevent environmental degradation. ‘Awaiting for certainty will often allow for only reactive, not preventive, regulatory action.’”

“Where uncertainty exists,” wrote the Court, “a trustee’s duty to protect the resource mitigates in favor of choosing presumptions that also protect the resource.” The “absence of firm scientific proof should not tie the Commission’s hands in adopting reasonable measures designed to further the public interest.”

In language of direct relevance to the setting of environmental standards in several arenas, including water allocations, water quality standards and others, the court found that:

405. Id.
406. Id.
408. In re Water Use Permit Applications, 9 P.3d 409, 466 (Haw. 2000).
409. Id. at 466 (quoting Ethyl Corp. v. U.S. Envtl. Prot. Agency, 541 F.2d 1, 29 (D.C. Cir. 1976)).
410. Id. at 466 (citing Lead Indus. Ass’n v. U.S. Envtl. Prot. Agency, 647 F.2d 1130, 1152–56 (D.C. Cir. 1976)).
411. Id. at 467.
In requiring the Commission to establish instream flow standards at an early planning stage, the Code contemplates the designation of the standards based not only on scientifically proven facts, but also on future predictions, generalized assumptions, and policy judgments. Neither the constitution nor Code, therefore, constrains the Commission to wait for full scientific certainty in fulfilling its duty towards the public interest in minimum instream flows. .. Uncertainty regarding the exact level of protection necessary justifies neither the least protection feasible nor the absence of protection.\textsuperscript{412}

The court noted that erring on the side of allowing additional environmental impacts (in this case from additional water allocations) created the potential for “unknown impairment and risk” and “could drain a stream dry incrementally, or leave a diverted stream dry in perpetuity, without ever determining the appropriate instream flows. Needless to say, we cannot accept such a proposition.”\textsuperscript{413}

On the other hand, the court did not require the Commission to take an overly-strict approach and allocate no water to private users for the several year period it would take to complete the scientific review necessary to resolve the current uncertainty. Instead, the water commission must apply “a methodology that recognizes the preliminary and incomplete nature of existing evidence, . . . and, indeed, incorporates elements of uncertainty and risk as part of its analysis. Such a methodology, by its nature, must rely as much on policy considerations as on hard scientific ‘facts.’”\textsuperscript{414}

In furtherance of its trust obligations, the Commission may make reasonable precautionary presumptions or allowances in the public interest.\textsuperscript{415} The Commission may still act when public benefits and risks are not capable of exact quantification. At all times, however, the Commission should not hide behind scientific uncertainty, but should confront it as systematically and judiciously as possible—considering every offstream use in view of the cumulative potential harm to instream uses and values and the need for meaningful studies of stream flow requirements. We do not expect

\textsuperscript{412} Id.
\textsuperscript{413} Id.\textsuperscript{12} at 471 (citing Ethyl Corp., 541 F.2d at 29 (The Commission “must act, in part on factual issues, but largely on choices of policy, on an assessment of risks, and on predictions dealing with matters on the frontiers of scientific knowledge.”) (brackets and internal quotation marks omitted)).
\textsuperscript{414} Id. at 466.
\textsuperscript{415} Id. at 466.
this to be an easy task. Yet it is nothing novel to the administrative function or the legal process in general.\textsuperscript{416}

The Supreme Court of Hawaii opinion quoted heavily from \textit{Ethyl Corp.} where the United States Court of Appeals for the D.C. Circuit upheld the Environmental Protection Agency's authority under the Clean Air Act to regulate in the face of scientific uncertainty.\textsuperscript{417} The Hawaii Court found the \textit{Ethyl Corp.'s} opinion's policy discussion, made in the context of human health concerns, relevant to environmental issues:

Regulators . . . must be accorded flexibility, \textit{a flexibility that recognizes the special judicial interest in favor of protection of the health and welfare of people, even in areas where certainty does not exist.}

Questions involving the environment are particularly prone to uncertainty. . . . \textit{Yet the statutes—and common sense—demand regulatory action to prevent harm, even if the regulator is less than certain that harm is otherwise inevitable.}

Undoubtedly, certainty is the scientific ideal—to the extent that even science can be certain of its truth. . . . \textit{Awaiting certainty, [however,] will often allow for only reactive, not preventive, regulation.} Petitioners suggest that anything less than certainty, that any speculation, is irresponsible. But when statutes seek to avoid environmental catastrophe, can preventative, albeit uncertain, decisions legitimately be so labeled?\textsuperscript{418}

In Florida, in the context of local government comprehensive planning decisions, local governments are encouraged to use any data necessary so long as methodologies are professionally applied, collected, and accepted. Comprehensive plans should be based on whatever data a local government does have, even if that data is not complete.\textsuperscript{419}

\textsuperscript{416} See \textit{Ethyl Corp.}, 541 F.2d at 28 n.58 (explaining how "assessment of risk is a normal part of judicial and administrative fact-finding").

\textsuperscript{417} Id. at 28.


\textsuperscript{419} Env'tl. Coal. of Fla., Inc. v. Broward County, 586 So. 2d 1212 (Fla. 1st Dist. Ct. App. 1991).
“Protection of environmentally sensitive areas and pollution prevention are legitimate concerns within the police power.” In Morales, the court upheld a down-zoning, based on an expert study, of a barrier island which was designed to preserve archaeological resources, protect the environment and adjoining aquatic preserve, and to guard against the threat by hurricanes and flooding to development. Florida courts also have recognized a local government’s legislation to protect their community’s appearance as a legitimate exercise of police power. Likewise, the Supreme Court of the United States has ruled that preservation of open space and protection from urbanization and the consequences of urban sprawl, e.g., water pollution, destruction of scenic beauty, disturbance of the ecology and environment, are valid public interests and legitimate governmental goals.

VI. CONCLUSION

Florida can only sustain itself and avoid economic and ecological crisis if its policies and laws respect and reflect the realities of the laws of nature, the finite (and shrinking) amount of land in this peninsula, and its ability to pay for more growth. Growth management must become, in some places, a growth limitation and where and when development can occur. Certainly, the potential impact of sea-level rise alone constitutes “data and analysis” relative to whether proposed land uses, densities, and locations would meet the terms and intent of Florida’s land use planning law.

We must have an honest and frank discussion about Florida’s finite amount of land, and financial and practical ability to sustain unlimited land development. In a state whose natural environment, built communities, and infrastructure are being overwhelmed by growth that is not paying for itself, government can and must ensure that the public fiscal and welfare are not harmed by the amount, type, and location of new development. Government can require growth to truly pay for itself. It can also regulate land strictly; even adopt annual growth caps, if important to ecosystem, farmland and community protection. It can maintain a tax system and fiscal policies that

420. Morales, 557 So. 2d at 655.
421. Lee Cnty. v. Morales, 557 So. 2d 652, 653 (Fla. 2d Dist. Ct. App. 1990). The court found that “the Zoning Board was appropriately concerned with limiting the effects of future commercial development . . . in view of legitimate environmental concerns, public safety concerns, and concern for preserving the island’s aesthetic, historical, and archeological characteristics.” Id. at 655.
work in the same direction as the rules. We must be able to talk about carrying capacity limits in polite company and government buildings.

Ultimately, while the law does not require government to watch helplessly while population growth results in the more loss of the basic life functions provided by the air, land, and water, protecting those necessities will require changes in the individual footprint of development and individuals. Indeed, as population growth continues, more people will need more drinkable water, fishing grounds, features like floodplains and dunes to prevent storm damage, land for growing and raising food, and places to enjoy their lives and the world recreating and relaxing in the great outdoors.

The federal and state laws governing planning and environmental permitting decisions in Florida and elsewhere provide government ample authority to ensure the sustainability of fiscal and ecological resources. Applicable judicial standards of review recognize and defer to the need for legislative and executive branch agencies to regulate and act in response to valid science and methodologies, and do not preclude such action in the face of (almost always present) technical or scientific debate. The discretion granted to agencies allows them to use their best judgment, and decisions that do not zealously ensure the long-term public interest may well be upheld upon challenge because a reviewing court cannot conclude that they are “arbitrary or capricious” or violative of a similarly deferential specific statutory review standard. But decisions that do give the benefit of the doubt to environmental, human health, the protection of taxpayer dollars, and other public interest considerations will just as surely be upheld, and property rights and other constitutional limits would intervene only in rare situations to prevent their implementation. The law allows and usually requires government to plan and regulate to ensure sustainability. Judicial standards of review are much more a limitation on the practical ability of environmental and taxpayers interests to challenge individual action as unsustainable than an impediment to aggressive governmental protection of the public interest. It is the election and appointment of public servants unwilling or unable to act boldly to protect the future of the places over which they have jurisdiction, not the courts and the Constitution, which is the critical impediment to sustainability.
THE 2010 FEDERAL PROPOSAL OF NUMERIC NUTRIENT CRITERIA: A NECESSITY FOR FLORIDA'S WATERS

EKATERYNA DROZD*

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I. INTRODUCTION

Clean water. What sort of image do these two words evoke? Drinking a glass of tap water from the faucet in your kitchen? An impromptu swim in

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a nearby pond or a lake on a hot summer afternoon? For the majority of people, such activities may only be a distant memory or even totally unfamiliar. Bottled water rules the market and long gone are the days of diving into a neighborhood spring or river because of their probable contamination.

On January 26, 2010, the United States Environmental Protection Agency (EPA) proposed a new rule requiring the establishment of 1) numeric nutrient standards for Florida “to protect aquatic life in lakes and flowing waters, including canals;” and 2) “regulations to establish a framework for Florida to develop ‘restoration standards’ for impaired waters.” The rule is the product of environmental groups’ dissatisfaction with the current nutrient standards in Florida. The January 2010 proposal “is part of a phased rule-making process in which the EPA will propose and take final action in 2010 on numeric nutrient criteria for lakes and flowing waters and for estuarine and coastal waters in 2011.”

The purpose of this article is to show why adoption of numeric nutrient water quality standards, while challenging and expensive, will most likely prove to be beneficial and necessary for various water bodies and the population of Florida. Section II of this article will explain the basics of water eutrophication, or nutrient pollution, taking into consideration the differences between natural and cultural eutrophication, nature and sources of main nutrients, and the effects of eutrophication. Section III will focus on the events leading up to the EPA’s proposal. In particular, it will address how the proposal developed; and explain the numeric and narrative nutrient standards, the reasons and justifications for the proposed rule, and the reactions from the state population. Finally, Section IV will conclude with a recap of the history of and the effects of eutrophication in Florida’s enormously significant Everglades ecosystem. Most importantly, it will discuss why the development of numeric nutrient criteria will be valuable in light of the uniqueness of the Everglades and the continued efforts employed in its restoration.


II. THE ESSENTIALS OF EUTROPHICATION, OR NUTRIENT POLLUTION

Eutrophication is a term used to describe "[n]utrient over-enrichment of freshwater and coastal ecosystems." A waterbody (e.g., a lake, river, or a canal) exhibiting an excess of nutrients may not present itself as an adverse concept at first. For instance, in lakes, the "additional nutrients are food for algae and fish, so the more eutrophic [the] lake is, the more living organisms it sustains." Moreover, eutrophication is often a common natural phenomenon, whereby nutrients accumulate over time and eventually fill the basin of a body of water. However, cultural eutrophication, another form of nutrient pollution that is human-induced beyond natural levels, has potential for disrupting ecosystem structure and function and further degrades the quality of water.

A. Main Culprits of Cultural Eutrophication: Nitrogen and Phosphorus

When referring to eutrophication caused by human activity, it is useful to understand which nutrients are the main focus of concern. Two of the nutrients which contribute to anthropogenic—human in nature—eutrophication are nitrogen and phosphorus. Phosphorus is considered to be the main catalyst for impairment of freshwater systems, while nitrogen is associated with eutrophication of coastal systems. It is important to note

5. Lake Eutrophication, RMB ENVT. LABS., INC., http://www.rmbel.info/Reports/Static/Eutrophication.aspx (last visited Aug. 1, 2011); see also SELMAN & GREENHALGH, supra note 4, at 1 (Nutrients "are critical to biological processes in aquatic ecosystems"); see also THOMAS OBERZA ET AL., UNIV. OF FLA., A GUIDE TO EPA'S PROPOSED NUMERIC NUTRIENT WATER QUALITY CRITERIA FOR FLORIDA 2 (Soil & Water Sci. Dept et al., series no. SL316, 2010), available at http://edis.ifas.ufl.edu/pdffiles/ss/ss52800.pdf ("All living things need nutrients to survive and grow . . .").
9. SELMAN & GREENHALGH, supra note 4, at 1.
10. Id.
that both nitrogen and especially phosphorus, help restrict the growth of aquatic plants when present in low concentrations.\textsuperscript{11} However, excess loadings of phosphorus and nitrogen in the water cause "rapid and extensive growth of aquatic plants and algae,"\textsuperscript{12} an occurrence which at first glance may not seem alarming. Nonetheless, oxygen depletion is often the result of such unrestrained plant growth,\textsuperscript{13} which can unfavorably influence animal and fish populations and lead to a variety of other unwanted and harmful effects, discussed in further detail below.\textsuperscript{14}

1. Nature and Sources of Nitrogen and Phosphorus

Both phosphorus and nitrogen are naturally occurring elements.\textsuperscript{15} Phosphorus, combined with other substances as a phosphate molecule,\textsuperscript{16} is extremely popular commercially,\textsuperscript{17} as is nitrogen, whose concentrations—in the form of nitrate in waters—"have increased significantly in many countries since the 1960s, primarily due to the use of synthetic nitrogen fertilizers."\textsuperscript{18} To fully grasp the significance of nitrogen and phosphorus in cultural eutrophication, one must consider the numerous sources of these nutrients—the majority of which, not surprisingly, are based on a variety of human ac-
tivities—such as agriculture or industry and fossil fuel combustion.\textsuperscript{19} They can be classified into "point" and "non-point" sources.\textsuperscript{20}

Point sources of nutrient pollution are those that are "localized and more easily monitored and controlled."\textsuperscript{21} Some of the examples of point sources include runoff from municipal wastewater treatment plants—considered the "largest point source of nutrient pollution"\textsuperscript{22}—and industrial wastewater discharges from waste disposal sites and from mines, oil fields, and unsewered industrial sites.\textsuperscript{23} Due to the ease with which point sources are identified and regulated, many of them have been effectively reduced.\textsuperscript{24} Non-point sources of nutrient pollution, on the other hand, present a greater challenge.\textsuperscript{25} They "are diffuse and much more difficult to monitor and regulate"\textsuperscript{26} because monitoring them involves dealing with a much larger number of agents.\textsuperscript{27} Non-point sources are "excess run-off from development, silviculture, and agriculture,\textsuperscript{28} from pastures and rangelands,\textsuperscript{29} or "atmospheric deposition over a water surface\textsuperscript{30}"—which does not include deposition of

\textsuperscript{19} See SELMAN \& GREENHALGH, supra note 4, at 2.
\textsuperscript{20} Smith et al., supra note 11, at 181.
\textsuperscript{21} Id.; see e.g., Chapter 5: Economic Aspects of Eutrophication, supra note 7 ("Point sources of pollution are easier to identify and it is easier to design policies to reduce pollution from point sources than from non-point sources."); see also Stephen Carpenter et al., Nonpoint Pollution of Surface Waters with Phosphorus and Nitrogen, ISSUES IN ECOLOGY, Summer 1998, at 1. Carpenter provides a good explanation about the ease of controlling point sources: "Pollutant discharges from such sources tend to be continuous, with little variability over time, and often they can be monitored by measuring discharge and chemical concentrations periodically at a single place. . . . Point sources are relatively simple to monitor and regulate, and can often be controlled by treatment at the source."
\textsuperscript{22} Hubbard, supra note 11.
\textsuperscript{23} Smith et al., supra note 11, at 181.
\textsuperscript{24} See Carpenter et al., supra note 21. Still, one must pay attention to point sources because of likely future expansion of urban areas and agricultural and other industries. Id.
\textsuperscript{25} See Chapter 5: Economic Aspects of Eutrophication, supra note 7.
\textsuperscript{26} Smith et al., supra note 11, at 181.
\textsuperscript{27} Chapter 5: Economic Aspects of Eutrophication, supra note 7; see also Carpenter et al., supra note 21 ("Nonpoint inputs often arise from a varied suite of activities across extensive stretches of the landscape, and materials enter receiving waters as overland flow, underground seepage, or through the atmosphere.").
\textsuperscript{28} Chapter 5: Economic Aspects of Eutrophication, supra note 7. Most agricultural practices involve heavy use of fertilizers containing nitrogen and phosphorus, which ends up in the run-off. Id.; see also Carpenter et al., supra note 21, at 3.
\textsuperscript{29} Smith et al., supra note 11, at 181.
\textsuperscript{30} Id.
phosphorus, but mainly nitrogen. 31 Non-point sources are predominant causes of nutrient pollution. 32

B. **Damaging Effects of Cultural Eutrophication, Generally**

If one lives near a lake, a pond, or a river, they will have probably—unless the water is perfectly safe from any of the above mentioned sources—witnessed the impacts of nutrient pollution at least at some point while living near that body of water. The most common manifestation of excess nutrient loadings in the water is an objectionable odor 33 and a bright green color coating the surface of the water caused by the “dominance of the phytoplankton by blue-green algae (cyanobacteria).” 34 In coastal areas, the red or brown tides are well known—these are algae blooms in marine ecosystems, which cause widespread problems by releasing toxins and by spurring oxygen depletion as they die and decompose. 35 Seemingly innocuous, the algae blooms are in fact responsible for subjecting an ecosystem to a significant amount of stress by potentially furthering the loss in aquatic biodiversity. 36

As overabundant nuisance plants die, bacterial decomposers proliferate; as they work to break down this plant matter, the bacteria consume more dissolved oxygen from the water. The result can be oxygen shortages that cause fish kills. Eutrophication can lead to loss of habitats such as aquatic plant beds in fresh and marine waters and coral reefs along tropical coasts. 37

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31. See Hubbard, supra note 11.
32. See Carpenter et al., supra note 21 (“Nonpoint inputs are the major source of water pollution in the U.S. today. 72% to 80% of eutrophic lakes would require control of nonpoint [phosphorus] inputs to meet water quality standards, even if point inputs were reduced to zero.”); see also Chapter 5: Economic Aspects of Eutrophication, supra note 7 (“In the U.S. threatened or impaired uses of most lakes and reservoirs are associated with non-point sources.”).
33. Hubbard, supra note 11.
34. Smith et al., supra note 11, at 182. The cyanobacterial algae blooms are dangerous; some of their compounds “are more toxic than cobra venom.” Id.
35. Carpenter et al., supra note 21, at 4.
37. See Carpenter et al., supra note 21.
The algal blooms also pose dangerous health risks, such as “rashes, eye irritation, asthma attacks, or liver damage.” Other incredibly costly and detrimental impacts of cultural eutrophication of water—especially from health and economic standpoints—should not be underestimated and require much attention, both on a local and national level. There is currently no drinking water standard established for phosphorus as a phosphate in the water because it does not have a directly harmful effect on humans. The efforts to impose limitations on phosphorus have been derided by some industries. Nutrient pollution which derives from nitrogen, however, presents a more direct threat to the population’s health. “Nitrate in water is toxic at high concentrations and has been linked to toxic effects on livestock and also to ‘blue baby disease’ (methemoglobinemia) in infants.” Human-induced eutrophication is also estimated to contribute significantly to economic losses, though “[d]ocumentation of economic harm from eutrophication is limited.” Nonetheless, setting reliable estimates of such losses is important.

As of 2008, sources reported that the combined costs associated with eutrophication in United States, freshwaters totaled $2.2 billion. It is helpful to outline some of the most pertinent economic areas at risk associated with cultural eutrophication. For example, with regards to recreational water usage in fourteen different eco-regions—particularly during the summer months in 2008, as “cyanobacterial blooms are most common during the summer”—it was concluded that the “current level of use [did] not represent the full potential of lakes to attract recreational users.”

38. See POLICY ALERT: SUPPORT EFFECTIVE NUTRIENT POLLUTION LIMITS, CONSERVANCY OF SOUTHWEST FLA., http://www.conservancy.org/Document.Doc?id=303 (last visited Aug. 1, 2011); see also Carpenter et al., supra note 21, at 5 (“Water-soluble compounds toxic to the nervous system and liver are released when cyanobacterial blooms die or are ingested.”).
39. See OBREZA ET AL., supra note 5, at 5; see also Hubbard, supra note 11.
40. See id. Apparently, sugarcane growers demonstrate their ridicule for phosphorus limits by having a glass of water from their farm ditches and laughing about what they deem to be non-existent dangers of run-off. Id.
41. See Carpenter et al., supra note 21, at 6.
42. Id.
43. Dodds et al., supra note 8, at 12.
44. See id. Economic loss estimates from “human-caused environmental impacts” such as cultural eutrophication can “potentially define problems for policy makers and direct focus to areas with the greatest potential societal costs.” Id.
45. Id.
46. Id. at 14.
47. Dodds et al., supra note 8, at 14. It was estimated that out of 450 to 465 and 305 to 315 million fishing and boating days respectively, 7.1 to 22.2 and 4.8 to 15 million days were lost to eutrophication each year. Id. at 15.
loss from nutrient pollution for recreational angling and boating could reach $1.16 billion in five eco-regions.\textsuperscript{48}

Concerning costs of treatment of water for drinking purposes, the results of studies are similarly not favorable. Because \textquoteleft [e]utrophic systems have more taste and odor problems from eutrophication,\textsuperscript{49} the amount of money spent on purchasing bottled water—rather than drinking tap water—is staggering.\textsuperscript{50} Moreover, eutrophic water is a cause for more costs associated with \textquoteleft [d]isruption of flocculation and chlorination processes at water treatment plants.\textsuperscript{51} The costs related to ensuring safe treatment of water in water drinking systems was assessed to constitute around $150.9 billion.\textsuperscript{52} And lastly, beautiful waterfront views usually attract many potential buyers of waterfront property. Yet, if there are strange smells and colors emanating from the water because of nutrient pollution, the value of such property quickly falls.\textsuperscript{53}

Overall, the trends of cultural eutrophication in the United States can be thought to represent a \textquoteleft global phenomenon.\textsuperscript{54} Across the globe, lakes, streams, and other bodies of water are subject to dangerous effects of eutrophication.\textsuperscript{55} Nationally, \textquoteleft [m]ore than 80,000 miles of streams and rivers are impaired due to nutrient pollution.\textsuperscript{56} Energy consumption, world population, and extensive agricultural methods are all considered to be \textquoteleft drivers of eutrophication\textsuperscript{57} and are expected to increase in the future.\textsuperscript{58}

\textsuperscript{48} \textit{id.}
\textsuperscript{49} \textit{id.} at 17.
\textsuperscript{50} \textit{id.} at 15 (Estimates indicate that \textquoteleft $813 million is spent annually on bottled water because of taste and odor problems potentially linked to eutrophication.\textsuperscript{49}"
\textsuperscript{51} Smith, et al., \textit{supra} note 11, at 185; \textit{see also} Carpenter, et al., \textit{supra} note 21 (reporting also that when water contaminated with cyanobacterial blooms is processed at water treatment plants, \textquoteleft [h]igh load[s] of organic detritus reacts with chlorine to form carcinogens known as trihalomethanes.\textsuperscript{54}
\textsuperscript{52} Dodds et al., \textit{supra} note 8, at 18.
\textsuperscript{53} \textit{id.} at 16 (\textquoteleft[L]akefront property has significantly greater value with increased clarity, [and] a decrease in property value of 15.6\% occurs with every 1-m loss in Secchi depth\textsuperscript{56}—the level of water transparency).
\textsuperscript{54} \textit{id.}
\textsuperscript{55} \textit{See} SELMAN & GREENHALGH, \textit{supra} note 4, at 1.
\textsuperscript{56} Hubbard, \textit{supra} note 11; \textit{see, e.g.,} OFFICE OF INSPECTOR GEN., \textit{supra} note 36, at 1 (depicting, as an example, the hypoxic zone in the Gulf of Mexico, which is the result of excess nutrients from the Mississippi River).
\textsuperscript{57} SELMAN & GREENHALGH, \textit{supra} note 4, at 1.
\textsuperscript{58} \textit{id.} \textquoteleft It is likely that eutrophication will increase most rapidly in the developing world, where population, meat consumption, and energy consumption are expected to increase more rapidly than in developed countries.\textsuperscript{58} \textit{id.} at 6.
III. THE DETERMINATION OF UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

The EPA made its initial determination regarding new water quality standards for nutrients for Florida on January 14, 2009. The EPA praised Florida for its commitment to managing and maintaining expenditures for purposes of researching and analyzing various factors related to nutrient pollution. However, it ultimately found that "continued population growth and environmental and land-use changes," which contributed to the persistent problem of nutrient over-enrichment in Florida, deemed it necessary for the agency to specify new nutrient criteria. The decision was immediately hailed as one that could set in motion a change in the standards for nutrients in other states.

A. The Promulgation of Water Quality Standards: Statutes and Regulations

The background of the EPA's decision is important to discuss, as it presents an overarching legal issue affecting all the parties and regulations involved. Pursuant to the Clean Water Act of 1972 (CWA), each state in the United States, along with authorized tribes, must develop new, or revise existing, water quality standards, which shall:

[C]onsist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses. Such standards shall be such as to protect the public health or welfare, enhance the quality of water . . . . Such standards shall

60. Id. at 1.
61. Id.
62. See, e.g., Lewis B. Jones, EPA to Promulgate Federal Nutrient Criteria for Florida Waters, 40 ENV'T REP. (BNA) 1589, 1589 (2009) ("EPA's determination in Florida could be a harbinger of things to come in other states."); see also Kenneth J. Warren, Clean Water Act Developments, in PRACTISING LAW INST., ENVIRONMENTAL REGULATION AND COMMERCIAL IMPLICATIONS 2010: HOW THE NEW ADMINISTRATION, CONGRESS AND THE COURTS HAVE CHANGED THE RULES 179 (2010). "EPA's decision to promulgate numeric nutrient criteria for Florida waters is likely to constitute the beginning of a national standard setting effort." Id. at 178.
63. 33 U.S.C. § 1251(a) (2006). The purpose of the Act was to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Id.
64. Letter from Benjamin H. Grumbles to Michael Sole, supra note 59, at 2.
be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.\(^{65}\)

Accordingly, the standards established by the states typically “define the goals for a waterbody by designating its uses, setting criteria to protect those uses, and establishing provisions to protect water quality from pollutants.”\(^{66}\) The EPA is authorized under the CWA to review water quality standards adopted by the states, which are then submitted to the EPA and are either approved or disapproved.\(^{67}\) Lastly, echoing the language of the CWA, under the Code of Federal Regulations, “States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use.”\(^{68}\) However, the Administrator of the EPA shall also:

\[
\text{[P]romptly prepare and publish proposed regulations setting forth a revised or new water quality standard for the navigable waters involved—} \\
\text{(A) if a revised or new water quality standard submitted by such State ... for such waters is determined by the Administrator not to be consistent with the applicable requirements of this chapter, or} \\
\text{(B) in any case where the Administrator determines that a revised or new standard is necessary ...}^{69}
\]

Thus, the Administrator has the power to determine that a particular state’s water quality standards are insufficient under the CWA, “even in the absence of a state submission.”\(^{70}\) The question then is whether the EPA had, in fact, made such a determination in reference to promulgating new water

\(^{66}\) OFFICE OF INSPECTOR GEN., supra note 36, at 2.
\(^{67}\) Id. “The [Clean Water] Act, passed in 1972, gives EPA the authority to review and approve State water quality standards ...” Id.
\(^{69}\) 33 U.S.C. § 1313(c)(4) (2006). The Administrator must then promulgate the newly adopted standard within ninety days of its publication, unless the state has revised its water quality standards in a manner that would prompt the Administrator to find them to be in accordance with CWA. Id.
\(^{70}\) Letter from Benjamin H. Grumbles to Michael Sole, supra note 59, at 2; see also 33 U.S.C. § 1313(c)(4)(B).
quality standards—and more specifically, numeric nutrient criteria—before the actual letter in 2009 from Assistant Administrator Benjamin Grumbles. Such determination would have triggered the EPA’s non-discretionary duty to “promptly prepare and publish proposed regulations setting forth a revised or new water quality standard” and more precisely, “to set numeric nutrient criteria for Florida”71 long before the events in 2008 and 2009. The reasons for determining that Florida’s current nutrient standards are inadequate and why the EPA’s duty to adopt new standards may have arisen prior to 2009 are addressed in the next sections.


The late 1990s proved to be a distinctive period for reform in water regulations and directives. On the 25th Anniversary of the CWA in October 1997, former Vice President of the United States Albert Gore, Jr. announced an initiative for “the relevant federal agencies to take a series of actions” as part of stressing the importance of clean water in matters such as public health, contamination of water due to polluted run-off, and a “comprehensive approach to water quality.”72 Gore specifically mentioned nitrogen and phosphorus as special risks facing the nation’s waters and acknowledged the need to establish water quality standards for those pollutants.73

The Clean Water Action Plan, prepared by the EPA and the Department of Agriculture, presents a culmination of efforts to develop a clean water initiative as urged by Gore.74 The two agencies also filed an administrative notice in the Federal Register, which presents an overview of the Clean Water Action Plan75 and requires definition of nutrient reduction goals: “EPA will establish by the year 2000 numeric criteria for nutrients (i.e., nitrogen and phosphorus) that reflect the different types of water bodies (e.g., lakes, rivers, and estuaries) and different ecoregions of the country and will assist states and tribes in adopting numeric water quality standards based on these

71. Jones, supra note 62, at 2 (quoting 33 U.S.C. § 1313(c)(4)).
73. id.
The states would then be “required to incorporate these criteria into their own standards by 2003.”

Finally, a few months after the notice in Federal Register, as part of the intent to help states and tribes in developing numeric nutrient criteria, the EPA published its description of the approach for working with the states and tribes in their efforts to develop numeric concentration levels for nutrients. The National Strategy explicitly provided that by December 31, 2003, the EPA expected all states and tribes to adopt and implement numerical nutrient criteria into their water quality standards. The National Strategy expressed concern with numerous findings, such as those indicating the states with primarily narrative water quality standards. According to the National Strategy, for those states utilizing the narrative nutrient standards—aimed at controlling problems associated with nutrient overenrichment—additional work was necessary in order to better understand and manage nutrient impacts. Such concern may be due in part to another section of the Code of Federal Regulations, which states: “In establishing criteria, states should: 1) Establish numerical values based on: (i) 304(a) Guidance; or (ii) 304(a) Guidance modified to reflect site-specific conditions; or (iii) Other scientifically defensible methods; (2) Establish narrative criteria or criteria based upon biomonitoring methods where numerical criteria cannot be established or to supplement numerical criteria.” This language demonstrates that EPA’s preference lies with numerical values for nutrients and narrative criteria should only be used where the numeric cannot be.

The National Strategy was cited as a purported “determination” under the CWA by five environmental groups who filed suit against the-then Administrator of EPA, Stephen Johnson. Citing the National Strategy report,
the plaintiffs asserted that "Florida has failed to develop numeric nutrient criteria for phosphorus and nitrogen" and that "Defendants have failed to take action by promptly setting numeric nutrient criteria for Florida as mandated by the CWA." The complaint shows the possibility of the EPA having a duty to set new standards long before the actual determination letter made in 2009.

B. Exploring Narrative vs. Numeric Nutrient Criteria

What is a numeric standard for nutrients? What signifies narrative criteria, which is the standard used in Florida and considered to be unsatisfactory for purposes of water quality standards in the 2008 complaint against the EPA? In general, the National Strategy report provides:

Nutrient criteria is intended to be interpreted in its broadest sense, covering both legal and scientific interpretations. Legally, a nutrient criterion is the numeric value which supports a particular beneficial designated use in defining a water quality standard. Scientifically, a nutrient criterion is meant to encompass both causal and response variables (e.g., nitrogen or phosphorus levels), as well as aquatic community response parameters such as but not limited to algal biomass, chlorophyll a, and secchi depth.

1. The Numeric Nutrient Standard: What’s in a Number?

A numeric standard would “define[] the maximum nitrogen and/or phosphorus concentration in a waterbody that will permit that waterbody to maintain its designated use.” The main focus of advancing numeric nutrient criteria “has been on lakes and reservoirs, with efforts to reduce nutrient inputs into streams resulting in facility specific effluent limitations.”

The approaches to determining numeric nutrient criteria for a waterbody differ based on the amount of data available. The most suitable approach is considered to be one involving experiments or monitoring a waterbody or a

85. Id. at *5 n.1, 6.
86. NATIONAL STRATEGY, supra note 78, at 1; see also STATE-EPA NUTRIENT INNOVATIONS TASK GRP., AN URGENT CALL TO ACTION: REPORT OF THE STATE EPA NUTRIENT INNOVATIONS TASK GROUP D-2 (2009), available at www.epa.gov/waterscience/criterialnutrient/nitgreport.pdf (“Numeric nutrient criteria employ ecoregional or site-specific water quality standards that utilize criteria for one or several key nutrient parameters to protect aquatic and recreational designated uses from nutrient inputs.”).
87. OBREZA ET AL., supra note 5, at 3.
88. STATE-EPA NUTRIENT INNOVATIONS TASK GRP., supra note 86, at D-2.
group of water bodies in order to witness the amount of nutrients in the water at which “an impact on the designated use is no longer acceptable.” Such an approach tests the stressor-response relationship where “nutrient concentrations protective of designated uses can be derived from the estimated relationship” and, therefore, can directly relate the “nutrient stressor” with the undesirable biological response. The EPA utilizes a five-step process in deriving numeric nutrient criteria:

First, data are assembled, and the nutrient and response variables on which the analysis will focus are selected. Second, the strength of the cause-effect relationship between the selected nutrient and response variables is assessed. Third, data are analyzed to estimate stressor-response relationships, and these stressor-response relationships are used to derive candidate nutrient criteria. Fourth, stressor-response relationships estimated by different statistical approaches are compared and evaluated. Finally, candidate nutrient criteria are evaluated, and appropriate criterion values identified.

The selection of stressor and response variables is a detailed task because an “appropriate response variable . . . can be used to measure whether the designated use of [a] waterbody is supported” and “responds causally to changes in nutrient concentration.” Should there be insufficient data for ascertaining the stressor-response relationship, a reference (or a reference-condition) approach is used. Here, the first task would be to identify a reference site, or a body of water which “represent[s] least disturbed and/or

90. EMPIRICAL APPROACHES, supra note 89, at 2.
91. OBREZA ET AL., supra note 5, at 8.
92. EMPIRICAL APPROACHES, supra note 89, at 3.
93. Id.
94. Id. at 5.
95. See OBREZA ET AL., supra note 5, at 8 (“When there is not enough information to determine stressor-response, then a reference approach is used.”).
minimally disturbed conditions . . . and share[s] similar characteristics to the waterbodies for which criteria are being derived."\textsuperscript{96} The EPA suggests using percentiles developed from reference sites, since those percentiles are indicative of a "biological integrity expected for a region."\textsuperscript{97}

2. Narrative Nutrient Criteria and an Explanation of Florida’s Present Water Quality Standards

The EPA’s proposed rule regarding water quality standards for Florida describes narrative nutrient criteria as "descriptions of conditions necessary for the waterbody to attain its designated use."\textsuperscript{98} In many cases, a typical statement of a narrative criterion includes "requirements that waters remain ‘free from’ certain characteristics."\textsuperscript{99} The rule directly suggests that the narrative criterion is not well suited for water quality standards.\textsuperscript{100}

Florida currently applies such a narrative nutrient criterion, which states, “In no case shall nutrient concentrations of a body of water be altered so as to cause an imbalance in natural populations of aquatic flora or fauna.”\textsuperscript{101} This language means that there is no defined concentration of nitrogen or phosphorus, but it is at that undefined concentration that the waterbody may become impaired.\textsuperscript{102} \textit{Florida Administrative Code} also provides that “[t]he discharge of nutrients shall continue to be limited as needed to prevent violations of other standards contained in this chapter.”\textsuperscript{103} The Florida Department of Environmental Protection (FDEP) previously explained that the reason for the state’s preference in using narrative criteria is that nutrients are very different from other pollutants.\textsuperscript{104} Unlike other pollutants which may be

\textsuperscript{96.} \textit{Empirical Approaches}, supra note 89, at 2. The numeric criteria are then derived from compiled “measurements of causal and response variables from reference waterbodies”; the value is then selected from the distribution. \textit{Id.}

\textsuperscript{97.} \textit{Id.; see also FLA. DEPT. ENVTL. PROT., supra note 89, at 3 ("Using the ‘reference site approach,’ EPA recommends setting criteria at an upper percentile value to represent a level of nutrient concentration that will inherently protect aquatic life.").}


\textsuperscript{99.} \textit{Id.}

\textsuperscript{100.} \textit{Id. ("[N]arrative criteria can be the basis for controlling nuisance conditions such as floating debris or objectionable deposits.”}).

\textsuperscript{101.} \textit{FLA. ADMIN. CODE ANN. r. 62-302.530(47)(b) (2010).}

\textsuperscript{102.} \textit{See Obreza et al., supra note 5, at 2 (explaining that reaching this undefined concentration is when the nutrients can be expected to be harmful to the body of water).}

\textsuperscript{103.} \textit{FLA. ADMIN. CODE ANN. r. 62-302.530(47)(a).}

\textsuperscript{104.} \textit{Development of Numeric Nutrient Criteria for Florida’s Waters, FLA. DEP’T OF ENVT. PROT., http://www.dep.state.fl.us/water/wqssp/nutrients/ (last updated Apr. 10, 2011).}
dealt with using a "toxicity threshold," nutrients are present naturally in ecos- 
systems and are essential for proper functioning.105

Florida implements the narrative nutrient criteria in two ways, depend-
ing on whether the source is point or non-point.106 For point sources, FDEP
"conducts a site-specific analysis to determine whether a proposed discharge
has the reasonable potential to cause or contribute to an exceedance of the
narrative water quality criterion in the receiving water or any other affected
water."107 This site-specific analysis is used to derive National Pollutant
Discharge Elimination System permits and in the development of Total Max-
imum Daily Loads (TMDLs), which the Department defines as "[a] scientific
determination of the maximum amount of a given pollutant that a surface
water can absorb and still meet the water quality standards that protect hu-
man health and aquatic life."108 In both instances, the state translates the
level of nutrients which would cause an imbalance in natural populations of
aquatic flora or fauna into numeric values for the affected waters.109 For
non-point source polluters, the state's revisions of its Impaired Waters
Rule110 bring them under regulations and "require the implementation of Best
Management Practices (BMPs)."111 A TMDL is still developed for that body
of water which is impaired and a Basin Management Action Plan (BMAP) is
derived, under which a "number of point and nonpoint sources of pollution
are regulated."112 Specifically, under BMAP, unpermitted nonpoint dis-
charges must show implementation of BMPs.

3. The 2009 Consent Decree: Rejection of Narrative Criteria

The Florida Wildlife Federation v. Johnson113 lawsuit resulted in the en-
try of a consent decree between the parties in August of 2009, which was
later approved by a court order114 due to numerous objections from various

105. Id. Such variation contributes to the presence of very unique and different nutrient
requirements. Id.
106. Frequently Asked Questions Related to Development of Numeric Nutrient Criteria,
FLA. DEP’T OF ENVTL. PROT., http://www.dep.state.fl.us/water/wqssp/nutrients/faq.htm (last
state.fl.us/water/tmdl/index.htm (last updated June 30, 2010).
111. STATE-EPA NUTRIENT INNOVATIONS TASK GRP., supra note 86, at D-7.
112. Id.
The court stated that the National Strategy Report and the Clean Water Action Plan—as distinct from the 2009 letter of determination from EPA’s Benjamin Grumbles—did not make it clear that they constituted a “determination” under the CWA. The court also agreed with the plaintiffs in finding that Florida’s narrative nutrient standard has not been helpful in solving the problem of “substantial nutrient pollution.”

What exactly is the problem with having narrative nutrient standards as opposed to numeric? After all, narrative standards are not entirely obsolete when dealing with water quality protection. Yet, according to some sources, the narrative criteria has been compared to having speed limit signs with no number on them and which instead vaguely read “Drive At A Reasonable Speed Considering Weather, Traffic and Lighting Conditions As Well As Other Relevant Factors.” Other states have similarly conceded that a narrative criterion assessment may be difficult because there is no concrete definition of a relationship between levels of nutrients and impairment of designated uses. In Florida’s case, performing site-specific analyses for thousands of state waters is a “difficult, lengthy, and data-intensive undertaking.”

There are significant advantages in using numeric nutrient standards

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116. Order Approving Consent Decree, supra note 114, at *4. The court reasoned that no determination was explicitly announced within the meaning of 33 U.S.C. § 1313(c)(4). See id.; see also NATIONAL STRATEGY, supra note 78, at vii (explaining that the report is not a regulation and does not substitute for the Clean Water Act).

117. Order Approving Consent Decree, supra note 114, at *5.

118. See OFFICE OF INSPECTOR GEN., supra note 36, at 2. The 2009 determination letter from the EPA likewise states that: “In many circumstances, narrative criteria can be an effective tool for protecting designated uses, particularly when the scope and nature of the environmental problem is easily and clearly defined and derivation of appropriate control measures can be effectively and expeditiously accomplished (e.g., toxic pollutants and bioassessments).” Letter from Benjamin H. Grumbles to Michael Sole, supra note 59, at 8.

119. It’s Time to End the Slime, FLA. WATER COAL., http://floridawatercoalition.org (last visited Aug. 1, 2011); see also STATE-EPA NUTRIENT INNOVATIONS TASK GRP., supra note 86, at D-3 (“[N]arrative criteria [is] open to interpretation due to their vaguely descriptive nature.”).


promulgated by the EPA. For instance, instead of having an undefined measure by which impairment caused by nutrients may be analyzed, numeric nutrient criteria would, in fact, provide a definitive standard.\textsuperscript{122}

C. Reactions to the Proposed Rule: The Big Picture

The responses to the EPA’s proposed criteria in Florida have not been welcoming.\textsuperscript{123} The rule itself has been criticized on multiple levels, and concerns arose immediately after the entry of the consent decree.\textsuperscript{124} The main problems identified by opponents consist of the following: 1) the possibility of recurring costs stemming from the new standards\textsuperscript{125}—which would include modification of current nutrient-reducing operations;\textsuperscript{126} 2) the allegedly “unattainable time frame” within which the nutrient pollution is to be addressed;\textsuperscript{127} 3) the lack of well defined scientific guidelines for establishment of water quality standards;\textsuperscript{128} and 4) the risk of new criteria not taking into attention Florida’s “remarkable ecological diversity.”\textsuperscript{129} The costs associated

\textsuperscript{122} STATE-EPA NUTRIENT INNOVATIONS TASK GRP., supra note 86, at D-3; see also Letter from Benjamin H. Grumbles to Michael Sole, supra note 59, at 5 (“Numeric nutrient criteria will provide more precise, predetermined targets that will facilitate more effective implementation of [the state’s] programs and provide greater certainty as to the level of water quality necessary to protect the state’s designated uses.”).

\textsuperscript{123} See, e.g., David Fleshler, Tight Pollution Limits Proposed for Canals, SUN SENTINEL (June 13, 2010), http://articles.sun-sentinel.com/2010-06-13/news/fl-water-pollution-20100614_1_hillsboro-canal-lakes-and-rivers-water-resource-manager (“Dozens of powerful opponents have lined up against the proposal [such as] paper, citrus and power companies . . .”); see also David Fleshler, Editorial, New EPA Water Rules Worth Every Penny, MIAMI HERALD (Jan. 20, 2010), http://www.miamiherald.com/2010/01/20/1434649/new-epa-water-rules-worth-every.html (listing city and county governments as other groups opposing the rule).

\textsuperscript{124} See generally Proposed Intervenors’ Memorandum and Expert Declarations in Opposition to Entry of Consent Decree, supra note 124, at I (demonstrating opposition to the consent decree from numerous groups).


\textsuperscript{126} Memorandum of Law in Opposition to Motions to Dismiss at 2, Fla. Wildlife Fed’n, Inc. v. Jackson, No. 4:08cv324-RH/WCS (N.D. Fla., Jan. 25, 2010).

\textsuperscript{127} Proposed Intervenors’ Memorandum and Expert Declarations in Opposition to Entry of Consent Decree, supra note 115, at 1.


with complying with numeric nutrient standards by implementing BMPs for entities such as agricultural producers is estimated to range from $855 million to $3.069 billion. Because not all agriculture in Florida is in compliance with the FDEP’s drafts of developing numeric nutrient criteria, “virtually all of agriculture acreage statewide will be subject to implementation of typical BMPs and additional on-farm water treatment/retention practices.” Others argue that the site-specific analysis currently in use by the state is less costly than the proposed standards. Another attack on the rule is the lack of “scientifically defensible waterbody specific numeric nutrient criteria.” For example, according to some of the sources’ experts, there was no established “relationship between nutrient concentrations observed and any adverse ecological response observed through measurement of response variables.”

The consent decree provided “that EPA issue a final rule by October 15, 2010 for lakes and flowing water and by October 15, 2011 for estuarine and coastal waters.” The period within which comments on the new rule must have been received was supposed to end on March 29, 2010. Such deadlines were criticized as being made in “zeal to dispense with litigation.” It was also alleged that the deadlines were indicative of the fact that the EPA “will not be swayed by any meritorious comments” regarding the establishment of numeric nutrient criteria. And lastly, the reactions concerned a
“one-size-fits-all” approach adopted by the EPA, meaning that the same numeric standards will be used for a multitude of waters in Florida.\footnote{Warren, supra note 62, at 179.}

The reactions to the EPA’s promulgation of numeric nutrient standards fail to take into consideration the bigger picture of nutrient pollution, which remains a significant environmental issue in Florida, and which still persists despite the efforts undertaken to manage it.\footnote{See Water Quality Standards for the state of Florida’s Lakes and Flowing Waters, 75 Fed. Reg. at 4180-81. EPA indicates that both phosphorus and nitrogen concentrations have remained stable in Florida and threats to public health and recreation continue due to frequent algae blooms. Letter from Benjamin H. Grumbles to Michael Sole, supra note 59, at 6; see also It’s Time to End the Slime, supra note 119 (“For example, almost the whole Caloosahatchee River in Southwest Florida recently suffered a massive blue-green algae outbreak. The St. Lucie River and estuary also suffered a massive toxic algae outbreak which caused a permanent loss of a half billion dollars in waterfront property values.”).} The EPA also reports that over sixty percent of waters are impaired for nutrients in Florida.\footnote{Letter from Benjamin H. Grumbles to Michael Sole, supra note 59, at 6.} Furthermore, there is a danger that waters which are still not analyzed will be impaired, thus making the actual number of waters impaired for nutrients higher.\footnote{Id.} The estimated high costs related to implementation of numeric nutrient criteria in agricultural and other industries, though significant, may be a necessary sacrifice which will help to save money spent on cleaning up the eutrophic water at the water treatment plants, as just one example. Additionally, the BMPs program’s success should be much easier to assess with numeric standards.\footnote{OBREZA ET AL., supra note 5, at 7.} Numeric nutrient standards may provide a stable method of controlling nutrient run-off. Other factors, such as rising population and Florida’s flat topography, which “causes water to move slowly over the landscape,” will contribute to increased wastewater and more time for development of eutrophication.\footnote{Water Quality Standards for the state of Florida’s Lakes and Flowing Waters, 75 Fed. Reg. 4174, 4180 (proposed Jan. 26, 2010) (to be codified at 40 C.F.R. pt. 131). “Florida is currently the fourth most populous state in the nation . . . .” Id.} The delays resulting from current use of narrative nutrient standards,\footnote{Id. at 4182.} along with the fact that the inadequacy of said standards was identified more than eleven years ago, do not justify yet another delay in addressing nutrient pollution.\footnote{Order Approving Consent Decree, supra note 114, at *6.} Nor do the deadlines established by the consent decree signify unwillingness on the part of the EPA to respond to comments made about the rule from residents and other groups.\footnote{Id. at *5-6.}
The EPA even extended the comment deadline by thirty days because of the enormous number of responses received regarding the proposed rule.\textsuperscript{150} Despite complaints of lack of recognition of Florida’s diverse ecology, the EPA did address the uniqueness of the state’s environment in the 2009 determination letter.\textsuperscript{151} It is highly unlikely that a “one-size-fits-all” approach would work in Florida, and the EPA recognized this by not only distinguishing between the bodies of water for which the numeric standard will be implemented, but also by categorizing the make-up of waters and regions.\textsuperscript{152} Perhaps the most important of reasons to have numeric nutrient criteria for Florida is due to the crucially unique nature of the Florida’s Everglades.

\section*{IV. EUTROPHICATION AND THE EVERGLADES WETLANDS}

The Everglades are considered to be “the defining component of the South Florida ecosystem,”\textsuperscript{153} the subject of one of the most significant restoration projects in the United States, and famously “recognized as an ecosystem of great ecological importance.”\textsuperscript{154} In the past, it stretched vastly for 220 miles from the city of Orlando down to Florida Bay, acting as a natural filter
system for water overflowing from Lake Okeechobee. The population of Florida in mid-1800s, however, saw the Everglades as a mere “unproductive swamp” and resolved to take advantage of the land by draining for agricultural and development purposes. These activities, which increased as the years went by, have contributed to reducing the Everglades to only fifty percent of its original size. Currently, the Everglades region consists of three primary areas: 1) Everglades Agricultural Area, which is used for production of sugarcane and winter vegetables, 2) Water Conservation Areas, or 3500 km² of “shallow, diked reservoirs,” and 3) the Everglades National Park, or “5700 km² preserved for wilderness and wildlife habitat.”

A. The Effects of Nutrient Pollution on the Everglades Ecosystem

Researchers agree that Everglades had been oligotrophic (i.e., nutrient-limited), historically. Excessive phosphorus presence in the Everglades began in 1940s, when many acres of land were converted to agricultural production. Canals carrying water from the Everglades Agricultural Area was recently reported to contain high concentrations of phosphorus, and “excessive [phosphorus] loading has caused eutrophication in parts of the [Water Conservation Areas].” Additionally, high amounts of nutrients entering both Lake Okeechobee and the Everglades have significantly de-
graded water quality.\textsuperscript{166} As a result of nutrients entering the Everglades, there was a "decline in native vegetation and an overabundance of invasive exotic species."\textsuperscript{167}

For example, excessive levels of phosphorus in the Everglades is thought to be the primary factor behind the conversion of native sawgrass marshes and sloughs to vegetation stands dominated by cattails. This shift in vegetation has resulted in less habitat for wading birds and other wildlife and reduced populations of several native plant species. Further, the rapid growth of cattails is partly responsible for clogging waterways and altering the hydrology in parts of the Everglades.\textsuperscript{168}

Nutrient enrichment is a significant problem for the Everglades, because "components of the Everglades ecosystem appear to be highly responsive to small changes in [phosphorus] concentrations."\textsuperscript{169}

B. Why Numeric Nutrient Criteria May Be Beneficial for the Everglades Restoration

As the "biotic integrity of the remaining [Everglades] ecosystem was threatened,"\textsuperscript{170} there was a growing concern over detrimental impacts of phosphorus.\textsuperscript{171} Commendably, under the Everglades Forever Act (EFA),\textsuperscript{172} enacted in 1994 in Florida, there is already a numeric phosphorus limit in place at least for one of the Everglades areas.\textsuperscript{173} However, there are two is-

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{166} William B. Perry, \textit{Everglades Restoration and Water Quality Challenges in South Florida}, 17 ECOTOXICOLOGY 569, 572 (2008).
\item \textsuperscript{167} Sheikh & Carter, \textit{supra} note 153, at 3.
\item \textsuperscript{168} Sheikh & Johnson, \textit{supra} note 153, at 7.
\item \textsuperscript{169} Noe et al., \textit{supra} note 169, at 603.
\item \textsuperscript{170} Chimney & Goforth, \textit{supra} note 154, at 95.
\item \textsuperscript{171} \textit{Id.}
\item \textsuperscript{172} FLA. STAT. § 373.4592(17) (2010). The Act was based on a 1992 consent decree between the federal government and the South Florida Water Management District. \textit{Id.} The Act required the parties involved to comply with multiple guidelines in order to alleviate the amount of urban and agricultural run-off entering the Everglades National Park and Loxahatchee National Wildlife Refuge. \textit{Id.} The guidelines were designed to help limit the levels of phosphorus in the run-off entering the wildlife areas. \textit{See} United States v. S. Fla. Water Mgmt. Dist., 847 F.Supp. 1567, 1570–71 (S.D. Fla. 1992), \textit{aff'd in part and rev'd in part by United States v. S. Fla. Water Mgmt. Dist., 28 F.3d 1563 (11th Cir. 1994) (outlining the remedial measures).}
\item \textsuperscript{173} FLA. STAT. § 373.4592(4)(e)(2) ("The phosphorus criterion shall be 10 parts per billion (ppb) in the Everglades Protection Area in the event the department does not adopt by rule such criterion by December 31, 2003.").
\end{itemize}
\end{footnotesize}
issues concerning the phosphorus limit provision. First, under the 2003 amendments of EFA, the deadlines for phosphorus mitigation became very flexible. The amendments specify a Long-Term Plan for the Everglades, which: 1) would be implemented from 2003 to 2016, as opposed to the December 2006 compliance deadline set by the 1994 Everglades Forever Act and the consent decree; and 2) did not explicitly require that a phosphorus criterion be met by 2006, despite referencing the December 2006 deadline. The amendments were criticized as an attempt to “postpone into the distant future the deadline for cleaning up the polluted water flowing into the Everglades.” The second issue lies with the language used for the current phosphorus criterion for the Everglades: “In no case shall such phosphorus criterion allow waters in the Everglades Protection Area to be altered so as to cause an imbalance in the natural populations of aquatic flora or fauna.” This language is highly reminiscent of the same wording used to describe the current narrative nutrient criteria in Florida. Consequently, a reworking of the present numeric phosphorus criterion according to the EPA’s proposed rule may be necessary, considering that thus far, no storm water treatment areas has produced effluent water with as little as ten parts per billion. Also, some studies recommend using what seems to be suggestive of stressor-response like methodologies to further understand the effects of phosphorus enrichment:

Finally, more controlled experimental additions of [phosphorus] should be done to separate the effects of concurrent [nitrogen] and [phosphorus] additions . . . . This research will help to alleviate

177. FLA. STAT. § 373.4592(3)(b) (“The pre-2006 projects identified in the Long-Term Plan shall be implemented by the district without delay, and revised with the planning goal and objective of achieving the phosphorus criterion . . . .”).
181. Perry, supra note 166, at 572. “Storm water treatment areas use naturally-occurring biological processes to reduce the levels of phosphorus in water that will enter the Everglades to an interim goal of [fifty] parts per billion. The treatment objective is to achieve [ten parts per billion], the established criterion for protection of Everglades biota.” Id.; see also AUDUBON OF FLA., NUMERIC WATER QUALITY STANDARDS (2010), available at http://audubonoffloridanews.org/wp-content/uploads/2010/02/Numeric-Water-Quality-Standards.pdf (“After a billion dollars of investment in stormwater treatment areas, and implementation best management practices, compliance with the Everglades 10 ppb phosphorus standard still has not been consistently achieved.”).
controversy by identifying [total phosphorus] concentrations in water entering the Everglades that can “prevent an imbalance in the natural populations of aquatic flora or fauna.”

The other piece of historic legislation dealing with restoration of Everglades is concerned with water “quantity, quality, timing, and distribution.” That legislation is called Comprehensive Everglades Restoration Plan (CERP), and it was approved in the Water Resources Development Act of 2000. It proposes more than forty major civil works projects and sixty-eight project components. Yet, no CERP projects have been completed since its enactment, and CERP itself is not a comprehensive plan for ecosystem restoration linked to water quality restoration program. Therefore, “restoration success will depend heavily on the success of . . . pollution reduction programs, which are outside the scope of CERP.” And, the success of CERP and EFA will depend on the introduction of new methods—such as the numeric nutrient criteria proposed by the EPA—in order to improve the quality of water used to restore the Everglades.

While there are presently efforts related to improvement of water quality in terms of curbing phosphorus enrichment, CERP’s technical team RECOVER has stated that “water quality and ecological models capable of predicting [nitrogen] loading, cycling, resultant concentrations, and transport still need to be developed.” Moreover, the team asserted that “[b]y quantifying nutrient sources, flows, and transformations through monitoring and assessment of freshwater marshes in the Greater Everglades, data will be available to develop evaluation tools and to better understand downstream effects of [nitrogen] export on estuaries,” and therefore, like the EPA, confirming a preference for numerical values for nitrogen water quality criteria. Numeric nutrient standards may help prevent phosphorus and nitrogen

182. Noe et al., supra note 169, at 618.
185. Perry, supra note 166, at 571.
187. See Perry, supra note 166, at 576 (stating that at present there is no such linkage between water quality restoration and comprehensive ecosystem restoration).
188. See id. CERP only focuses in improving the quality of water where feasible, suggesting that it is not one of the priority issues in Everglades ecosystem restoration. Id. at 569.
190. Id.
enrichment, which "leads to a distinctly different ecosystem than the historic oligotrophic Everglades." 191

V. CONCLUSION

Undoubtedly, developing adequate and scientifically sound criteria for nutrients in Florida will be an incredibly challenging and costly task. In the case of the Everglades wetlands, much research and studies will be needed in order to understand the link between water quality and the restoration needs of a badly damaged ecosystem and whether the numeric criteria proposed by the EPA supports the "same level of science backing up the Everglades [ten] part per billion standard." 192 All of the above would understandably take a long time to accomplish. However, the EPA’s rule regarding Florida’s water quality standards is a great way to rectify many years of inaction and delay in attempting to fix the nutrient pollution problem in Florida and other states. As of August 2011, a federal appeals court for the Eleventh Circuit struck down an appeal filed by the intervenor groups such as the South Florida Water Management District after the 2009 consent decree was approved. 193 The court reasoned that "a challenge to the consent decree "does not . . . create the alleged substantive injury and [the]decision to reverse its approval would not redress the [a]ppellants' alleged grievances." 194 Though this outcome is favorable for proponents of the rules, there are still significant challenges facing the implementation of the standards. But, nonetheless, like a speed limit, which does not specify the numerical value of the speed at which everyone should be going, a narrative nutrient criterion in Florida is very vague. The EPA’s proposed rule, much like a real numerical speed limit, will help minimize the impacts of nutrient pollution.

191. Noe et. al., supra note 169, at 620.
192. AUDUBON OF FLA. supra note 181.
194. Id. at *7.
LESSONS FROM BP: DEEPWATER OIL DRILLING IS AN ABNORMALLY DANGEROUS ACTIVITY

VALERIO SPINACI*

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I. INTRODUCTION

On April 20, 2010, while drilling oil from the outer Continental Shelf, the Deepwater Horizon oil rig exploded, killing eleven people and spilling more than five million gallons of oil into the Gulf of Mexico.1 Deepwater Horizon held the record as the deepest oil rig in history, and the oil spill it produced is one of the largest ever.2

Fortunately, catastrophic spills like the Deepwater Horizon are not the rule.3 Offshore operators spill millions of gallons of oil, fuel, and other chemicals into federal waters each year.4 According to the United States Minerals Management Service, approximately forty spills were greater than one thousand barrels since 1964, and thirteen within the last ten years.5 Offshore oil extraction operations have produced some of the largest oil spills in the world’s history.6 The numbers become higher when considering oil spills from tankers, carriers, and barges.7 As estimated by the United States Coast Guard, 1.3 million gallons of petroleum are spilled into United States waters


4. Id.

5. Id.


from vessels and pipelines in a typical year. In addition, spill statistics are often misleading because some incidents are not reported in the Coast Guard’s database.

Moreover, statistics are no better when considering the rest of the world. For example, while the Deepwater Horizon spill was still ongoing, China experienced its largest oil spill. There are also many oil spills that go largely unnoticed, and the numbers seem to be increasing. Even if the United States and other countries suspended deepwater drilling as a result of the spill, East Timor, Australia and others continue to pursue “ultra-deep” exploration. Despite the experience and the moratorium that followed the spill, deep water drilling is resuming in other wells in the Gulf of Mexico. Further, British Petroleum will start drilling soon in the Mediterranean and in the Arctic Ocean. Finally, the worst has yet to come: Brazil is drilling deeper than the BP Deepwater Horizon oil rig and with fewer precautions.

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9. RAMSEUR, supra note 6, at 32.
11. See Joe Brock, Africa’s Oil Spills are Far from U.S. Media Glare, REUTERS (May 18, 2010, 1:49 PM), http://www.reuters.com/article/idUSLDE64G12X. “International media has largely ignored the latest incidents . . . in Nigeria, where the public can only guess how much oil might have been leaked.” Id.

The platform is now operating 125km off the coast of Brazil in 1,798 metres (5,900 feet) of water—deeper than BP’s Deepwater rig that exploded in April and led to the disastrous oil spill in the Gulf of Mexico. . . . [T]he 14-page environment report prepared by the [bank financing the drilling operations] makes no mention of blowouts or the equipment needed to prevent them. Ministers have edited out all ECDG’s comments assessing the risks involved in deep-sea drilling in the Atlantic.

Id.; see also Editorial, Obama Underwrites Offshore Drilling, WALL ST. J., Aug. 18, 2009, at A16.
In other words, the problem is more than compelling. The risk is that the environmental damage will be irreversible. Oil has played, and still plays, a fundamental role in the world’s economy. But times are changing. Alternative feasible sources of energy exist—renewable, less dangerous, and, most importantly, environment-friendly energy sources. Still, oil maintains its supremacy mainly because of its low cost. However, oil’s low cost depends on nobody being held accountable for the environmental damages produced by oil drilling. Nowadays, different theories are raised to support the petroleum companies’ liability. Still, the United States system owns in its arsenal one of the most powerful weapons to fight the oil plague.

This article will show that the common law doctrine of strict liability for abnormally dangerous activities constitutes the best way to remedy and to prevent further oil spills from occurring. Part II will analyze the issue of whether federal preemption thwarts the application of state tort law. Part III will generally describe the doctrine of abnormally dangerous activities and its application in Florida. Finally, Part IV will argue that offshore oil drilling is an abnormally dangerous activity.

18. See id.
20. Id.
21. See id.
22. See David Rosenberg, The Judicial Posner on Negligence Versus Strict Liability: Indiana Harbor Belt Railroad Co. v. American Cyanamid Co., 120 HARV. L. REV. 1210, 1216 (2007) (“Under strict liability, firms price their products to include not only the costs of production and reasonable care, as they would under the negligence rule, but also the cost of accidents from unavoidable residual risk.”); see also Ruwantissa Abeyratne, The Deepwater Horizon Disaster—Some Liability Issues, 5 TUL. MAR. L.J. 125, 127 (2010).
23. Abeyratne, supra note 22, at 127. “At the time of writing, questions continued to emerge as to who was liable for the spill, and it was reported that the United States Department of Justice opened both civil and criminal investigations into the occurrence.” Id.
24. See id. at 128, 149 (starting the analysis on oil spill liability with the acknowledgment that “[t]he United States is a common law jurisdiction,” and then concluding that a defendant’s liability “could be determined on the basis of fault liability or strict liability.”).
II. A VALID COMMON LAW CLAIM

A. A Preliminary Issue: Why Common Law Should Not Be Preempted

An issue preliminary to the present discussion concerns federal preemption. The Supremacy Clause of the Constitution states that federal law “shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby.” 25 Thus, pursuant to the Constitution, federal law could preempt the application of the state common law, frustrating any chance to establish tort liability. 26 Historically, federal and state laws have supplemented the common law standards of liability in many instances. 27 Congress has regulated oil pollution through piecemeal legislation, 28 and entrusted federal agencies have enacted a large body of regulations to supplement those rules. 29

However, even when federal law regulates harmful activity through extensive and comprehensive prohibitions, state common law can maintain its fundamental role of “gap filler.” 30 In particular, there are compelling reasons why the common law of torts should not be preempted. 31 First, tort law provides an alternative basis to recover both compensatory and punitive damages, even when relief would be unavailable under statutory law. 32 Moreover, common tort law operates to protect different—but complementary—

25. U.S. CONST. art. VI, cl. 2.


27. William K. Jones, Strict Liability for Hazardous Enterprise, 92 COLUM. L. REV. 1705, 1742 (1992). “For example, the Federal Water Pollution Control Act provides for strict liability for clean-up costs ...” Id. (footnote omitted).

28. See Ambrose O. O. Ekpu, Environmental Impact of Oil on Water: A Comparative Overview of the Law and Policy in the United States and Nigeria, 24 DENV. J. INT’L L. & POL’y 55, 65 (1995). The author lists several federal statutes: the Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCA); Clean Water Act (CWA); Outer Continental Shelf Lands Act (OCSLA); Oil Pollution Act (OPA); Safe Drinking Water Act (SDWA); Coastal Zone Management Act (CZMA); Trans-Alaska Pipeline Authorization Act (TAPAA); Migratory Bird Treaty Act (MBTA); Deepwater Port Act (DPA); and the Ports and Waterways Safety Act (PWSA). Id. at 65 n.51.

29. Id. At a federal level, a non-exclusive list includes the Environmental Protection Agency, the Department of Transportation (including the Coast Guard), the Army Corps of Engineers, the Department of Interior, and the Minerals Management Service. Id. at 65 n.54.


31. See id.

32. Id.
interests than public law, such as morality, reciprocity, and most importantly, distributive justice.  

Finally, preserving common law remedies may promote economic efficiency. Tort liability forces the purveyors of risky activities to bear the cost of harm caused by the activity. The companies engaged in abnormally dangerous activities will spread such costs by raising the prices of their products. That would make the consumers aware of the true costs of production, including the environmental costs, and enable them to make informed purchasing decisions. When damage awards make the existing practice too expensive, the producer is motivated either to improve the product or take the product off the market. Considering the importance of petroleum in our society, it is unlikely that oil companies would choose the latter option; it is more than fair, however, to force such companies to pay for the harm caused while pursuing their profits. 

The foregoing was underlined in United States v. Tex-Tow, Inc. where the Court of Appeals for the Seventh Circuit, upholding a penalty for an oil spill, observed:

[T]he party engaged in the potentially polluting enterprise is in the best position to estimate the risk of accidental pollution and plan accordingly, as by raising its prices or purchasing insurance. Economically, it makes sense to place the cost of pollution on the enterprise... which statistically will cause pollution.

Accordingly, imposing common law strict liability has the collateral effect of requiring oil companies to account for the harm produced by their

33. Id. (stating that “[s]ocietal norms of reciprocity, distributive justice, morality, and punishment for careless or malicious deeds undergird tort law”) (footnote omitted).
35. Zellmer, supra note 30, at 1673.
36. See id.; see also David C. Vladeck, Preemption and Regulatory Failure, 33 PEPP. L. REV. 95, 101 (2005) (identifying the threat of liability as an important source of market discipline).
37. Glicksman, supra note 34, at 194; Zellmer, supra note 30, at 1673–74.
38. Zellmer, supra note 30, at 1674.
39. See Guido Calabresi, The Decision for Accidents: An Approach to Nonfault Allocation of Costs, 78 HARV. L. REV. 713, 718 (1965). “Activities are made more expensive, and thereby less attractive, to the extent of the accidents they cause. In the extreme cases they are priced out of the market.” Id.
40. 589 F.2d 1310 (7th Cir. 1978).
41. Id. at 1314–15 (footnotes omitted).
activities, with the final, auspicious result of rendering the alternative energy sources more feasible. Based on the foregoing, the applicability of the common law should not be preempted.

B. The Rules for Preemption

It is a well-established principle of constitutional law that """"any state law . . . which interferes with or is contrary to federal law, must yield."""" This principle makes no distinction between federal statutes and federal regulation by a government agency; federal regulations have the same preemptive effect as federal statutes when they are enacted according to the congressional mandate. However, under preemption principles it appears crystal clear that neither federal law nor federal regulation would preempt Florida tort law in this case.

Federal pre-emption may be either expressed or implied. Express preemption results when the federal legislation contains explicit pre-emptive language. In the absence of such express language, the Supreme Court of the United States has distinguished two types of implied preemption. Field preemption—when the """"federal regulation is ‘so pervasive . . . that Congress left no room for the States to supplement it,'"""" and conflict preemption—when compliance with both the federal and the state regulation would be physically impossible, or when application of the state law would interfere with the realization of the full purpose and objectives of Congress.

The congressional purpose, then, is the """"ultimate touchstone."""" Where there is an overlap between federal and state law, however, the latter is presumed valid """"unless [preemption] was the clear and manifest purpose of Congress."""

Thus, this presumption must be rebutted to preempt a state

42. See Calabresi, supra note 39, at 716 (""""Treating the problems of accident law in terms of activities rather than in terms of careless conduct is the first step toward a rational system of resource allocation."""").
45. Gade, 505 U.S. at 98.
46. See id.
47. Id.
48. Id. (citing De La Cuesta, 458 U.S. at 153).
49. Id. (citing Fla. Lime & Avocado Growers, Inc. v. Paul, 373 U.S. 132, 142-43 (1963)).
50. Gade, 505 U.S. at 98 (citing Hines v. Davidowitz, 312 U.S. 52, 67 (1941)).
52. Id. (quoting Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1947)).
Law. Preempting a common law theory of recovery is usually more difficult. Finally, the result seems easier when the federal law contains an express savings clause, designed to leave to the states the power to regulate the matter.

Oil polluters invoked the foregoing principles as a protection from liability for oil spills in interstate waters; however, courts have correctly chosen to preserve state law remedies.

C. No Federal Statutes Overcome the Presumption Against Preemption

1. Clean Water Act

The first statute to consider is the Clean Water Act (CWA). Section 1321(b)(3) of CWA prohibits any person from discharging into or upon waters of the United States any harmful quantity of oil. Violation of the prohibition or failure to comply with the federal government’s directives regarding cleanup operations triggers liability for civil penalties. However, nothing in the Act expressly preempts state law; in fact, the contrary is true. CWA contains an explicit saving clause that prevents any interpretation precluding state authority. As written, CWA is only an alternative channel to seek recovery. Express preemption, then, has to be excluded.

53. See id.
54. See United States v. Texas, 507 U.S. 529, 534 (1993). “In order to abrogate a common-law principle, the statute must ‘speak directly’ to the question addressed by the common law.” Id. (citing Mobil Oil Corp. v. Higginbotham, 436 U.S. 618, 625 (1978)).
55. See Zellmer, supra note 30, at 1660.
56. Id. at 1678.
58. Id. § 1321(b)(6)(A)(i)–(ii).
59. Id. § 1321(o)(2). This section specifically addresses oil spills; under the title “[L]ocal authority not preempted” states:

(1) Nothing in this section shall affect or modify in any way the obligations of any owner or operator of any vessel ... onshore facility or offshore facility to any person or agency under any provision of law for damages to any publicly owned or privately owned property resulting from a discharge of any oil ... or from the removal of any such oil.

(2) Nothing in this section shall be construed as precluding any State ... from imposing any requirement or liability with respect to the discharge of oil ... into any waters within such State, or with respect to any removal activities related to such discharge.

Id.

60. In re Complaint of Allied Towing Corp., 478 F. Supp. 398, 403 (E.D. Va. 1979) (concluding that nothing in CWA “conflicts with or otherwise preempts any state statute ... imposing liability” nor “limit the amount of that liability,” but “merely provides the states with an alternative federal remedy” assuring the preservation of “the natural resources of this country”); accord Baker v. Hazelwood (In re Exxon Valdez), 270 F.3d 1215, 1231 (9th Cir.
Any attempt to imply preemption will lead to a similar conclusion. Congress did not intend CWA penalties for water pollution to occupy the entire field of pollution remedies. Through its saving clause, CWA was designed to maintain the common law theories. Thus, there is no field preemption. Moreover, the common law does not conflict with the federal regulation, the former providing an easier way to punish the same harmful conduct. First, it is not physically impossible to comply with both. In fact, strict liability under common law will enter into play only when the statute is already violated by an unlawful oil spill. Second, applying the doctrine of abnormally dangerous activities to oil spills aims at the same purpose that CWA tries to obtain. The principal purpose of this section is to deter harmful oil spills. Such a goal will be accomplished, rather than obstructed, by considering deepwater oil drilling an abnormally dangerous activity. Finally, the legislative history indicates a lack of congressional intent to preempt state law. Accordingly, CWA should not preempt the state common law.

2001) ("[T]he Clean Water Act does not preempt a private right of action for punitive as well as compensatory damages for damage to private rights.").


62. See id. (CWA is "expressly geared to protecting ‘water,’ ‘shorelines,’ and ‘natural resources’" and was not intended to "eliminate sub silentio oil companies’ common law duties to refrain from injuring the bodies and livelihood of private individuals.").

63. Id.


65. See id.

66. See infra Part III.


68. See Wash. Suburban Sanitary Comm’n v. Cae-Link Corp., 622 A.2d 745, 758 (Md. 1993). “To the extent that the action does not otherwise thwart the goal of the [CWA], the savings clause does preserve state law remedies.” Id. at 756.

69. For instance, the Senate Report of the 1977 CWA amendments, in the relevant part, contains the following comments:

The committee considered amendments to section 311 to establish liability for damages occurring outside the jurisdiction of any State as a result of an oilspill, including compensation for income loss due to damages to property or natural resources. A related amendment creating a new compensation fund . . . was also considered. The committee deferred action on these proposals and will consider them as part of the comprehensive oilspill liability legisla-
This rationale was followed by the appellate court in the Exxon Valdez oil spill.\textsuperscript{70} The jury awarded compensatory and punitive damages to fishermen and landowners injured by the oil spill under Alaskan law.\textsuperscript{71} Since OPA does not retroactively apply to spills before 1990, Exxon argued that CWA and federal admiralty law preempted common law damages awards.\textsuperscript{72} The Ninth Circuit considered CWA savings clause and left the private tort claims intact.\textsuperscript{73} The Supreme Court affirmed.\textsuperscript{74} Some of the same reasons apply when considering the next statute.

2. Oil Pollution Act

As a response to the Exxon Valdez wreck in 1989, which caused an oil spill of eleven million gallons into the coastal waters of Alaska, Congress enacted the Oil Pollution Act (OPA) in 1990.\textsuperscript{75} OPA substantially expanded the existing regulation concerning oil spills.\textsuperscript{76} It also imposed strict liability for parties responsible for oil spills.\textsuperscript{77} In enacting OPA, preemption was the most discussed point.\textsuperscript{78} In the last version of the OPA, Congress included two savings clauses almost identical to those contained in CWA.\textsuperscript{79} Thus,

\textit{Nothing in [the OPA] shall . . . be construed . . . as preempting the authority of any State . . . from imposing any additional liability or requirements with respect to the discharge of oil or . . . any removal activities in connection with such a discharge.}\textsuperscript{80}

\textsuperscript{70.} See Zellmer, supra note 30, at 1679.
\textsuperscript{71.} Baker v. Hazelwood (\textit{In re Exxon Valdez}), 270 F.3d 1215, 1225 (9th Cir. 2001).
\textsuperscript{72.} \textit{In re Exxon Valdez}, 270 F.3d at 1226, 1228.
\textsuperscript{73.} \textit{See id}. at 1231.
\textsuperscript{75.} 33 U.S.C. §§ 2701–2720 (2006); \textit{Exxon Shipping Co.}, 128 S. Ct. at 2613.
\textsuperscript{77.} 33 U.S.C. § 1321(b)(7)(A); see Driscoll, supra note 76, at 611.
\textsuperscript{79.} See 33 U.S.C. § 2718(a), (c).
\textsuperscript{80.} \textit{Id}. § 2718(a).
And,

Nothing in this Act . . . shall in any way affect, or be construed to affect, the authority of the United States or any State . . . to impose additional liability or additional requirements; or to impose, or to determine the amount of, any fine or penalty . . . for any violation of law; relating to the discharge, or substantial threat of a discharge, of oil.81

Since its enactment, federal courts have rejected OPA preemption of common law tort claims for damages to natural resources.82 In United States v. Locke,83 the Supreme Court ultimately interpreted the scope of the savings clauses.84 The unanimous Court limited the state power to regulations imposing additional liability relating to oil spills.85 The Court reasoned:

Placement of the saving clauses in Title I of OPA suggests that Congress intended to preserve state laws of a scope similar to the matters contained in Title I of OPA, not all state laws similar to the matters covered by the whole of OPA or to the whole subject of maritime oil transport. The evident purpose of the saving clauses is to preserve state laws which, rather than imposing substantive regulation of a vessel's primary conduct, establish liability rules and financial requirements relating to oil spills.86

Finally, the Court also acknowledged that it has “upheld state laws imposing liability for pollution caused by oil spills” and specified that the decision “preserves this important role for the States, which is unchallenged here.”87 By coincidence, the cite was to a Florida case: Askew v. American

81. Id. § 2718(c).
83. 529 U.S. 89 (2000).
84. Id. at 105–06.
85. Id. at 106.
86. Id. at 105.
87. Id. at 106 (citing Askew v. Am. Waterways Operators, Inc., 411 U.S. 325, 332 (1973)).
Waterways Operators, Inc., in which the Supreme Court of the United States held that the Federal Water Quality Improvement Act did not preempt state law, because of two similar saving clauses. The court explained that:

[T]here need be no collision between the Federal Act and the Florida Act because . . . the Federal Act presupposes a coordinated effort with the States, and any federal limitation of liability runs to ‘vessels,’ not to shore ‘facilities.’ That is one of the reasons why the Congress decided that the Federal Act does not pre-empt the States from establishing either ‘any requirement or liability’ respecting oil spills.

At the time of the Askew decision, OPA had not been enacted yet; however, the Court applied the same rationale in Locke and refused implied preemption. In sum, the Court’s view of OPA’s saving clauses does allow state law—including state common law—as a supplemental source of liability for oil spills. Accordingly, although it is worth noting that British Petroleum is facing, among others, a lawsuit filed under CWA by three environmental groups of citizens for the Deepwater Horizon oil spill, neither CWA nor OPA preempts state common law.

III. THE DOCTRINE OF ABNORMALLY DANGEROUS ACTIVITY

A. Ultrahazardous Strict Liability in the United States

1. Rylands v. Fletcher: The Seminal Case

Strict liability for ultrahazardous activities was first established in the English case Rylands v. Fletcher. The idea set forth in Rylands is simple: Someone conducting an activity on his own property, “which he knows will be mischievous if it gets on his neighbour’s,” must pay for the damage

89. Id. at 328–29.
90. Id. at 336.
92. Locke, 529 U.S. at 105.
94. See Exxon Shipping Co. v. Baker, 128 S. Ct. 2605 (2008); see also Locke, 529 U.S. at 105.
“which ensues if he does not succeed in confining it to his own property.”

In other words, some activities are so risky that those who engage in them will be liable for the consequences of loss of control over the activities, regardless of whether they were carried on without wrongful conduct.

Ironically, *Rylands* itself involved a spill; the defendant’s reservoir flooded on to the plaintiff’s adjoining land. The defendant was not negligent, but the Court found the defendant strictly liable, stating:

> [T]he true rule of law is, that the person who for his own purposes brings on his lands and collects and keeps there anything likely to do mischief if it escapes, must keep it in at his peril, and, if he does not do so, is prima facie answerable for all the damage which is the natural consequence of its escape.

After an initial hostility to the *Rylands* principle, American courts began to adopt the doctrine, imposing strict liability even in absence of negligence. In the earliest cases applying *Rylands*, strict liability involved two components: first, the abnormal danger of certain activities; and second, the fairness of imposing the cost for the harm resulting from the activity on the actor rather than on unrelated parties.

Those components were still more evident in the first decision applying strict liability for oil drilling. In *Green v. General Petroleum Corp.*, the court stated:

> When . . . the defendant, though without fault, has engaged in the perilous activity of storing . . . explosive[s] for use in his business . . . there is no justification for relieving it of liability, and . . . the owner of the business, rather than a third person who has no relation to the explosion, other than that of injury, should bear the loss.

where the plaintiff's injury was caused by the defendant's exploding oil well, the Supreme Court of California imposed liability on the defendant, stating:

Where one, in the conduct and maintenance of an enterprise lawful and proper in itself, deliberately does an act . . . and injury is done to the other as the direct and proximate consequence of the act, however carefully done, the one who does the act and causes the injury should, in all fairness, be required to compensate the other for the damage done. 105

Several years later, in Luthringer v. Moore,106 the same court explained its holding in Green stating, "The important factor is that certain activities under certain conditions may be so hazardous to the public generally, and of such relative infrequent occurrence, that it may well call for strict liability as the best public policy."107

Accordingly, both components were present in the court's analysis, and the court eventually held in favor of the plaintiff.108 The fairness component was more explicit in Green than in the previous cases.109 However, the First Restatement of Torts and the Second Restatement of Torts apparently restrained the breadth of the doctrine, making its application more unpredictable.110

2. The Restatement (First) of Torts: Common Activities

The First Restatement of Torts embraced strict liability for ultrahazardous activity.111 An activity was "ultrahazardous" when it "(a) necessarily involves a risk of serious harm to the person, land or chattels of others which

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104. 270 P. 952 (Cal. 1928).
105. Green, 270 P. at 955.
106. 190 P.2d 1(Cal. 1948).
107. Id. at 8.
108. Green, 270 P. at 956.
109. See Case, supra note 97, at 179.
110. See id.; see also Nolan & Ursin, supra note 103, at 265.
111. RESTATEMENT OF TORTS § 519 (1938). This section provided: [O]ne who carries on an ultrahazardous activity is liable to another whose person, land or chattels the actor should recognize as likely to be harmed by the unpreventable miscarriage of the activity for harm resulting thereto from that which makes the activity ultrahazardous, although the utmost care is exercised to prevent the harm.

Id.
cannot be eliminated by the exercise of the utmost care, and (b) is not a matter of common usage."\(^{112}\)

By excluding the activities of "common usage" from strict liability, even when ultrahazardous, the Restatement limited the expansion of the doctrine to new areas, such as driving cars and operating railroads.\(^{113}\) The doctrine's practical significance was reduced to a minimum.\(^{114}\) However, in the decades after the promulgation of the Restatement, courts revitalized the strict liability principle, circumventing the "common usage" restraint.\(^{115}\)

The courts did so by narrowly defining the activity under adjudication and considering the overall circumstances in such a way as to make it "uncommon."\(^{116}\) An example of the former is *Luthringer v. Moore*,\(^ {117}\) where the Supreme Court of California imposed strict liability on a defendant who engaged in pest control.\(^ {118}\) The plaintiff was harmed during the fumigation activities as a result of a gas leak.\(^ {119}\) The court applied the First Restatement in defining fumigation as a "specialized activity" and considered the fact that professional fumigators were "few in number."\(^ {120}\)

Similarly, a "common usage" activity becomes abnormally dangerous in particular circumstances.\(^ {121}\) For example, in *Koos v. Roth*,\(^ {122}\) the Supreme Court of Oregon distinguished agricultural field burning from everyday backyard burning.\(^ {123}\) Both fire related activities involved "destruction of raw material by oxidation," but the "scale" and the "location" made the basic act of burning leaves ultrahazardous; field burning was found abnormally dangerous because it created hazards "beyond the ordinary risks associated with common uses of fire."\(^ {124}\) Thus, an otherwise ordinary activity may be deemed abnormally dangerous when it is carried out in an ultrahazardous manner.\(^ {125}\) Thus, in *In re Tutu Wells Contamination Litigation*,\(^ {126}\) strict liability was proper even though service stations were considered a matter of common usage; the District Court of the Virgin Islands stated:

\(^{112}\) *Id.* § 520.

\(^{113}\) See Nolan & Ursin, *supra* note 103, at 266.

\(^{114}\) See Case, *supra* note 97, at 180.

\(^{115}\) See Nolan & Ursin, *supra* note 103, at 270.

\(^{116}\) See Case, *supra* note 97, at 193.

\(^{117}\) 190 P.2d 1 (Cal. 1948).

\(^{118}\) *Id.* at 9.

\(^{119}\) *Id.* at 3.

\(^{120}\) *Id.* at 8.

\(^{121}\) Case, *supra* note 97, at 193.

\(^{122}\) 652 P.2d 1255 (Or. 1982).

\(^{123}\) *Id.* at 1265.

\(^{124}\) *Id.*

\(^{125}\) See Case, *supra* note 97, at 193.

It may well be, as Defendants contend, that operation and ownership of service stations is a matter of common usage and that it is not unusual today to find service stations in residential areas. But where, as here, the risk of seepage is contamination of the area's precious and limited water supply, locating the storage tanks above the aquifer created an abnormally dangerous and inappropriate use of the land.127

The court considered, but ultimately ignored, the commonality of the activity in light of the surrounding circumstances.128 The "common usage" limitation, then, was emptied of its substantial significance.129

3. The Restatement (Second) of Torts: Confusion with Negligence

Finally, the Second Restatement of Torts modified the doctrine at least in its formal aspects.130 First, it labeled the activities "abnormally dangerous," as opposed to the older "ultrahazardous."131 Second, under the reformulation, strict liability must be imposed after considering six factors that determine whether the activity is abnormally dangerous.132 An activity is abnormally dangerous when some of the following factors exist:

(a) existence of a high degree of risk of some harm to the person, land or chattels of others;

(b) likelihood that the harm that results from it will be great;

(c) inability to eliminate the risk by the exercise of reasonable care;

127. Id. at 1269.
128. See id.
129. See Case, supra note 97, at 180; see also Gerald W. Boston, Strict Liability for Abnormally Dangerous Activity: The Negligence Barrier, 36 San Diego L. Rev. 597, 615 (1999). "[T]aken literally, the provision rarely limits the range of activity qualifying as ultrahazardous." Id.
131. Restatement (Second) of Torts § 520 (1977). According to the drafters, "A combination of the factors . . . is commonly expressed by saying that the activity is 'ultrahazardous,' or 'extra-hazardous.'" Id. § 520 cmt. h. The American Law Institute modified the name of the doctrine, but the substance remained the same. See Cities Serv. Co. v. State, 312 So. 2d 799, 802 (Fla. 2d Dist. Ct. App. 1975). In this article, however, the three terms are used interchangeably.
132. Restatement (Second) of Torts § 520 (1977).
(d) extent to which the activity is not a matter of common usage;

(e) inappropriateness of the activity to the place where it is carried on; and

(f) extent to which its value to the community is outweighed by its dangerous attributes.\textsuperscript{133}

The first four clauses are generally derived from the First Restatement; only factors (e) and (f) seem to be new.\textsuperscript{134} But while the restyling appears to restrict the application of strict liability because of the two additional factors, the test is substantially unchanged.\textsuperscript{135} The fulfillment of just a few of the factors is still enough to find an activity abnormally dangerous.\textsuperscript{136} Additionally, the Second Restatement reduced the burden on the plaintiff to prove a risky activity by using “reasonable care” in factor (c) instead of the previous “utmost care” and requiring the courts to consider the “extent to which” the activity is not a matter of common usage, “rather than categorically excluding common activities.”\textsuperscript{137}

Moreover, as both courts and commentators have noted, the new factors (e) and (f) suggest a theory more similar to negligence than to strict liability.\textsuperscript{138} While not expressly rejecting the Restatement, some courts and commentators have shown hostility toward this approach ignoring those two factors when engaging in an abnormally dangerous activity analysis.\textsuperscript{139}

For instance, in \textit{Koos v. Roth},\textsuperscript{140} the Supreme Court of Oregon held that a farmer burning his fields was strictly liable for the harm caused to a neighbor by the fire.\textsuperscript{141} Acknowledging the “appropriateness” of agricultural field burning to its location, the court expressly declined to consider factor (e), stating that “an activity is not otherwise immune from strict liability because

\textsuperscript{133} \textit{Id.}

\textsuperscript{134} \textit{Compare} \textit{RESTATEMENT (SECOND) OF TORTS §§ 519–20 (1977), with} \textit{RESTATEMENT (FIRST) OF TORTS §§ 519–20 (1938)}.

\textsuperscript{135} \textit{See Case, supra note 97, at 180.}

\textsuperscript{136} \textit{RESTATEMENT (SECOND) OF TORTS § 520 cmt. f (1977).} The Restatement explains that “the factors listed in Clauses (a) to (f) of this Section are all to be considered, and are all of importance. . . . [I]t is not necessary that each of them be present, especially if others weigh heavily.” \textit{Id.}

\textsuperscript{137} \textit{Case, supra note 97, at 181–82; see also Nolan & Ursin, supra note 103, at 272.}

\textsuperscript{138} \textit{See Nolan & Ursin, supra note 103, at 272–73; Boston, supra note 129, at 624; Case, supra note 97, at 182.}

\textsuperscript{139} \textit{See, e.g., Koos v. Roth, 652 P.2d 1255 (Or. 1982); Yukon Equip., Inc. v. Fireman’s Fund Ins. Co., 585 P.2d 1206 (Alaska 1978); see also Boston, supra note 129, at 662.}

\textsuperscript{140} 652 P.2d 1255 (Or. 1982).

\textsuperscript{141} \textit{Id.} at 1261, 1263.
it is ‘appropriate’ in its place.”

Likewise, the “value of the dangerous activity to the community” was irrelevant to the court’s decision. The court emphasized that the proper inquiry was “who shall pay for harm that has been done” and further noted that “the person conducting the activity can choose whether or not to chance the potentially costly consequences . . . [but] [t]he potential victim cannot make that choice.” Accordingly, factor (f) was ignored, and the touchstone was again the fairness of requiring a person who engages in the risky activity to pay the costs.

Further illustrating this approach, in Enos Coal Mining Co. v. Schuchart, the Supreme Court of Indiana rejected the argument that the defendant’s blasting activity was “necessary” and stated, “A business should bear its own costs, burdens, and expenses of operation, and these should be distributed by means of the price of the resulting product and not shifted, particularly, to small neighboring property owners for them to bear alone.”

In Siegler v. Kuhlman, the Supreme Court of Washington considered the transportation of gasoline abnormally dangerous. The court focused on the nature of risks created by the tanker, referring to its “uniquely hazardous characteristics” and “extraordinary dangers deriving from sheer quantity, bulk, and weight, which enormously multiply its hazardous properties.” The court also considered fairness, “putting the burden where it should belong as a matter of abstract justice, that is, upon the one of the two innocent parties whose acts instigated or made the harm possible.” As it appears, the two components of the original doctrine as established in Rylands were present in each of these cases.

Further, the Supreme Court of Washington in Langan v. Valicopters, Inc., expressly criticized factor (f), writing:

As a criterion for determining strict liability, this factor has received some criticism among legal writers. . . . § 520(f) is not a

142. Id. at 1263.
143. Id. at 1261.
144. Id.
146. See id, at 1262.
147. 188 N.E.2d 406 (Ind. 1963).
148. Id. at 408.
149. 502 P.2d 1181 (Wash. 1972) (en banc).
150. Id. at 1184.
151. Id.
152. Id. at 1185.
153. See Case, supra note 97, at 184.
154. 567 P.2d 218 (Wash. 1977) (en banc).
true element of strict liability: "The justification for strict liability, in other words, is that useful but dangerous activities must pay their own way."

There is no doubt that pesticides are socially valuable in the control of insects, weeds and other pests. They may benefit society by increasing production. Whether strict liability or negligence principles should be applied amounts to a balancing of conflicting social interest [of] the risk of harm versus the utility of the activity. In balancing these interests, we must ask who should bear the loss caused by the pesticides.

In the present case, the Langans were eliminated from the organic food market for 1973 through no fault of their own. If crop dusting continues on the adjoining property, the Langans may never be able to sell their crops to organic food buyers. Appellants, on the other hand, will all profit from the continued application of pesticides. Under these circumstances, there can be an equitable balancing of social interests only if appellants are made to pay for the consequences of their acts. 155

The Langan court declared that the test of the Restatement, as adopted in Siegler, was met; it listed all six factors, but substantially disregarded them. 156 Fairness, then, was still determinative. Finally, before turning to the adoption of the doctrine in Florida, the confusion created by the application of factor (c) of the Restatement deserves some clarifying words. Factor (c) requires the "inability to eliminate the risk of the activity by exercising reasonable care." 157 Apparently, following the rationale set forth in Indiana Harbor Belt Railroad Co. v. American Cyanamid Co., 158 some argued that factor (c) should be interpreted as depriving the doctrine of abnormally dangerous activities of any significance. 159

155. Langan, 567 P.2d at 223 (citations omitted).
156. Id. at 222.
157. See Restatement (Second) of Torts § 520 (c) (1977). The Restatement requires the "inability to eliminate the risk by the exercise of reasonable care," but this proposition is doubtful. See id. Every activity creates at least some minimal risk. This is recognized in the change from "utmost care" in the First Restatement to "reasonable care" in the Second Restatement and by the stated rationale that "probably no activity, unless . . . perhaps the use of atomic energy, from which all risks of harm could not be eliminated by the taking of all conceivable precautions" id. cmt. h. Thus, as discussed below, the standard of care is immaterial. The proper focus then is on the dangerousness of the activity carried on.
158. 916 F.2d 1174 (7th Cir. 1990).
159. See generally Boston, supra note 129; Peter M. Gerhart, The Death of Strict Liability, 56 Buffalo L. Rev. 245 (2008).
In *Indiana Harbor Belt*, a railroad tank car containing acrylonitrile leaked and spilled the dangerous chemical.\(^{160}\) The Court of Appeals for the Seventh Circuit had to decide whether a spill of dangerous chemicals occurring during transportation should be subject to strict liability.\(^{161}\) Writing for the court, Judge Posner reversed the district court’s decision; finding strict liability,\(^{162}\) Posner stated the now famous principle: “The baseline common law regime of tort liability is negligence. When it is a workable regime, because the hazards of an activity can be avoided by being . . . nonnegligent, there is no need to switch to strict liability.”\(^{163}\) Then, Posner suggested that the six factors be analyzed in the following order of importance: (c), (e), (f), (a), (b), and finally (d).\(^{164}\) Ultimately, the Court concluded in favor of a finding of negligence, because the plaintiff offered “no reason . . . for believing that a negligence regime [was] not perfectly adequate to remedy and deter, at reasonable cost, the accidental spillage of acrylonitrile from rail cars.”\(^{165}\) Subsequent to this decision, at least one commentator argued that factor (c) requires the impossibility of proving negligence.\(^{166}\)

However, considering as the first issue whether the defendant could have eliminated the risk by using reasonable care should not automatically end the analysis and preclude strict liability.\(^{167}\) On the contrary, as several authors have pointed out, “the unavoidability of the danger may suggest that those conducting the activities are better situated than victims to spread, avoid, and internalize this type of loss.”\(^{168}\) Explaining the importance of the six factors, the Court in *Indiana Harbor Belt* also recognized that some accidents could be avoided merely by using care and that these situations require moving the activity to another location or reducing its scale:

By making the actor strictly liable—by denying him in other words an excuse based on his inability to avoid accidents by being more

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160. *Ind. Harbor Belt R.R.*, 916 F.2d at 1175 (7th Cir. 1990).
161. Id. at 1177.
162. Id. at 1183.
163. Id. at 1179.
164. See id.
166. See, e.g., Boston, *supra* note 129, at 632–33.
167. Joseph H. King, Jr., *A Goals-Oriented Approach to Strict Tort Liability for Abnormally Dangerous Activities*, 48 BAYLOR L. REV. 341, 366 (1996) (“The imposition of strict liability should be driven by the central goals of this doctrine. If the defendant is a suitable party from the standpoint of loss-spreading, loss reduction, and loss allocation, then strict liability may be appropriate. Moreover, even when the materialization of a risk may have been reasonably preventable, that fact may not be readily provable by the victim, especially in violent occurrences or highly unusual activities.”).
168. Id. at 366; see also Jones, *supra* note 27, at 1752; Rosenberg, *supra* note 22, at 1216.
careful—we give him an incentive, missing in a negligence regime, to experiment with methods of preventing accidents that involve not greater exertions of care, assumed to be futile, but instead relocating, changing, or reducing (perhaps to the vanishing point) the activity giving rise to the accident.\textsuperscript{169}

Thus, Judge Posner himself centered the analysis on the extent to which an activity, even when undertaken with all reasonable care, maintains an unavoidable residual risk requiring the recourse to strict liability.\textsuperscript{170} Now, an activity can be risky either because it is hard to control or because the effects threatened by a loss of control are extremely dangerous.\textsuperscript{171} Focusing on the level of care the defendant might have used can be misleading and lead to absurd outcomes.\textsuperscript{172} How can an activity that is abnormally dangerous in the absence of negligence become less dangerous when the defendant is negligent? Thus, the emphasis must be on the magnitude of the damages that may ensue if the activity goes wrong, which generally remains equal regardless of the defendant’s conduct.\textsuperscript{173}

Further, another deficiency of the negligence regime is that the proof is generally unavailable to the injured party.\textsuperscript{174} The Indiana Harbor Belt court itself was unable to identify whose carelessness caused the spill.\textsuperscript{175} Requiring a casual plaintiff to wait for each defendant “to point a finger at the others in an effort to shift the blame for an accident” would be profoundly un-

\textsuperscript{169} \textit{Indiana Harbor Belt R.R.}, 916 F.2d at 1177.
\textsuperscript{170} Rosenberg, \textit{supra} note 22, at 1213.
\textsuperscript{171} \textit{See} Case, \textit{supra} note 97, at 188.
\textsuperscript{172} Id.
\textsuperscript{173} \textit{See} id. at 189. As characterized by the district court, the spill in Indiana Harbor Belt “forced the temporary evacuation of about 3000 people” and “contaminated not only the ground, but also the water beneath it, thus threatening the water supply” of several communities. \textit{Ind. Harbor Belt R.R. v. American Cyanamid Co.}, 662 F. Supp. 637 (N.D. Ill. 1987), rev’d, 916 F.2d 1174 (7th Cir. 1990).
\textsuperscript{174} Jones, \textit{supra} note 27, at 1752 (noting that “[i]f a bystander had been injured in \textit{Indiana Harbor}, she would have had to trace this carload of acrylonitrile from the supply of the railroad car by North American Car Corporation, to the loading of the car in Louisiana by American Cyanamid, to the movement of the car to Chicago by the Missouri Pacific Railroad, to the handling of the car in the yard of the switching road, Indiana Harbor.”).
\textsuperscript{175} Id. at 1752–53 (“The court was of the opinion that the leak of acrylonitrile ‘was caused by carelessness—whether that of the North American Car Corporation in failing to maintain or inspect the car properly, or that of Cyanamid in failing to maintain or inspect it, or that of the Missouri Pacific when it had custody of the car, or that of the switching line itself in failing to notice the ruptured lid, or some combination of these possible failures of care.’”).
fair.\textsuperscript{176} Rather, strict liability provides incentives for reducing the risks at the outset, resulting in more certain accountability in case of an accident.\textsuperscript{177}

Several courts have understood and applied this interpretation, properly focusing the analysis on the dangers imposed by the activity, coupled with the victim’s lack of relation with such activity.\textsuperscript{178} This also seems to be consistent with the spirit of the Restatement, that explained with admittedly unclear language, “The essential question is whether the risk created is so unusual, either because of its magnitude or because of the circumstances surrounding it, as to justify the imposition of strict liability for the harm that results from it, even though it is carried on with all reasonable care.”\textsuperscript{179}

In short, the doctrine of abnormally dangerous activities—as reformulated by the Restatement—can be, and was in fact construed by the great majority of jurisdictions, as reduced to two basic themes.\textsuperscript{180} First, the dangers created to the community by engaging in the risky activity under particular circumstances; and second, the fairness of imposing liability on those engaged in such risky activity for their own benefit.\textsuperscript{181} Florida courts have followed this approach.

B. Abnormally Dangerous Activities in Florida

The Supreme Court of Florida adopted the \textit{Rylands} doctrine in the case of \textit{Pensacola Gas Co. v. Pebley}.\textsuperscript{182} In \textit{Pebley}, the defendant gas company

\begin{enumerate}
\item \textsuperscript{176} Id. at 1753.
\item \textsuperscript{177} As suggested by one author:
Cases might of course arise in which the negligence rule would eliminate all risk. But there is no need to choose between strict liability and negligence in such cases because both would produce identical deterrent effects: the defendant would invest in reasonable care to avoid all risk of accident. At the other extreme, cases might arise in which the negligence rule would not eliminate all risk, but the defendant lacks options to reduce activity level, even by raising price. The two rules again produce the same deterrent effect: the defendant would invest in reasonable care, leaving a residuary of unavoidable risk. In short, courts do not need to choose between rule regimes because strict liability works in all cases: it will be effective when it is needed and do no harm when it is not.
\item \textsuperscript{178} See, e.g., United States v. Stevens, 994 So. 2d 1062, 1066 (Fla. 2008) (“Strict liability does not concern itself with whether the actor exercised reasonable care.”); Laterra v. Treaster, 844 P.2d 724, 731 (Kan. Ct. App. 1992) (considering suicide with gas an abnormally dangerous activity even if the defendant-suicidal was negligent); Siegler v. Kulhman, 502 P.2d 1181, 1185 (Wash. 1972) (en banc) (disregarding anyone’s negligence in light of the extreme danger posed by hauling gas on the highway).
\item \textsuperscript{179} \textit{RESTATEMENT (SECOND) OF TORTS} § 520 cmt. f (1977).
\item \textsuperscript{180} See Case, \textit{supra} note 97, at 187.
\item \textsuperscript{181} See \textit{id}.
\item \textsuperscript{182} 5 So. 593 (Fla. 1889).
\end{enumerate}
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polluted the plaintiff's water as a result of its operations. The court indirectly applied the Rylands principles to solve the case, stating that:

The appellant gas company had the right to use the water in and about the gas-works as they pleased, but they had no right to allow the filthy water to escape from their premises, and to enter the land of their neighbors. It was the duty of the company to confine the refuse from their works so that it could not enter upon and injure their neighbors, and if they did so it was done at their peril; the escape of the refuse filthy water being in itself an evidence of negligence on the part of the gas company.

Even if the court imposed a sort of strict liability, the negligence language used by the court blurred the extent of the two components revealed in the English case. Eighty-six years later, however, in Cities Service Co. v. State, the Florida's Second District Court of Appeal imposed strict liability over a defendant that caused vast damages by accidentally discharging phosphate lime into the Peace River. The court held, "The doctrine of Rylands v. Fletcher should be applied in Florida." Expressly adopting Rylands, the court applied the doctrine as reformulated by the Restatement of Torts, section 519 and 520. Before reaching the six factors analysis, the court stated:

Even the non-negligent use of one's land can cause extensive damages to a neighbor's property. Though there are still many hazardous activities which are socially desirable, it now seems reasonable that they pay their own way. It is too much to ask an innocent neighbor to bear the burden thrust upon him as a consequence of an abnormal use of the land next door.

Thus, the court first perceived that an innocent person should not suffer the consequences of the abnormally dangerous activity. After briefly balancing the six factors, the court further admitted its reliance on one factor in particular: the great risk of harm. In its words, the court was "impressed

183. Id. at 595.
184. Id.
185. See id.
186. 312 So. 2d 799 (Fla. 2d Dist. Ct. App. 1975).
187. Id. at 800.
188. Id. at 801.
189. Id. at 802-03.
190. Id. at 801.
191. Cities Serv. Co., 312 So. 2d at 801.
192. Id. at 803.
by the magnitude of the activity and the attendant risk of enormous damage.\textsuperscript{193} Additionally, the Florida court reasoned that one who carries on the risky activity should bear the loss, rather than the victim, who had no relation to the activity other than being injured by it.\textsuperscript{194} Thus, the court seemed to recognize the importance of the two elements: dangerousness of the activity and fairness of accounting the carrier for the risks.\textsuperscript{195}

The fairness component was also considered in \textit{Bunyak v. Clyde J. Yancey and Sons Dairy, Inc.},\textsuperscript{196} where the court applied the Restatement analysis.\textsuperscript{197} In \textit{Bunyak}, liquefied cow manure flowed from defendant’s farm onto plaintiff’s land.\textsuperscript{198} The trial court refused to impose strict liability, and the Florida’s Second District Court of Appeal reversed.\textsuperscript{199} Remarkably, after discussing the six factors and finding strict liability proper, the court returned to emphasize the fairness component, writing at the very end of its decision: “The conclusion is inescapable that no matter what theory is invoked by a plaintiff whose property is damaged by the lawful activities conducted upon or conditions existing on the land of another, the key consideration will always be that useful but dangerous activities must pay their own way.”\textsuperscript{200}

In \textit{Great Lakes Dredging and Dock Co. v. Sea Gull Operating Corp.},\textsuperscript{201} although rejecting plaintiff’s contention that strict liability was proper, the Florida court focused its analysis again on the magnitude of harm, considering that it was “[c]entral to [the abnormally dangerous activity] doctrine . . . that the ultrahazardous or abnormally dangerous activity poses some physical . . . danger to persons or property in the area, which danger must be of a certain magnitude and nature.”\textsuperscript{202} Other decisions followed the same rationale.\textsuperscript{203} Further, in \textit{United States v. Stevens},\textsuperscript{204} the Supreme Court of Florida recently reaffirmed the immateriality of the standard of reasonable care in the abnormally dangerous activity analysis.\textsuperscript{205} The court expressly stated that

\begin{itemize}
\item \textsuperscript{193} \textit{Id.}
\item \textsuperscript{194} \textit{See id.}
\item \textsuperscript{195} \textit{See id.}
\item \textsuperscript{196} 438 So. 2d 891 (Fla. 2d Dist. Ct. App. 1983).
\item \textsuperscript{197} \textit{Id.} at 894–95.
\item \textsuperscript{198} \textit{Id.} at 893.
\item \textsuperscript{199} \textit{Id.} at 893, 896.
\item \textsuperscript{200} \textit{Id.} at 896.
\item \textsuperscript{201} 460 So. 2d 510 (Fla. 3d Dist. Ct. App. 1984).
\item \textsuperscript{202} \textit{Id.} at 513.
\item \textsuperscript{203} \textit{See, e.g., Old Island Fumigation, Inc. v. Barbee, 604 So. 2d 1246, 1248 (Fla. 3d Dist. Ct. App. 1992) (per curium) (holding that fumigation was an “ultrahazardous activity”).}
\item \textsuperscript{204} 994 So. 2d 1062 (Fla. 2008).
\item \textsuperscript{205} \textit{Id.} at 1066 n.2.
\end{itemize}
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"[s]trict liability does not concern itself with whether the actor exercised reasonable care."\(^{206}\)

C. Defenses

Finally, we have to direct some of our attention to an issue common to each jurisdiction: defenses that might exclude strict liability.\(^{207}\) The modern statutory trend is to set aside those defenses.\(^{208}\) Even when imposing strict liability, federal statutes limit the defenses available to the plaintiff.\(^{209}\) State statutes are even more rigid and disallow all or most defenses.\(^{210}\) According to the Restatement, one who engages in an abnormally dangerous activity "is subject to strict liability for the resulting harm although it is caused by the unexpectable (a) innocent, negligent or reckless conduct of a third person, or (b) action of an animal, or (c) operation of a force of nature."\(^{211}\) Following this trend, in Old Island Fumigation, Inc. v. Barbee,\(^{212}\) Florida's Third District Court of Appeal stated:

Any alleged negligence by a third party does not free the fumigation company from liability. In a case involving ... an ultra-hazardous activity, this court held that "[u]nder Florida law, a defendant is still liable for the consequences of his conduct even though some other cause contributed to the same damage."\(^{213}\)

Still applying the Restatement, the court agreed that when the risk results in an injury, "it is immaterial that the harm occurs through the unexpectable action of a human being, an animal or a force of nature ... irrespective of whether the action of the human being [who partakes in] the abnormally dangerous activity harmful is innocent, negligent or even reckless."\(^{214}\) The modern trend, and especially the Second Restatement approach, seems correct.\(^{215}\) In the absence of some fault on the part of the victim, strict liabili-

\(^{206}\) Id.
\(^{207}\) See Jones, supra note 27, at 1743.
\(^{208}\) Id.
\(^{209}\) See Christopher B. Kende, Development And Presentation Of The Pollution Victims' Claim, 5 U.S.F. MAR. L.J. 203, 210 (1993) ("The [contributory] negligence of the United States ... is no longer available under OPA.").
\(^{210}\) Jones, supra note 27, at 1743.
\(^{211}\) RESTATEMENT (SECOND) OF TORTS § 522 (1977).
\(^{212}\) 604 So. 2d 1246 (Fla. 2d Dist. Ct. App. 1992) (per curium).
\(^{213}\) Id. at 1248 (citations omitted).
\(^{214}\) RESTATEMENT (SECOND) OF TORTS § 522 cmt. a (1977). However, the Restatement expressed no opinion on deliberately harmful behavior by third parties. See id.
\(^{215}\) Jones, supra note 27, at 1744.
ty justly requires anyone conducting an abnormally dangerous activity to bear the burden of the resulting accident.\textsuperscript{216}

At this point, the groundwork has been laid to show that offshore oil drilling is an abnormally dangerous activity, especially because it is performed in circumstances that render it extremely dangerous, such as drilling in deep water without sufficient technology.

IV. DEEPWATER OIL DRILLING IS ABNORMALLY DANGEROUS

When considering oil related activities, jurisdictions are split.\textsuperscript{217} On one end of the spectrum, some courts have refused to consider mere transportation of petroleum an abnormally dangerous activity.\textsuperscript{218} However, at least one jurisdiction deemed the danger created by an oil spill during such transportation an "extraordinary" risk of harm.\textsuperscript{219}

On the other end, strict liability was found appropriate in oil drilling situations similar to blasting activities.\textsuperscript{220} As noted in \textit{Green v. General Petroleum Co.}, an oil well exploded during drilling operations, causing damages to the plaintiff.\textsuperscript{221} The Supreme Court of California found strict liability "regardless of any element of negligence either in the doing of the act or in the construction, use, or maintenance of the object or instrumentality that may have caused the injury."\textsuperscript{222} Of course, accidents like the one in the Gulf of Mexico are comparable to this kind of conduct.

In the middle category, very few courts have yet to decide whether oil drilling—regardless of the location—is an abnormally dangerous activity.\textsuperscript{223}

\begin{itemize}
  \item \textsuperscript{216} See \textit{id.} at 1755.
  \item \textsuperscript{218} \textit{Smith}, 2007 WL 1309612 at *3.
  \item \textsuperscript{219} See, e.g., \textit{In re Complaint of Weeks Marine, Inc.}, No. 04-494, 2005 WL 2290283, at *6 (D. N.J. Sep. 20, 2005). "The Court does not find that [plaintiff] has demonstrated that the risk of harm imposed on the community by [operating a crane] is 'extraordinary,' in contrast, for example, to the danger posed by oil spills or the transporting of hazardous substances." \textit{Id.}
  \item \textsuperscript{220} Green v. General Petroleum Co., 270 P. 952, 956 (Cal. 1928).
  \item \textsuperscript{221} \textit{Id.} at 953.
  \item \textsuperscript{222} \textit{Id.} at 955.
  \item \textsuperscript{223} See EOG Resources, Inc. v. Badlands Power Fuels, LLC, 673 F. Supp. 2d 882, 900 n.3 (D. N.D. 2009). "Only the Tenth Circuit Court of Appeals has squarely answered the question of whether oil well drilling is an ultrahazardous activity." \textit{Id.} (citing Hull v. Chevron U.S.A., Inc., 812 F.2d 584, 586 (10th Cir. 1987) (finding "that oil well drilling is an ultrahazardous activity"). \textit{Cf. Union Oil Co. v. Oppen}, 501 F.2d 558, 563 n.3 (9th Cir. 1974) ("We decline to reach the issue of whether defendants' oil drilling operations constitute an
It is time, then, to consider each of the six factors’ applicability to deep water oil drilling. At the end of the analysis—which will keep an eye on Florida law—it will appear both logical and just to consider the petroleum companies accountable for such a remunerative, yet dangerous, activity. Under Florida law, oil drilling performed in deepwater must be subject to strict liability as matter of law. And such conclusion is supported by those decisions that have already considered oil drilling as an ultra hazardous activity—regardless the location.

A. It Is Likely to Produce Great Harm: Factors (a) and (b)

"The greater the risk of an accident . . . the stronger is the case for strict liability," Factors (a) and (b) can be considered together. In conjunction, these two factors represent the dangerousness of the activity—probably the most relevant part. In Cities Service Company v. State, Florida’s Second District Court of Appeal dwarfed all the other factors, emphasizing "the magnitude of the activity and the attendant risk" of harm and explained why such magnitude was great:

The impounding of billions of gallons of phosphatic slimes behind earthen walls which are subject to breaking even with the exercise of the best of care strikes us as being both 'ultrahazardous' and 'abnormally dangerous,' as the case may be.

'ultrahazardous activity' and express no opinion as to the applicability of this doctrine to the facts presently before us.

224. See Restatement (Second) of Torts § 520, cmt. f (1977). When the activity's "dangers and inappropriateness for the locality" are great enough, "[the carrier] should be required as a matter of law to pay for any harm it causes, without the need of a finding of negligence." Id. But see SKF Farms v. Superior Court, 200 Cal. Rptr. 497, 499 (Cal Ct. App. 1984) ("[B]y its very nature, the issue of whether an activity is ultrahazardous cannot be decided on demurrer."); Travelers Indemnity Co. v. City of Redondo Beach, 34 Cal. Rptr. 2d 337, 344 (Cal. Ct. App. 1994) ("Given the peculiar facts . . . the location of the drilling activity and the importance of the breakwater to the safety . . . we cannot say, as a matter of law, that respondents' drilling was not ultrahazardous.").

225. See, e.g., Franks v. Indep. Prod. Co., 96 P.3d 484, 492 (Wyo. 2004) (citing Pan American Petroleum Corp. v. Like, 381 P.2d 70 (Wyo. 1963) (Wyoming law recognizes that the drilling of an oil and gas well is an ultrahazardous activity, a dangerous agency); But see Ainsworth v. Shell Offshore, Inc., 829 F.2d 548, 550 (5th Cir. 1987) (concluding that drilling operations are not ultrahazardous).


227. See Boston, supra note 129, at 655.

228. See Case, supra note 97, at 186.

229. 312 So. 2d 799 (Fla. 2d Dist. Ct. App. 1975)
This is not clear water which is being impounded. Here, Cities Service introduced water into its mining operation which when combined with phosphatic wastes produced a phosphatic slime which had a high potential for damage to the environment. If a break occurred, it was to be expected that extensive damage would be visited upon property many miles away. In this case, the damage, in fact, extended almost to the mouth of the Peace River, which is far beyond the phosphate mining area described in the Cities Service affidavit. We conclude that the Cities Service slime reservoir constituted a non-natural use of the land such as to invoke the doctrine of strict liability.230

Considering the potential dangerousness of the activity as the main point of the analysis, the court focused on the environmental damage.231 The other factors appeared almost irrelevant once the risk of harm resulting from the activity was on a large enough scale.232 However, strict liability is proper either when there is little chance of great harm or when such a risk is high but the magnitude of harm threatened is low.233

In the case of oil drilling, both the risk that an oil spill will occur and the magnitude of the harm that results once it occurs are gigantic. As to the risk that some damage will result, as previously discussed, oil spills are more than common.234 As to the severity of harm, during an interview with the Financial Times, Tony Hayward, British Petroleum’s Chief Executive Officer, acknowledged that the company considered the blowout a “low probability, high impact event.”235 Thus, the magnitude of harm in the case of an oil spill may be monumental, and often irreparable.236 Indeed, BP spilled more than one hundred and forty million gallons into the Gulf waters and killed eleven people as a result of the rig’s explosion.237

230. Id. at 803 (emphasis added).
231. See id.
232. Boston, supra note 129, at 656.
233. See id.
234. See Ivanovich & Hays, supra note 3 and accompanying text.
In particular, deepwater oil drilling creates a risk upon the environment, human health, and some economic activities that are water related.

1. Effect on Aquatic Life

Oil pollution affects the aquatic life in different ways. First, the consequences of large oil spills are directly lethal to marine organisms like corals,238 shrimps,239 and any other kind of animals including birds and mammals.240 Second, even when life forms are not killed immediately, the oil can indirectly destroy the fauna by impairing fish “feeding efficiency, growth and reproductive rates, survival of offspring, and resistance to diseases.”241

Additional known effects are “disturbance of the food chain and ‘direct coating’ which impedes the vital processes of respiration . . . in animals, prevents sunlight penetration to plants, and increases temperature by absorbing solar radiation.”242 In fact, oil itself can impact coastal plant species by the mere effects of touching and smothering.243

Finally, the long-term effects of oil on the marine ecosystem are still unknown.244 In particular, the exact effects on the deep-sea life from the oil that dissolved below the surface—like the way with which such a dissolution takes place—are “still a mystery.”245 Nonetheless, when discussing the extent of the environmental damages, scientists concur that oil in water is harmful.246

238. See John C. Rudolf, Deep Underwater, Threatened Reefs, N.Y. TIMES, June 2, 2010 at A16. “Studies on the effects of oil and chemicals on coral are limited to the shallow-water variety, however. Essentially no research has been conducted on their slow-growing deepwater cousins.” Id.
240. DISASTERS: OIL SPILLS, http://www.pollutionissues.com/Co-Ea/Disasters-Oil-Spills.html#ixzz0uzKw6lko (last visited Oct. 1, 2011). “900 bald eagles, 250,000 seabirds, 2,800 sea otters, and 300 harbor seals were killed directly by the Exxon Valdez spill . . . however, population-level consequences are difficult to measure.” Id.
241. Id.
242. Ekpu, supra note 28, at 63.
243. Rudolf, supra note 238, at A16.
244. Id.
246. See Ekpu, supra note 28, at 61–62. “There has not always been a consensus . . . on the exact effects of oil pollution on water. . . . [I]t is generally agreed that petroleum in water is harmful, even though the extent of the harm may not be agreed upon.” Id.
2. Effect on Human Health

Likewise, there is some dispute about the potential effects of the spilled oil on human health. However, some damages are evident. First, for instance, a direct result of the spill: Eleven workers died on April 20, 2010, when the Deepwater Horizon went up in flames. Second, the effects arising from the exposure to the oil spilled: Many of the chemicals extracted from crude oil are "carcinogenic, mutagenic and teratogenic." While brief contact with small quantities of light crude oil is not harmful, ingesting a minimal amount of oil will cause "upset stomach, vomiting, and diarrhea." Long-term exposures can affect the central nervous system. A 2007 study following cleanup damages after the 2002 Prestige oil spill in Galicia, Spain, showed that respiratory symptoms might arise years after the exposure. Skin and respiratory disorders were also common symptoms after the Exxon Valdez oil spill, in 1989. Other potential long-term risks include lung, kidney, liver, and DNA damage. Significant steps have been taken to increase the knowledge about the longer-term effects of oil exposure. Finally, it is difficult to estimate the catastrophic impact—mental, physical, and emotional—that the spill will have on the people currently living in the Gulf, and on the generations to come. Overall, few would disagree that the risks posed on the human health by oil spills are abnormally dangerous.

248. See generally Walsh & THE PETROLEUM INDUSTRY infra.
250. Ekpu, supra note 28, at 64 n.47. Benzene, toluene, and butylene are three of the most dangerous.
252. Id.
254. See id. "[O]nly seven spills have been studied of the hundreds around the world." Id.
255. Id.
256. Alazraki, supra note 253. "[T]he Department of Health and Human Service has set aside $10 million to track oil spill-related illnesses in states along the Gulf Coast and study cleanup workers." Id.
257. Walsh, supra note 249. As a consequence of the catastrophe, "[t]hese are people in a serious crisis." Id. For instance, an Alabama fisherman with an oil-spill cleanup job for BP, was recently found "dead from a self-inflicted gunshot wound." Id.
3. Economic Loss

Finally, oil spills result in the impairment of large zones of water that were once used for recreation, navigation, or livelihood.\(^{258}\) Thus, depending on its size, an oil spill may affect commercial fishermen, beach owners and users,\(^{259}\) tourist booking agents, waterfowl guides and photographers,\(^{260}\) fishing industry employees, and commercial fish processors.\(^{261}\) Water contamination also impairs recreational activities like swimming or water surfing.\(^{262}\) And the list is absolutely non-exhaustive.

Such economic interests were traditionally unprotected: Strict liability permitted only recovery for harm to persons, real property, or chattels.\(^{263}\) Logically, these damages should have been included within the scope of strict liability because they directly result from the abnormally dangerous activity.\(^{264}\) However, some courts limited the imposition of strict liability for recovering economic loss.\(^{265}\)

In *Curd v. Mosaic Fertilizer, LLC*,\(^{266}\) the Supreme Court of Florida solved the issue consistently with the letter of the Restatement.\(^{267}\) In *Curd*, the defendant spilled pollutants into Tampa Bay.\(^{268}\) The plaintiffs-fishermen sued for both negligence and strict liability, claiming loss of income or profit.\(^{269}\) The court first explained the applicability of the economic loss rule, stating:

[The economic loss rule in Florida is applicable in only two situations: (1) where the parties are in contractual privity . . . or (2) where the defendant is a manufacturer or distributor of a defective

\(^{258}\) See Ekpu, *supra* note 28, at 61.
\(^{259}\) Id.
\(^{260}\) Id.
\(^{261}\) See Weyhrauch, *supra* note 236, at 372–75.
\(^{262}\) Id. at 372
\(^{264}\) Id. The Restatement apparently supports this conclusion, distinguishing between “harm” and “physical harm” and applying strict liability to “harm.” Id. Therefore, liability for economic loss should not excluded by the rule. See id.
\(^{266}\) 39 So. 3d 1216 (Fla. 2010).
\(^{267}\) Id. at 1228.
\(^{268}\) Id. at 1218.
\(^{269}\) Id. at 1219.
product which damages itself but does not cause personal injury or damage to any other property.

Clearly neither the contractual nor products liability economic loss rule is applicable to this situation. . . . Rather we have plaintiffs who have brought traditional negligence and strict liability claims against a defendant who has polluted Tampa Bay and allegedly caused them injury. . . . [T]he economic loss rule does not prevent the plaintiffs from bringing this cause. The plaintiffs' causes of action are controlled by traditional negligence law . . . and by strict liability principles.270

Then, the court went on to apply the principle to the plaintiffs' negligence claim and found "a protectable economic expectation in the marine life that qualifies as a property right."271 Finally, the court held in favor of the plaintiffs, concluding:

[D]ischarge of the pollutants constituted a tortious invasion that interfered with the special interest of the commercial fishermen to use those public waters to earn their livelihood. We find this breach of duty has given rise to a cause of action sounding in negligence. We note, however, that in order to be entitled to compensation for any loss of profits, the commercial fishermen must prove all of the elements of their causes of action, including damages.272

It must be noted that although the court avoided the issue of strict liability, it cited to two oil spill cases in reaching its conclusion.273 The court's holding, then, seems to be broader than it appears. Whether Curd would protect the special interest of surfers and swimmers—in addition to that of fisherman—is an issue beyond the scope of this article. Nevertheless, at this point, it seems clear that economic losses must be taken into account when considering the severity of the harm threatened by engaging in the activity.

Therefore, the magnitude of the risk that either an oil spill will occur or that irreparable damages will result in the event of a spill is enormous and sufficient to justify the enhanced protection provided by strict liability principles.

270. Id. at 1223.
271. Curd, 39 So. 3d at 1224.
272. Id. at 1228 (emphasis added).
B. **No Standard of Reasonable Care Can Be Exercised: Factor (c)**

Another factor to consider is whether the risk of injury can be avoided through the exercise of reasonable care.\(^{274}\) One may argue that using reasonable care can eliminate the risks of oil drilling. However, as previously discussed, this is not the proper question because the defendant's conduct is irrelevant in a strict liability analysis.\(^{275}\) The relevant inquiry is whether the magnitude of the danger is the same regardless of one's fault.\(^{276}\) Oil drilling is dangerous regardless of whether or not negligence accompanies it. First, it is likely that an oil spill may occur; in fact, it is almost the rule.\(^{277}\) Second, when such a spill does occur in the deep sea, the resulting harm to the environment—and not only the environment—is intolerable, regardless of any potential negligence. The difficulties in closing the spill increase with the depth.\(^{278}\) Finally, even an accurate estimation of the real damage becomes hard.\(^{279}\) Accordingly, the argument against strict liability will likely fail.

C. **The Activity Is Not a Matter of Common Usage: Factor (d)**

The more the activity is customary, the less it is abnormally dangerous. An activity is a matter of common usage when it is habitually "carried on by the great mass of mankind or by many people in the community."\(^{280}\) Oil drilling, even when conducted on land or in shallow waters, certainly does not fit within this definition. Thus, this factor also weighs in favor of strict liability.

In any event, as we have seen before, the fact that an activity is a matter of common usage is rarely outcome determinative.\(^{281}\) The significance of factor (d) can be limited by narrowly defining the activity involved.\(^{282}\) Simi-

\(^{274}\) **RESTATEMENT (SECOND) OF TORTS** § 520(c) (1977).

\(^{275}\) Calabresi, *supra* note 39, at 716.

\(^{276}\) Case, *supra* note 97, at 188.


\(^{280}\) **RESTATEMENT (SECOND) OF TORTS** § 520 cmt. i (1977).

\(^{281}\) See Boston, *supra* note 129, at 659; Case, *supra* note 97, at 193.

\(^{282}\) To recall, in *Koos v. Roth*, the court distinguished agricultural field burning from everyday backyard burning, applying strict liability to the latter. 652 P.2d 1255, 1265–66 (Or.
larly, an otherwise ordinary activity can be found abnormally dangerous when it is carried out in a dangerous manner. Accordingly, even assuming that oil drilling could be considered an activity of common usage, deepwater oil drilling is certainly not. In fact, while oil is commonly drilled in-land or in coastal waters, offshore deepwater facilities have found their way only recently. In the Gulf of Mexico there are approximately three thousand and five hundred drilling wells and production platforms, yet few reach a depth of one thousand feet. With a vertical depth of 35,050 feet (10,680 m) and a measured depth of 35,055 feet (10,685 m), the Deepwater Horizon is the deepest oil rig in history. Not only was the activity not common, it was actually a world record of uncommonality. This conclusion is completely consistent with the Restatement approach, adopted in Florida: "[A]bnormal dangers arise from activities that are in themselves unusual, or from unusual risks created by more usual activities under particular circumstances." It seems apparent that the overall risks produced by drilling in such deeper water are much greater than normal.

D. Off-Shore Oil Drilling Is Inappropriate for the Location

Conducting an activity in the wrong place can render such activity abnormally dangerous. In Florida, the proper inquiry is whether the activity is a "non-natural" use of the land. However, a different community may turn a dangerous activity, such as oil drilling, into a natural use of the land; this situation occurred, for example, in a few cases of properly conducted operations of oil wells in Texas and Oklahoma. However, even such cases

1982). In Luthringer v. Moore, pest control was considered professional fumigation and found abnormally dangerous. 190 P.2d 1, 6-7 (Cal. 1948).
283. See Case, supra note 97, at 193.
286. See id.
288. See Urbina, supra note 284.
289. See Boston, supra note 129, at 661; Case, supra note 97, at 193.
290. See Cities Serv. Co. v. State, 312 So. 2d 799, 803 (Fla. 2d Dist. Ct. App.1975). "The conclusion is, in short, that the American decisions, like the English ones, have applied the principle of Rylands v. Fletcher only to the thing out of place, the abnormally dangerous condition or activity which is not 'natural' one where it is." Id. at 802 (quoting W. PROSSER, THE LAW OF TORTS § 78 510 (4th ed. 1971)).
291. See Turner v. Big Lake Oil Co., 96 S.W. 2d 221 (Tex. 1936); Tidal Oil Co. v. Pease, 5 P.2d 389 (Okla. 1931).
are distinguishable. In *Turner v. Big Lake Oil Co.*, the Supreme Court of Texas held that oil drilling was a natural use of land in Texas and refused to impose strict liability for harm caused by the escape of salt water wastes from oil drilling operations. Similarly, in *Tidal Oil Co. v. Pease*, the Supreme Court of Oklahoma found the location for oil drilling operations appropriate. However, the court in *Tidal* stressed that the touchstone for determining the appropriateness of the location is the possibility of injuring others or the land of others. Although this possibility is reduced to a minimum in rural and isolated land areas, engaging in the very same conduct in places where it may affect other people can transform such conduct into an abnormally dangerous activity.

If oil spills in the open sea the risk of harm to third parties is at its greatest; as discussed, the injury would reach a large number of different victims, from landowners to just users of the marine resources. But the reasons why offshore deepwater is inappropriate for oil drilling are more compelling. Not only is deepwater oil drilling more likely to cause accidents, but also the depth of the sea makes solving problems that may arise more difficult. Scientists have compared working in the deep sea to working in space: “It’s a hard place to get to, a tricky space in which to maneuver, and subject to daunting laws of physics.”

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292. 96 S.W.2d 221 (Tex. 1936).
293. See id. at 226.
294. 5 P.2d 389 (Okla. 1931).
295. Id. at 392–93.
296. Id. at 391.
297. Compare Turner, 96 S.W.2d at 221 with *Green v. General Petroleum Co.*, 270 P. 952 (Cal. 1928).

The intent and purpose of the act is to prevent persons in the operation of oil and gas wells to deposit oil... in streams used by others for watering stock, and... from allowing salt water to escape from their wells and flow over the surface of the land of others. To hold that operators could not flow salt water over the surface of land owned by them... would result in depriving the owner of land of the right to use it to its own advantage, where such use would in no way harm or injure others.

*Tidal*, 5 P.2d at 392.
298. See Weyhrauch, *supra* note 236, at 372.
300. See id. “In the future, it is inevitable that technology and risk will increase, not diminish, as ‘easy’ sources of oil are depleted and as the exploration effort moves into new and ever more challenging frontiers.” Id.
301. See Spotts, *supra* note 278. Siphoning systems used to remedy to the spill have “never been tested at such depths.” Id.
302. Id.
E. The Value of the Activity Does Not Outweigh its Risk: Factor (f)

How desperate are we for oil? It is undisputed that oil has been the most important source of energy in the world. The Restatement describes this factor as the prosperity the activity provides to the community. However, as we have seen, a Florida court rejected the “value to the community” factor in Cities Service Co., reasoning that one who carries on the risky activity should bear the loss, rather than the victim who had no relation to the activity other than being injured by it. The conclusion is supported by the approach of other jurisdictions considering the issue; many recent cases suggest that the utility to the community is largely irrelevant.

What seems clear is that even after weighing oil’s utility to the community, such utility is largely outweighed by the extraordinary dangers of deepwater oil drilling. BP and other petroleum companies will continue to profit by extracting oil in the deepwater; but the carriers of such risky oil drilling must bear any costs that may result when their activity goes wrong.

As discussed, the Restatement does not require the presence of all six factors; the presence of three to four factors is generally sufficient for a court to impose strict liability. Here, all six factors weigh in favor of considering deep water oil drilling an abnormally dangerous activity. In short, it is an easy case for strict liability.

V. CONCLUSION

Both water contamination and oil pollution are among the worst threats to the environment that man can produce. Oil spills are almost always within the exclusive control of the companies that operate the wells, and victims can do little to guard against oil pollution or avoid damages resulting from it. When the oil drilling operations are conducted in deep water, the likelihood of harm increases, the resulting damages become monumental, and repairing such damage is arduous, when not impossible. The Deepwater Horizon alone has leaked into the water more than one hundred and forty million gal-

304. RESTATEMENT (SECOND) TORTS § 520 cmt. f (1977). For example, an oil well may not be considered abnormally dangerous in Texas or Oklahoma because of the importance the oil industry has to the local economy, whereas the same oil well in Indiana or California might be found abnormally dangerous because it is a lesser industry in those areas. See id.
305. See id.
308. Case, supra note 97, at 194.
Ions of oil, and scientists continue to discuss how many more similar spills our planet can endure.

Strict liability provides an incentive for oil companies to take appropriate precautions to avoid such catastrophic events; or, in the least, it requires them to bear the burden of the unavoidable accidents. Further, the doctrine of abnormally dangerous activities appears to be the easiest way to determine oil companies’ strict liability—not requiring any showing of the defendant’s negligence and disallowing almost every defense.

Consistently applied throughout the United States, the doctrine is applicable regardless of federal statutes that may already impose some sort of liability. Federal law is but one of the many tools that can be used to keep our waters clean. Additionally, state law must coexist and supplement federal law in order to effectively protect the rights of citizens of the United States—and more generally, those who receive a benefit from the sea.

Accordingly, a plaintiff may freely choose to recover under a common law strict liability theory as the simplest and safest way to redress the environmental damage caused by petroleum companies. Pursuant to the doctrine of abnormally dangerous activities, as first established in Rylands v. Fletcher and developed by the Restatements of Torts, deep water oil drilling qualifies as an activity that, because of its dangerousness, should be subject to a strict liability regimen.

This is especially true in Florida and in such jurisdictions where courts are willing to consider as primary factors the magnitude of the danger created by the activity and the fairness of making the carrier of the activity liable. In the event of litigation in Florida, the mission will be easier. The risks imposed on society as a result of offshore oil drilling are extreme, and the victims are powerless and faultless with respect to the control and prevention of the damages.

Finally, such a conclusion is strongly supported by those decisions that have already considered oil drilling—regardless of the location—an abnormally dangerous activity. Courts that have decided otherwise did not take into account the actual dangerousness of the enterprise, and they will likely reconsider the issue when faced with the additional risks imposed by the inappropriate location. The Deepwater Horizon oil spill may be the best place to start.