STATE STANDING IN CLIMATE CHANGE LAWSUITS

KIRSTEN H. ENGEL*

I.	INTRODUCTION	7
II.	STATE-INITIATED CLIMATE CHANGE LITIGATION IN	
	FEDERAL COURT)
	A. A Typology of State-initiated Climate Change Cases . 220)
	B. The Importance of Federal Court Jurisdiction	
	(and thus State Standing) to State Climate	
	Change Regulation	1
III.	PARENS PATRIAE STANDING: AN "ANSWER" TO THE	
	PROBLEM OF THE SLIPPERY SLOPE? 227	7
	A. Parens Patriae Standing and State Standing	
	Based upon the State as an Individual 228	3
	1. Parens Patriae Standing 228	3
	2. Standing based upon the State as an individual,	
	acting in a nonsovereign capacity)
	B. Massachusetts v. EPA: Muddying the Waters	
	of State Standing	L
	C. Climate Plaintiffs and the Requirements for	
	Parens Patriae Standing 233	3
	D. Parens Patriae and the Slippery Slope Problem 234	1
IV.	THE ADVANTAGES AND PITFALLS OF RELYING UPON	
	STATES TO VINDICATE THE INTERESTS OF PRIVATE	
	INDIVIDUALS IN ADDRESSING CLIMATE CHANGE IN	
	FEDERAL COURT ACTIONS 235	5
V.	CONCLUSION	7

I. INTRODUCTION

Until fairly recently, the federal government was largely absent on the issue of mandating climate change mitigation in the United States. During this time of primarily federal inaction, many state and local governments became policy leaders on climate change. While this trend continues, the EPA, spurred by multiple lawsuits compelling the agency to regulate greenhouse gas emissions, together with an administration more sympathetic to action on climate change, is now putting in place a national greenhouse gas regulatory framework largely using existing re-

^{*} Professor of Law, James E. Rogers College of Law, University of Arizona. The author would like to thank the faculty and students of the Florida State University College of Law for the opportunity to present the Fall 2010 Distinguished Lecture in Environmental Law and for the excellent comments from faculty and students alike.

quirements found in the Clean Air Act.¹ Still, uncertainty continues in the future regulatory landscape for climate change. The EPA's newly promulgated rules regulating greenhouse gas emissions from power plants and other stationary sources are being challenged in multiple courts across the country.² Some members of Congress are seeking to undermine EPA regulation through outright prohibitions upon regulation or funding restrictions.³ As a result of this uncertainty, those states inclined to push forward with policies to mitigate greenhouse gas emissions will likely continue to serve as national climate change policy leaders for some time to come.

The courts have functioned as a critical tool in the efforts of these climate-policy-leader states to further their agenda. A hallmark of climate change litigation thus far is the dominance of state and local governments as plaintiffs. Indeed, *Massachusetts v. EPA*,⁴ the first Supreme Court decision on climate change, was brought by twelve states together with several environmental organizations.⁵ A large number of the lawsuits brought by states are similar to that of *Massachusetts v. EPA*, in which states are seeking to compel the federal government to address climate change under current environmental statutory authorities.⁶ However, with the instigation of climate nuisance lawsuits of *Connecticut v. American Electric Power*⁷ and *Native Village of Kivalina v. ExxonMobil Corp.*,⁸ such litigation now encompasses actions for injunctive relief and damages against individual sources of greenhouse gases under the common law.

^{1.} See, e.g., Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 75 Fed. Reg. 31,514 (June 3, 2010) (to be codified at 40 C.F.R. pts. 51, 52, 70, 71) [hereinafter Tailoring Rule]; Reconsideration of Interpretation of Regulations That Determine Pollutants Covered by Clean Air Act Permitting Programs, 75 Fed. Reg. 17,004 (Apr. 2, 2010) (to be codified at 40 C.F.R. pts. 50, 51, 70, 71).

^{2.} See, e.g., Gabriel Nelson, Texas Seeks Home-Court Edge in Bid to Block EPA's Climate Rules, N.Y. TIMES, Dec. 20, 2010, available at http://www.nytimes.com/gwire/2010/12/20/20greenwire-texas-seeks-home-court-edge-in-bid-to-block-epa-8462.html.

^{3.} As of this writing, members of Congress have thus far failed in their efforts to bar EPA from exercising its authority under the Clean Air Act to regulate greenhouse gases though additional efforts are being planned. John M. Broder, *Senate Rejects Bills to Limit E.P.A.'s Emission Programs*, N.Y. TIMES, Apr. 7, 2011, at A15, *available at* http://www.nytimes.com/2011/04/07/us/politics/07epa.html.

^{4. 549} U.S. 497 (2007).

^{5.} Id. at 505, n.2-4.

^{6.} For an up-to-date list and description of all climate change related lawsuits pending in the United States, see the charts maintained by Columbia Law School's Center for Climate change Law and posted at http://www.climatecasechart.com/. For a discussion of the trends in U.S. climate change litigation, see J.B. Ruhl & David Markell, *An Empirical Survey of Climate Change Litigation in the United States*, 40 ENVTL. L. REP. 10644 (2010) and Kirsten H. Engel, *Courts and Climate Policy: Now and in the Future, in* GREENHOUSE GOVERNANCE: ADDRESSING CLIMATE CHANGE IN AMERICA 229 (Barry G. Rabe ed., 2010).

^{7. 582} F.3d 309, 318 (2d Cir. 2009), cert. granted, 131 S. Ct. 813 (2010).

^{8. 663} F. Supp. 2d 863, 868 (N.D. Cal. 2009).

A state's standing under Article III to litigate concerning climate change, either to compel federal regulation of greenhouse gases or to obtain abatement or damages from individual sources of greenhouse gases, is and will continue to be central to this stateinitiated litigation. Indeed, Massachusetts v. EPA is primarily a decision about state standing and only secondarily a decision about the applicability of the Clean Air Act to greenhouse gas emissions. Much remains uncertain, however, with respect to the doctrinal basis of a state's standing to sue over climate change and the standard that applies. In Massachusetts v. EPA, the Supreme Court appeared to apply a more lax standard of Article III standing to the states in view of both Congress's authorization of such lawsuits in the Clean Air Act and the plaintiff's status as states, seeking relief from the federal government for environmental injuries originating outside their borders over which they were otherwise all but powerless to address.⁹ It is an open question whether states are similarly entitled to this lax standard when suing private sources over their contribution to climate change under the common law, or even whether Article III, as opposed to some other doctrinal basis, such as *parens patriae*, provides the doctrinal basis for a state's standing. Finally, there is also the question as to whether the courts might apply prudential standing doctrines to bar state standing in these common law suits, regardless of the states' entitlement to standing under Article III or parens patriae. An important backdrop, potentially influencing to the courts' resolution of these somewhat intractable questions, is the consideration of the degree to which the court decisions regarding state standing may authorize private litigation over climate change, potentially opening up a "floodgate" of litigation.¹⁰

This Article will review the status of state standing in climate change litigation with specific attention to the confusion over the source of state standing and the test that applies.¹¹ I conclude that standing based upon *parens patriae*, or the status of a state as a sovereign, may appear attractive to the courts concerned about opening the courthouse door to climate litigation by private indi-

^{9.549} U.S. at 518 ("Given that procedural right and Massachusetts' stake in protecting its quasi-sovereign interests, the Commonwealth is entitled to special solicitude in our standing analysis.").

^{10.} See Lujan v. Defenders of Wildlife, 504 U.S. 555, 577-79 (1992).

^{11.} Commentary on state standing to litigate in federal court concerning climate change includes: Kevin A. Gaynor, Benjamin S. Lippard & Margaret E. Peloso, Challenges Plaintiffs Face in Litigating Federal Common-Law Climate Change Claims, 40 ENVTL. L. REP. NEWS & ANALYSIS 10845, 10845-47 (2010); Bradford Mank, Should States Have Greater Standing Rights than Ordinary Citizens?: Massachusetts v. EPA's New Standing Test for States, 49 WM. & MARY L. REV. 1701, 1756-62 (2008); Kathryn A. Watts & Amy J. Wildermuth, Massachusetts v. EPA: Breaking New Ground on Issues Other than Global Warming, 102 NW. U. L. REV. 1029, 1030-35 (2008).

viduals. I also suggest a rationale for *parens patriae* standing based upon the importance of the existence of a federal court forum to address states' efforts to regulate greenhouse gas emissions from out-of-state sources. Finally, I discuss the advantages and disadvantages of relying upon states to vindicate, in federal court, the interests of their citizenry in redressing harms attributable to climate change.

II. STATE-INITIATED CLIMATE CHANGE LITIGATION IN FEDERAL COURT

A. A Typology of State-Initiated Climate Change Cases

The litigation strategy being pursued by states in climate change litigation is consistent with the limited options faced by states as they attempt to address the global tragedy of the commons represented by climate change. According to Garret Hardin, a tragedy of the commons occurs where the individually rational choice concerning the level of exploitation of a natural resource is collectivity irrational, leading to the over-exploitation of the resource and to the overall detriment of each individual exploiter.¹² Such overexploitation occurs because, according to the theory, individual exploiters—herders of cattle grazing in a common pasture, according to Hardin's parable—have an incentive to free ride off of other herders', efforts to refrain from an individually-optimal level of exploitation.¹³ The result is that all herders will engage in a level of exploitation that is collectively too intense for the continued maintenance of a healthy resource.¹⁴

Where it is either not possible or it is undesirable to privatize the commons, the preferred solution to the tragedy of the commons is to restrict use of common resources such that the overall level of exploitation falls below problematic levels. This, however, requires a centralized authority able to enforce restrictions upon all of the herders. Where such a central authority does not exist or is unwilling to act, a partial solution is for a governing authority with jurisdiction over a fraction of the herders, responsible for a sizable amount of the degradation of the commons resource, to mandate that the herders reduce the intensity of their use of the commons resource. Still a third solution would be for some of the herders to voluntarily reduce the number of cattle in their own herds, perhaps responding to economic or political signals that are stronger

^{12.} Garrett Hardin, The Tragedy of the Commons, 162 SCI. 1243, 1244 (1968).

^{13.} *Id*.

^{14.} Id.

than those which would ordinarily compel them to free-ride. These same herders would likely also want to take any measures possible to prevent the remaining herders from adding more cattle to their herds and thereby wiping out any improvements to the commons achieved by their voluntary reductions, not to mention preventing these other herders from enriching themselves at their expense.

The litigation strategy being pursued by states as plaintiffs in climate change litigation tracks the solutions that the herders might adopt to address the problem of the overexploitation of a commons resource. The efforts of nations to develop an international treaty to reduce greenhouse gas emissions reflects the herders' most preferred strategy of deferring to the exploitation reductions ordered by a central authority.

On the other hand, the states' strategy of filing of legal actions to compel a central regulatory body, the EPA, to mandate nationwide greenhouse gas emissions reductions might be seen as a reflection of the herders' second tactic. Massachusetts v. EPA is the product of that approach. In the suit, twelve states, joined by several local governments and environmental organizations, sued the EPA under the Clean Air Act for rejecting a rulemaking petition which sought to compel the EPA to establish nationwide regulations of greenhouse gas emissions from cars and trucks.¹⁵ Collectively, emissions from U.S. cars and trucks make up a sizable fraction of global greenhouse gas emissions.¹⁶ Many other cases filed by state and local governments seek to compel greenhouse gas emission reductions nationwide, thus also reflecting this same strategy.¹⁷ California and other states have filed numerous rulemaking petitions requesting EPA regulation of greenhouse gas emissions under the Clean Air Act. These include a request that the EPA regulate greenhouse gas emissions from ocean-going vessels,¹⁸ from airplanes,¹⁹ and from non-road vehicles and engines, which would include a large variety of outdoor power equipment, recreational vehicles, farm and construction machinery, logging

^{15.} Massachusetts v. EPA, 549 U.S. 497, 505 (2007).

^{16.} The regulations ultimately issued by EPA addressed 23% of the total U.S. greenhouse gas emissions in 2007. *EPA and NHTSA Finalize Historic National Program to Reduce Greenhouse Gases and Improve Fuel Economy for Cars and Trucks*, ENVTL. PROT. AGENCY (Apr. 5, 2010), http://www.epa.gov/otaq/climate/regulations/420f10014.htm.

^{17.} See lawsuits listed under "Force Government to Act" in the Climate Case Chart, *supra* note 6.

^{18.} Petition for Rule Making Seeking the Regulation of Greenhouse Gas Emissions from Ocean-Going Vessels, California v. Johnson (Oct. 3, 2007), *available at* http://ag.ca.gov/cms_pdfs/press/N1474_Petition.pdf.

^{19.} Petition for Rule Making Seeking the Regulation of Greenhouse Gas Emissions from Aircraft, California v. Johnson (Dec. 4, 2007), *available at* http://ag.ca.gov/cms_attachments/press/pdfs/n1501_aircraft_petition_final.pdf.

equipment and mining equipment.²⁰ Should these petitions be denied, the states will likely file suit in federal court challenging the basis for that denial.

The states' effort to compel regulation by the federal government is beginning to bear fruit but its ultimate success is still uncertain. For example, EPA, under the authority of the Clean Air Act, and the Department of Transportation, under the authority of the Energy Policy Conservation Act, is now regulating greenhouse gas emissions from cars and trucks.²¹ EPA is moving slowly to regulate the emissions from other sectors, though each of its regulations is being challenged by industry and is subject to being overturned by Congress. Given the vulnerability of this first tactic, the states might be expected to explore other alternatives to compel sizable reductions in the greenhouse gas emissions of others while seeking to reduce their own in-state emissions as well.

Thus the American Electric Power case might also be seen as exemplifying the third strategy: a defensive tactic to protect the integrity of the plaintiff states' own efforts to reduce their contribution to climate change by seeking sizable reductions in emissions from out-of-state sources. In the case, eight states, one city, and two land trusts are together suing six of the largest electricitygenerating companies in the United States which collectively own and operate coal-fired electric power plants in twenty states.²² Here the states can be seen as seeking to compel reductions of a sizable fraction of U.S. and world greenhouse gas emissions.²³ Together, the six electric generating companies in the United States are responsible for 25% of U.S. electric power greenhouse gas emissions, 10% of total U.S. greenhouse gas emissions, and 2.5% of world greenhouse gas emissions.²⁴ Through this one lawsuit, states would seem to be seeking to make a dent in world greenhouse gas emissions.

Reductions in emissions from out-of-state sources protect the integrity of the plaintiff states' own efforts to reduce their contribution to climate change. The plaintiff states are among the most

^{20.} Petition for Rulemaking Seeking the Regulation of Greenhouse Gas Emissions from Nonroad Vehicles and Engines (Jan. 29, 2008), *available at* http://ag.ca.gov/cms_attachments/press/pdfs/n1522_finaldraftnonroadpetition3.pdf. In this petition, California was joined by the states of Pennsylvania, Connecticut, Massachusetts, New Jersey, and Oregon.

^{21.} Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 75 Fed. Reg. 25324 (May 7, 2010) (to be codified at 40 C.F.R. pts. 85, 86, 600 & 49 C.F.R. pts. 531, 533, 536, 537, 538).

^{22.} Connecticut v. Am. Electric Power, 582 F.3d 309, 314 (2d Cir. 2009), *cert. granted*, 131 S. Ct. 813 (2010). The eight states are Connecticut, New York, California, Iowa, New Jersey, Rhode Island, Vermont, and Wisconsin, and the city is New York City.

^{23.} See id.

^{24.} Id. at 316, 347.

active on climate change of all of the U.S. states. In general, the eight plaintiff states are national leaders on climate change. For example, with the exception of Wisconsin and Iowa, the plaintiff states are among the states with the most numerous climate action programs.²⁵ Similarly, four of the plaintiff states—Connecticut, California, New Jersey, and Rhode Island—were among the top ten states in a recent ranking of states according to the degree to which their transportation policy and finance decisions are effective in reducing carbon emissions.²⁶ Perhaps most importantly, however, all eight of the plaintiff states are members of a regional cap and trade program that limits greenhouse gas emissions from the electric generating sector.²⁷

Given that the American Electric Power plaintiff states are acting to reduce their own greenhouse gas emissions, it is logical that they would attempt to prevent emitters located in non-regulating states from undercutting their emissions reductions or profiting from this regulation. The latter could occur if electric power producers—located in non-regulating states and hence producing more greenhouse-gas-intensive energy, but at a cheaper cost—are able to export power to regulated states and take over the market for electricity supply. For instance, if compliance with the Regional Greenhouse Gas Initiative (RGGI) will necessitate that electric power producers located in states subject to the Initiative raise the price of electricity, electricity providers located in states that are not members of RGGI could replace this supply with the export of cheaper, more greenhouse-gas-intensive energy. There is evidence, for instance, that RGGI will result in such "leakage." In other

^{25.} See Pew Center on Global Climate Change, Interactive Table of All State Initiatives (Jan. 27, 2009), available at http://www.pewclimate.org/docUploads/ AllStateInitiatives-01-27-09-a_0.pdf. The Pew Center looked at each state to determine how many programs, out of 21 state climate programs, each state had. *Id.* With the exception of Iowa (12) and Wisconsin (15), each of the plaintiff states had 17 or more climate programs. *Id.*

^{26.} Colin Peppard, *Getting Back on Track: States, Transportation Policy, and Climate Change*, Switchboard: Natural Resources Defense Council Staff Blog (Dec. 14, 2010), http://switchboard.nrdc.org/blogs/cpeppard/getting_back_on_track_states_t.html.

^{27.} Connecticut, New York, New Jersey, Rhode Island, and Vermont are members of the Regional Greenhouse Gas Initiative, a fully functioning regional cap and trade program applicable to the carbon dioxide emissions of electric power companies. *See* Fact Sheet, Regional Greenhouse Gas Initiative, http://www.rggi.org/docs/RGGI_Fact_Sheet.pdf (last visited May 9, 2011). California is the lead member of the Western Climate Initiative, whose stated goal is to develop a regional greenhouse gas cap and trade program for various industries, including the electric power industry, and Wisconsin and Iowa are members of the Midwest Greenhouse Gas Reduction Accord, a coalition of Midwestern states which have agreed "to establish regional greenhouse gas reduction targets, including a long-term target of 60 to 80 percent below current emissions levels, and develop a multi-sector cap-and-trade system to help meet the targets." *Regional Initiatives*, PEW CENTER FOR GLOBAL CLIMATE CHANGE, http://www.pewclimate.org/what_s_being_done/in_the_states/ regional_initiatives.cfm (last updated Feb. 10, 2010).

words, the imposition of the RGGI cap is likely to result in a shift of greenhouse gas emissions from RGGI states to non-RGGI states that are able to export more fossil-fuel intensive power into RGGI states.²⁸

The American Electric Power lawsuit fits the pattern of the third type of "defensive" litigation mentioned above because the plaintiff states are each members of a coalition that is, or is seeking to reduce greenhouse gas emissions from its own in-state electric power sector.²⁹ The plaintiff states are suing to achieve the abatement of emissions from electric power producers that operate coal-fired power plants in states that are in general not subject to a regional climate initiative and are not particularly active in addressing climate change.³⁰ Thus the lawsuit might be seen as a defensive measure by states that are actively working to reduce their own contribution to global climate change. The states might be seen as turning to litigation to prevent other states, which have failed to limit their own in-state emissions, from undercutting the environmental gains of the plaintiff states who have acted to reduce their emissions.

B. The Importance of Federal Court Jurisdiction (and thus State Standing) to State Climate Change Regulation

It may seem self-evident that standing is critical to any climate change litigation strategy pursued by states. But it bears noting that whatever barriers are posed by standing doctrine exist only with respect to actions filed by states in federal court. States will normally have little trouble establishing standing in their own state courts, at least with respect to the enforcement of their own state laws enacted pursuant to their police powers.³¹ Moreover,

^{28.} JOHN ROGERS, CHRIS JAMES & ROBIN MASLOWSKI, UNION OF CONCERNED SCIEN-TISTS, IMPORTING POLLUTION: COAL'S THREAT TO CLIMATE POLICY IN THE U.S. NORTHEAST 1-2 (2008) ("Yet RGGI's very approach threatens to expand reliance on coal-based electricity produced elsewhere-thus offsetting its global warming reductions. That is because RGGI puts a price on emissions only from power plants within the region, making electricity from plants outside the region less expensive. That, in turn, could spur electricity suppliers in RGGI states such as Maryland to import more power from coal-producing states such as West Virginia."). See also Adam Bumpus, The West is the Best? Leaking Carbon from the Patchwork Quilt. The Green BLOG NETWORK, (Mar. 24,2010). http://greenblognetwork.blogspot.com/2010/03/untitled.html.

^{29.} The defendant electric power companies operate coal-fired power plants in Alabama, Arkansas, Colorado, Florida, Georgia, Indiana, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, New Mexico, Ohio, Oklahoma, South Dakota, Tennessee, Texas, Virginia, West Virginia, and Wisconsin. See Complaint at 45-49, Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265 (S.D.N.Y. 2004) (Second Claim for Relief—State-Law Public Nuisance, $\P 165 - 186$).

^{30.} Id.

^{31.} See Ann Woolhandler & Michael G. Collins, State Standing, 81 VA. L. REV. 387, 398 (1995) ("When the state is enforcing its general powers as narrowed and defined by

generally more lax standards for standing prevail in state courts.³² Nevertheless, the absence of specific authority for the filing of such suits makes the state's standing to do so even in state court less clear-cut than where they are seeking to enforce a state civil or criminal statute.³³

Yet it is federal court jurisdiction that is critical to the states that are actively regulating in-state sources of greenhouse gases but are seeking to compel reductions in emissions originating outof-state. In such situations, states are seeking to use litigation to pursue claims against the federal government to compel the federal government to regulate greenhouse gas emissions or against individual sources of greenhouse gas emissions located out-of-state. Hence states will inevitably wish to file in federal court as the subject matter jurisdiction of their claims will either be federal question jurisdiction or diversity jurisdiction. Thus far, the type of cases filed by states most frequently are actions to compel regulation by the EPA under an existing environmental statute.³⁴ Cases to compel federal regulation of greenhouse gases are filed pursuant to federal question jurisdiction and are thus prototypically filed in federal court.³⁵ State challenges to federal action constitute 28% of the climate cases filed thus far.³⁶ In addition, states are at the forefront of efforts to build the foundation for future regulation.

As discussed above, however, states that are reducing their own in-state emissions will logically want to reduce the ability of out-of-state emitters to erase these climate gains with their own emissions. Hence states are likely to use litigation to seek mitigation of greenhouse gas emissions from out-of-state sources. Indeed, out-of-state sources of greenhouse gas emissions are the common target of the nuisance actions filed by states thus far.³⁷ In these

35. 28 U.S.C. § 1331 (2006) ("The district courts shall have original jurisdiction of all civil actions arising under the Constitution, laws, or treaties of the United States.").

specific legislation, whether civil or criminal, the question of state 'standing' is ordinarily irrelevant.").

^{32. 2} KENNETH A. MANASTER & DANIEL P. SELMI, STATE ENVIRONMENTAL L. § 14.2 (2010) (standing opinions under state law "often emphasize that standing is to be interpreted broadly rather than restrictively" and hold that the standing bar should be lowered in cases of broad public interest). See also Bray v. Pioneer Irrigation Dist., 157 P.3d 610, 612 (Idaho 2007) (rejecting argument that no standing existed because the claimant had the same injury as all citizens based upon the court's interpretation of the statute to provide "any claimant" with standing); Pele Def. Fund v. Paty, 837 P.2d 1247, 1257 (Haw. 1992) (justifying a broad view of standing in cases where the right of the public might otherwise be denied a hearing in a judicial forum).

^{33.} See Woolhandler & Collins, supra note 31, at 398.

^{34.} See supra text accompanying notes 15-31.

^{36.} Columbia Ctr. for Climate Change Law, Chart of Type of Climate Cases Filed in the U.S., http://www.arnoldporter.com/resources/documents/climate%20pie%20chart.pdf (last visited May 9, 2011).

^{37.} Thus, for example, with the exception of Wisconsin, all of the electrical generating plants of the defendants targeted in *Connecticut v. American Electric Power* are located in

suits, states are alleging that private out-of-state sources of greenhouse gases are contributing to the public nuisance of climate change.³⁸ Again, the cause of action is properly filed in federal court because the primary claim being made is that of the defendants' liability under the federal common law of nuisance, a claim subject to federal question jurisdiction.

In granting certiorari in *Connecticut v. American Electric Pow*er, the Supreme Court may rule on the continued viability of federal common law nuisance as a climate change cause of action. The industry respondents in *American Electric Power* allege that recent actions of the EPA in regulating greenhouse gas emissions from stationary sources under the federal Clean Air Act displace a claim of federal common law nuisance.³⁹ Indeed, the EPA has moved to regulate greenhouse gas emissions from motor vehicles and from large stationary sources.⁴⁰ Under *Milwaukee v. Illinois*, federal common law nuisance is preempted to the extent that the regulatory target is subject to federal regulation pursuant to a valid statute.⁴¹ Hence the Supreme Court could well hold that EPA regulation under the Clean Air Act displaces state federal common law nuisance claims against out-of-state sources of greenhouse gases.⁴²

Should the Court hold that EPA regulation has displaced the federal common law claims and hence that the claim is unavailing to plaintiff states, it may simply result in states filing their common law nuisance claims under state nuisance law. Indeed, in the climate change nuisance lawsuits filed thus far, the plaintiffs have alleged state nuisance as an alternative basis for liability.⁴³ Interestingly, such lawsuits are likely to be filed in federal court and hence the standard applied for standing under Article III will continue to be important, regardless of whether the Supreme Court holds, in the *American Electric Power* case, that liability for climate change based upon federal common law has been displaced.

states other than the plaintiff states. Complaint, Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265 (S.D.N.Y. 2005), vacated, 582 F.3d 309 (2d Cir. 2009), cert. granted, 131 S. Ct. 813 (U.S. Dec. 6, 2010).

^{38.} Id.

^{39.} Connecticut v. Am. Electric Power, 582 F.3d 309, 375 (2d Cir. 2009), cert. granted, 131 S. Ct. 813 (2010).

^{40.} Tailoring Rule, *supra* note 1, at 31,519-20. *See also* Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,499 (Dec. 15, 2009) (to be codified at 40 C.F.R. ch. 1).

^{41. 451} U.S. 304, 317-19 (1981).

^{42.} See North Carolina v. Tenn. Valley Auth., 615 F.3d 291, 309-10 (4th Cir. 2010) (reversing district court's determination that sources were liable for polluting emissions based upon Fourth Circuit's conclusion that emissions were legally permitted under the federal Clean Air Act).

^{43.} See Complaint, supra note 37, at 2.

The reason for reliance upon federal courts as the venue for state-law-based climate nuisance litigation is that for state climate plaintiffs, litigating in federal court will be preferable to litigating in the courts of the defendants. Under Supreme Court precedent, the law that would apply to a nuisance lawsuit filed in federal court under state law against an out-of-state defendant would be the law of the state in which the defendant source of the emissions is located.⁴⁴ As it would be extremely unusual that the plaintiff state would have subject matter jurisdiction to file, in its own courts, a lawsuit alleging liability under the law of a different state, the plaintiff state would be faced with the choice of filing suit either in the courts of the state in which the defendant is located or in federal court pursuant to diversity jurisdiction.⁴⁵ Between these two options, state plaintiffs would be expected to file suit in federal court pursuant to diversity jurisdiction upon the expectation that their claims would receive a more sympathetic hearing than they would in the state courts of the parties that they are suing.⁴⁶

III. PARENS PATRIAE STANDING: AN "ANSWER" TO THE PROBLEM OF THE SLIPPERY SLOPE?

The future viability of state-initiated lawsuits in federal court is likely to turn on whether the courts recognize *parens patriae* as an independent and sufficient basis for Article III standing, and are thus able to distinguish the basis for the standing of states from the basis for the standing of individuals. The reason for this is simple: basing state standing on state sovereignty avoids the "slippery slope" inherent in basing standing upon satisfaction of

^{44.} Int'l Paper Co. v. Ouellette, 479 U.S. 481, 487 (1987).

^{45. 28} U.S.C. § 1332 (2006).

^{46.} See, e.g., North Carolina v. Tenn. Valley Auth., 593 F. Supp. 2d 812 (W.D.N.C. 2009). Prior to an appellate court's ruling that state common law had been preempted by federal regulation, this is precisely the tactic that was pursued by North Carolina in attempting to obtain, through a common law nuisance lawsuit, an injunction abating the emission of conventional pollutants from Tennessee Valley Authority's out-of-state coal-fired electric utility plants. *Id.* at 815. North Carolina alleged that the plants' emissions constituted a public nuisance under the law of the states in which the plants were located. *Id.* In referring to North Carolina's complaint concerning the emissions of specific utility plants, the district court stated:

[[]s]pecifically, whether Widows Creek and Colbert are public nuisances in North Carolina is a matter of Alabama law; whether Paradise and Shawnee are public nuisances in North Carolina is a matter of Kentucky law; and whether Bull Run, Kingston, John Sevier, Gallatin, Johnsonville, Cumberland, and Allen are public nuisances in North Carolina is a matter of Tennessee law.

Id. at 829. However, the Fourth Circuit held that the district court paid only lip service to the nuisance standards of these states and instead actually applied North Carolina's statutory-based standards for air pollution to find liability. North Carolina v. Tenn. Valley Auth., 615 F.3d at 306-07.

the same Article III particularized injury test that applies to individuals.⁴⁷ This is because, in a common law nuisance case, states are unlikely to find recourse with the more lax Article III standard applied in *Massachusetts v. EPA*. There, the more lax standard was applied in view of both the Clean Air Act's express grant of jurisdiction to sue the EPA and the state's reliance upon the federal government to address harms originating outside their boundaries.⁴⁸ Neither of these factors exist when a state is suing private entities for a common law nuisance. As a result, if the Court applies Article III at all, it would likely have to apply the same standard of Article III standing that would apply were an individual to sue sources of greenhouse gas emissions. Basing the standing of states suing individual sources of greenhouse gases upon *parens patriae* would enable a court to avoid this slippery slope.

Which standard—parens patriae or the Article III particularized injury test of Lujan—will apply to states in the future is unclear. In Massachusetts v. EPA, the Supreme Court, for all intents and purposes, punted on the issue, with the result that the lower courts have no clear guidance on this issue.

A. Parens Patriae Standing and State Standing Based upon the State as an Individual

1. Parens Patriae Standing

While *parens patriae* is founded in the prerogative of the king to act on behalf of subjects who cannot care for themselves,⁴⁹ the modern origins of *parens patriae* standing can be found in the turn-of-the-century nuisance cases filed by states in federal court over interstate pollution incidents.⁵⁰ These cases represented a shift from the Supreme Court's previous insistence that states show a particularized injury in order to maintain a nuisance suit in federal court.⁵¹ The Court in these cases anchored the standing for state plaintiffs in what it referred to as "quasi-sovereign" interest in governing those within its borders and also of demanding recognition from other sovereigns, which most frequently involves or border disputes.⁵² Safeguarding the health and welfare of its citizens as well as the integrity of its natural resources falls

^{47.} See Lujan v. Defenders of Wildlife, 504 U.S. 555 (1992).

^{48.} See supra note 9.

^{49.} See Late Corp. of the Church of Jesus Christ of Latter–Day Saints v. United States, 136 U.S. 1, 56-57 (1890).

^{50.} See, e.g., Missouri v. Illinois, 180 U.S. 208, 244 (1901).

^{51.} Woolhandler & Collins, *supra* note 31, at 446-47.

^{52.} Snapp & Son, Inc. v. Puerto Rico ex rel. Barez, 458 U.S. 592, 601 (1982).

squarely in the former category of sovereign interests. Thus *parens patriae* recognizes the state's police power, the same power that authorizes states to legislate to protect the health and safety of its residents and the integrity of the land and resources within its boundaries, as a sufficient basis to confer standing to sue in federal court to protect these same interests. It is important to note that these turn-of-the-century *parens patriae* standing cases concerned nuisance, a quintessential example of the type of harm where state representation would be important to any one landowner filing suit due to the perhaps overwhelming barrier posed by free-riding.

Two decisions set the stage for *parens patriae* standing prior to Massachusetts v. EPA: Missouri v. Illinois⁵³ and Georgia v. Tennessee Copper Co.⁵⁴ In the former, Missouri sued Illinois in an attempt to prevent that state from discharging sewage into the Mississippi River over forty miles above St. Louis.⁵⁵ Missouri alleged that Illinois' actions constituted a public nuisance.⁵⁶ Although holding that Missouri had failed to present sufficient proof that Illinois's actions were the cause of any increase in typhoid cases in Missouri,⁵⁷ the Court upheld the standing of Missouri to sue Illinois in federal court based upon *parens patriae* standing.⁵⁸ The Court explained Missouri's standing as a quid pro quo for Missouri's relinquishment, when it joined the union, of its otherwise sovereign prerogative to resort to force to obtain the abatement of the nuisance activity by Illinois.⁵⁹ Similarly, in *Georgia v. Tennessee Copper*, the Court allowed Georgia to sue a copper smelter sited in Tennessee also under public nuisance and again the Court upheld Georgia's standing under parens patriae.60 The Court used the similar rationale that the alternative to being able to file suit in federal court to vindicate its interests in protecting both its citizenry and the state's environment would be to resort to force.⁶¹

More recently, in *Snapp & Son, Inc. v. Puerto Rico*, the Court articulated the modern-day test for determining when a state is

59. Id. at 241. The court stated:

^{53. 180} U.S. 208 (1901).

^{54. 206} U.S. 230 (1907).

^{55.} Missouri v. Illinois, 180 U.S. at 208-09, 211.

^{56.} *Id.* at 214.

^{57.} Id. at 241-48.

^{58.} Id. at 247-48.

If Missouri were an independent and sovereign state all must admit that she could seek a remedy by negotiation, and, that failing, by force. Diplomatic powers and the right to make war having been surrendered to the general government, it was to be expected that upon the latter would be devolved the duty of providing a remedy, and that remedy, we think, is found in the constitutional provisions we are considering.

Id.

^{60.} Georgia v. Tenn. Copper Co., 206 U.S. at 237.

^{61.} Id.

suing in *parens patriae*.⁶² Most importantly, "the State must articulate an interest apart from the interests of particular" persons and this interest must be a "quasi-sovereign interest" which must usually fall in the category of either an interest in the "health and well-being—both physical and economic—of its residents in general[,]" or within the state's interest "in not being discriminatorily denied its rightful status within the federal system."⁶³

The significance of the *parens patriae* case law is that, where a state is suing in its quasi-sovereign capacity, courts have traditionally not required that the state satisfy a rigorous particularized injury test. Thus, in *Missouri v. Illinois*, for example, it was sufficient that Missouri alleged harm to the "health and comfort" of its inhabitants.⁶⁴ Ultimately, in a follow up lawsuit, Missouri was unable to prove that the injury it complained of was attributable to the sewage discharges by Illinois.⁶⁵ This failure to demonstrate that its injury was in fact attributable to the defendant's conduct would, were the individual standing test of *Lujan* applied, most likely lead to the dismissal of Missouri's case on standing grounds. Instead, because Missouri's standing was established on the much more lenient basis of *parens patriae*, the lack of causal connection was considered part of the court's consideration of the merits of Missouri's nuisance claim.⁶⁶

2. Standing Based upon the State as an Individual Acting in a Nonsovereign Capacity

A state might be considered to be acting in an individual capacity with respect to actions it takes for purposes other than those that pertain purely to safeguarding the health or welfare of its citizens and protecting or securing its border. Where, for instance, a state participates in a business venture or on behalf of a particular resident, as opposed to all of its residents, it is not acting in its sovereign capacity.⁶⁷ Similarly, though the issue is closer, where a state acts to protect the land it owns outright, the Supreme Court has stated that it considers the state to be acting in its proprietary

Id.

^{62.} Snapp & Son, Inc. v. Puerto Rico ex rel. Barez, 458 U.S. 592 (1982).

^{63.} Id. at 607.

^{64.} Missouri v. Illinois, 180 U.S. at 241. The court stated:

It is true that no question of boundary is involved, nor of direct property rights belonging to the complainant state. But it must surely be conceded that, if the health and comfort of the inhabitants of a state are threatened, the state is the proper party to represent and defend them.

^{65.} Missouri v. Illinois, 200 U.S. 496, 517-18 (1906).

^{66.} *Id*.

^{67.} See Snapp, 458 U.S. at 601-02.

capacity like any other individual landowner and not in a quasisovereign capacity.⁶⁸

Where a state is suing outside its sovereign capacity, there appears to be little basis for departing from the standing test that would apply to individuals if they filed suit. Thus for lawsuits filed by states in their proprietary capacity, it would appear that the state would have to satisfy the particularized standard for injury-in-fact, causation, and redressability that is set forth in *Lujan v*. *Defenders of Wildlife*.⁶⁹

B. Massachusetts v. EPA: Muddying the Waters of State Standing

In *Massachusetts v. EPA*, the Supreme Court held that the ten plaintiff states had standing to sue the EPA for unlawfully interpreting the Clean Air Act not to apply to greenhouse gas emissions that contribute to global climate change.⁷⁰ Nevertheless, the Court's majority opinion considerably muddied the waters of state standing doctrine by refusing to clearly choose either *parens patriae* or the particularized injury test of *Lujan* as the basis for the standing of Massachusetts and the other states. Instead, the Court conflated the two tests, using the quasi-sovereign interests of the state that were at stake in the lawsuit to satisfy parts of the *Lujan* test.⁷¹

The Massachusetts v. EPA Court appeared to reject parens patriae as an independent and wholly sufficient ground for state standing. The Court upheld Massachusetts' standing after determining that the state's interest in the lawsuit satisfied the three prongs of the Lujan test: injury-in-fact, causation, and, most importantly in the case given the question of whether EPA regulation would make a sufficient dent in global warming, redressability.⁷² Furthermore, the Court characterized the question of standing as one of whether the parties have a sufficiently "personal stake" in

^{68.} *Id.* at 601 (The court stated that "[t]wo kinds of nonsovereign interests are to be distinguished. First, like other associations and private parties, a State is bound to have a variety of proprietary interests. A State may, for example, *own land* or participate in a business venture.") (emphasis added). This categorization appears overbroad. Often a state owns land, not for some administrative purpose or for the benefit of state employees (such as state-owned office buildings), but to enhance the health and well being of its residents. Thus, for example, a state establishes a state-owned public park to provide recreational and aesthetic opportunities to its residents and hence arguably should be able to file suit against a threat to the integrity of that park on the basis of *parens patriae* standing.

^{69. 504} U.S. 555 (1992).

^{70.} Massachusetts v. EPA, 549 U.S. 497, 498 (2007).

^{71.} See Connecticut v. Am. Elec. Power Co., 582 F.3d 309, 334-40 (2d Cir. 2009) (describing how the Supreme Court conflated the two bases for standing).

^{72.} Massachusetts v. EPA, 549 U.S. at 517, 521-26.

the outcome of the case that the "concrete adverseness" needed to enable the court to decide the case can be assured.⁷³ The ability of the "injury in fact" test to meet the need for concrete adverseness appears to have been important to Justice Kennedy's decision to join the *Lujan* majority, and thus must be considered critical to the injury-in-fact test.⁷⁴

Nevertheless, the Court clearly relied upon parens patriae standing in reaching its conclusion that Massachusetts had standing to sue the EPA. The Court analogized Massachusetts' interest in the suit to that of states in prior cases that satisfied standing through a *parens patriae* analysis.⁷⁵ Thus the Court stated that "[j]ust as Georgia's independent interest 'in all the earth and air within its domain' [in Georgia v. Tennessee Copper] supported federal jurisdiction a century ago, so too does Massachusetts' wellfounded desire to preserve its sovereign territory today."⁷⁶ The Court furthermore used the quid pro quo rationale for parens patriae standing—that affording states standing in federal court based upon the state's quasi-sovereign interests was the trade-off made to encourage states to enter the union and therefore give up their rights to protect these interests through diplomacy or force.⁷⁷ The Court further indicated that Massachusetts' proprietary interests—which would otherwise appear to be the trigger for the applicability of the Lujan test—simply reinforced the Court's conclusion, based upon the strength of the Commonwealth's sovereign interest, that Massachusetts had a sufficiently concrete interest in the lawsuit to support standing.⁷⁸ Finally, the Court stated that "Massachusetts' stake in protecting its quasi-sovereign interests," together with Congress's bestowal of a procedural right to sue under the Clean Air Act, justified its conclusion that "the Commonwealth is entitled to special solicitude in our standing analysis."79

In sum, in finding that Massachusetts had standing, the Court relied on both *Lujan* as well as prior state standing decisions resting on *parens patriae*. As a result, it is hard to disagree with the Second Circuit's assessment that the Supreme Court's recent

^{73.} Id. at 517 (quoting Baker v. Carr, 369 U.S. 186, 204 (1962)).

^{74.} Lujan v. Defenders of Wildlife, 504 U.S. 555, 581 (1992) (Kennedy, J., concurrence).

^{75.} Massachusetts v. EPA, 549 U.S. at 519.

^{76.} Id.

^{77.} Id.

^{78.} See *id*. ("That Massachusetts does in fact own a great deal of the 'territory alleged to be affected' only reinforces the conclusion that its stake in the outcome of this case is sufficiently concrete to warrant the exercise of federal judicial power.").

^{79.} Id. at 519-20.

Spring, 2011]

treatment of standing "arguably muddled state proprietary and parens patriae standing." 80

C. Climate Plaintiffs and the Requirements for Parens Patriae Standing

The Supreme Court need not have muddled the jurisprudence of state standing in climate change lawsuits. Rather than arriving at Massachusetts' standing through the overlapping application of the tests for standing based upon the Commonwealth's quasisovereign and proprietary interests, the Court could have simply held that Massachusetts had standing under the parens patriae doctrine.⁸¹ This would have infinitely simplified matters for later state plaintiffs, such as the states in American Electric Power. The reasons are three-fold: Massachusetts and other climate plaintiffs are seeking to address the potential injuries that affect all of the state's population as well as its natural resources; the relative insignificance of the injury sustained by individuals virtually guarantees that individuals will not be able to obtain complete, much less meaningful, relief through the filing of court actions;⁸² and state litigation over climate change is an outgrowth of the state's sovereign interest in addressing its own contribution to a global commons issue.

The first two reasons are not difficult to fathom. First, as a global phenomenon, climate change affects all of the earth and thus necessarily all of a state's territory. According to recent scientific reports, climate change is already affecting the health and well-being of the entire U.S. population as well as the nation's ecosystems.⁸³ Second, individuals might use the class action mecha-

^{80.} Connecticut v. Am. Elec. Power Co., 582 F.3d 309, 337 (2d Cir. 2009).

^{81.} The Court's insistence upon using Article III, as opposed to *parens patriae*, as the framework for its standing analysis cannot be attributed to the Court's adherence to a broad reading of *Massachusetts v. Mellon*, 262 U.S. 447 (1923) in which the Court held that a state did not have standing to assert a quasi-sovereign interest against the federal government. To the contrary, in *Massachusetts v. EPA*, the Court explicitly narrowed *Mellon* to its facts: cases in which a state seeks to protect its citizens from the application of federal law, as opposed to cases such as that brought by Massachusetts against EPA, in which a state asserts its rights under a federal statute. 549 U.S. at 520 n.17. *See also* Mank, *supra* note 11, at 1770.

^{82.} See Snapp & Son, Inc. v. Puerto Rico ex rel. Barez, 458 U.S. 592, 607 (1982). Although, according to the Supreme Court in *Snapp*, the capacity of individuals to vindicate their harms through a court action is one of the prongs of the *parens patriae* test, lower courts have criticized the inclusion of this element, arguing that the vindication of a state's quasi-sovereign rights should not be dependent upon the availability of relief for the individual resident. See Puerto Rico ex rel. Quiros v. Bramkamp, 654 F.2d 212, 217 (2d Cir. 1981).

^{83.} See GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES, U.S. GLOBAL CHANGE RESEARCH PROGRAM (Thomas R. Karl, Jerry M. Melillo & Thomas C. Peterson eds., 2009).

nism to aggregate the magnitude of their climate-change-related injuries. However, the vast discrepancy between the relatively small harm sustained by any one individual and the costs and impacts associated with emissions cutbacks of the amounts necessary to make a dent in climate change, not to mention the multitude of defendants who would need to be sued, both domestically and internationally, clearly renders it impossible for an individual to obtain meaningful relief.

Courts and commentators have overlooked the sovereignty interest behind a state's pursuit of climate litigation. According to this sovereignty interest, climate litigation is intimately related to the state's exercise of its police powers to reduce the greenhouse gas emissions of in-state emitters. As discussed in Part I.A. above, litigation by the state against out-of-state contributors in an effort to achieve similar mitigation actions by such out-of-state contributors is to be expected. Such efforts can be seen as an effort to stop the leakage, from the regulating state to non-regulating states, of various environmental and economic benefits associated with regulation. Thus the ability to sue out-of-state sources is arguably an important incentive for states to unilaterally reduce their own contribution to a commons degradation problem such as global climate change. Because litigation against out-of-state sources of commons degradation is integral to a state's exercise of its own police powers to address a commons problem such as climate change, standing of states in federal court to litigate against out-of-state contributors should be seen as a manifestation of a state's sovereignty interests.

D. Parens Patriae and the Slippery Slope Problem

The Court's leading authority on the standing of states to litigate disputes over climate change, *Massachusetts v. EPA*, is internally self-contradictory. The Court upheld the states' standing under Article III, but in part upon the basis of the states' status as sovereigns—a factor that would otherwise support *parens patriae* standing. By finding state standing based in part upon unique aspects of states, the Court was able to preserve a role for the federal courts in ensuring compliance with laws related to climate change and, at the same time, protect the federal courts from being overwhelmed with a flood of lawsuits. The analysis adopted by the Court may not hold up in the long term because it conflates proprietary and *parens patriae* grounds for standing and does not provide clear guidance for lower courts in the future.

A more principled method of recognizing state standing in climate change lawsuits that avoids the slippery slope that could compel recognition of the standing claims of individuals for climate change harms would be to simply base state standing upon *parens patriae*. Such an approach recognizes the real environmental harm attributable to climate change as sufficient for standing purposes, but limits the litigation based upon this harm to actions by representative state governments. It thus does not open the doors to suits by individuals, but nor does it close them. Whether harm to individuals from climate change meets the test for standing can wait for the development of a better understanding of the impacts of climate change on the individual level and for the further development of the *Lujan* test in the lower courts.

It is difficult to know whether the Court purposefully conflated the Article III and *parens patriae* tests in order to ensure that its decision upholding state standing would not open the courts to climate lawsuits by individual citizens. Faced with opening the courthouse doors to all climate plaintiffs, states as well as individuals, and shutting them altogether, it is quite possible that the Supreme Court would choose the latter option. In any case, we are left with a precedent that effectively allows states to litigate over climate injuries but leaves uncertain the ability of individuals to do so.

IV. THE ADVANTAGES AND PITFALLS OF RELYING UPON STATES TO VINDICATE THE INTERESTS OF PRIVATE INDIVIDUALS IN ADDRESSING CLIMATE CHANGE IN FEDERAL COURT ACTIONS

Although this Article suggests a doctrinal reformulation that will place state standing on the surer ground of *parens patriae*, this reformulation does nothing to alter the status quo, established in *Massachusetts v. EPA*, of relying upon states to vindicate the public interest in redressing harms attributable to climate change. Granted, nothing about the current status of state standing law or the reformulation here proposed precludes standing by individual claimants. Instead, the status quo and the proposed reformulation chart alternative paths for distinguishing the basis for state standing from the somewhat higher burden that individuals face in establishing individual standing under the *Lujan* test.

The major benefit of the status quo is that mentioned above in Part III: reliance upon states as plaintiffs is likely the most realistic arrangement for ensuring that interest in redressing the harms of climate change receives a hearing in federal court. Restricting the actions to those filed by states limits the possible number of suits and thereby makes it more likely that the courthouse door will remain open to at least some claims and not be shut entirely on the pretext of protecting the courts from a potential flood of litigation.

A second benefit is attributable to the filtering of climate change lawsuits through the litigating arm of state government. State litigating authority will reside either with a state department of justice within the executive branch or with an independently-elected state attorney general. Both offices are accountable to the state electorate, either through the governor or directly, in the case of an attorney general elected by the state's voters. Such filtering should ideally serve as a democratic and public interest check upon the climate lawsuits that are filed, ensuring that they vindicate a broader public interest, as opposed to the narrow self-interest of a small number of plaintiffs. Given the generally high standards for professionalism and legal education that prevail in state government legal offices, filtering climate lawsuits through state government should serve as a check upon the filing of badly-conceived lawsuits with an inadequate legal or factual foundation. This would result in a savings to judicial resources that might otherwise be wasted on lawsuits with a poor legal or factual foundation.

Yet a third benefit is that which follows from the vantage point of state government which may be able to bring a stronger case for the interrelated harms related to climate change across an entire ecosystem, as opposed to a discrete parcel of property owned by a single person, for example. Thus a state's broader authority would enable it to seek redress for the harms of climate change to an entire watershed, as opposed to a single parcel of property in that watershed.

Along with the advantages of state representation of private individuals' interests in redressing harms from climate change in federal court also come certain disadvantages. Chief among these disadvantages is the possibility that the state's litigation decisions do not reflect the public interest, but instead reflect the more narrow industrial interests, those with the most to lose from stateinitiated lawsuits based upon climate change harms. In such a case, reliance upon state government to file climate change lawsuits undermines the public interest in such litigation.

Suppose, for example, the state refuses to seek federal court review of an EPA decision not to regulate greenhouse gas emissions from military bases because the state houses a large military base and the former head of the base is now a powerful member of the state senate. The public interest might well be served by a state-initiated lawsuit seeking to compel EPA to regulate the emissions from military bases and a private litigant might have an incentive to file such a suit, but the powerful senator may block any state effort to file suit in the name of the state.

V. CONCLUSION

Despite recent EPA actions to regulate greenhouse gas emissions, states must still be considered the policy leaders in climate change. While much state climate policymaking consists of programs, initiatives, procurement guidelines, legislation, and rules, states have also been the initiators of climate-change-related litigation. These lawsuits can be seen as an outgrowth of the states' efforts to address the commons aspects of the problem of climate change. This pushes the states to seek to compel the federal government to mandate emissions reductions and also to seek to reduce the emissions of large out-of-state sources of greenhouse gases. The latter tactic can be understood as an effort both to reduce climate change impacts and also to remove the disincentive for other states to regulate greenhouse gases due to the prospect that their industries will be able to undercut and hence take over the market share previously possessed by industries now regulated in climate-regulating states.

These two types of lawsuits will be filed by states in federal court where the state's standing under Article III continues to be an issue. This Article has argued that the Supreme Court has muddied the standard applicable to states in an effort to lower, and hence distinguish, state standing from the standing standard that would apply to private individuals as plaintiffs. This Article suggests an alternative method of distinguishing the standing of states from that of private plaintiffs that is doctrinally straightforward: relying upon the doctrine of *parens patriae*. Finally, to the extent the Court maintains a lower bar to state standing than to the standing of private individuals seeking to redress harms resulting from climate change, states may be the only entities that can bring such suits in federal court. Currently the industry petitioners in the Connecticut v. American Electric Power case, backed by the Obama Administration, are seeking to chip away at state standing in climate change lawsuits by arguing that state standing is untenable in climate nuisance suits given the broad nature of the relief sought.⁸⁴ The Court should resist this effort because it

^{84.} See Brief for Tennessee Valley Authority as Respondent Supporting Petitioners, Am. Elec. Power v. Connecticut, 131 S. Ct. 813 (2010) (No. 10-174), available at http://www.americanbar.org/content/dam/aba/publishing/previewbriefs/10_174_brief_update s/10-174_PetitionerTVARespondent.authcheckdam.pdf.

further undermines the capacity of the states to vindicate climate injuries of the general public.

REASONABLE INVESTMENT-BACKED EXPECTATIONS: SHOULD NOTICE OF RISING SEAS LEAD TO FALLING EXPECTATIONS FOR COASTAL PROPERTY PURCHASERS?

THOMAS RUPPERT*

I.	INTRODUCTION	239
II.	RISING SEAS: THE NEED TO CONFRONT	
	COASTAL CHANGE	242
III.	TAKINGS BACKGROUND	243
IV.	THE EVOLUTION OF REASONABLE INVESTMENT-BACKED	
	EXPECTATIONS	246
	A. Introduction to Reasonable Investment-Backed	
	Expectations and Penn Central	246
	B. Kaiser Aetna	247
	C. Nollan	248
	D. Lucas	249
	E. Palazzolo v. Rhode Island	250
	F. Tahoe Sierra	252
	G. The State of RIBE Today	
V.	THE IMPACT OF "NOTICE" ON RIBE	256
VI.	EXAMPLES OF NOTICE STATUTES AND RELATED CASES	260
	A. Examples of Notice Statutes	
	B. Coastal Hazards Notice in Case Law	266
VII.	DRAFTING THE BEST POSSIBLE NOTICE REQUIREMENT	267
	A. What Property Is Affected	268
	B. Which Property Transactions Are Affected	271
	C. Timing and Process Related to the Notice	271
	D. Content and Form of Notice	272
	E. Results of Compliance with Notice Requirements	274
	F. Results of Non-Compliance with	
	Notice Requirements	274
VIII.	CONCLUSION AND RECOMMENDATIONS	275

I. INTRODUCTION

Sea level is rising, and the rate of this rise is increasing.¹ As a result, past trends and problems with coastal flooding, storm

^{*} Coastal Planning Specialist, Florida Sea Grant College Program, University of Florida, Gainesville, FL, truppert@ufl.edu. This research was funded under award number NA10OAR4170078 from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce.

^{1.} Andrew C. Kemp et al., Timing and Magnitude of Recent Accelerated Sea-Level Rise (North Carolina, United States), 37 GEOLOGY 1035, 1035, 1037-38 (2009); Stefan

surge, salt water intrusion, and erosion will be even worse going forward.² As government's role is to help protect its people, their property, and the resources common to the people, the changes in coastal areas present enormous challenges for coastal areas and government entities with responsibility or authority in these areas. Such entities should be utilizing the tools at their disposal to keep people, property, and infrastructure safe from the rising seas.

Keeping people and property safe does not only mean protecting property through "armoring" such as sea walls, bulkheads, or levees.³ While such armoring has appropriate applications in certain circumstances, it also carries costs. Two significant costs include potentially increasing the overall risk of flood damage due to increased development in protected areas and the loss of natural resources as beaches and estuarine systems drown out between a moving shoreline and stationary armoring.⁴ Instead of armoring, a number of land use planning and regulatory structures can assist in moving development away from areas at risk of direct sea level rise (hereinafter "SLR") or erosion or storm surges that can be exacerbated by SLR.

While each potential planning approach to the problem carries its own costs and difficulties, the potential cost of a constitutional claim of a taking of private property for public use⁵ poses a significant barrier in the United States to entertaining serious consideration of many adaptive planning and hazard mitigation

FLA. ADMIN. CODE R. 63B-33.002(5) (2008).

Rahmstorf, A New View on Sea-Level Rise: Has the IPCC Underestimated the Risk of Sea-Level Rise?, 4 NATURE REPORTS: CLIMATE CHANGE 44, 44-45 (2010).

^{2.} FLORIDA OCEANS AND COASTAL COUNCIL, CLIMATE CHANGE AND SEA-LEVEL RISE IN FLORIDA: AN UPDATE OF THE EFFECTS OF CLIMATE CHANGE ON FLORIDA'S OCEAN & COASTAL RESOURCES 5-8, 11 (2010) *available at* http://www.floridaoceanscouncil.org/reports/ Climate_Change_and_Sea_Level_Rise.pdf.

^{3.} Armoring is defined as

a manmade structure designed to either prevent erosion of the upland property or protect eligible structures from the effects of coastal wave and current action. Armoring includes certain rigid coastal structures such as geotextile bags or tubes, seawalls, revetments, bulkheads, retaining walls, or similar structures but does not include jetties, groins, or other construction whose purpose is to add sand to the beach and dune system, alter the natural coastal currents, or stabilize the mouths of inlets.

^{4.} Jenifer E. Dugan & David M. Hubbard, *Ecological Responses to Coastal Armoring on Exposed Sandy Beaches*, 74 SHORE & BEACH 10, 15 (2006) (identifying risks and frequent use or armoring in certain locales). *Cf.* ORRIN H. PILKEY & ROB YOUNG, THE RISING SEA 159 (2009); THOMAS K. RUPPERT ET AL., ERODING LONG-TERM PROSPECTS FOR FLORIDA'S BEACH-ES: FLORIDA'S COASTAL MANAGEMENT POLICY 14 (2008), *available at* http://www.law.ufl.edu/ conservation/pdf/coastal_management_finalreport.pdf (highlighting temporary and atypical nature of armoring).

^{5.} See infra Part IV.

policies.⁶ Even when takings claims fail, the time and expense of litigating the issue can dramatically impact the regulating entity as many, particularly with the current economic situation, already lack funds for basic operations. While specific numbers on the chilling impact of takings claims on potential planning for adaptation to SLR do not exist, there is evidence that takings claims have significantly chilled enactment of regulations to protect our environment.⁷

To minimize the barrier posed by potential takings liability, this Article focuses on one specific—and key—concept in regulatory takings law: reasonable investment-backed expectations (hereinafter "RIBE"). This Article examines how increasing awareness of SLR and its impacts as well as distribution of such information should inform analysis of coastal owners' RIBE in legal claims that government regulation or action has taken private property. Even absent any intent to alter takings analysis, notice requirements promote better free market operation in real property transactions since an ideal free market requires that consumers have sufficient knowledge to make informed choices. In addition, more informed choices strengthen the case that those making the choice to purchase coastal property accept the risks inherent in owning coastal property.⁸

Part II gives examples of the evidence for SLR, estimates for the future, and the impact of SLR. Part III briefly discusses the development of regulatory takings and RIBE. Part IV discusses the evolution of RIBE through case law, primarily at the level of the U.S. Supreme Court, and its role in takings analysis. Part V specifically looks at notice as an element of RIBE. Part VI discusses various notice statutes for coastal property owners and the impact of such notice statutes. The conclusion and recommendations follow in Part VII.

^{6.} Booz Allen Hamilton, Inc., NAT'L OCEANIC AND ATMOSPHERIC ADMIN. COASTAL SERVS. CTR., Hazard and Resiliency Planning: Perceived Benefits and Barriers Among Land Use Planners, 10, 22, 31-32 (2010), available at http://csc.noaa.gov/publications/ social_science/NOAACSCResearchReport.pdf.

^{7.} *Id.* For discussion of a similar dynamic of a chilling effect due to takings claims based on statutes instead of the U.S. Constitution, see John D. Echeverria & Thekla Hansen-Young, *The Track Record on Takings Legislation: Lessons from Democracy's Laboratories*, GEORGETOWN ENVTL. LAW & POLICY INST. (2008) http://www.law.georgetown.edu/gelpi/TrackRecord.pdf.

^{8.} But see Order for Final Summary Judgment, Jordan v. St. Johns County, No. CA05-694, at 17 n. 2, (Fla.7th Cir. Ct. May 21, 2009) (referring to as "coercive and repugnant" a policy of St. Johns County, Florida requiring residents of an at-risk area to sign "Assumptions of Risk" agreements to receive development permission).

II. RISING SEAS: THE NEED TO CONFRONT COASTAL CHANGE

After about six thousand years of unusual relative stability, sea level is rising.⁹ In Florida, our relative sea level has risen about eight inches over the past century.¹⁰ Relative rates in other parts of the world are higher or lower depending on many local factors.¹¹ The current rates of SLR are projected to increase over the next century.¹² Part of this rise is due to thermal expansion of ocean waters as they warm and part is due to the meltwater of glaciers and polar ice sheets.¹³ While estimates vary, most peer-reviewed scientific estimates fall within the range of 0.8–1.8 meters of SLR during the next 100 years.¹⁴

Current SLR has already significantly impacted our world,¹⁵ but the projected rates will be far worse than anything we have seen yet. That coastal areas are the fastest-growing areas only exacerbates the risks we face.¹⁶ Proactively adapting to changing sea levels presents the best option for protecting life, infrastructure, and property. Many organizations, governments, municipalities,

11. Sea Level Trends: Frequently Asked Questions, NAT'L OCEANIC AND ATMOSPHERIC ADMIN., http://tidesandcurrents.noaa.gov/sltrends/faq.shtml#q1 (last visited May 9, 2011). See generally Sea Level Trends, NAT'L OCEANIC AND ATMOSPHERIC ADMIN., http://tidesandcurrents.noaa.gov/sltrends/sltrends.html (last visited May 9, 2011) (showing sea level trends in the United States and globally).

12. Cazenave & Llovel, supra note 9, at 165-66; Aslak Grinsted et al., Reconstructing Sea Level from Paleo and Projected Temperatures 200 to 2100AD, 34 CLIMATE DYNAMICS 461, 470 (2009).

13. Cazenave & Llovel, *supra* note 9, at 152.

14. See, e.g., Rahmstorf, supra note 1, at 44-45. See also Grinsted supra note 12, at 461, 463.

16. For example, the Atlantic coastal counties experienced population growth of 58% between 1980 and 2003. KRISTEN M. CROSSETT ET AL., NAT'L OCEAN & ATMOSPHERIC AD-MIN., POPULATION TRENDS ALONG THE COASTAL UNITED STATES: 1980-2008, 3 (2004) available at http://oceanservice.noaa.gov/programs/mb/pdfs/coastal_pop_trends_complete.pdf. While land below thirty feet above sea level which is particularly vulnerable to coastal hazards comprises only 2% of the world's land area, this area is home to almost 10% of the world's population. Gordon McGranahan et al., *The Rising Tide: Assessing the Risks of Climate Change and Human Settlements in Low Elevation Zones*, 19 ENVT. & URBANIZATION 17, 22 (2007).

^{9.} Anny Cazenave & William Llovel, *Contemporary Sea Level Rise*, 2 ANN. REV. OF MARINE SCI. 145, 146 (2010).

^{10.} See, e.g., Obtaining Tide Gauge Data, PERMANENT SERV. FOR MEAN SEA LEVEL, http://www.psmsl.org/data/obtaining/ (last updated Mar. 23, 2011) (providing links to Florida tide gauge charts). See also Key West, PERMANENT SERV. FOR MEAN SEA LEVEL, http://www.psmsl.org/data/obtaining/stations/188.php (last updated Feb. 23, 2011); FLORI-DA ATLANTIC UNIVERSITY, FLORIDA'S RESILIENT COASTS: A STATE POLICY FRAMEWORK FOR ADAPTATION TO CLIMATE CHANGE 15, available at www.ces.fau.edu/files/projects/ climate_change/Fl_ResilientCoast.pdf.

^{15.} See, e.g., Larisa R. G. Desantis et al., Sea-level Rise and Drought Interactions Accelerate Forest Decline on the Gulf Coast of Florida, USA, 13 GLOBAL CHANGE BIOLOGY 2349 (2007) (chronicling impacts of SLR on coastal forests in Florida for more than two decades); Nirmala George, Disputed Isle in Bay of Bengal Disappears into Sea, U.S. NEWS & WORLD REPORT, Mar. 24, 2010, available at http://www.usnews.com/science/articles/2010/03/ 24/disputed-isle-in-bay-of-bengal-disappears-into-sea.html.

and commentators have argued for adaptive planning and have begun to discuss its tools and methods.¹⁷ In some countries the focus has been on armoring coastlines; some have combined armoring with relocation out of certain areas;¹⁸ yet few places are talking seriously about protecting people and natural coastal ecosystems by allowing natural movement of these areas through removing human development that interferes with such movement. Part of this reluctance has been attributed to the potential cost to regulators of regulatory takings claims if policies implementing relocation strategies are utilized. The next section briefly describes the basis in U.S. constitutional law for regulatory takings.

III. TAKINGS BACKGROUND

While much of the public may view real property as a static notion, this is incorrect;¹⁹ few concepts have provoked more writing, discussions, and conflict. The history of property through many ages and cultures included the ability of the leader or leaders to significantly modify—even freely redistribute—property.²⁰ Such great power over property could be used for good or ill; cases of abuse in Europe during the Middle Ages eventually led to the *Magna Carta*, a document which sought to limit the power of feudal kings to arbitrarily take away property. This represented a watershed moment in the history of property in the western world as it heralded the beginnings of development of a conception of prop-

^{17.} See, e.g., COASTAL SERVS. CTR., NAT'L OCEANIC & ATMOSPHERIC ADMIN., http://www.csc.noaa.gov/ (last visited May 9, 2011); Climate Ready Estuaries, U.S. ENVTL. PROTECTION AGENCY, http://www.epa.gov/climatereadyestuaries/ (last visited May 9, 2011); Climate Adaptation, ICLEI http://www.icleiusa.org/programs/climate/Climate_Adaptation (last visited May 9, 2011); Maryland at Risk: Sea-Level Rise Adaptation & Response, MD. DEPT. OF NATURAL RES. (2008), available at http://www.dnr.state.md.us/CoastSmart/pdfs/ SeaLevel_AdaptationResponse.pdf. See also Planning for Climate Change: Resources for Bay Area Local Government, SAN FRANCISCO BAY CONSERVATION & DEV. COMM'N, http://www.bcdc.ca.gov/planning/climate_change/adaptation.shtml (last visited May 9, 2011); Framework for Implementation—Sea Level Rise Task Force, N.Y. STATE DEPT. OF ENVTL CONSERV., http://www.dec.ny.gov/energy/48459.html (last visited May 9, 2011); Sea Level Rise, SATELLITE BEACH COMPREHENSIVE PLANNING ADVISORY BOARD, http://satellitebeachfl.org/CPABSeaLevelRise.aspx (last visited May 9, 2011) (Satelite Beach, Fla.); City of Punta Gorda Adaptation Plan, Sw. FLA. REGIONAL PLANNING COUNCIL (2009), available at http://www.chnep.org/projects/climate/PuntaGordaAdaptationPlan.pdf.

^{18.} Arguably Venice, Italy is taking the approach of both armoring and relocation. Italy is pursuing a tidal flood barrier to protect Venice even as the residents of Venice vote with their (soggy) feet, and the population of Venice has dropped from 121,000 in 1996 to 62,000 in 2009. PILKEY & YOUNG, *supra* note 4, at 22.

^{19.} See generally, ERIC T. FREYFOGLE, ON PRIVATE PROPERTY: FINDING COMMON GROUND ON THE OWNERSHIP OF LAND xvii-xix, 145-56 (2007).

^{20.} See, e.g., Thomas T. Ankersen & Thomas Ruppert, Tierra y Libertad: The Social Function Doctrine and Land Reform in Latin America, 19 TUL. ENVTL. L.J. 69, 76-78 (2006); Thomas T. Ankersen & Thomas K. Ruppert, Defending the Polygon: The Emerging Human Right to Communal Property, 59 OKLA. L. REV. 681, 689-90 (2006).

erty focused more on the individual than on the community. This conception of property grew stronger and stronger in the west, finding substantial philosophical support in the writings of John Locke, who promoted the individual's right to property as a "natural right" that preceded the formation of government.²¹ In fact, said Locke, the primary purpose for which men—and it was men in Locke's time and culture—formed government was to protect the property that natural law granted to them.²²

This concept of an *a priori* natural law right to property stands in stark contrast to concepts of property that view property not as a natural law creation, but rather as a creation of the positive law of the state. Once government exists to define and exercise control that protects the rights to property the State defines, then property begins to exist; without the State to define the rights of property and sanction and protect those rights, the rights to property do not exist.²³

One might believe that such arcane discussions about the origins and history of property have no relevance to property today, but in truth, these concepts matter greatly since awareness of them—or lack thereof—color our expectations related to property.²⁴ The U.S. Supreme Court has long held for more than three decades that our expectations related to property form one of the factors to consider when analyzing whether government regulation has "taken" private property for public use in contravention of the Fifth Amendment to the U.S. Constitution.²⁵

The Bill of Rights was adopted in 1791 and added to the 1788 Constitution of the United States. The Fifth Amendment states, in part, "nor shall private property be taken for public use, without just compensation."²⁶ For most of the United States's history, this was understood to only limit physical invasions and expropriations of property.²⁷ This understanding fits comfortably with the notion of a right to property that had been constantly evolving since adop-

^{21.} See generally JOHN LOCKE, TWO TREATISES OF GOVERNMENT (A. Millar et al. eds., 6th ed. 1764) (1689).

^{22.} Id. § 222.

^{23.} For information on the republican/positivist view of law vs. federalist/natural law view, see A. Dan Tarlock, *Local Government Protection of Biodiversity: What is its Niche?*, 60 U. CHI. L. REV. 555, 588 (1993). See also Ankersen & Ruppert, *Defending the Polygon*, supra note 20, at 689-90; Ankersen & Ruppert, *Tierra y Libertad*, supra note 20, at 89-91.

^{24.} See generally FREYFOGLE, ON PRIVATE PROPERTY, supra note 19 (discussing changes in property law in the history of the United States and its colonies).

^{26.} Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104 (1978). *Cf.* Vill. of Euclid v. Ambler Realty Co., 387 (1926) (discussing how changing times and context can alter what a property owner might reasonably expect for property restrictions).

^{27.} U.S. CONST. amend. V.

^{27.} Lingle v. Chevron U.S.A. Inc., 544 U.S. 528, 537 (2005); see also Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1028 n.15 (1992) ("[E]arly constitutional theorists did not believe the Takings Clause embraced regulations of property at all").

tion of the *Magna Carta* in 1215 first limited the right of the sovereign to take property from those who held it.²⁸

This understanding of the Fifth Amendment being limited to government actions that either physically invade or take title to property remained our law for more than a century until 1922 when, in *Pennsylvania Coal Co. v. Mahon*, the U.S. Supreme Court held that a regulation that goes "too far" in limiting the use of property can be treated as equivalent to a physical invasion of property.²⁹ This new type of taking has been called a regulatory taking or inverse condemnation. This Article refers to these as regulatory takings or simply as takings.

Prior to as well as after the *Mahon* case, other U.S. Supreme Court takings cases did not require compensation for situations in which regulations had severely diminished the value of property. This line of cases, stretching from 1887 to 1962,³⁰ indicated that when the State exercises its power to protect the health, morals, and safety of the public from a use of property that works contrary to these interests, no compensation is required unless the burden on the property owner is too onerous.³¹

It might be argued that *Lingle* essentially overturned this aspect of several of these cases on the basis that these cases were actually due process cases, not regulatory takings cases. *Cf.* 544 U.S. at 541. However, *Lingle* likely did not overrule *Goldblatt* or the others since these cases were still, at least in part, properly takings cases. *Goldblatt* serves as an example. On the one hand, *Goldblatt's* holding is that the claimant did not meet its burden to demonstrate that the regulation was not reasonable—a due process argument. *Goldblatt,* 369 U.S. at 596. However, the Court only examined the due process question of whether the regulation was reasonable after disposing of the issue of whether the regulation was a taking in light of the regulation going too far in imposing a financial burden. *Id.* at 592-94.

^{29.} See U.S. NATL ARCHIVES & RECORDS ADMIN., MAGNA CARTA (Nicholas Vincent trans. 2007) (1215) available at http://www.archives.gov/exhibits/featured_documents /magna_carta/translation.html.

^{29. 260} U.S. 393, 415 (1922).

^{30.} See generally Penn Central Transportation Co. v. City of New York, 438 U.S. 104, 125 (1978) (stating that "in instances in which a state tribunal reasonably concluded that 'the health, safety, morals, or general welfare' would be promoted by prohibiting particular contemplated uses of land, this Court has upheld land-use regulations that destroyed or adversely affected recognized real property interests." (citing Nectow v Cambridge, 277 U.S. 183, 188 (1928))); Goldblatt v. Town of Hempstead, 369 U.S. 590, 593 (1962) (indicating that a valid police-power exercise of the right to regulate land use "as will be prejudicial to the health, the morals, or the safety of the public, is not, and, consistently with the existence and safety of organized society, cannot be, burdened with the condition that the state must compensate such individual owners for pecuniary losses they may sustain, by reason of their not being permitted, by a noxious use of their property, to inflict injury upon the community." (quoting Mugler v. Kansas, 123 U.S. 623, 668-69 (1887))); Miller v. Schoene, 276 U.S. 272, 277-78 (1928) (allowing destruction of cedar trees, without compensation for the resulting decrease in property value, in order to protect the valuable apple industry from cedar rust); Gorieb v. Fox, 274 U.S. 603, 605 (1927) (requirement that portions of parcels be left unbuilt as set-backs); Vill. of Euclid v. Ambler Realty Co., 272 U.S. 365, 384-85 (1926) (prohibition of industrial use); Hadacheck v. Sebastian, 239 U.S. 394 (1915) (barring operation of brick mill in residential area); Mugler v. Kansas, 123 U.S. 623 (1887) (prohibiting manufacture of alcoholic beverages).

^{31.} Goldblatt, 369 U.S. at 592-94.

IV. THE EVOLUTION OF REASONABLE INVESTMENT-BACKED EXPECTATIONS

Under current regulatory takings law analysis, most regulatory takings cases will be decided under rules that must consider RIBE.³² This section briefly discusses a small number of the seminal U.S. Supreme Court cases that help determine the scope of RIBE to give the non-lawyer greater context within which to understand the subsequent discussion of RIBE.³³

A. Introduction to Reasonable Investment-Backed Expectations and Penn Central

The precursor to RIBE first made its U.S. Supreme Court appearance in the seminal case of Penn Central Transportation Co. v. City of New York in 1978.³⁴ In Penn Central, the City of New York's Landmarks Preservation Committee had refused to allow construction of a more than fifty-story office building over Grand Central Terminal, which had been declared an historic landmark.³⁵ In response, Penn Central sued and claimed that the historic landmark designation and related denial of permission to construct a fifty-plus story office building on top of Grand Central Terminal resulted in a taking of Penn Central's property without payment of "just compensation."³⁶ The U.S. Supreme Court held that the historic preservation law and denial to Penn Central of the permit did not constitute a "taking" of property.³⁷ In doing so, the U.S. Supreme Court reviewed the development of Fifth Amendment takings jurisprudence and noted that the Court had "been unable to develop any 'set formula' for determining when 'justice and fairness' require that economic injuries caused by public action be compensated[.]"38 Instead, the Court uses "ad hoc, factual inquiries" to determine when a taking has occurred.³⁹ This

^{32.} See, e.g., Lingle, 544 U.S. at 539; Jason E. Holloway & Donald C. Guy, Palazzolo's Impact on Determining the Extent of Interference with Investment-Backed Expectations, 32 REAL EST. L.J. 19, 28 (2003) (noting that only rare cases fall within the "per se" rule for a taking enunciated by the Lucas case that excludes consideration of RIBE).

^{33.} Many additional Supreme Court cases mention RIBE, but this section focuses on those cases that involve real property (as opposed to personal property) and include RIBE as an important consideration in the decision.

^{34. 438} U.S. 104 (1978). Despite being used by the U.S. Supreme Court for the first time in 1978, the phrase "investment-backed expectations" traces its roots to a seminal article of 1967 by Professor Frank I. Michelman. *Property, Utility, and Fairness: Comments on the Ethical Foundations of "Just Compensation Law,*" 80 HARV. L. REV. 1165, 1213 (1967).

^{35.} Penn Central, 438 U.S. at 116-18.

^{36.} Id. at 119.

^{37.} Id. at 131, 136.

^{38.} Id. at 124.

^{39.} Id.

analysis occurs through a three-pronged inquiry,⁴⁰ one factor of which is "the extent to which the regulation has interfered with distinct investment-backed expectations[.]"⁴¹ The Court observed that this does not always mean you get to do what you thought you could.⁴² The Court noted that the primary expectation of *Penn Central* was to be able to continue to use Grand Central Terminal as it had been used for the past sixty-five years and that *Penn Central* could obtain a "reasonable return" on its investment.⁴³

B. Kaiser Aetna

Only one year after *Penn Central*, the case of *Kaiser Aetna v*. *United States* changed the phrase to "*reasonable* investmentbacked expectations."⁴⁴ It did this with little fanfare and without even noting that the phrase was any different than what had been put forth in *Penn Central* the prior year. While the word "reasonable" carries significance,⁴⁵ adding it only made clearer the "reasonableness" standard that was likely already intended in *Penn Central*'s version.⁴⁶

Kaiser Aetna also added an interesting twist: Government action may impact the "expectancies" related to property. In Kaiser Aetna, the court found that the government's action made the relevant property expectation stronger for the private property owner.⁴⁷ This leads one to ask whether the obverse also applies: May government action similarly reduce the relevant "expectancies" of property owners? While this appears clearly true in cases of reg-

43. Id. at 136.

46. See Daniel R. Mandelker, Investment-Backed Expectations in Taking Law, 27 URB. LAW 215, 217 (1995). See also Zach Whitney, Comment, Regulatory Takings: Distinguishing Between the Privilege of Use and Duty, 86 MARQ. L. REV. 617, 637 n.145 (2002).

^{40.} The three prongs include: 1) the character of the government action, 2) the economic impact on the claimant, and 3) the "distinct investment-backed expectations" of the claimant. Id.

^{41.} Id. The Court twice referred to *Pennsylvania Coal Co. v. Mahon* as the leading case indicating that sufficient frustration of "distinct investment-backed expectations" could result in a taking. *Id.* at 124, 127.

^{42.} Id. at 130.

^{44. 444} U.S. 164, 175 (1979) (emphasis added).

^{45.} Using the example of tort law—i.e. the "reasonable man" standard—"reasonable" investment-backed expectations are not those of the particular owner but rather are those of the "reasonable" person. See, e.g., RESTATEMENT (SECOND) OF TORTS §283, cmt. c (1965) (noting that the "reasonable man" standard is objective and external to the individual). For a bizarre analysis that turns this upside-down and claims that expectations of an individual are "objective" and those based on broader context and evidence independent of any specific individual's "distinct" beliefs are "subjective," see Calvert G. Chipchase, From Grand Central to the Sierras: What Do We Do with Investment-Backed Expectations in Partial Regulatory Takings?, 23 VA. ENVTL. L.J. 43, 56-67 (2004) (arguing that adding "reasonable" to "investment-backed expectations" is more subjective than the "distinct" investment-backed expectations.

^{47.} Kaiser Aetna, 444 U.S. at 179-80.

ulation of business, 48 the answer remains less clear when applied to real property. 49

C. Nollan

In the case of *Nollan v. California Coastal Commission*, the Court held that requiring a lateral public easement across the beach in exchange for a development permit constituted a taking.⁵⁰ The Court held this exaction an unconstitutional condition and taking because the required easement—which allowed public access to property in violation of the fundamental right to exclude outsiders from private property—lacked an essential nexus with the reason why the local government could have rejected the permit application.⁵¹ The local government argued that it could have rejected the permit application based on impacts to visual access to the beach.⁵²

Footnote two in the opinion dismisses the argument made in the dissent that because the Commission publicly announced its intention to require lateral easements in these circumstances, the owners had no RIBE.⁵³ Justice Scalia distinguished the precedent cited by the dissent by noting that there it was an application for a "valuable [g]overnment benefit" not including real property and that a permit to build on your own property "cannot remotely be described as a 'governmental benefit."⁵⁴

While some intimated that *Nollan* may have limited the reach of the importance of notice in takings,⁵⁵ subsequent cases

^{48.} See, e.g., Phillips v. Wash. Legal Found., 524 U.S. 156, 160 (1998); Concrete Pipe & Prod. of Cal., Inc. v. Constr. Laborers Pension Trust, 508 U.S. 602, 645-47 (1993) (noting that the business should have anticipated the potential for substantial new regulation since the industry in which it was involved was already highly regulated by a complex regulatory structure); Connolly v. Pension Benefit Guaranty Corp., 475 U.S. 211, 226-28 (1986) (standing for the same principle as *Concrete Pipe & Products*).

^{49.} In *Lucas v. South Carolina Coastal Council*, Justice Scalia announced that the state can entirely destroy the value of personal property, but not real property. 505 U.S. 1003, 1027-29 (1992). This distinction between real and personal property led some to assume that the "notice" rule in the *Monsanto* case (i.e., that one could have no RIBE of something when one was on notice of a law to the contrary) had added, but see *infra* notes 125-126 and accompanying text (discussing how *Tahoe-Sierra Regional Planning Agency* seems to back away from language in previous case law that could have been construed as limiting the importance of RIBE and notice).

^{51. 483} U.S. 825, 841-42 (1987).

^{52.} Id. at 837.

^{53.} Id. at 836.

^{53.} Id. at 833 n.2

^{54.} Id. (quoting Ruckelshaus v. Monsanto Co., 467 U.S. 986, 1007 (1984)) (emphasis omitted).

^{55.} See, e.g., Mandelker, supra note 46, at 221-23.

continued to reference notice as an element of RIBE in regulatory takings analysis. 56

D. Lucas

In Lucas v. South Carolina Coastal Council, property owner Lucas had purchased coastal property with the intent of building single-family homes on the lots.⁵⁷ South Carolina subsequently passed the Beachfront Management Act, which directly prohibited Lucas from building any permanent structures on his lots.⁵⁸ Lucas sued, and a trial court found the law had rendered Lucas's property valueless.⁵⁹ The U.S. Supreme Court concluded that a taking of property occurs when a regulation removes all economicallybeneficial use from a property.⁶⁰

Lucas's majority opinion overtly mentions expectations only once in its analysis.⁶¹ The Court noted that examination of the owner's reasonable expectations, as shaped by the State's property law, can help to explain seemingly contradictory takings cases analyzed under the *Penn Central* factors of economic impact, RIBE, and nature of the government action.⁶²

In addition, the concurring opinion is dedicated largely to a discussion of how RIBE should figure into takings analysis.⁶³ The concurrence asserts that a finding of "no value" should be determined "by reference to the owner's reasonable, investment-backed expectations"⁶⁴ as this retains the ability of state property law to continue to evolve in response to our "complex and interdependent society."⁶⁵ For the concurrence, had the "reasonable expectations" of the claimant in the case been more in line with the prohibition on construction as evidenced by both such a finding by the legislature and by having imposed the regulation prior to development of

^{56.} See, e.g., Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l. Planning Agency, 535 U.S. 302 (2002); Palazzolo v. Rhode Island, 533 U.S. 606 (2001).

^{57. 505} U.S. 1003, 1006-07 (1992).

^{58.} Id. at 1007.

^{61.} Id.

^{60.} *Id.* at 1027. The Court then proceeded to outline an exception to this rule for instances in which "background principles" of common law would also have had the same effect as the challenged regulation. *Id.* at 1027-32.

^{61.} Id. at 1016 n.7. In addition, a footnote in the majority opinion addressing an issue from the dissent uses the phrase "distinct investment-backed expectations" when quoting from Penn Central. Id. at 1019 n.8 (quoting 438 U.S. 104, 124 (1978)).

^{62.} Id. at 1016 n.7.

^{63.} Id. at 1032-36 (Kennedy, J., concurring).

^{64.} Id. at 1034 (Kennedy, J., concurring) (citing Kaiser Aetna v. United States, 444 U.S. 164, 175 (1979)).

^{65.} *Id.* at 1035 (Kennedy, J., concurring) (citing Goldblatt v. Hempstead, 369 U.S. 590, 593 (1962)).

adjacent lots and not imposing it on Lucas until after his purchase, there might have been no taking.⁶⁶

While *Lucas* left in doubt what, if any, role RIBE plays in determining a taking in the rare case when regulation eliminates all economically-beneficial use, it remained clear that RIBE still played an important role in the *Penn Central* analysis of regulatory takings.

E. Palazzolo v. Rhode Island

The case of *Palazzolo v. Rhode Island* is factually complex, but one of the two issues in the case is whether acquiring land after regulations limiting development have been passed automatically precludes a takings claim based on those regulations.⁶⁷ The Rhode Island Supreme Court had, in fact, ruled specifically that the challenged regulation could not be a taking under the *Penn Central* analysis because "[Palazzolo] could have had 'no reasonable investment-backed expectations that were affected by this regulation' because [the regulation] predated his ownership."⁶⁸

Palazzolo presented particularly difficult facts since the claimant legally acquired the property after the regulation alleged to have caused the taking. However, the claimant acquired the property through the operation of law; the claimant was the sole remaining shareholder of the corporation that owned the property for many years prior to enactment of the challenged regulation.⁶⁹ After the new regulation was enacted, the corporation's charter was revoked for failure to pay corporate income taxes.⁷⁰

In a highly fractured set of opinions, the U.S. Supreme Court disagreed with the Rhode Island Supreme Court's ruling that the claimant could not challenge the regulations that were enacted when the now-dissolved corporation owned the property but before the claimant took personal ownership of the property.⁷¹ The Court refused to allow a rule that acquiring property after a new regulation takes effect—in other words, with notice—shields the new regulation from challenge as a taking.⁷² Such a rule would put an "expiration date" on the Takings Clause and fail to take into account owners at the time regulation takes effect.⁷³

^{66.} Id. at 1035-36 (Kennedy, J., concurring).

^{67. 533} U.S. 606, 616, 626 (2001).

^{68.} Id. at 616 (quoting Palazzolo v. State, 746 A.2d 707, 717 (R.I. 2000)).

^{69.} Id. at 613-14.

^{70.} *Id.* at 614.

^{71.} Id. at 616, 630.

^{72.} Id. at 627.

^{73.} Id.

Palazzolo itself addresses both Nollan and Lucas. Palazzolo said that Nollan's rule was that notice did not prohibit challenging a regulation under the Takings Clause and that Lucas did not mean that mere enactment of a regulation makes it a "background principle" that is immune from a takings challenge.⁷⁴ While a majority of the Court agreed on these points, Justices Scalia and O'Connor filed separate concurring opinions that were diametrically opposed in their respective "understanding[s]" of the majority's opinion and how it should be interpreted.⁷⁵ Justice O'Connor indicated her understanding that the Court was saying that notice was still a factor in the Penn Central analysis⁷⁶ whereas Justice Scalia indicated the opposite, saying that notice via previous enactment of regulation was irrelevant to takings analysis.⁷⁷

Ignoring the pre- and post-enactment status of the owner, as Scalia advocated, presents problems as it would eviscerate the Penn Central analysis.⁷⁸ Considering the time of acquisition of property relative to enactment of regulation in takings analysis of RIBE amounts, said Scalia, to assuming the constitutionality of the regulation in question.⁷⁹ In a sense this is correct; if one assumes the validity of the regulation in order to determine RIBE. then the owner had no RIBE. However, Scalia failed to appreciate that the converse also holds true. Assuming the invalidity of the regulation to calculate RIBE virtually eliminates the "reasonable" in RIBE as one could harbor RIBE completely contrary to existing regulations. In fact, the more out-of-line a proposed development is with existing regulation, the better chance the plaintiff has at winning a takings claim under this approach.⁸⁰ This creates incentive for developers to speculate on heavily regulated land in hopes of getting compensation or getting the regulation invalidated.⁸¹ Subsequent court rulings seem to favor O'Connor's approach over Scalia's.⁸²

So the question becomes how to calculate RIBE when the "reasonableness" in RIBE relates to the validity or invalidity of

^{74.} Id. at 629-30.

^{78.} Id. at 632, 636 (O'Connor, J., & Scalia, J., concurring). Compare id. at 633-36 (O'Connor, J., concurring) with id. at 636-37 (Scalia, J., concurring).

^{76.} Id. at 632 (O'Connor, J., concurring).

^{77.} Id. at 637 (Scalia, J., concurring).

^{78.} Id. at 635 (O'Connor, J., concurring).

^{79.} Id. at 637 (Scalia, J., concurring).

^{80.} Cf. id. at 634-35 (O'Connor, J., concurring) ("[T]he development sought by the claimant may also shape legitimate expectations").

^{81.} See id. at 636 (Scalia, J., concurring). See also, Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1070 n.5 (1992) (Stevens, J., dissenting) (expressing fear that the categorical rule of a taking for elimination of all value will lead developers to overinvest).

^{82.} See, e.g., Commonwealth Edison Co. v. United States, 271 F.3d 1327, 1348 (Fed. Cir. 2001); Appolo Fuels, Inc. v. United States, 381 F.3d 1338, 1348-49 (Fed. Cir. 2004).

the questioned regulation. Yet this very validity or invalidity depends in part on defining the RIBE involved. Justice Kennedy explicitly acknowledged such circularity in his concurrence in *Lucas* and said some amount of it cannot be avoided.⁸³ Yet, objective standards in the legal tradition limit circularity.⁸⁴ Kennedy's statement that "courts must consider all reasonable expectations whatever their source"⁸⁵ echoes O'Connor's approach in her *Palazzolo* concurrence.⁸⁶

F. Tahoe Sierra

Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency⁸⁷ resoundingly reaffirmed the importance of an existing regulatory scheme in assessing RIBE. In Tahoe-Sierra, the U.S. Supreme Court upheld the district court's finding that the challenged moratorium on development was not a regulatory taking under the Penn Central analysis.⁸⁸ Tahoe-Sierra indicated that consideration of the RIBE of the property owners contributed heavily to this finding of no taking. Tahoe-Sierra observed that "the 'average holding time of a lot in the Tahoe area between lot purchase and home construction is twenty-five years,"⁸⁹ and that the claimants had time to build before restrictions went into effect, and "almost everyone . . . knew . . . that a crackdown on develop-

86. Palazzolo, 535 U.S. at 634-36 (O'Connor, J., concurring).

^{83.} Lucas, 505 U.S. at 1034-35 (Kennedy, J., concurring). See also Mandelker, supra note 46, at 228-29.

^{84.} Lucas, 505 U.S. at 1034-35 ("Some circularity must be tolerated in these matters, however, as it is in other spheres. E.g., Katz v. United States, 389 U.S. 347 (1967) (Fourth Amendment protections defined by reasonable expectations of privacy). The definition, moreover, is not circular in its entirety. The expectations protected by the Constitution are based on objective rules and customs that can be understood as reasonable by all parties involved."). For an extensive treatment of the issue of circularity and the problem of those that assert a regulatory takings claim on a property that was subject to the regulation when they acquired the property, see Tal Dickstein, Escaping Logical Circularity: The Postenactment Purchaser Problem and Reasonable Investment-Backed Expectations, 34 ENVTL. L. REP. 10865 (2004). The article's proposed solution is to review the investment-backed expectations of the owner prior to the "postenactment" purchaser. Id. at 10889. However, even this proposed solution remains significantly subjective. Id. While some subjectivity is allowable, only very few of the factors typically considered by federal courts in evaluations of RIBE are subjective. See infra notes 94-99 and accompanying text (listing objective factors to consider in RIBE from various cases) and notes 103-105 and accompanying text (listing at least five additional factors considered by courts, three of which are objective, and two subjective, with one of the subjective factors-whether the plaintiff was aware of the problem giving rise to the contested regulation at the time plaintiff purchased the propertyarguably more objective than subjective if notice requirements actually informed the purchaser of the problems spawning the regulation).

^{85.} Lucas, 505 U.S. at 1035 (Kennedy, J., concurring).

^{87. 535} U.S. 302 (2002).

^{88.} Id. at 341-42

^{89.} Id. at 315 (quoting Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l Planning Agency, 34 F. Supp. 2d 1226, 1240 (D. Nev. 1999)).
ment was in the works."⁹⁰ The court also cited the intent of the "average" purchaser in support of the conclusion that the purchasers "did not have reasonable, investment-backed expectations . . . " contravened by the challenged moratorium.⁹¹

In further support of the lack of RIBE, the U.S. Supreme Court noted that claimants had purchased the land "amidst a heavily regulated zoning scheme."⁹² The importance of such existing regulatory regimes will be taken up again in the next section.

G. The State of RIBE Today

Confusion sometimes surfaces around RIBE because it can include so many different factors.⁹³ Factors include, among others, current use of the property,⁹⁴ purchase price,⁹⁵ use of adjacent properties,⁹⁶ appropriateness of the property for the proposed use,⁹⁷ time of purchase relevant to the contested regulation(s),⁹⁸ and prior existence of similar or related regulations.⁹⁹ As with the *Penn Central* analysis itself, RIBE defies set rules and instead is an *ad hoc*, case-specific inquiry—which has been defended as the appropriate, albeit difficult, approach for regulatory takings.¹⁰⁰ While the specific parameters of RIBE may be subject to debate as applied in any given case, what is clear is that RIBE remains part of our takings law: *Tahoe-Sierra*¹⁰¹ and *Lingle v. Chevron*¹⁰² made this clear at the U.S. Supreme Court level and other federal courts have continued to apply RIBE in regulatory takings analysis for real property.¹⁰³

94. Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104, 136 (1978).

95. Gazza v. N.Y. State Dep't of Envtl. Conservation, 605 N.Y.S.2d 642, 643-44 (N.Y. 1993) (citations omitted).

96. See Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1008 (1992); Gil v. Inland Wetlands & Watercourses Agency, 593 A.2d 1368, 1375 (Conn. 1991); McNulty v. Town of Indialantic, 727 F. Supp. 604, 611 (M.D. Fla. 1989).

97. Cf., e.g., Tahoe-Sierra 535 U.S. at 315, 315 n.11 (2002).

98. Palazzolo v. Rhode Island, 533 U.S. 606, 613-15 (2001); *McNulty*, 727 F. Supp. at 611-12.

99. Tahoe-Sierra, 535 U.S. at 313; McNulty, 727 F. Supp. at 612.

100. Palazzolo, 533 U.S. at 633-36 (O'Connor, J., concurring).

101. 535 U.S. 302 (2002).

102. 544 U.S. 528, 538-39 (2005) (citing Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104, 124 (1978)).

103. See, e.g., Cienega Gardens v. United States, 503 F.3d 1266, 1289-91 (Fed. Cir. 2007); Webster v. United States, 90 Fed. Cl. 107, 114 (Fed. Ct. Cl. 2009); Res. Invs., Inc. v.

^{90.} Id. at 315 n.11 (quoting Tahoe-Sierra, 34 F. Supp 2d at 1241).

^{91.} Id. at 315 (quoting Tahoe-Sierra, 34 F. Supp 2d at 1241).

^{92.} Id. at 313 n.5.

^{93.} Many commentators have criticized RIBE for its lack of specificity and definitiveness. See, e.g., R. S. Radford & J. David Breemer, Great Expectations: Will Palazzolo v. Rhode Island Clarify the Murky Doctrine of Investment-Backed Expectations in Regulatory Takings Law?, 9 N.Y.U ENVTL. L.J. 449, 449 n.3 (2001) (listing articles critical of the lack of clarity in RIBE).

In fact, federal courts are not so confused about how to evaluate RIBE as some commentators seem to be. For example, the Court of Appeals for the Federal Circuit noted:

> [T]hree factors relevant to the determination of a party's reasonable expectations: (1) whether the plaintiff operated in a highly regulated industry; (2) whether the plaintiff was aware of the problem that spawned the regulation at the time it purchased the allegedly taken property; and (3) whether the plaintiff could have reasonably anticipated the possibility of such regulation in light of the regulatory environment at the time of purchase.¹⁰⁴

Note that of these three, the second is based entirely on a claimant's actual knowledge. An additional—and related—factor considered in determining RIBE includes the appropriateness of property for the proposed use (i.e., would the proposed use harm resources or the public due to the nature or location of the property?); in other words, environmentally sensitive land is a good example of land that is likely to be regulated in the future, even if it is not now.¹⁰⁵ Finally, as a threshold matter, courts have required that the claimant has had an actual, subjective expectation that has been frustrated.¹⁰⁶

Careful case-by-case analysis including these factors should effectively serve to promote justice and fairness¹⁰⁷ and avoidance of arbitrariness.¹⁰⁸ Even avoiding arbitrariness will not be enough to satisfy everyone; many property owners simply do not want to see

106. See Appolo Fuels, 381 F.3d at 1349.

107. See, e.g., Tahoe-Sierra, 535 U.S. at 334 (noting that concepts of justice and fairness underlie the Takings Clause).

United States, 85 Fed. Cl. 447, 474 (Fed. Ct. Cl. 2009). In addition, courts also continue to apply expectations analysis in non-real property cases. *See, e.g.*, Rose Acre Farms, Inc. v. United States, 559 F.3d 1260, 1261-1262 (Fed. Cir. 2009).

^{104.} Appolo Fuels, Inc. v. United States, 381 F.3d 1338, 1349 (2004) (citing Commonwealth Edison Co. v. United States, 271 F.3d 1327, 1348 (Fed. Cir. 2001)) (internal quotation marks omitted); *Webster*, 90 Fed. Cl. at 114 (citing *Appolo Fuels* for the three relevant factors in determining the reasonableness of investment-backed expectations); *Res. Invs.*, 85 Fed. Cl. at 513-14 (same); Kemp v. United States, 65 Fed. Cl. 818, 821 (Fed. Ct. Cl. 2005) (same); *See also* Good v. United States, 189 F.3d 1355, 1363 (Fed. Cir. 1999) (discussing the appellant's necessary awareness of regulations and increasing environmental concerns).

^{105.} Good, 189 F.3d at 1363. Cf. Tahoe-Sierra, 535 U.S. at 307-12 (2002) (citing extensively to the appeals court opinion that noted the likelihood of increased future regulation of the property around Lake Tahoe since existing regulations were clearly insufficient to protect the quality of Lake Tahoe); Michael C. Blumm & Lucus Ritchie, Lucas's Unlikely Legacy: The Rise of Background Principles as Categorical Takings Defenses, 29 HARV. ENVTL. L. REV. 321, 344-46 (2005) (discussing the "Natural Use Doctrine" as a defense to a takings claim).

^{108.} Cf. Mandelker, supra note 46, at 228-29.

property law ever change, even though such a desire remains entirely unreasonable in the face of historical precedent.¹⁰⁹ In other words, some believe that the only way any change in the rules of property should be allowed is through payment to property owners for the change. Aside from being impracticable,¹¹⁰ no historical precedent supports freezing the meaning of property independent of the society that creates and protects property. Rather, property has and remains a dynamic concept that evolves in direct relationship with the society that defines it.¹¹¹ RIBE holds the balance between the need for property concepts to evolve and the need for certainty or consistency in definitions of property. Too much flexibility in the definition of property can leave property owners subject to unfair losses while too little flexibility in the definition of property can lead to grave harms to the society that makes property possible and protects it. Harms to society can include making society shoulder the environmental costs of activities on private property, loss of public access to resources, foisting the costs of risk-taking onto the public,¹¹² and, in the most extreme case, the inability of society to advance.¹¹³

Realization that the property involves a dynamic balance allows us to then see why some have said that the measure of a taking is whether the action was arbitrary. Assuring that the public and property owners have notice of changing knowledge and un-

^{109.} See supra notes 20-24 and accompanying text.

^{110.} Pa. Coal Co. v. Mahon, 260 U.S. 393, 413 (1922).

^{111.} See, e.g., ERIC T. FREYFOGLE, THE LAND WE SHARE: PRIVATE PROPERTY AND THE COMMON GOOD 62, 65, 73-78 (2003) (explaining the importance of continued development of property law to meet society's evolving needs).

^{112.} Taxpaver liability may accrue at the federal, state, or local level. At the federal level, taxpayers are on the hook via the federally subsidized National Flood Insurance Program. This program has long been criticized as a financial boondoggle that improperly benefits those that take risks by locating in floodplain areas; the program is sustained by tax dollars as premiums paid into the program by policy holders that are insufficient to cover its costs. Ernest B. Abbott, Floods, Flood Insurance, Litigation, Politics-and Catastrophe: The National Flood Insurance Program, 1 SEA GRANT L. & POL'Y J. 129, 129-30 (2008), available at http://nsglc.olemiss.edu/SGLPJ/Vol1No1/vol1no1.pdf. For a discussion of a dynamic in river floodplains similar to what may happen in coastal areas subject to flooding, see Adam Scales, A Nation of Policyholders: Governmental and Market Failure in Flood Insurance, 26 MISS. C. L. REV. 3, 6 (2007) (discussing the "self-destructive pattern" of flood mitigation efforts that includes flood control works, followed by increased development, followed by eventual system failure and flooding in the context of levees). At the state level, some states provide direct subsidies through state-sponsored and guaranteed, subsidized property insurance. See, e.g., Michael Hofrichter, Comment, Texas's Open Beaches Act: Proposed Reforms Due to Coastal Erosion, 4 ENVT'L & ENERGY L. & POL'Y J. 147, 151 (2009) (discussing Texas's "Texas Windstorm Insurance Corporation"); Florida's Hurricane Catastrophe Fund, FLA. STAT. § 215.555 (2010) (outlining Florida's state-sponsored and required reinsurance program for companies offering hurricane insurance in the state); Florida's Citizens Property Insurance, FLA. STAT. § 627.351(6) (2010). Florida's Citizens Property Insurance can fund deficits by assessing charges on other insurance policies in the state, including auto insurance. RUPPERT ET AL., supra note 4, at 51.

^{113.} See generally FREYFOGLE, THE LAND WE SHARE, supra note 111 at 74-75.

derstandings that impact our understanding of how we balance the rights and relationships of property helps ensure that incremental changes do not undermine fairness and justice.



V. THE IMPACT OF "NOTICE" ON RIBE

At this point it should be clear that in some sense notice and RIBE cannot be separated; while RIBE is far broader than just notice, notice still plays an important role.¹¹⁴ If no obvious forms of notice exist for potential regulations, hazards, or other problems with a property and most people are not aware of the issue, expectations contrary to them could potentially still seem reasonable. As part of shaping expectations, notice also assists in decision-making about property purchases. For example, situations arise that offend our sense of fairness and justice when, after saving for a lifetime, a couple buys their dream retirement home on the beach without understanding the risks, and they lose everything to

^{114.} Numerous articles on takings issues address the notice issue, especially after the *Palazzolo* case. *See, e.g.,* Dickstein, *supra* note 84; Chipchase, *supra* note 45; Dana Larkin, Comment, *Dramatic Decreases in Clarity: Using the* Penn Central *Analysis to Solve the* Tahoe-Sierra *Controversy,* 40 SAN DIEGO L. REV. 1597, 1616-17 (2003). Courts have taken differing positions on how notice of existing regulations affects purchasers after the regulation takes effect. Dickstein, *supra* note 84, at 10866-67. Some courts find that notice of existing regulations offers an insurmountable bar to a takings claim, while others do not see it as a bar but rather as part of the *Penn Central* regulatory takings inquiry. *Id.* at 10866-67. Since *Palazzolo*, courts are no longer free to find that notice due to pre-existing regulations forms an absolute bar to a takings claim. *See* Palazzolo v. Rhode Island, 533 U.S. 606, 626-28 (2001).

coastal dynamics.¹¹⁵ Laws that help avoid such situations serve to ensure that coastal property owners indeed understand the inherent risks, limitations, and responsibilities of owning coastal property rather than being unpleasantly—and maybe even unfairly surprised by them.¹¹⁶ Additionally, notice helps overcome the general lack of awareness of the public that laws controlling property have historically changed and will continue to do so.¹¹⁷ Such notice of the risks and limitations should, then, color property owners' expectations. Thus, while notice is not itself the same thing as RIBE, the quality of notice about the factors affecting RIBE helps determine the reasonableness of their expectations.

Notice impacting RIBE can be broken down into two general types: 1) notice of existing regulations and 2) notice of context/appropriateness of land use.

Notice of existing regulations can be further dissected into two parts: 1A) notice that a proposed land use is prohibited and 1B) that an existing regulatory framework indicates the likelihood of future changes. Type 1A)—notice of current regulatory prohibition—was addressed primarily in the *Palazzolo* case for real property. As noted above, *Palazzolo* resulted in the narrow holding that enactment of regulations that predate ownership of property does not preclude a takings claim based on the prior-enacted regulation; strong disagreement emerged as to whether prior enactment of regulations should be irrelevant in takings analysis or simply constitute another case-specific factor for consideration in the *Penn Central* analysis of a regulatory taking. Case law since *Palazzolo* indicates that acquisition of property after notice via regulation remains a factor to consider in RIBE, but is not dispositive.¹¹⁸

As to 1B) notice—notice via current regulation that future regulation may occur—*Tahoe-Sierra* noted that claimants had purchased the land "amidst a heavily regulated zoning scheme."¹¹⁹ This phraseology evokes the Court's language in several regulatory takings cases that did not include real property. These cases, sometimes referred to as the "heavily-regulated-industries" cases, reason that when one involves oneself in an area of business that is already highly regulated, one must expect that further regula-

^{115.} See, e.g., David P. Hendricks, Silence is Golden: The Case for Mandatory Disclosure of Coastal Hazards and Land-Use Restrictions by Residential Sellers in North Carolina, 25 N.C. CENT. L.J. 96, 96-97 (2002).

^{116.} While the former rule in real property transactions used to be *caveat emptor*, all states in the United States now have statutes relating to disclosures for at least some issue in residential property transfers.

^{117.} Cf., FREYFOGLE, ON PRIVATE PROPERTY, supra note 19, at 102-04.

^{118.} See, e.g., Appolo Fuels, Inc. v. United States, 381 F.3d 1338, 1348-49 (2004).

^{119.} Tahoe-Sierra Pres. Council v. Tahoe Reg'l Planning Agency, 535 U.S. 302, 313 n.5 (2002).

tion may occur.¹²⁰ This is so, say courts, for two reasons: 1) the businesses involved in highly regulated areas are already aware of the existence of complex regulation and the dynamic nature of that regulation and 2) based on knowledge of past change in regulations, such businesses should plan on future changes to regulations that may not be favorable. After all, accounting for uncertainty is a landmark of business planning.

Do we really believe, however, that private individuals purchasing beach-front or coastal property are so sophisticated as to understand the complexity of regulatory regimes potentially affecting their property as well as the ocean and coastal dynamics? While some might be this sophisticated, we may not currently ascribe such knowledge to all purchasers. But, even if this is so, at what point must we attribute constructive notice to the general public? In our increasingly complex world, just as in business, change has become the rule rather than the exception to the rule. This applies also to legal and regulatory matters. Thus, even with regard to real property, courts have stated that "[i]n light of the growing consciousness of and sensitivity toward environmental issues, [the owner] must also have been aware that standards could change to his detriment, and that regulatory approval could become harder to get."121 Strong notice statutes thus can help protect potential coastal property owners by ensuring they are aware of the dynamic physical and regulatory environments into which they are considering purchasing. Those that choose to enter the fray of owning coastal property should not then expect the public to shoulder the financial burden if existing or foreseeable regulations then limit the uses of their property to protect the public's health and welfare.

^{120.} See, e.g., Holliday Amusement Co. of Charleston, Inc. v. South Carolina, 493 F.3d 404, 410 (4th Cir. 2007); Concrete Pipe & Prod. of Cal., Inc. v. Constr. Laborers Pension Trust for S. Cal., 508 U.S. 602, 645-46 (1993) (noting that pension plans had long been subject to federal regulation so the plaintiff "could have had no reasonable expectation that it would not be faced with liability"); Mitchell Arms, Inc. v. United States, 26 Cl. Ct. 1, 5 (Cl. Ct. 1992), aff'd, 7 F.3d 212 (Fed. Cir. 1993) (rejecting claim that suspension of import permits constituted taking, noting that "government as we know it would soon cease to exist if such exclusively governmental functions as the control over foreign commerce could not be accomplished without the payment of compensation to those business interests that have chosen to operate within this highly regulated area"). But see Philip Morris, Inc. v. Reilly, 312 F.3d 24, 26 (1st Cir. 2002) (en banc) (finding that Massachusetts's Disclosure Act, requiring cigarette companies to disclose ingredients, constituted taking of manufacturers' trade secrets even though "[u]nquestionably, tobacco is subject to heavy regulation by feder-al and state governments").

^{121.} Good v. United States, 189 F.3d 1355, 1363 (Fed. Cir. 1999) (finding no taking where property owner applied for and received federal permits over many years but could not secure state permits; in the meantime, federal regulatory scheme changed and owner could no longer secure federal permits to replace the expired permits).

The second type of notice, i.e., notice of context/appropriateness of land use, also remains a factor under current case law, though its application has been less clear. The *Tahoe-Sierra* case implied that this type of notice militated against the RIBE of the claimants since, in that case, it had been widely understood for about four decades that land development was damaging Lake Tahoe. In addition, no one disputed that the claimants' lands were lands that, if developed, would contribute to the damage to Lake Tahoe.¹²² The Court seemed to be saying that the claimants could have little RIBE in development that clearly harms an important public resource. This backs away from previous language of the U.S. Supreme Court in *Nollan* and *Lucas* that could have been interpreted as minimizing the importance of RIBE in takings analysis.¹²³

Ultimately, notice of the vulnerability of coastal property to storm surge, flooding, erosion, SLR, and other coastal dynamics should impact the takings analysis for owners. For owners that purchased their land forty or fifty years ago, the import of such notice should be less since widespread understanding of storm surge, flooding, erosion, and SLR did not exist.¹²⁴ Today, however, we have such detailed information on historic storm tracks, storm surges, erosion, and flooding as well as growing capabilities for estimating future storm surge and SLR—not to mention extensive experience tracking historical coastal erosion and SLR-that failure to impute these to property purchasers burdens the public with the cost of coastal property risks that are largely controlled by the private property owners. Guaranteeing that potential coastal property owners understand the coastal dynamics-including SLR—that can threaten the property they may purchase, helps ensure that the private property owners are properly informed and can best evaluate their own exposure to risk. In addition, notice of the risks inherent in coastal property fairly colors the RIBE of owners that purchase with such notice.

Current knowledge of existing hazards and coastal exposure, the increasing rate of SLR, and greater climate extremes make it likely that federal, state, and local governments may seek to limit exposure to hazards through greater regulation within coastal areas.¹²⁵ Indeed, failure of the federal, state, or local governments to

^{122.} Tahoe-Sierra Pres. Council, 535 U.S. at 314 n.9.

^{123.} Cf, e.g., Karen M. Brunner, Comment, A Missed Opportunity: Palazzolo v. Rhode Island Leaves Investment-Backed Expectations Unclear as Ever, 25 HAMLINE L. REV. 117, 142 (2001).

^{124.} Cf Nordlinher v. Hahn, 505 U.S. 1, 14 (1992) (treating otherwise similarly situated landowners differently for a takings analysis based on time of purchase of property and justifying this based on RIBE).

^{125.} Coastal Zone Management Act, 16 U.S.C. §§ 1451(l), 1452(2)(B), 1452(2)(K) (2006) (encouraging states to address SLR in state and coastal zone management).

act increases the financial burden on the public when disasters do strike and may even give rise to liability for a local government allowing construction in areas it knows to be hazardous.¹²⁶

VI. EXAMPLES OF NOTICE STATUTES AND RELATED CASES

A. Examples of Notice Statutes

All states already have statues related to disclosures¹²⁷ in residential property transfers. For example, Oregon has one of the most comprehensive notice statutes in the country. Oregon requires that sellers of dwelling units with one to four dwellings, condominiums, timeshares, and manufactured homes owned by the same owner as the lot must provide a disclosure statement.¹²⁸ The disclosure form in statute contains an extensive list of questions about the property, such as whether there are other legal claims or limitations on the property, about the water, insulation, structural integrity, insurance claims, repairs, and soil settling.¹²⁹ The disclosure also inquires whether there is "any material damage to the property or any of the structure(s) from . . . floods [or] beach movement. . . . "¹³⁰ Connecticut has a high-hazard dam notice requirement.¹³¹ California also has notice requirements for hazards,¹³² including location within a delineated earthquake fault zone.¹³³ Several disclosure statutes require inclusion of whether the property has been affected by floods or is in a flood zone or plain.¹³⁴ These disclosure statutes seek to require a seller to inform purchasers of risks, hazards, or attributes that might not be apparent from viewing the property or to someone unfamiliar with the area.

^{126.} See generally James Wilkins, Is Sea Level Rise "Foreseeable"? Does it Matter," 26 J. LAND USE & ENVTL. L. 437 (2011).

^{127.} Many states refer to these as disclosure statutes since the statutes developed to require sellers to disclose known hazards and problems to potential purchasers. Due to this article's focus on the impact of this on purchasers, this article refers to disclosure statutes as notice statutes.

^{128.} OR. REV. STAT. § 105.465(1)(a) (2009).

^{129.} Id. § 105.464.

^{130.} *Id*.

^{131.} CONN. GEN. STAT. § 22a-409(a) (2011). This notice does not actually require a property owner to tell a prospective purchaser about the high-hazard dam, but it does require that the owner file a notice of the dam in the land records; such a notice should alert the prospective purchaser to the dam's status during a routine title search for the property.

^{132.} CAL. CIV. CODE § 1103.2 (2010).

^{133.} CAL. PUB. RES. CODE § 2621.9 (2010).

^{134.} See, e.g., CAL. CIV. CODE § 1103(c)(1)(A) (2010).

In most cases, the obligation to complete a disclosure is on the seller of property,¹³⁵ and the seller's agent is responsible for delivery of the disclosure to the buyer.¹³⁶ Disclosure is typically not required on all types of property or transactions;¹³⁷ disclosure is usually limited to sale, exchange, contract, or lease with purchase option for residential property.¹³⁸ Some states allow waiver of disclosure by purchasers.¹³⁹ Some states require that the disclosure be supplied prior to an offer¹⁴⁰ whereas others allow it to be offered at signing of the contract.¹⁴¹ Some statutes note that the buyer is required to indicate receipt of the disclosure.¹⁴²

Disclosure statutes mandating notice to potential purchasers often utilize a standard form to provide this notice.¹⁴³ A standard disclosure form assists the seller in complying with the law and provides standard information formatting for purchasers, allowing for more informed decision-making—a key part of a healthy free market. Several disclosure statutes decrease the risk and burden to sellers by allowing sellers some flexibility when information is not readily available,¹⁴⁴ based on erroneous public information,¹⁴⁵ or by limiting liability if previously correct information subsequently changes through no action of the seller.¹⁴⁶

Once notice is delivered, it can only serve its purpose of promoting more-informed decision-making if the notice allows a potential purchaser to reconsider, without penalty, in light of the in-

^{135.} See, e.g., MD. CODE ANN. REAL PROP. § 10-702(e)(3)(iii) (LexisNexis 2010) (noting that representations of disclosure are those of the vendor, not the vendor's agent). Some states even specifically provide that agents for sellers are not liable for any omissions or inaccuracies unless they have actual knowledge of them. See, e.g., LA. REV. STAT. ANN. § 9:3199B (2010).

^{136.} See, e.g., HAW. REV. STAT. § 508D-7 (2010); MD. CODE ANN. REAL PROP. § 10-702(f)(1) (LexisNexis 2010).

^{137.} See, e.g., HAW. REV. STAT. §§ 508D-1, 508D-3 (2010); CAL. CIV. CODE § 1103.1 (2010); MAINE REV. STAT. tit. 33 § 172 (2010); S.C. CODE ANN. § 27-50-30 (2010).

^{138.} See, e.g., ALASKA STAT. § 34.70.200 (2010); CAL. CIV. CODE § 1103(a) (2010); LA. REV. STAT. § 9:3197 (2010); MD. CODE ANN. REAL PROP. § 10-702(b) (LexisNexis 2010); S.C. CODE ANN. § 27-50-20 (2010).

^{139.} See, e.g., ALASKA STAT. § 34.70.110 (2010); WASH. REV. CODE § 64.06.010(7) (2010) (allowing for limited waiver).

^{140.} See, e.g., FLA. STAT. § 161.57(2) (2010); LA. REV. STAT. ANN. § 9:3198B(2) (2010); ME. REV. STAT. tit. 33 § 174.1 (2010) (requiring delivery before or at acceptance of an offer by seller).

^{141.} MD. CODE REAL PROP. § 10-702(f) (2010).

^{142.} See, e.g., HAW. REV. STAT. § 508D-12 (2010).

^{143.} For disclosure forms, see, e.g., CAL. CIV. CODE § 1103.2 (2010); 21 N.C. ADMIN. CODE 58A.0114 (2010); WASH. REV. CODE §§ 64.06.013, 64.06.015, 64.06.020 (2010); OR. REV. STAT. § 105.464 (2010).

^{144.} See, e.g., Alaska Stat. § 34.70.040 (2010); 33 Me. Rev. Stat. § 176.1 (2010).

^{145.} See, e.g., CAL. CIV. CODE § 1103.4 (2010); LA. REV. STAT. ANN. § 9:3198E (2010).

^{146.} See, e.g., CAL. CIV. CODE § 1103.5 (2010). Hawaii also requires additional information discovered by seller prior to recording of the property sale to be supplied to the purchaser, who then again has fifteen calendar days to rescind unless the property transaction has already been recorded. HAW. REV. STAT. § 508D-13 (2010).

formation in the disclosure. While in some instances statutes require delivery of notice prior to proffering or accepting a written offer,¹⁴⁷ others allow notice to come after acceptance of a purchase contract.¹⁴⁸ In either case, it is critical that the buyer has time to review the disclosure and related information before making a decision about whether to move forward with the transaction. One of the more generous statutory regimes allows fifteen calendar days from receipt of the disclosure during which the purchaser may decide whether or not to go through with the purchase.¹⁴⁹ Statutes that allow for voiding or rescinding a contract based on the disclosure specify that the purchaser be refunded all deposits, escrow funds, or earnest money.¹⁵⁰

In cases in which disclosure requirements have not been met, some states do not invalidate the property transfer,¹⁵¹ but many allow the purchaser to rescind the contract within a specified period.¹⁵² In cases in which the contract is not invalidated, statutes often specify that the seller is liable for the actual damages incurred by the purchaser due to failure to comply with the notice requirements.¹⁵³ However, it is difficult to imagine how a court can effectively assess the damages a property owner will incur in the coastal context since, in theory, the damages could be the entire value of the property but might not occur for years after the transfer due to a flood, erosion, wind, or storm surge.

Only a few state disclosure requirements specifically refer to coastal property. South Carolina requires a contract for the sale or transfer of coastal property to include information on the regulatory setback line and the most recent local erosion rates available,

^{147.} See, e.g., ALASKA STAT. § 34.70.010 (2010). Alaska also allows delivery of the required disclosure after a written offer, but in such a case, delivery of the disclosure then allows the purchaser the option to terminate the offer. Id. § 34.70.020.

^{148.} See, e.g., HAW. REV. STAT. § 508D-5 (2010).

^{149.} *Id.* § 508D-5. A less generous time frame of seventy-two hours is allowed to buyers to rescind according to statutes in some states. LA. REV. STAT. § 9:3198B(3)(a) (2010); WASH. REV. CODE § 64.06.030 (2010); 33 ME. REV. STAT. § 174.2 (2010).

^{150.} See, e.g., HAW. REV. STAT. § 508D-16(c) (2010); LA. REV. STAT. ANN. § 9:3198(B)(3)(a) (2010); WASH. REV. CODE § 64.06.030 (2010).

^{151.} See, e.g., FLA. STAT. § 161.57(4) (2010); ALASKA STAT. § 34.70.090 (2010); LA. REV. STAT. ANN. § 9:3198(B)(3)(c) (2010); 33 ME. REV. STAT. § 174.5 (2010); S.C. CODE ANN. §27-50-50 (2010).

^{152.} WASH. REV. CODE § 64.06.040(1),(3) (2010); HAW. REV. STAT. §§ 508D-13, 508D-16.5 (2010) (allowing rescission for failure to provide the disclosure, provided that the property sale has not been recorded); N.C. GEN. STAT. § 47E-5(b)(1)-(2) (2010) (allowing rescission of the contract for three days time after making the contract or for three days after receiving the disclosure, whichever occurs first).

^{153.} See, e.g., Alaska Stat. § 34.70.090(b)-(d) (2010); S.C. Code Ann. § 27-50-65 (2010).

but failure to do so does not affect the legality of the contract.¹⁵⁴ Florida law requires notice to a potential purchaser of property affected by Florida's Coastal Construction Control Line;¹⁵⁵ although, like in South Carolina, failure to comply with the disclosure requirement does not affect the related purchase contract.¹⁵⁶ Washington could be included with those states specifically referencing coastal property, but just barely. Washington statutes require a seller to disclose "any material damage to the property from . . . beach movements[.]"¹⁵⁷ North Carolina has seen various notice laws for prospective purchasers proposed,¹⁵⁸ most recently in 2009,¹⁵⁹ but these have not passed the legislature.

The most detailed and explicit notice statute for coastal property occurs in Texas. Texas requires that the sales contract for certain property near its coasts include a disclosure in substantially the following form:

> DISCLOSURE NOTICE CONCERNING LEGAL AND ECONOMIC RISKS OF PURCHASING COASTAL REAL PROPERTY NEAR A BEACH

> WARNING: THE FOLLOWING NOTICE OF PO-TENTIAL RISKS OF ECONOMIC LOSS TO YOU AS THE PURCHASER OF COASTAL REAL PROP-ERTY IS REQUIRED BY STATE LAW.

> * READ THIS NOTICE CAREFULLY. DO NOT SIGN THIS CONTRACT UNTIL YOU FULLY UN-DERSTAND THE RISKS YOU ARE ASSUMING.

The provisions of this section are regulatory in nature and do not affect the legality of an instrument violating the provisions.

Id.

155. FLA. STAT. § 161.57 (2010).

156. Id. § 161.57(4).

157. WASH. REV. CODE §§ 64.06.013, 64.06.015, 64.06.020 (2010).

158. See, e.g., H.R. 1512, 2005 Gen. Assemb. (N.C. 2005).

^{154.} S.C. CODE ANN. § 48-39-330 (2010):

Thirty days after the initial adoption by the department of setback lines, a contract of sale or transfer of real property located in whole or in part seaward of the setback line or the jurisdictional line must contain a disclosure statement that the property is or may be affected by the setback line, baseline, and the seaward corners of all habitable structures referenced to the South Carolina State Plane Coordinate System (N.A.D.-1983) and include the local erosion rate most recently made available by the department for that particular standard zone or inlet zone as applicable. Language reasonably calculated to call attention to the existence of baselines, setback lines, jurisdiction lines, and the seaward corners of all habitable structures and the erosion rate complies with this section.

^{159.} See, e.g., H.R. DRH30151-RI-12, 2009 Gen. Assemb. (N.C. 2009) available at http://ftp.legislature.state.nc.us/Sessions/2009/Bills/House/HTML/H605v0.html.

* BY PURCHASING THIS PROPERTY, YOU MAY BE ASSUMING ECONOMIC RISKS OVER AND ABOVE THE RISKS INVOLVED IN PURCHASING INLAND REAL PROPERTY.

* IF YOU OWN A STRUCTURE LOCATED ON COASTAL REAL PROPERTY NEAR A GULF COAST BEACH, IT MAY COME TO BE LOCATED ON THE PUBLIC BEACH BECAUSE OF COASTAL EROSION AND STORM EVENTS.

* AS THE OWNER OF A STRUCTURE LOCATED ON THE PUBLIC BEACH, YOU COULD BE SUED BY THE STATE OF TEXAS AND ORDERED TO REMOVE THE STRUCTURE.

* THE COSTS OF REMOVING A STRUCTURE FROM THE PUBLIC BEACH AND ANY OTHER ECONOMIC LOSS INCURRED BECAUSE OF A REMOVAL ORDER WOULD BE SOLELY YOUR RESPONSIBILITY.

The real property described in this contract is located seaward of the Gulf Intracoastal Waterway to its southernmost point and then seaward of the longitudinal line also known as 97 degrees, 12', 19" which runs southerly to the international boundary from the intersection of the centerline of the Gulf Intracoastal Waterway and the Brownsville Ship Channel. If the property is in close proximity to a beach fronting the Gulf of Mexico, the purchaser is hereby advised that the public has acquired a right of use or easement to or over the area of any public beach by prescription, dedication, or presumption, or has retained a right by virtue of continuous right in the public since time immemorial, as recognized in law and custom.

The extreme seaward boundary of natural vegetation that spreads continuously inland customarily marks the landward boundary of the public easement. If there is no clearly marked natural vegetation line, the landward boundary of the easement is as provided by Sections 61.016 and 61.017, Natural Resources Code.

Much of the Gulf of Mexico coastline is eroding at rates of more than five feet per year. Erosion rates for all Texas Gulf property subject to the open beaches act are available from the Texas General Land Office.

State law prohibits any obstruction, barrier, restraint, or interference with the use of the public easement, including the placement of structures seaward of the landward boundary of the easement. OWNERS OF STRUCTURES ERECTED SEA-WARD OF THE VEGETATION LINE (OR OTHER APPLICABLE EASEMENT BOUNDARY) OR THAT BECOME SEAWARD OF THE VEGETA-TION LINE AS A RESULT OF PROCESSES SUCH AS SHORELINE EROSION ARE SUBJECT TO A LAWSUIT BY THE STATE OF TEXAS TO RE-MOVE THE STRUCTURES.

The purchaser is hereby notified that the purchaser should:

(1) determine the rate of shoreline erosion in the vicinity of the real property; and

(2) seek the advice of an attorney or other qualified person before executing this contract or instrument of conveyance as to the relevance of these statutes and facts to the value of the property the purchaser is hereby purchasing or contracting to purchase.¹⁶⁰

In addition to states, local governments in many states have the authority to require their own notice ordinances. For example, Miami-Dade County has an ordinance that requires notice to property purchasers if the property being sold is in the "Coastal High Hazard Area"¹⁶¹ or in the county's "Special Flood Hazard Ar-

^{160.} TEX. NAT. RES. CODE § 61.025(a) (2010).

^{161.} MIAMI-DADE COUNTY, FLA., CODE OF ORDINANCES § 11C-17(a) (2010) ("In any contract for the sale of improved real estate located in unincorporated Metropolitan Miami-Dade County which is in a Coastal High Hazard Area, the seller shall include in the contract or a rider to the contract the following disclosure in not less than ten-point bold-faced type: THIS HOME OR STRUCTURE IS LOCATED IN A COASTAL HIGH HAZARD AR-

ea."¹⁶² California statutes include a specific section guaranteeing the validity of existing local government notice requirements and specifying a form for those local governments to use for such requirements.¹⁶³

Potential sale of property is not the only time available to guarantee that a property owner has notice of coastal hazards affecting property; application for a development permit offers another opportunity.¹⁶⁴ For example, North Carolina requires that applicants for permits in coastal areas receive—and acknowledge receipt in writing—information on the special hazards such as erosion, floods, and storms in coastal areas.¹⁶⁵ While use of notice codes within the context of permitting is very valuable and highly recommended, it should be a compliment to—rather than a replacement for—required notice in property transfers.

B. Coastal Hazards Notice in Case Law

As so few states' disclosure laws contain any mention of coastal hazards in notice requirements, it comes as little surprise that few cases related to coastal hazards mention disclosure or notice requirements. In fact, research revealed only two cases that directly reference a statutory notice requirement for coastal properties. Both of these cases originate in Texas.

The first case, *Brannan v. State*, the Texas First District Court of Appeal noted that several of those claiming a regulatory taking of their coastal property in the case had purchased their property after receiving the notice to purchasers required by Texas law.¹⁶⁶ The court then cited the notice portion of the law which, as indicated above, specifically states that if a house comes to be on the beach subject to the public's access easement seaward of the vegetation line, then the house is subject to removal at the expense of the property owner.¹⁶⁷ The court also cited to the notice provision

EA. IF THIS HOME OR STRUCTURE IS BELOW THE APPLICABLE FLOOD ELEVA-TION LEVEL AND IS SUBSTANTIALLY DAMAGED OR SUBSTANTIALLY IMPROVED, AS DEFINED IN CHAPTER 11C OF THE METROPOLITAN Miami-Dade COUNTY CODE, IT MAY, AMONG OTHER THINGS, BE REQUIRED TO BE RAISED TO THE AP-PLICABLE FLOOD ELEVATION LEVEL.").

^{162.} Id. § 11C-17(b).

^{163.} CAL. CIV. CODE § 1102.6a (2010).

^{164.} For example, Snohomish County, Washington requires signing and recording of a "Tsunami Hazards Area Disclosure" prior to issuance of development permits. SNOHOMISH COUNTY, WASH., CODE OF ORDINANCES ch. 30.62.B (2010). This same approach is used by Skamania County, Washington for identified landslide or erosion hazard areas. SKAMANIA COUNTY, WASH., CODE OF ORDINANCES ch. 21A.06 (2010).

^{165. 15}A N.C. Admin. Code 07H .0306(i) (2010).

^{166.} No. 01-08-00179-CV, 2010 Tex. App. LEXIS 799, at *4-*5 (1st Dist. Houston Feb. 4, 2010).

^{167.} Id. at *19-*21.

as evidence of the intent of the Texas Open Beaches Act to preserve the public beach.¹⁶⁸ However, the court did not go on to treat any differently the owners that purchased properties more recently with notice versus those that had owned for longer periods and without the benefit of notice.

The second and most recent case, Severance v. Patterson,¹⁶⁹ also refers to the notice requirement in Texas statute. In Severance, the Texas Supreme Court addressed certified questions from the United States Fifth Circuit Court of Appeal about Texas property law.¹⁷⁰ The certified questions on Texas property law stemmed from the federal takings claim case that arose from Texas's injunction requiring Severance and others to remove their houses from the beach after the beach moved to their houses because of a storm.¹⁷¹ The majority opinion spent its last pages¹⁷² responding to the dissent, including disagreeing with the dissent that Severance had no takings claim because she willingly took the risk that her house could end up on the beach and subject to removal.¹⁷³ This latest case, if it stands,174 appears to mean that Texas courts will be able to give little or no consideration to any form of notice in cases of coastal avulsion. Nonetheless, since property law is part of state law, other states may still give consideration to purchasers who were on notice of likely regulations or hazards. In addition, in a federal takings claim RIBE and notice still play a role under a Penn Central analysis.

VII. DRAFTING THE BEST POSSIBLE NOTICE REQUIREMENT

Notice is not a talisman that government should be able to use to destroy private property rights.¹⁷⁵ However, properly designed notice statutes can help in ensuring that those purchasing coastal property understand the unique risks and hazards associated with coastal property, particularly in the face of current SLR and projected future SLR. Also, federal, state, and local governments should not be hamstrung in their efforts to protect people and

^{168.} Id. at *37.

^{169.} No. 09-0387, 2010 Tex. LEXIS 854 (Tex. Nov. 5, 2010) reh'g granted (Mar. 11, 2011).

^{170.} Id. at *1-*2.

^{171.} *Id*.

^{172.} Id. at *43-*53. The majority may have felt the need to spend so much time addressing the dissent because the case overruled and disapproved numerous court decisions in Texas. Id. at *53, *72-*75 (Medina, J., dissenting).

^{173.} Id. at *45 -*47.

^{174.} A petition for rehearing was submitted to the Texas Supreme Court in *Severance v. Patterson*, and was granted on March 11, 2011.

^{175.} See, e.g., Palazzolo v. Rhode Island, 533 U.S. 606, 634 (2001) (O'Connor, J., concurring).

property from the impacts of SLR in our coastal areas. Nor should the public have to shoulder the price of losses incurred by those that take the risk of purchasing property subject to coastal hazards.¹⁷⁶ Just as there are some burdens that should be shared by all, burdens that property owners are aware of and inhere in the nature of their property and that purchasers accept as part of their ownership should not accrue to the public. Our understanding of coastal processes makes clear that as SLR occurs, coastal areas will suffer increasingly from flooding, storms, and erosion. At minimum in such areas, we need to limit the development that creates additional hazards for which federal, state, and local governments then share the burden and limit public expenditures for public infrastructure that is itself then subject to loss from coastal hazards.¹⁷⁷ Properly designed notice statutes may play a positive role in helping shape the actions and RIBE of coastal property owners, thus decreasing the takings liability risk for regulators seeking to protect property owners from hazardous development and the public fisc from the liability of paying for property owners that willingly assume the risks inherent in owning coastal property.

What attributes does a properly designed notice statute contain? A properly designed notice statute should address four key components: 1) what property is affected, 2) timing and process related to the notice, 3) the content and form of the notice, and 4) results of compliance or noncompliance with the notice requirements. The following recommendations emanate primarily from the review of notice statutes above in Part VI.A. In the following paragraphs, the notice referred to *only* encompasses the notice issues related to coastal hazards and not the contents of other disclosure requirements.

A. What Property Is Affected

The question of what property is affected breaks down into two parts: 1. What property zoning classifications are impacted? and 2. Where must property be located to be affected by the notice requirement?

^{176.} Severance v. Patterson, No. 09-0387, 2010 Tex. LEXIS 854, at *89 (Tex. Nov. 5, 2010) *reh'g granted* (Mar. 11, 2011) (Medina, J., dissenting). The costs of disasters and insurance for them are significant, with a large portion of the cost born by the public through federal and state government.

^{177.} The cost to local governments of improperly sited infrastructure can be substantial. See, e.g., Order for Final Summary Judgment, Jordan v. St. Johns County, No. CA05-694 at ¶ 13 (Fla.7th Cir. Ct. May 21, 2009) (noting a 5-year average of 244,305/mile/year for maintenance of a county road subject to storms and beach erosion versus an average of 9,656/mile/year for other county roads).

Notice requirements should, at a minimum, apply to all property zoned for residential uses whether the property is improved or not.¹⁷⁸ Jurisdictions might also want to consider applying notice requirements to all other properties as well even though current disclosure statutes typically focus on residential property.¹⁷⁹ While one might expect that this would be unnecessary for commercial transactions since commercial purchasers should exercise due diligence in researching potential commercial acquisitions, efficiency might be better served by having the owner supply information which the owner should already possess.

Since most disclosure statutes do not specifically include coastal issues, few examples exist for determining the geographic extent to which a coastal notice statute should apply. Of the few examples that refer specifically to coastal property, the area will still vary in definition from one state to the next. For example, in Florida, the notice statute applies to properties "partially or totally seaward of the coastal construction control line[.]"¹⁸⁰ Unfortunately the coastal construction control line only applies to "sand beaches . . . fronting on the Atlantic Ocean, the Gulf of Mexico, or the Straits of Florida[,]"¹⁸¹ which means that heavily regulated and at-risk coastal properties not on such beaches are not subject to this notice requirement.

In South Carolina, "real property located in whole or in part seaward of the setback line or the jurisdictional line" is subject to a requirement of notice in property transfer documents.¹⁸² Texas applies its notice requirements to property "seaward of the Gulf Intracoastal Waterway to its southernmost point and then seaward of the longitudinal line also known as 97 degrees, 12', 19" which runs southerly to the international boundary from the intersection of the centerline of the Gulf Intracoastal Waterway and the Brownsville Ship Channel."¹⁸³

The ideal geographic scope of a notice statute will inherently vary from state to state based on the unique regulatory structure in each state. Nonetheless, the goal in drafting should remain focused on the intent to inform potential property purchasers of possible risks to their safety and property as well as their legal rights due to coastal hazards and associated regulation. To accomplish

^{178.} See, e.g., WASH. REV. CODE $64.06.015, 64.06.020 \ (2010) \ (applying disclosure requirements to developed and undeveloped property).$

^{179.} But see WASH. REV. CODE $64.04.013(1) \ (2010) \ (applying disclosure requirements to commercial property).$

^{180.} FLA. STAT. § 161.57(1) (2010).

^{181.} Id. § 161.053(1)(a).

^{182.} S.C. CODE ANN. § 48-39-330 (2010).

^{183.} TEX. NAT. RES. CODE ANN. § 61.025(a) (2010).

this, the notice requirements should apply to at least to all property partially or totally in:

- A coastal area regulated by state coastal building and construction standards;
- Any FEMA "V" zones;¹⁸⁴
- Any area defined as a coastal high hazard area;
- Properties within areas predicted by the SLOSH model¹⁸⁵ to be within the storm surge area of hurricanes (may select from Category 1 to Category 5 storm surge areas); and
- A coastal property categorized as having a defined level of significant coastal erosion, special zoning or overlay zones related to coastal hazards, or, if the information is available readily from state sources, property within areas likely subject to inundation due to a specified amount of SLR.

Further protection may be provided to property owners by extending this requirement to all properties partially or entirely within a specified distance and elevation from any of the enumerated areas. The distances and elevations used for safety should vary according to coastal geomorphology, coastal dynamics, land form, and land use; a relatively easy way in the southeast and eastern United States to calculate distances and elevations might be to use the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model and add any hurricane storm surge levels not otherwise already included in coastal notice requirements.

^{184. &}quot;V" zones in the Federal Emergency Management Agency's National Flood Insurance Plan are defined as "an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources." 44 C.F.R. § 59.1 (2009) (providing the definition of "coastal high hazard area," which is referred to for the definition of "V Zone"). While not the focus of this article, properties within FEMA "A" zones—representing the 100-year floodplain—should have their own notice requirements independent of coastal notice requirements.

^{185. &}quot;The Sea, Lake and Overland Surges from Hurricanes (SLOSH) model is a computerized numerical model developed by the National Weather Service (NWS) to estimate storm surge heights resulting from historical, hypothetical, or predicted hurricanes by taking into account the atmospheric pressure, size, forward speed, and track data." Nat'l Hurricane Ctr., Sea, Lake, and Overland Surges from Hurricanes (SLOSH), NAT'L WEATHER SERV. (Nov. 2, 2010), http://www.nhc.noaa.gov/ssurge/ssurge_slosh.shtml. The SLOSH model is utilized by federal agencies to assist in hurricane evacuation studies and contribute to creation of the Flood Insurance Rate Maps utilized by the Federal Emergency Management Agency. No Adverse Impact in the Coastal Zone, in COASTAL NO ADVERSE IMPACT HAND-BOOK 17 (May 2007), available at http://www.floods.org/NoAdverseImpact/CNAI_Handbook/ CNAI_Handbook_Chapter2.pdf; Reorganizing and Comprehending Your Flood Risk, UNIV. OF R.I. http://www.hurricanescience.org/society/risk/recognizingcomprehendingfloodrisk/ (last visited May 9, 2011).

Applying notice requirements this broadly will result in some costs for sellers of coastal property. Potential savings in lives, property damage (both public and private), and decreased taxpayer liability that should result from more informed purchasers will likely outweigh the transactional costs involved.¹⁸⁶ Another cost to coastal property owners could be a decrease in property value were potential purchasers to have better information on risks; any such loss by existing owners would also accrue as savings to purchasers and represents a more efficient market in land.¹⁸⁷ In other words, anything characterized as a "loss" to existing owners resulting from coastal notice actually represents a correction of overvaluation of the property due to the lack of information possessed by potential purchasers; it is hard to imagine that local government could be held liable for ensuring that property purchasers have additional information germane to their decision on whether to purchase coastal property.

B. Which Property Transactions Are Affected

Coastal notice requirements do not necessarily need to apply to certain types of transfer of property, such as between co-owners, spouses, pursuant to court order, or to a government agency. Most existing general disclosure statutes exempt such transfers of property.¹⁸⁸

C. Timing and Process Related to the Notice

The method of notice should also be carefully considered. Two potentially conflicting goals should inform this decision. The first goal is to maximize the utility of the information to the potential purchaser and the second goal is to minimize the burden on the seller and agent. One aspect of this is the work involved for the seller to disclose information. Use of a standard form simplifies this process and ensures consistency.

Some states require that the seller provide notice to the buyer prior to the seller accepting an offer.¹⁸⁹ While this is good since it is very early in the process and comes before the potential purchaser has invested significantly in trying to purchase the property, it

^{186.} See FREYFOGLE, supra note 111, at 190-91.

^{187.} Cf. JEFFREY L. HARRISON, LAW AND ECONOMICS IN A NUTSHELL 21-22 (2d ed. 2000) (discussing the role of information as a component of a perfectly competitive market and how absence of information for purchasers gives rise to market power allowing sellers to sell goods at higher than competitive prices).

^{188.} See, e.g., CAL. CIV. CODE § 1103.1 (2010).

^{189.} See, e.g., ALASKA STAT. § 34.70.010 (2010); MD. CODE ANN. REAL PROP. § 10-702(f)(1) (LexisNexis 2010).

creates a heavier burden on the seller since the seller may not accept an offer without first supplying the notice. This means that a seller must essentially fully prepare the notice as part of marketing the property rather than waiting for an offer. Other states allow the seller to provide notice at the signing of the contract.¹⁹⁰ Many states have balanced the burden of timing by allowing the notice to be supplied within a set number of days after the signing of a contract for the sale. Thus, supplying notice to the prospective purchaser within ten days following the signing of a contract, and a minimum of two weeks prior to closing, represents a good balance. It allows time for sellers to prepare the notice for identified purchasers and would typically allow the purchasers to receive the notice before making significant investments of time and money to purchase a property they might not purchase if they were aware of the contents of the notice. Notice should be personally delivered with signed acknowledgment of receipt or by certified mail, return receipt requested, to the potential buyer.¹⁹¹

Notice requirements should require the seller's agent to supply the notice. In some disclosure statutes the agent's duty to supply the requisite disclosure only applies if the agent receives the information from the seller. In the case of coastal-related notice, however, the seller's agent should have the expertise necessary to supply the required information, especially once internal procedures for real estate agents develop along with state and local electronic information portals that facilitate such information exchange. If the seller has no agent, then the responsibility rests with the seller.¹⁹² To reduce liability concerns, no liability attaches to a seller or agent for the use of information supplied by a public agency, even if it is inaccurate.¹⁹³

D. Content and Form of Notice

Effective notice requires that the notice itself describe why the property under consideration is subject to notice requirements. In other words, the notice should explain that the property involves a FEMA flood zone, involves a state coastal high-hazard area, resides within a special regulatory area (such as a setback area, storm surge area, special zoning overlay zone, etc.), or is in an area otherwise categorized as being at risk. Each area in which the property resides in whole or in part and which justifies

^{190.} See, e.g., FLA. STAT. § 161.57(2) (2010); 33 ME. REV. STAT. § 174.1 (2010) (requiring delivery before or at acceptance of an offer by seller).

^{191.} Cf., e.g., HAW. REV. STAT. § 508D-12 (2010).

^{192.} See, e.g., CAL. CIV. CODE § 1103(c)(1) (2010).

^{193.} See, e.g., Id. § 1103.4.

the notice requirement should have its own section in the notice which would describe:

- The purpose of the specific area;
- The geographic extent of the area;
- Reference to the science on which the area's boundary is based, if relevant;
- Reference to regulations and laws specifically applicable to the area;
- Contact information for officials that can supply more information on the applicable area; and
- The likelihood of future changes to regulations in the area due to factors supporting creation of the area.

Coastal notice should also include coastal erosion rates for the area if these are available from state or local government¹⁹⁴ as well as future projections of coastal erosion. This information should be complemented with information about past beach nourishment projects within a specified range of the property along with a statement that protective measures such as ongoing nourishment are not necessarily guaranteed and will be subject to federal, state, and local government discretion and funding.

For property in FEMA flood zones, the notice should include that flood insurance from the National Flood Insurance Program will be required for bank financing of purchase or construction; that National Flood Insurance Program rates may increase; that National Flood Insurance Program benefits may be decreased; and that continued availability of insurance through the National Flood Insurance Program is not guaranteed. Similarly, for states with state-backed insurance, the property notice should indicate that access to such programs may be limited or ended at any time, that rates may rise, and that benefits may be decreased regardless of rates. While such changes may and have occurred legally without notice, such notice contributes to more informed purchasers and decreased perceived unfairness.

Other information that should be included in coastal notice includes:

- Information on storm surge projections (based on FEMA information);
- Information on past storms (could be based on the Historical Hurricane Tracks tool developed

^{194.} Many states now calculate erosion rates of coastal areas. Some states include reference to erosion rates in their notice statutes. *See, e.g.,* FLA. STAT. § 161.57(2) (2010); S.C. CODE ANN. § 48-39-330 (2010); *and* TEX. NAT. RES. CODE ANN. § 61.025(a) (2010).

by NOAA's Coastal Services Center and the National Hurricane Center¹⁹⁵);

- Concise statement of lateral beach access law in the state, including discussion of the public trust doctrine; and
- Information on insurance claims related to flooding or wind damage submitted by seller.

E. Results of Compliance with Notice Requirements

Compliance with the disclosure requirements should allow the purchaser a minimum amount of time—such as fifteen days—to examine the notice and conduct any additional research deemed necessary to understand the potential risks associated with the property. If the purchaser determines during this time that the risk is larger than the purchaser understood prior to receiving the notice, the purchaser may, in writing, notify the seller of the purchaser's decision to rescind the contract and receive a refund of all escrow or earnest money given by the purchaser. If the purchaser does not give notice during the specified time, the purchase contract remains binding as if there were no notice requirement.

F. Results of Non-Compliance with Notice Requirements

Noncompliance by the seller (or seller's agent) with a notice requirement gives the purchaser the option of terminating the agreement and recouping any earnest money or escrow funds.¹⁹⁶ In the interest of not introducing too much uncertainty or confusion into land markets, the right to rescission might be limited to the time prior to the recording of the property sale.¹⁹⁷ At the same time, such a limitation may hurt purchasers that immediately recorded their purchase and only later learn that they should have received more information that might have impacted their decision.

^{195.} Historical Hurricane Tracks, NAT'L OCEANIC AND ATMOSPHERIC ADMIN. COASTAL SERVS. CTR., http://csc.noaa.gov/hurricanes/# (last visited May 9, 2011).

^{196.} See, e.g., HAW. REV. STAT. § 508D-16(c) (2010); TEX. NAT. RES. CODE ANN. § 61.025(c) (2010); WASH. REV. CODE § 64.06.040(1), (3) (2010).

^{197.} HAW. REV. STAT. § 508D-16.5 (2010) (allowing rescission provided that the property sale has not been recorded); *See also* N.C. GEN. STAT. § 47E-5(b)(1)-(2) (2010) (setting a three-day time limit for cancellation).

VIII. CONCLUSION AND RECOMMENDATIONS

Coastal hazards have exacted high costs—in both dollars and lives—in the United States. As migrations to our coastal areas cause them to grow much more rapidly than other parts of the country, it is no surprise that many people purchasing property have a limited understanding or appreciation of the dynamics of coastal areas and the risks that accompany ownership of coastal property. Similarly, many of those new to the coasts lack awareness of the complex regulatory controls that have evolved to balance protection of people, property, and the environment. Since the benefits of coastal living are obvious to all while the costs are not, requirements for detailed notice of coastal dynamics, regulations, and hazards can help ensure that those purchasing property do so with appropriate appreciation of the risks and limitations associated with coastal property.

Failure to ensure well-structured notice for coastal property purchasers contributes to sad stories of people that spend their life savings to purchase coastal property only to lose everything to a storm. Such stories tug at us for sympathy when those that lost were not aware of the risk. Coastal property notice can help avoid this scenario by ensuring that purchasers of coastal property know the risks and factor these into their purchase decision.

Finally, coastal notice can help state and local governments fulfill their mission to protect the health, safety, and welfare of their citizens by enacting regulations that protect people and property from the most dangerous coastal hazards. Currently many regulators with responsibility for protecting people and property from coastal hazards feel that they lack the legal maneuvering space to properly regulate land use and construction for protection from coastal hazards due to threats of regulatory takings claims. Proper and comprehensive notice may impact the viability of takings claims analyzed under the takings analysis established by the U.S. Supreme Court's *Penn Central* case. One part of this analysis includes examination of a regulation's impact on investment-backed expectations.

While no one part of the *Penn Central* analysis necessarily trumps, ensuring that coastal property owners have full understanding of the nature of the hazards, the dynamic coastal environment, and existing and potential regulatory limitations should demonstrate that owners' expectations which are drastically out of line with these realities and information are not reasonable. While some will complain that this means redefining property, the proper response should be a lesson in the long, rich history of property and how it is filled with examples of the evolution of property law to fit with societies' changing needs and understandings. Inquiry into RIBE in a takings case helps to focus on keeping the necessary flexibility of property concepts limited to incremental changes that, while they may negatively impact some property owners, do not reach the level of arbitrary or unforeseen changes that would undermine the justice and fairness concerns that underlie takings law. Incorporating some level of notice as an element of RIBE supports the notion that has motivated protection of property for centuries: Property shall not be taken *arbitrarily*.¹⁹⁸ The institution of property should not be allowed to ossify while the purposes and justification served by the institution continue to change and evolve.

^{198.} In this case, "arbitrary" has its common meaning of "not restrained or limited in the exercise of power" and "existing or coming about seemingly at random or by chance or as a capricious and unreasonable act of will[,]" rather than its legal meaning in the test of the extent of the states' police powers. Arbitrary, MERRIAM-WEBSTER DICTIONARY, available at http://www.merriam-webster.com/dictionary/arbitrary (last visited May 9, 2011). Allowing the latter to be the meaning here would, indeed, remove protections from property. Steven J. Eagle, The Rise and Rise of "Investment-Backed Expectations," 32 URB. LAW 437, 446 (2000). However, avoidance of arbitrariness here means that alterations in property law would have to be reasonable in light of existing law and understanding. "Reasonable" incremental change justified by specific, well-understood threats to public health, safety, or welfare, can hardly be called "arbitrary."

PROPOSED EXACTIONS

TIMOTHY M. MULVANEY*

I.	INTRODUCTION	77
II.	TEMPORALITY IN EXACTION TAKINGS LAW	31
	A. A Précis on Nollan and Dolan	31
	B. Characteristics of the Property Interest at Stake in	
	Exaction Takings Disputes	32
III.	PROPOSED-VERSUS-IMPOSED EXACTIONS	
	A. The Limited Judicial Treatment of the Proposed-	
	Versus-Imposed Exaction Inquiry	90
	B. Competing Interests in the Proposed-Versus-Imposed	
	Exaction Debate)0
	1. Applying the <i>Nollan</i> and <i>Dolan</i> Construct to	
	Proposed Exactions 30)0
	2. Limiting Application of the Nollan and Dolan	
	Construct to Imposed Exactions)1
IV.	THE IMPACT OF SUBJECTING PROPOSED EXACTIONS TO THE	
	EXACTION TAKINGS CONSTRUCT AT THE WATER'S EDGE 30)7
	A. Discouraging Pre-Decisional Interaction Between	
	Landowners and Regulators 30)8
	B. Lost Benefits on the Coast 30)9
V.	CONCLUSION	1

I. INTRODUCTION

In the abstract, the site-specific ability to issue conditional approvals offers local governments the flexible option of permitting a development proposal while simultaneously requiring the applicant to offset the project's external impacts.¹ However, the U.S. Supreme Court curtailed the exercise of this option in *Nollan v*.

^{*} Associate Professor of Law, Texas Wesleyan University School of Law. Thank you to J.B. Ruhl and the participants in the April 23, 2010 conference at Florida State University College of Law for their guidance. Further, thank you to Mark Fenster, Keith Hirokawa, John Martinez, Jessica Owley, Andrew Schwartz, and Laura Underkuffler for providing insightful comments on earlier drafts. Finally, thank you for the observations provided by those researchers operating under National Oceanic and Atmospheric Administration award number NA100AR4170078.

^{1.} See Mark Fenster, Takings Formalism and Regulatory Formulas: Exactions and the Consequences of Clarity, 92 CAL. L. REV. 609, 615 (2004) [hereinafter Takings Formalism] ("[I]ndividualized . . . exactions constitute a flexible, open-ended set of conditions that serve regulatory and persuasive functions by offering both to internalize at least some of the external costs of development and to make a proposed land use either sufficiently attractive or minimally unattractive to decision makers and the voting public."). For purposes of this Article, the term "approvals" encompasses successful applications for zoning modifications, subdivision, variances, construction permits, and the like.

California Coastal Commission² and Dolan v. City of Tigard³ by establishing a constitutional takings framework unique to exaction disputes. This exaction takings construct has challenged legal scholars on several fronts for the better part of the past two decades.⁴ For one, Nollan and Dolan place a far greater burden on the government in justifying exactions it attaches to a development *approval* than it has placed on the government in justifying the underlying regulations by which such approval could be withheld. Moreover, there remain a series of unanswered questions regarding the scope and reach of exaction takings scrutiny that plague the development of a coherent body of law upon which both landowners and regulators can comfortably rely. This Article explores whether these problems are augmented where the exaction takings construct that is ordinarily applied when an exaction is imposed is also applicable at the point in time when an exaction is merely proposed.

This temporal issue has received little judicial treatment to date. Indeed, when a Florida appellate court recently faced the question in *Koontz v. St. John's River Management District*,⁵ it had only the cursory analysis of two lower court opinions out of Arkansas⁶ and a dissent from the denial of certiorari at the U.S. Supreme Court⁷ on which to rely. In *Koontz*, a permit applicant sought to develop protected wetlands.⁸ While the regulating body could have exercised its authority to deny this request, it instead identified several possible exactions that, if accepted by the applicant, could allow for the development to proceed.⁹ The applicant, however, refused these proposals, and the government ultimately

^{2. 483} U.S. 825 (1987).

^{3. 512} U.S. 374 (1994).

^{4.} For a general sampling of this scholarship, see Vicki Been, "Exit" as a Constraint on Land Use Exactions: Rethinking the Unconstitutional Conditions Doctrine, 91 COLUM. L. REV. 473 (1991); David A. Dana, Land Use Regulation in an Age of Heightened Scrutiny, 75 N.C. L. REV. 1243 (1997); Lee Anne Fennell, Hard Bargains and Real Steals: Land Use Exactions Revisited, 86 IOWA L. REV. 1 (2000); Fenster, Takings Formalism, supra note 1; Mark Fenster, Regulating Land Use in a Constitutional Shadow: The Institutional Contexts of Exactions, 58 HASTINGS L.J. 729 (2007) [hereinafter Constitutional Shadow]; Mark Fenster, The Stubborn Incoherence of Regulatory Takings, 28 STAN. ENVTL. L.J. 525 (2009) [hereinafter Stubborn Incoherence]; Timothy M. Mulvaney, The Remnants of Exaction Takings, 33 ENVIRONS ENVTL. L. & POL'Y J. 189 (2010).

^{5.} Koontz v. St. Johns River Water Mgmt. Dist. (Koontz IV), 5 So. 3d 8 (Fla. 5th DCA 2009).

^{6.} See William J. Jones Ins. Trust v. City of Fort Smith, 731 F. Supp. 912 (W.D. Ark. 1990); Goss v. City of Little Rock, 151 F.3d 861 (8th Cir. 1998).

^{7.} See Lambert v. City & C<ty of S.F., 120 S. Ct. 1549 (2000) (Scalia, J., Kennedy, J., & Thomas, J., dissenting from the denial of certiorari).

^{8.} Koontz IV, 5 So. 3d at 9-10.

^{9.} Id. (citing St. Johns River Water Mgmt. Dist v. Koontz (Koontz II), 861 So. 2d 1267, 1269 (Fla. 5th DCA 2003)).

denied the development request outright.¹⁰ At the appellate level, the developer prevailed on the rather unusual theory that the government had *proposed* exactions that amounted to an unconstitutional taking for which compensation is due.¹¹

In an effort to situate the discussion of this proposed-versusimposed inquiry, Part II analyzes the contours of property's multiple dimensions-broadly labeled by one scholar as theory, space, stringency, and time¹²—as they arise in exaction takings contests. It suggests that issues of temporality stand as the most perplexing, unsettled, and multi-faceted of these dimensions.¹³ Nearly all takings disputes implicitly involve the temporal question of whether, and the extent to which, property interests may be refined in light of social, political, economic, scientific, or technological developments.¹⁴ Yet deducing property's temporal characteristics also plays an important role in at least two other contexts that are particularly relevant to the realm of exactions. First, it establishes the relevance of the varying levels of delay between a regulatory action and the external impact that regulation is intended to cure.¹⁵ Second, it defines the point in time—be it upon the proposition or imposition of regulatory action-when property's other dimensions attach as to any particular takings claimant. While the former will be addressed in a forthcoming project, this Article focuses on the latter.

Part III starts with an examination of the limited judicial treatment on the question of whether claimants should be entitled to takings relief based upon the mere proposition of an exaction. The Part then moves beyond the surface analysis in the few reported decisions addressing this issue by identifying and exploring the competing normative justifications underlying it. It offers three

^{10.} Id. at 10 (citing Koontz II, 861 So. 2d at 1269).

^{11.} *Id.* at 8-12 (affirming the trial court decision finding a taking). The matter is now pending before the Florida Supreme Court. *See* St. Johns River Water Mgmt. Dist. v. Koontz, 15 So. 3d 581 (Fla. 2009) (granting certiorari).

^{12.} See LAURA S. UNDERKUFFLER, THE IDEA OF PROPERTY: ITS MEANING AND POWER 15-33 (2003); Laura S. Underkuffler-Freund, Takings and the Nature of Property, 9 CAN. J.L. & JURISPRUDENCE 161, 169-82 (1996).

^{13.} See infra notes 35-60 and accompanying text.

^{14.} Compare Stop the Beach Renourishment, Inc. v. Fla. Dept. of Envtl. Prot., 130 S. Ct. 2592, 2610 (2010) (plurality opinion) (suggesting that a judicial change in the common law could amount to an unconstitutional taking even if that change is predictable), with Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1069-70 (1992) (Stevens, J. dissenting) ("[O]ur ongoing self-education produces similar changes in the rights of property owners: New appreciation of the significance of endangered species; the importance of wetlands; and the vulnerability of coastal lands, shapes our evolving understandings of property rights." (citations omitted)). For an assessment of this aspect of temporality in a recent article, see Timothy M. Mulvaney, *The New Judicial Takings Construct*, 120 YALE L.J. ONLINE 247 (2011), available at http://www.yalelawjournal.org/images/pdfs/946.pdf.

^{15.} See Timothy M. Mulvaney, Address at Albany Law School, Northeast Regional Scholarship Workshop, Time and Exactions (Feb. 5, 2011).

reasons to suggest that only upon the imposition of an exaction should the existing exaction takings construct attach as to any individual permit applicant. First, where a proposed exaction is refused or withdrawn, no property has been taken.¹⁶ Second, judicial speculation on the substantive worth of hypothetical exactions suggests such matters are not suitable for review.¹⁷ Third, burdening governmental entities with possible takings liability for statements made during pre-decisional negotiation sessions places a chilling effect on regulator-landowner coordination.¹⁸

Part IV contends that validating the proposed exactions theory, as select lower courts have done, constrains governmental entities' use of exactions as a tool responsive to the impacts associated with the topic of this journal volume: sea level rise. Described as a "slow-motion flood,"¹⁹ rising waters are gradually inundating lowlying lands and eroding beaches, such that the increased storm surge associated therewith poses major public safety and environmental risks.²⁰ Theoretically, exactions could, at least in part, counter these impacts. However, subjecting exactions that are merely proposed to takings suits could depress cooperation between regulators and landowners. This, in turn, could forestall the development of new, creative, collaborative solutions to a complex phenomenon that both parties still do not fully understand.

The Article concludes in Part V that uncertainty remains with respect to the temporal issue of whether the exaction takings construct attaches at the moment an exaction is merely proposed. This uncertainty is hindering the ultimate employment of exac-

^{16.} See infra notes 132 to 136 and accompanying text.

^{17.} See infra notes 137 to 149 and accompanying text.

^{18.} See infra notes 150 to 156 and accompanying text.

^{19.} Josh Harkinson, Buh Bye East Coast Beaches: Which Part of the Atlantic Coast Will Be Swallowed By the Sea?, MOTHER JONES (Apr. 27, 2010, 2:00 PM) (quoting James Titus, EPA Project Manager for Sea Level Rise), http://motherjones.com/environment/2010/04/climate-desk-sea-level-rise-epa.

^{20.} See, e.g., Donald Scavia et al., Climate Change Impacts on U.S. Coastal and Marine Ecosystems, 25 ESTUARIES 149, 152-53 (2002); U.S. CLIMATE CHANGE SCI. PROGRAM, COASTAL SENSITIVITY TO SEA LEVEL RISE: A FOCUS ON THE MID-ATLANTIC REGION 2 (2009), available at http://epa.gov/climatechange/effects/coastal/sap4-1.html; J.G. TITUS, ET AL, EPA 430R07004, BACKGROUND DOCUMENTS SUPPORTING CLIMATE CHANGE SCIENCE PROGRAM SYNTHESIS AND ASSESSMENT PRODUCT 4.1: COASTAL ELEVATIONS AND SENSITIVITY TO SEA LEVEL RISE i (J.G. Titus & E.M. Strange, eds. 2008), available at http://epa.gov/ climatechange/effects/coastal/background.html; Climate Change 2007: A Synthesis Report, IPCC, http://www.ipcc.ch/publications_and_data/ar4/syr/en/spms3.html; JAMES G. TITUS & VIJAY K. NARAYANAN, EPA 230-R-95-008, THE PROBABILITY OF SEA LEVEL RISE (1995), available at http://epa.gov/climatechange/effects/coastal/slrmaps_probability.html; Robert J. Nicholls et al., Coastal Systems and Low-Lying Areas, in INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY 315, 317-356 (Martin Perry et al. eds., 2007); E. ROBERT THIELER & ERIKA S. HAMMER-KLOSE, U.S. GEOLOGICAL SURVEY, OPEN-FILE REPORT 00-179, NATIONAL ASSESSMENT OF COASTAL VULNERABILITY TO FUTURE SEA-LEVEL RISE: PRELIMINARY RESULTS FOR THE U.S. GULF OF MEXICO COAST (2006), available at http://pubs.usgs.gov/of/2000/of00-179/index.html.

tions as a component of local government land use controls. This Article solicits the judiciary to provide explicit, reasoned guidance respecting the content of the temporal characteristics of property in exaction takings law. Until then, the discretionary governmental power to condition development approvals—particularly as a tool to adapt to sea level rise—will continue to raise indeterminate and unnecessary takings liability risks.

II. TEMPORALITY IN EXACTION TAKINGS LAW

This Part first suggests that the U.S. Supreme Court's exaction takings jurisprudence provides little explicit examination of the property interest at stake. It then explores the underlying content of this property interest through the lens of property's multidimensional features. It deduces that issues of temporality stand as the most complicated and unsettled of these features.

A. Précis on Nollan and Dolan

In *Nollan*, the state did not meet its burden of proving that a condition requiring a beach access pathway bore an "essential nexus" to the impacts caused by the development.²¹ *Dolan* added an additional requirement to *Nollan's* nexus test in compelling a town to prove that the cost of dedicating a strip of land for flood control and a public bicycle path was "rough[ly] proportion[ate]" to the benefits the strip would provide to the public in offsetting flooding and traffic resulting from the development.²² Yet while the legal validity of any takings claims depends "upon what [one] consider[s] property, as a substantive matter, to be[,]"²³ neither decision proved a beacon of clarity on this score.

The impacts occasioned by the proposed development in *Nollan* included blocking (1) the public's view of the ocean and (2) "the public's sense that it may have physical access to the beach" seaward of Nollan's house.²⁴ The Court concurrently implied that the property interest at stake was an absolute right to prohibit per-

^{21.} Nollan v. Cal. Coastal Comm'n, 483 U.S. 825, 828, 837 (1987).

^{22.} Dolan v. City of Tigard, 512 U.S. 374, 391 (1994) (holding that "the city must make some sort of individualized determination" regarding the quantitative nature of the condition).

^{23.} See UNDERKUFFLER, supra note 12, at 18. See also Underkuffler-Freund, supra note 12, at 165 ("Until we know what the property [interest] at stake is, it is impossible to evaluate whether it has been taken, or whether compensation for its loss should be paid.").

^{24.} Nollan, 483 U.S. at 865 (Blackmun, J., dissenting). But see C.B. MACPHERSON, PROPERTY: MAINSTREAM AND CRITICAL POSITIONS 201 (1978) (suggesting, pre-Nollan, that the right to exclude others is no more the essence of property than the right not to be excluded).

manent access by others;²⁵ a right to prohibit temporary access by others;²⁶ a right to build on one's property;²⁷ and a right to otherwise use one's property.²⁸ Therefore, the Court identified the particularized property interest at stake in a variety of incompatible ways. Nonetheless, the Court proceeded to hold that, by failing to exhibit the required "essential nexus" between the end advanced by the exaction and any justification offered for requiring a development permit in the first place, the government "took" the property interest at issue—whatever that property interest was.²⁹

Seven years after *Nollan*, the *Dolan* majority simultaneously avowed that the property interest at stake involved the right to use of the entire property;³⁰ the right to use the regulated portions of the property;³¹ and the right to exclude others from the regulated portions of the property.³² After what one scholar referred to as this "superficial gloss"³³ over determining what constituted the allegedly taken property interest, the Court proceeded to focus on the takings question and remanded for consideration under the newly-established proportionality test.³⁴

B. Characteristics of the Property Interest at Stake in Exaction Takings Disputes

The failings of *Nollan* and *Dolan* can be illuminated with the assistance of a model espoused by Laura Underkuffler. Underkuffler asserts that property consists of four dimensions: theory,

- 31. Id. at 389-90.
- 32. Id. at 393.
- 33. See UNDERKUFFLER, supra note 12, at 154.

34. Dolan, 512 U.S. at 396. On remand, even after the city no longer was asking for a dedication of property but rather only an easement, an Oregon trial court concluded that the city could not meet its burden under the "rough proportionality" test. The parties ultimately resolved the matter via settlement, with the city agreeing to pay Dolan nearly \$1.5 million for the relevant strip of property. Randall T. Shephard, *Takings Law: Do We Really Want More Judicial Intervention in State Land Use Regulation*?, 1 GEO. J.L. & PUB. POL'Y 99, 102 n.22 (2002) (citing *City of Tigard Will Pay Dolans \$ 1.5 Million in Bikepath "Takings" Case*, BUS. WIRE, Nov. 21, 1997); Richard Duane Faus, *Exactions, Impacts Fees, and Dedications—Local Government Responses to* Nollan/Dolan *Takings Law Issues*, 29 STETSON L. REV. 675, 676-77 (2000); Samuel H. Weissbard & Camellia K. Schuk, *Taking Issue with Taking by Regulation*, COM. INVESTMENT REAL ESTATE (Nov. – Dec. 1998), *available at* http://www.realtor.org/archives/lawyoujul1998b.

^{25.} See Nollan, 483 U.S. at 831 ("an easement across their beachfront available to the public on a permanent basis . . .").

^{26.} Id. at 832 ("a . . . continuous right to pass to and fro, so that the real property may continuously be traversed, even though no particular individual is permitted to station himself permanently upon the premises") (footnote omitted).

^{27.} Id. at 833 n.2.

^{28.} Id. at 834 (quoting Agins v. Tiburon, 447 U.S. 255, 260 (1980)).

^{29.} See id. at 841-42.

^{30.} Dolan v. City of Tigard, 512 U.S. 374, 400 (1994).

space, stringency, and time. The *theoretical dimension* involves a decision reflecting the incidents of ownership.³⁵ The *spatial dimension* identifies those "objects," or types of interests, to which the chosen theory of rights applies.³⁶ The *stringency dimension* relates to the level of protection afforded to the identified private interest in light of competing societal interests.³⁷ And the *temporal* dimen-

36. See UNDERKUFFLER, supra note 12, at 21 ("If we choose, for example, the property holder's 'reasonable expectations' as the theoretical dimension for our conception of property, the question arises: 'reasonable expectations with respect to what?' If we choose legal rules as the theoretical dimension for our conception of property, the question arises: 'legal rules as applied to what?""). Underkuffler contends that the spatial dimension is relevant on both a conceptual and a geographic scale. See Underkuffler-Freund, supra note 12, at 171 ("The chosen theory of rights has meaning only with reference to a geographically or otherwise conceptually described field of application."). The "parcel as a whole" debate in regulatory takings jurisprudence provides an appropriate example on the geographic scale. See Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104, 130-31 (1978) (""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. . . . [T]his Court focuses . . . on the nature and extent of the interference with rights in the parcel as a whole"); Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470, 497 (1987) (supporting the statement in *Penn Central* that the extent of deprivation effected by a regulatory action is measured against the value of the parcel as a whole); Tahoe-Sierra Pres. Council v. Tahoe Reg'l Planning Agency, 535 U.S. 302, 331 (2002) (quoting Penn Cent., 438 U.S. at 130-31) ("in regulatory takings cases [the judiciary] must focus on 'the parcel as a whole""). But see Palm Beach Isles Assocs. v. United States, 208 F.3d 1374, 1380-81 (Fed. Cir. 2000) (declaring the relevant parcel to be the 50.7 regulated acres rather than the entire 311.7 acre parcel owned by the plaintiff); Loveladies Harbor, Inc. v. United States, 28 F.3d 1171, 1181 (Fed. Cir. 1994) (finding that the relevant parcel for takings purposes did not include portions of the parcel sold before promulgation of the regulation at issue). See also Marc R. Poirier, The Virtue of Vagueness in Takings Doctrine, 24 CARDOZO L. REV. 93, 110 n.65 (2002) [hereinafter Virtue of Vagueness] ("In a takings claim based on loss of value, the loss must be examined relative to a 'before' picture of what was initially at stake."); James G. Titus, Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners, 57 MD. L. REV. 1279, 1348 (1998) ("A setback of one foot . . . might deny all beneficial use to that first foot of land, yet barely impair the use of the remaining land.").

37. UNDERKUFFLER, *supra* note 12, at 25. For example, the Supreme Court, having on several occasions chosen a theory of rights grounded in the "bundle of rights" metaphor, has categorized the "right to exclude" as "one of the most essential sticks" in that bundle. Kaiser Aetna v. United States, 444 U.S. 164, 176 (1979). Necessarily, then, there must be sticks within that bundle that are afforded a lesser degree of protection than the right to exclude. See UNDERKUFFLER, supra note 12, at 25. Indeed, the Court in another case seemingly acknowledged the same, stating that an ordinance limiting land to single-family dwellings does not "extinguish a fundamental attribute of ownership[.]" Agins v. City of Tiburon, 447 U.S. 255, 262 (1980) (citing Kaiser Aetna, 444 U.S. at 179-80). Outside of the real property context, the stringency with which property rights are protected also might differ depending upon the kinds of objects at issue. For example, money is less protected than real property

^{35.} See UNDERKUFFLER, supra note 12, at 16. This dimension requires a universal theory of individual rights (lest any idea of property be void of meaning). See also Susan Eisenberg, Comment, Intangible Takings, 60 VAND. L. REV. 667, 702-03 (2007) (discussing the role of a universal theory for defining property rights). Such a theory could, for instance, be grounded in positivist notions of the law, historical understandings, ordinary meaning, custom, or reasonable and justified expectations. See UNDERKUFFLER, supra note 12, at 19-21. See also Jedediah Purdy, A Freedom-Promoting Approach to Property: A Renewed Tradition for New Debates, 72 U. CHI. L. REV. 1237, 1239 n.9 (2005); Joseph William Singer, The Ownership Society and Takings of Property: Castles, Investments, and Just Obligations, 30 HARV. ENVTL. L. REV. 309, 310-14 (2006) (describing conceptions of what "ownership" means to partially define property rights).

sion, according to Underkuffler, reflects whether, and the extent to which, property rights can be modified in light of evolutional societal change.³⁸ If courts directly contemplate the choices they are making within each dimension, their holdings are more likely to seem principled.³⁹ In other words, attentiveness to these four dimensions of property forces the judiciary to acknowledge at least some of the underlying choices made in takings cases.⁴⁰ However, in both of its seminal exaction takings decisions, the U.S. Supreme Court did not overtly acknowledge the content ascribed to each dimension of the property interest that it deemed taken.

It appears that, in *Nollan*, the Court simultaneously selected two distinct *theories* of rights, without delineating the contours of either theory or suggesting how any distinctions between the two might be reconciled. First, it chose a theory of property as circumscribed by its "ordinary meaning."⁴¹ However, the Court only explicitly defined "ordinary meaning" in the negative; it stated that "ordinary meaning" does *not* connote the landowner's reasonable expectations with respect to use restrictions, as Justice Brennan had defined it in a dissenting opinion.⁴² Second, the Court resorted

in light of its fungible nature. See, e.g., E. Enters. v. Apfel, 524 U.S. 498, 555 (1998) (Breyer, J., dissenting); United States v. Sperry Corp., 493 U.S. 52, 62 n.9 (1989). It also may differ in light of the different contexts in which ownership rights to a given object appear. For example, a chair with which one has a personal attachment because it is a family heirloom may be more protected than the same chair—from a physical standpoint—that is replaceable with one of equal value. UNDERKUFFLER, *supra* note 12, at 27 (citing Margaret Jane Radin, *Property and Personhood*, 34 STAN L. REV. 957, 1007 (1982)).

^{38.} See UNDERKUFFLER, supra note 12, at 29-30. If one chooses a theory of rights grounded in ordinary meaning, however, it is difficult to distinguish Underkuffler's description of the theoretical dimension with that of the temporal dimension. This Article suggests that the temporal nature of property, particularly in exaction takings cases, consists of several important sub-elements that separate it from choices surrounding a theory of rights. See infra text accompanying notes 58-60.

^{39.} It suffices to say that the more the content afforded each dimension of such choices is made transparent, the better off all members of society will be—from judges to legislators to regulators to private citizens—in fashioning their own perspectives on the competing interests at work in takings disputes. Without an explicit assessment of the content of each dimension, individuals "lose the opportunity to evaluate consciously the social and political choices that all property involves." UNDERKUFFLER, *supra* note 12, at 62 (comparing a conception of property that recognizes competing interests amidst a fluid landscape and "explicitly assess[es]" the "choices for its dimensions of theory, space, stringency, and time" with a conception of property that views property as "protection" and "tends to deny or obscure these [dimensional] choices" without asking "why or how such protection exists"). This lost opportunity supports a "dangerous (and naïve) illusion that 202.

^{40.} See UNDERKUFFLER, supra note 12, at 155 ("Awareness of the dimensions that property involves would . . . force an awareness of the choices that we—as a society—are making in [takings] cases, either explicitly or by default.").

^{41.} See Nollan v. Cal. Coastal Comm'n, 483 U.S. 825, 831 (1987).

^{42.} Id.

to a theory of rights grounded in the "bundle of rights" metaphor.⁴³ The *Dolan* majority cited favorably to the Court's earlier reliance on this metaphor, without further explanation.⁴⁴ Yet while the Court has previously held that the "bundle" includes the generally-described rights of possession, use, exclusion, and disposition,⁴⁵ the "sticks" that make up this bundle have been so vociferously debated that some suggest the metaphor is of trivial meaning.⁴⁶ Complicating *Nollan*'s, and, by affirmation, *Dolan*'s, rather perplexing selection of the "ordinary meaning" and "bundle of rights" theories, the U.S. Supreme Court in other recent takings cases has chosen theories grounded in the right to "anticipated gains,"⁴⁷ the right to use as limited by background principles of state property law,⁴⁸ and the rights as determined by the "existing rules or understandings that stem from an independent source such as state law[.]"⁴⁹

Similarly, the Court has not definitely interpreted the *spatial* dimension of property rights in the exactions context. Rather, it has sent only vague signals in identifying the categories of exactions to which the *Nollan* and *Dolan* paradigm apply. Several commentators have drawn from dicta in recent Supreme Court decisions to suggest that the relevant "space" includes only those exactions that are adjudicative in nature⁵⁰ or require public occu-

^{43.} *Id.* (citing Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 433 (1982)). Justice Brennan's dissenting opinion suggested the same. *See id.* at 857 (Brennan, J., dissenting) ("[S]tate law is the source of those strands that constitute a property owner's bundle of . . . rights.").

^{44.} Dolan v. City of Tigard, 512 U.S. 374, 384 (1994) (citing Kaiser Aetna v. United States, 444 U.S. 164, 176 (1979)).

^{45.} See United States v. Gen. Motors Corp., 323 U.S. 373, 377-78 (1945). See also Underkuffler-Freund, *supra* note 12, at 169 ("Theories that have appeared, at various times [in U.S. Supreme Court opinions], include the 'bundle' of 'traditionally' or 'commonly' recognized rights to possess, use, transport, sell, donate, exclude, or devise[.]"(footnote omitted)).

^{46.} See, e.g., Craig Anthony (Tony) Arnold, Legal Castles in the Sand: The Evolution of Property Law, Culture, and Ecology in Coastal Lands, 61 SYRACUSE L. REV. (forthcoming 2011), available at http://papers.srn.com/sol3/papers.cfm?abstract_id=1701626.

^{47.} Andrus v. Allard, 444 U.S. 51, 66 (1979). See also E. Enters. v. Apfel, 524 U.S. 498, 528-29 (1998).

^{48.} Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1030 (1992).

^{49.} Bd. of Regents v. Roth, 408 U.S. 564, 577 (1972).

^{50.} See Fenster, Takings Formalism, supra note 1, at 628 (citing City of Monterey v. Del Monte Dunes at Monterey, Ltd., 526 U.S. 687, 702 (1999)) (suggesting that dicta in Del Monte Dunes "seemed to limit nexus and proportionality to a subset of land use conditions" that are adjudicative in nature); Poirier, Virtue of Vagueness, supra note 36, 107 n.55 (contending that Del Monte Dunes limits the application of Nollan and Dolan to individualized determinations); Robert H. Freilich & Jason M. Divelbiss, The Public Interest is Vindicated: City of Monterey v. Del Monte Dunes, 31 URB. LAW. 371, 380 (1999) (suggesting that Del Monte Dunes establishes that the Nollan and Dolan threshold is limited to "the [n]arrow [c]ategorical [e]xceptions of [t]itle or [e]xaction [t]akings"); Mulvaney, Remnants of Exaction Takings, supra note 4, at 212-14 (suggesting that there is a strong implication in the U.S. Supreme Court's unanimous 2005 opinion in Lingle v. Chevron U.S.A., Inc., 544 U.S. 528

pation of private lands.⁵¹ (Both the beach access way exaction in *Nollan* and the bicycle path exaction in *Dolan* were arguably adjudicative,⁵² and both clearly required public occupation of previously private lands.) Yet other commentators suggest that the nexus and proportionality threshold is equally applicable to legislatively-imposed exactions,⁵³ or to exactions that do not re-

52. But see Mulvaney, Remnants of Exaction Takings, supra note 4, at 227 (suggesting that both Nollan and Dolan could be considered generally applicable legislative schemes, whereby the facts in those cases would fail to meet the stated circumstances in which their tests apply).

53. See, e.g., Steven J. Eagle, Del Monte Dunes, Good Faith, and Land Use Regulation, 30 ENVTL. L. REP. 10100, 10103-05 (2000) ("It seems highly unlikely that the Supreme Court would unanimously declare through dicta in Del Monte Dunes that the Dolan 'rough proportionality' principle should not develop to meet the exigencies of cases as they arise, much less to deal with deliberate municipal circumventions."); J. David Breemer, The Evolution of the "Essential Nexus": How State and Federal Courts Have Applied Nollan and Dolan and Where They Should Go from Here, 59 WASH. & LEE L. REV. 373, 401-02 (2002); Christopher T. Goodin, Note, Dolan v. City of Tigard and the Distinction Between Administrative and Legislative Exactions: "A Distinction Without A Constitutional Difference," 28 U. HAW. L. REV. 139, 158-67 (2005); David L. Callies & Christopher T. Goodin, The Status of Nollan v. California Coastal Commission and Dolan v. City of Tigard After Lingle v. Chevron U.S.A., Inc., 40 J. MARSHALL L. REV. 539, 563-64 (2007); Steven A. Haskins, Closing the Dolan Deal-Bridging the Legislative/Adjudicative Divide, 38 URB. LAW. 487, 501-21 (2006) (arguing that the Takings Clause does not distinguish between branches of government, such that legislative and adjudicative exactions should receive the same level of judicial scrutiny); James S. Burling & Graham Owen, The Implications of Lingle on Inclusionary Zoning and Other Legislative and Monetary Exactions, 28 STAN. ENVTL. L.J. 397, 407-17 (2009) (arguing that Lingle supports subjecting legislativelyimposed exactions to heightened judicial scrutiny).

For a review of the pre-Lingle judicial split on this issue of legislative versus adjudicative exactions, compare Garneau v. City of Seattle, 147 F.3d 802, 811 (9th Cir. 1998) (expressing "considerable doubt" about the applicability of Dolan's rough proportionality standard to "legislative, as opposed to administrative exactions") (footnote omitted), San Remo Hotel L.P. v. City & Cnty. of San Francisco, 41 P.3d 87, 105-11 (Cal. 2002) (holding that Nollan and Dolan's heightened scrutiny did not apply to broad legislation establishing a formula for housing replacement fee conditions), Homebuilders Ass'n of Metro. Portland v. Tualatin Hills Park & Rec. Dist., 62 P.3d 404, 413 (Or. Ct. App. 2003) (holding that the Dolan "rough proportionality" test did not apply in determining whether system development charge was a taking), Home Builders Ass'n. of Cent. Ariz. v. City of Scottsdale, 930 P.2d 993, 1000 (Ariz. 1997), Arcadia Dev. Corp. v. City of Bloomington, 552 N.W.2d 281, 286 (Minn. Ct. App. 1996), Southeast Cass Water Res. Dist. v. Burlington N. R.R. Co., 527 N.W.2d 884, 896 (N.D. 1995), Waters Landing L.P. v. Montgomery Cnty., 650 A.2d 712, 724 (Md. 1994), and Parking Ass'n of Ga., Inc. v. City of Atlanta, 450 So. 2d 200, 203 n.3 (Ga. 1994), with Amoco Oil Co. v. Vill. of Schaumburg, 661 N.E.2d 380, 389 (Ill. App. Ct. 1995) (applying Dolan to legislatively imposed property development conditions), Dudek v. Umatilla Cnty., 69 P.3d 751, 756 (Or. Ct. App. 2003) (distinguishing a legislatively adopted exaction scheme where the ordinance grants discretion to the county to determine the extent of the exaction, to which Nollan and Dolan apply, from a legislatively determined impact fee charge, to which they do not), and Lincoln

⁽²⁰⁰⁵⁾ that the *Nollan* and *Dolan* tests do not apply to conditions imposed through the legislative process).

^{51.} As with the adjudicative-versus-legislative distinction, some scholars contend that there is a strong implication in *Del Monte Dunes* and *Lingle* that the *Nollan* and *Dolan* tests do not apply to conditions that are not physically invasive. See, e.g., Fenster, *Takings Formalism, supra* note 1, at 635-36; John D. Echeverria, *Takings and Errors*, 51 ALA. L. REV. 1047, 1077-79 (2000) [hereinafter *Takings and Errors*]; John D. Echeverria, *Revving the Engines in Neutral:* City of Monterey v. Del Monte Dunes at Monterey, Ltd., 29 ENVTL. L. REP. 10682, 10692 (1999); Mulvaney, *Remnants of Exaction Takings, supra* note 4, at 214.

quire physical public occupation, such as conservation restrictions and impact fees.⁵⁴

City Chamber of Commerce v. City of Lincoln City, 991 P.2d 1080, 1082 (Or. Ct. App. 1999) (applying *Dolan* to an ordinance requiring fees for roads and other infrastructure as development permit conditions). Of note, Justices O'Connor and Thomas dissented from the U.S. Supreme Court's denial of a petition for certiorari in a matter where the Georgia Supreme Court declared that the heightened scrutiny of *Nollan* and *Dolan* is not applicable to legislatively-imposed exactions, but only those that are adjudicatively-imposed. *See* Parking Ass'n of Ga., Inc. v. City of Atlanta, 515 U.S. 1116, 1117–19 (1995) (Thomas, J. & O'Connor, J., dissenting from the denial of certiorari).

For post-*Lingle* cases on this legislative versus adjudicative question, compare Wolf Ranch L.L.C. v. City of Colo. Springs, 207 P.3d 875, 880 (Colo. App. 2008), *aff'd*, 220 P.3d 559 (Colo. 2009) (holding that legislatively formulated exactions applying to broad classes of landowners do not require a showing of an essential nexus and rough proportionality), and McClung v. City of Sumner, 548 F.3d 1219, 1227-28 (9th Cir. 2008) (holding that the *Nollan* and *Dolan* tests are inapplicable to cases that do not involve individual, adjudicative decisions nor the physical appropriation of private land), with B.A.M. Dev. L.L.C. v. Salt Lake Cnty., 128 P.3d 1161, 1170-71 (Utah 2006) (holding that prior to the enactment of a Utah statute codifying a "rough proportionality" treatment of all development exactions, *Nollan* and *Dolan* applied to both adjudicative decisions and general land-use ordinances).

54. See, e.g., Breemer, supra note 53, at 402-05. The lower courts continue to debate the issue. For pre-Lingle cases on this question, compare Kitt v. United States, 277 F.3d 1330, 1336 (Fed. Cir. 2002) (quoting Commonwealth Edison Co. v. United States, 271 F.3d. 1327, 1340 (Fed. Cir. 2001)) ("the mere imposition of an obligation to pay money . . . does not give rise to a claim under the Takings Clause of the Fifth Amendment"), Garneau, 147 F.3d at 811 (expressing "considerable doubt" about the applicability of Dolan's rough proportionality standard to "fee exactions, as opposed to physical exactions"), Clajon Prod. Corp. v. Petera, 70 F.3d 1566, 1578 (10th Cir. 1995) (declaring that Dolan's heightened scrutiny is inapplicable to fees imposed as a condition of a landowner's exercise of her property rights to hunt on her own land because no physical occupation occurred), Atlas Corp. v. United States, 895 F.2d 745, 757-758 (Fed. Cir. 1990) (citing Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470, 491-92 (1987)) (conditioning approval on expenditures is not a taking), Home Builders Ass'n of Cent. Ariz., 930 P.2d at 1000 (citing Commercial Builders v. Sacramento, 941 F.2d 872 (9th Cir. 1991)) (finding a water resource development fee not subject to Dolan's heightened scrutiny), and McCarthy v. City of Leawood, 894 P.2d 836, 845 (Kan. 1995) (declining to apply Dolan beyond property dedications to impact fees), with Garneau, 147 F.3d at 815 n.5 (O'Scannlain, J., concurring in part and dissenting in part) (citing Ehrlich v. City of Culver City, 512 U.S. 1231 (1994)) (asserting that U.S. Supreme Court's vacation and remand in Ehrlich soon after Dolan suggests Dolan applies to imposed fees), Town of Flower Mound v. Stafford Estates L.P., 135 S.W.3d 620, 635 (Tex. 2004) (applying *Dolan* to traffic impact fee imposed ad hoc to improve an existing public road), Krupp v. Breckenridge Sanitation Dist., 19 P.3d 687, 695 (Colo. 2001) (applying Dolan to sanitation fee), Ehrlich v. City of Culver City, 911 P.2d 429, 444 (Cal. 1996) (applying Dolan to recreation fee), N. Ill. Home Builders Ass'n v. Cnty. of DuPage, 649 N.E.2d 384, 390-91 (Ill. 1995) (applying Dolan to transportation impact fees), Trimen Dev. Co. v. King Cnty., 877 P.2d 187, 194 (Wash. 1994) (applying Dolan to park fees), Benchmark Land Co. v. City of Battle Ground, 972 P.2d 944, 950 (Wash. App. 1999) (deciding that Nollan and Dolan apply "where the City requires the developer as a condition of approval to incur substantial costs improving an adjoining street"), J.C. Reeves Corp. v. Clackamas Cnty., 887 P.2d 360, 365-66 (Or. Ct. App. 1994) (applying Dolan to transportation impact fees), and Dowerk v. Charter Twp. of Oxford, 592 N.W.2d 724, 728 (Mich. Ct. App. 1998) (applying Dolan to extension and upgrade of private roads).

For post-*Lingle* cases on this question, compare Norman v. United States, 429 F.3d 1081, 1089-90 (Fed. Cir. 2005) (holding that that *Nollan* and *Dolan* only apply to permit conditions that require a physical invasion of property), and City of Olympia v. Drebick, 126 P.3d 802, 808 (Wash. 2006) (holding that the tests applied in *Nollan* and *Dolan* should not be extended to impact fees imposed to mitigate the direct impacts of new development or general growth impact fees imposed pursuant to statutorily-authorized ordinances), with Ocean Harbor House Homeowners Ass'n v. Cal. Coastal Comm'n, 77 Cal. Rptr. 3d 432, 449-

In analyzing *Nollan* and *Dolan*, one can say with certainty that only the *stringency* dimension of property has been explicitly addressed in any detail. Whatever theory of rights is utilized, in whatever conceptual space those rights apply, the judiciary is to review any alleged infringement of those rights via an exaction with an intermediate level of scrutiny. That is, the government bears the burden of establishing compliance with the "essential nexus" and "rough proportionality" tests.⁵⁵ And even within the stringency dimension, the precise nature of the nexus and proportionality tests remains subject to debate.

^{50 (}Cal. Ct. App. 2008) (holding that under California law, the *Nollan* and *Dolan* tests apply to permit conditions that require land dedication and ad hoc mitigation fees).

Some commentators even have contended that the *Nollan* and *Dolan* opinions indicate the Court's willingness to authorize an expanded field of substantive challenges to the validity of final governmental acts far beyond exactions. *See, e.g., Jan G. Laitos, Takings* and *Causation, 5 WM. & MARY BILL RTS. J. 359, 377-78 (1997) (suggesting that the Nollan* and *Dolan* analysis should apply to all governmental actions that affect private property interests); Edward J. Sullivan, *Substantive Due Process Resurrected through the Takings Clause:* Nollan, Dolan, and Ehrlich, 25 ENVTL. L. 155 (1995). But see Richard J. Ansson, Jr., Dolan v. Tigard's *Rough Proportionality Standard: Why This Standard Should Not Be Applied to an Inverse Condemnation Claim Based upon Regulatory Denial*, 10 SETON HALL CONST. L.J. 417, 425-434 (2000).

^{55.} For scholarly articles referring to the Nollan and Dolan threshold as a form of "intermediate scrutiny," see, for example, Carlos A. Ball & Laurie Reynolds, Exactions and Burden Distribution in Takings Law, 47 WM. & MARY L. REV. 1513, 1516-17 (2006) (discussing academic debate on the benefits and burdens of applying the intermediate scrutiny required by Nollan and Dolan to exactions); Note, California Court of Appeal Finds Nollan's and Dolan's Heightened Scrutiny Inapplicable to Inclusionary Zoning Ordinance.-Home Builders Ass'n of Northern California v. City of Napa, 108 Cal. Rptr. 2d 60 (Cal. Ct. App. 2001), 115 HARV. L. REV. 2058, 2058-59 (2002) (discussing a California Court of Appeal's refusal to apply intermediate scrutiny in accordance with Nollan and Dolan to exactions in support of inclusionary zoning); Charles M. Haar & Michael Allan Wolf, Euclid Lives: The Survival of Progressive Jurisprudence, 115 HARV. L. REV. 2158, 2184-87 (2002) (suggesting that, in Nollan and Dolan, the Rehnquist Court, "lowered the bar . . . for private property owners challenging government regulation of land" by calling for a more significant level of scrutiny than had previously been required in land use cases and placing the burden of proof on the defendant government); Fenster, Takings Formalism, supra note 1, at 622 ("Nollan's and Dolan's 'essential nexus' and 'rough proportionality' tests require courts to apply heightened scrutiny to challenged land use regulations"); Breemer, supra note 53, at 385 (citing Ehrlich v. City of Culver City, 911 P.2d 429, 439 (1996)) (discussing the need for application of the intermediate standard of scrutiny formulated by the Court in Nollan and Dolan to curtail the government's abusive use of its discretionary land use and police powers); Otto J. Hetzel & Kimberly A. Gough, Assessing the Impact of Dolan v. City of Tigard on Local Governments' Land-Use Powers, in TAKINGS: LAND-DEVELOPMENT CONDITIONS AND REGULATORY TAKINGS AFTER DOLAN AND LUCAS 219 (David L. Callies ed., 1996) (stating that Nollan and Dolan "clearly signalled the Court's determination to provide greater protection for private property rights" through the application of intermediate judicial scrutiny); Andrew W. Schwartz, Deputy City Attorney, S.F., Cal., Address at Georgetown Univ. Law Ctr., Litigating Regulatory Takings Claims: The Application of Nollan/Dolan Heightened Scrutiny to Legislative Regulations and "Unsuccessful Exactions," (Oct. 28-29, 1999); Donald C. Guy & James E. Holloway, The Direction of Regulatory Takings Analysis in the Post-Lochner Era, 102 DICK. L. REV. 327, 346 (1998) (stating the Court's nexus and proportionality tests represent the application of heightened judicial scrutiny). See also STEVEN J. EAGLE, REGULATORY TAKINGS § 7-10(b)(7) (3d ed. 2005).
Openly affording content—imprecise at that—to but one of the first three dimensions of the property interest at stake in exaction takings disputes hardly establishes a coherent and consistent paradigm in which regulators and individual property owners can be expected to comfortably co-exist.⁵⁶ Not surprisingly, the content afforded by the Supreme Court to these first three dimensions has provoked a significant amount of critical legal scholarship.⁵⁷ However, the *temporal* dimension has gone largely undetected within exactions jurisprudence, and, likely as a result, has not been fully explored in the academic literature. In this light, it is the temporal features of property to which the remainder of this Article is dedicated.

The content afforded the temporal dimension is important on several fronts. As Underkuffler suggests, it affects whether, and the extent to which, property interests may be refined in light of subsequent collective action responsive to political, economic, scientific, or technological developments.⁵⁸ Yet decisions respecting property's temporal characteristics also play an important role in at least two other contexts in exaction taking law. First, defining property's temporal features establishes the relevance of the varying levels of delay between an exaction and the external impact that exaction is intended to cure.⁵⁹ Second, it determines the point in time when property's theoretical, spatial, and stringency characteristics attach as to any particular exaction takings claimant.⁶⁰ The following Part considers this latter element of property's temporal dimension.

III. PROPOSED-VERSUS-IMPOSED EXACTIONS

The first section below explores the limited judicial treatment on the temporal question of whether the *Nollan* and *Dolan* construct attaches at a point in time *prior to* the government's imposition of an exaction. The second section goes beyond the cursory analysis in these reported decisions by exploring

^{56.} See, e.g., Poirier, Virtue of Vagueness, supra note 36, at 107 n.55 (suggesting that Nollan and Dolan articulate tests "that are hardly beacons of clarity . . ."); Fenster, Takings Formalism, supra note 1, at 613-14, 628 (describing Nollan and Dolan as "somewhat inexact" and contending that "state and lower federal courts lack guidance on, and continue to disagree about, the precise boundaries of the category of regulations to which the exactions rules apply").

^{57.} See, e.g., supra notes 35-37 and accompanying text.

^{58.} See UNDERKUFFLER, supra note 12, at 29-30. See also supra note 14 and accompanying text.

^{59.} See Mulvaney, Time and Exactions, supra note 15.

^{60.} See infra notes 61-169 and accompanying text.

the competing normative positions pertinent to resolution of this temporal question.

A. The Limited Judicial Treatment of the Proposed-Versus-Imposed Exaction Inquiry

The factual circumstances of *St. John's River Management District v. Koontz*,⁶¹ recently decided by a Florida appellate court, serve as an appropriate template to explore this temporal element. Coy Koontz applied to the St. Johns River Management District (the "District") for a dredge-and-fill permit to construct a commercial shopping center on 3.7 acres of his 14.2-acre lot.⁶² The permit was necessary because nearly Koontz's entire property lies within the Riparian Habitat Protection Zone of the Econlockhatchee River Hydrologic Basin ("Basin").⁶³ Koontz's proposed development within the Basin would require the destruction of 3.4 acres of protected wetlands and 0.3 acres of protected uplands.⁶⁴ In his development application, Koontz offered to mitigate the wetland loss by restricting from development the remaining undeveloped portion of the largely wetland property (a total of 10.5 acres) through a conservation easement.⁶⁵

In assessing the District's response to Koontz's permit application, it is important to identify the baseline: the District at all times retained the regulatory authority to prohibit use of the property to protect the health and safety of the public by preserving the ecosystem services that Koontz's property, in its natural state, provides.⁶⁶ In this instance, however, the District proved willing to discuss possible avenues for mitigating the impacts of the proposed development through imposition of an exaction.⁶⁷ Yet Koontz's mitigation proposal (placing a conserva-

^{61.} Koontz IV, 5 So. 3d 8 (Fla. 5th DCA 2009).

^{62.} Id. at 9-10. Technically, Koontz applied for both a dredge-and-fill permit and "a management and storage of surface waters permit" Id. at 10 (citing Koontz II, 861 So. 2d 1267, 1269 (Fla. 5th DCA 2003)). The distinction between the two is not relevant to the issues addressed herein.

^{63.} Id. at 9-10.

^{64.} Id. at 10.

^{65.} *Id.* at 9-10. There is no mention in the public record of Koontz offering to offset the loss of protected uplands, nor of the government requesting that Koontz do so.

^{66.} See Koontz v. St. Johns River Water Mgmt. Dist. (Koontz III), 720 So. 2d 560, 561 (Fla. 5th DCA 1998) (affirming the District's statutory authority to designate the affected land as a protected hydrological basin). For examples of prominent scholarship on the emerging notion of ecosystem services, see J.B. Ruhl & James Salzman, *The Law and Policy Beginnings of Ecosystem Services*, 22 J. LAND USE & ENVTL. L 157 (2007), and Keith H. Hirokawa, *Three Stories About Nature: Property, the Environment, and Ecosystem Services*, 62 MERCER L. REV. (forthcoming 2011), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1809035.

^{67.} See Koontz IV, 5 So. 3d at 10.

tion restriction on the 10.5 acres upon which he did not propose to build) amounted to less than one-third of that required by the District's conservation guidelines.⁶⁸

In informal discussions with Koontz, the District stated that it was willing to grant the development permit on the condition that Koontz perform offsite mitigation.⁶⁹ For example, the District suggested that Koontz agree to plug ditches, replace damaged culverts, or perform some equivalent mitigating act on nearby properties within the Basin.⁷⁰ Alternatively, the District proposed that Koontz could avoid performing any off-site wetlands mitigation by reducing the size of his project to the point where the destruction of protected territory would be limited to one acre.⁷¹

Koontz rejected these propositions by the District;⁷² he would only agree to his original, self-proposed condition to deed-restrict the remaining portion of his property for conservation purposes after construction of his entire 3.7-acre proposed development.⁷³ Concluding that Koontz's self-proposed condition would not offset the wetland loss associated with the project, the District denied the permit application outright.⁷⁴ In the denial order, the District reiterated its suggested mitigation options, as well as the project design alternative, that would make Koontz's development permissible.⁷⁵

72. Koontz IV, 5 So. 3d at 10. See also id. at 16 (Griffin, J., dissenting) ("Mr. Koontz apparently thought [development of 3.7 acres, preservation of the balance, and offsite mitigation to enhance existing wetlands by cleaning some culverts and ditches] was OK, except for the part about the culverts and ditches").

73. Id. at 10 (citing Koontz II, 861 So. 2d 1267, 1269 (Fla. 5th DCA 2003)).

74. See id.

^{68.} Petitioner-Appellant's Initial Brief on the Merits, at 2, *Koontz IV*, 5 So. 3d 8 (SC09-713), 2009 WL 4227381 (citation omitted).

^{69.} Id. at 3 (citation omitted).

^{70.} Id. at 3-4 (citations omitted).

^{71.} Id. at 4 (citation omitted). The District's mitigation guidelines call for a 10:1 mitigation ratio. Id. at 7-8. It is questionable whether these guidelines—or at least St. Johns' application of them-are sufficiently protective of wetland resources under Florida's Environmental Resource Permitting Program, which states that "[t]he mitigation must offset the adverse effects caused by the regulated activity." FLA. STAT. § 373.414(1)(b) (2010). Existing law prohibits the destruction of wetlands, yet St. Johns apparently contends that its guidelines allow a developer to destroy one acre of wetlands he owns for every ten acres of wetlands he owns but does not destroy. To actually offset the destruction of one wetland acre (upon which development is otherwise prohibited), it seems more appropriate that the government demand that an applicant create a certain multiple number of acres of new wetlands (based on the likelihood of their surviving the tenuous process of converting uplands to wetlands), restore degraded wetlands, enhance the functionality of existing wetlands, or place a conservation restriction on upland wetlands buffers or wetlands that for some reason are not protected by existing law. See generally Jessica Owley Lippmann, The Emergence of Exacted Conservation Easements, 84 NEB. L. REV. 1043 (2006); David C. Levy & Jessica Owley Lippmann, Preservation as Mitigation under CEQA: Ho-hum or Uh-oh?, 14 ENVTL. L. NEWS 18 (2005).

^{75.} Petitioner-Appellant's Initial Brief on the Merits, at 2-4.

Koontz did not seek an administrative hearing to question the validity of the proposed mitigation demands, as authorized under Florida's Administrative Procedure Act.⁷⁶ Instead, he filed suit in the State's circuit court under the rather unusual theory that the District had *proposed* conditions that amounted to an unconstitutional taking for which compensation would be due.⁷⁷

Before trial, the parties stipulated that the denial order did not deprive Koontz "of all or substantially all economically [viable] . . . use of [his] property."⁷⁸ In light of this stipulation, Koontz necessarily retained property that was economically valuable and available for certain non-trivial uses.⁷⁹ Therefore, Koontz would be highly unlikely to prevail under the "essentially ad hoc" balancing test set forth in *Penn Central* that is ordinarily applicable in regulatory takings cases.⁸⁰ The question that remained is one of a tem-

77. See Koontz III, 720 So. 2d 560, 561 (Fla. 5th DCA 1998).

78. Petitioner-Appellant's Initial Brief on the Merits, at 4-5 (citation omitted).

79. Koontz originally contended that the government's proposed exactions "did not serve a substantial purpose[,]" were "so excessive" and "[un]necessary[,]" and "without basis." Joint Pre-Trial Statement at 7 Koontz v. St. Johns River Water Mgmt. Dist. (Aug. 2002) (No. Cl-94-5763) (on file with author). He grounded these contentions in the U.S. Supreme Court's test, announced in Agins v. Tiburon, 447 U.S. 255 (1980), that a regulatory decision that fails to "substantially advance" a legitimate state interest amounts to an unconstitutional taking. Petitioner-Appellant's Initial Brief on the Merits at 30. However, a unanimous Supreme Court rejected the Agins test as an appropriate takings inquiry in 2005, suggesting it instead sounds in due process. See Lingle v. Chevron U.S.A., Inc., 544 U.S. 528, 540 (2005). While the exactions tests of Nollan and Dolan seemingly required application of the very substantive analysis rejected in *Lingle*, *Lingle* preserved Nollan and Dolan's tests in the "special context" of exactions. Id. at 538, 548. Apparently, after Lingle, Koontz successfully converted his claim to fit the high court's salvaged exaction takings jurisprudence. This mid-litigation conversion is fodder for additional future scholarship. For general assessments of Lingle's impact upon exaction takings jurisprudence, see John D. Echeverria, Lingle Etc., The U.S. Supreme Court's Takings Trilogy, 35 ELR 10577 (2005); Fenster, Stubborn Incoherence, supra note 4; Mulvaney, Remnants of Exaction Takings, supra note 4.

80. 438 U.S. 104, 124 (1978) (stating that, where facing a traditional regulatory takings claim, courts must engage in an "essentially ad hoc, factual inquir[y]" by considering the degree to which the claimant's property interest is impaired, the import of the interest advanced by the government's regulatory act, and the fairness in asking the

^{76.} See FLA. STAT. § 120.57(1)(b) (2010). At such an administrative hearing, environmental organizations and other interested parties have standing to participate in the scientific, procedural, and policy questions surrounding issues such as wetlands mitigation. See id. However, such groups are not afforded the same participatory rights in civil actions, such as the one that Koontz pursued here. See, e.g., Racing Props., L.P., v. Baldwin, 885 So. 2d 881, 883 (Fla. 3d DCA 2004). See also McMahon v. Geldersma, 317 S.W.3d 700, 705 (Mo. Ct. App. 2010) (quoting State ex rel. Nixon v. Am. Tobacco Co., 34 S.W.3d 122, 127 (Mo. 2000)) ("In the absence of a statute conferring an unconditional right to intervene, an applicant seeking intervention must file a timely motion showing three elements: '(1) an interest relating to the property or transaction which is the subject of the action; (2) that the applicant's ability to protect the interest is impaired or impeded; and (3) that the existing parties are inadequately representing the applicant's interest.""); In re Devon Energy Prod. Co., 321 S.W.3d 778, 783 (Tex. Ct. App. 2010) (citing In re Union Carbide Corp. 273 S.W.3d 152, 155 (Tex. 2008)) ("To constitute a justiciable interest, the intervenor's interest must be such that if the original action had never been commenced, and he had first brought it as the sole plaintiff, he would have been entitled to recover in his own name to the extent of at least a part of the relief sought in the original suit.").

poral nature: is the *Penn Central* balancing inquiry supplanted by the more probing scrutiny of the U.S. Supreme Court's exaction takings jurisprudence at the point in time where the government offers mitigation options before ultimately issuing a denial? Answering this question in the affirmative would mean that the theoretical, spatial, and stringency features of property attach as to any particular owner at the instant of the proposed exactions. In Koontz's case, this would obviously improve his chances of prevailing, for he could avail himself of the "intermediate scrutiny" of the *Nollan* and *Dolan* test, instead of the lower level of scrutiny of a *Penn Central* analysis.⁸¹

Nearly all of the many lower court applications of the U.S. Supreme Court's exaction takings construct have addressed final permit approvals.⁸² Indeed, prior to *Koontz*, it appears that in only three instances—a federal district court opinion, a federal circuit court opinion, and in a U.S. Supreme Court Justice's dissent from a denial of certiorari—did members of the judiciary assert that a proposed exaction could, in and of itself, implicate the Takings Clause.⁸³ And across these three cases, the opinions provide thin

claimant to bear this burden rather than the public); Brown v. Legal Found. of Wash., 538 U.S. 216, 233-35 (2003) (quoting *Penn Central*, 438 U.S. at 124) ("Our regulatory takings jurisprudence . . . is characterized by 'essentially ad hoc, factual inquiries'"); Palazzolo v. Rhode Island, 533 U.S. 606, 616 (2001). *See also* Fenster, *Takings Formalism, supra* note 1, at 612 ("The general default standard that applies to the majority of takings claims . . . employs a relatively low level of scrutiny and balances a number of factors in an ad hoc, open-ended inquiry.").

^{81.} Still, it is unclear whether the stringency of the nexus and proportionality tests applies within the space that *Koontz* asserts, namely, on-site conservation and the funding of off-site mitigation. *See supra* note 54 and accompanying text.

^{82.} For a sampling of the most recent reported exaction takings cases that have received attention in the academic literature, all of which involve the *issuance* of conditional permits, see McClung v. City of Sumner, 548 F.3d 1219 (9th Cir. 2008); Norman v. United States, 429 F.3d 1081 (Fed. Cir. 2005); Town of Flower Mound v. Stafford Estates L.P., 135 S.W.3d 620 (Tex. 2004); Wolf Ranch L.L.C. v. City of Colo. Springs, 207 P.3d 875 (Colo. App. 2008), *aff'd*, 220 P.3d 559; Ocean Harbor House Homeowners Ass'n v. Cal. Coastal Comm'n, 77 Cal. Rptr. 3d 432 (Cal. Ct. App. 2008).

^{83.} An amici of Koontz, in its brief to the Florida Supreme Court, submitted without explanation that there are four additional cases on point supportive of answering this question in the affirmative. See Brief of Fla. Home Builders Ass'n & Nat'l Ass'n of Home Builders as Amici Curiae Supporting Respondent at 10-11, Koontz IV, 5 So. 3d 8 (SC09-713) 2010 WL 262547. However, each of the four appears inapposite. The first, decided before Nollan and Dolan, involved only a facial challenge to an ordinance, from which the applicant had received a variance. Lee Cnty. v. New Testament Baptist, 507 So. 2d 626, 627 (Fla. 2d DCA 1987). In the second, a court applied Nollan where the government issued an order stating that if the developer did not submit a sufficient alternative re-design plan, the developer's road access permit would be issued with a condition requiring a public access easement across his property. Paradyne Corp. v. Fla. Dept. of Transp., 528 So. 2d 921, 926-27 (Fla. 1st DCA 1988). In the third case, a state appellate court in Illinois held that the denial of an application to expand a gas station was substantively invalid; therefore, the court's discussion of whether the dedication that the city would have attached to an issued permit was dicta. Amoco Oil Co. v. Vill. of Schaumburg, 661 N.E.2d 380, 391 (Ill. App. Ct. 1995) ("[T]he very issue in this case is whether [the city] has in fact enacted a valid special use permit."). And in the fourth, Salt Lake County had not only proposed an exaction but

and contradictory guidance on the complex questions surrounding whether such a novel claim presents a legitimate takings issue.

In one case, William J. Jones Insurance Trust v. City of Fort Smith,⁸⁴ the City of Fort Smith advised a developer seeking to build a convenience store that it could not authorize the proposed construction unless the developer granted the city an expanded right-of-way along the street frontage of his property for traffic and safety purposes.⁸⁵ In ruling for the developer, then-U.S. District Court Judge Morris Arnold (and current judge on the Eighth Circuit Court of Appeals) cited to what he termed "a brilliantly sustained and intellectually unrelenting elaboration of the relationship between the Fifth Amendment and taxes" by noted libertarian scholar Richard Epstein.⁸⁶

Judge Arnold accepted that the development would result in an increase in traffic into and out of the relevant property.⁸⁷ However, drawing on Epstein's work, he likened the city's dedication proposition to a tax.⁸⁸ He held that the city did not prove that any overall traffic increase, as opposed to a mere redistribution of traffic, would result from the proposed development.⁸⁹ He declared that this governmental action thus amounted to an exaction taking under *Nollan*'s nexus standard.⁹⁰ Judge Arnold ordered the city "to issue the requested permit unconditionally."⁹¹

A second case, Goss v. City of Little Rock,⁹² involved factual circumstances quite similar to William J. Jones Insurance Trust. The federal district court ruled that the city's denial of a rezoning request—in light of the applicant's refusal to dedicate a portion of his property for highway expansion as a condition thereto—amounted to an exaction taking in violation of the Nollan and Dolan threshold.⁹³ The U.S. Court of Appeals for the Eighth Circuit affirmed.⁹⁴

90. Id.

93. Id. at 863.

issued a conditional permit. See B.A.M. Dev. L.L.C. v. Salt Lake Cnty., 128 P.3d 1161, 1164 (Utah 2006).

^{84. 731} F. Supp. 912 (W.D. Ark. 1990).

^{85.} Id. at 913.

^{86.} Id. at 914 n.2.

^{87.} Id. at 914.

^{88.} Id. See also Nancy E. Stroud & Susan L. Trevarthen, Defensible Exactions After Nollan v. California Coastal Commission and Dolan v. City of Tigard, 25 STETSON L. REV. 719, 764-65 (1996) (remarking that, although Judge Arnold admitted that the increased carloads on the applicant's property could increase congestion, he suggested that a reasonable fact finder could conclude that the development would not create the congestion but only relocate it). Takings scholar Steven Eagle has described Judge Arnold's opinion on this point as "well-reasoned" and "prescient" in advance of the U.S. Supreme Court's decision in Dolan, which came four years after William J. Jones Ins. Trust. EAGLE, supra note 55, at § 7-10(a)(1).

^{89.} See William J. Jones Ins. Trust, 731 F. Supp. at 914.

^{91.} Id.

^{92. 151} F.3d 861 (8th Cir. 1998).

But Goss is a peculiar holding, for the court stated, "Little Rock has a legitimate interest in declining to rezone Goss's property, and the city may pursue that interest by denying Goss's rezoning application outright, as opposed to denying it because of Goss's refusal to agree to an unconstitutional condition"⁹⁵ Thus, the court said that a taking occurred, but no remedy—compensation or otherwise—was due.⁹⁶ In light of the Eighth Circuit's decision on the remedy in Goss eight years after William J. Jones Insurance Trust, as well as recent U.S. Supreme Court case law indicating that equitable relief is not appropriate in takings cases,⁹⁷ the continuing precedential value of Judge Arnold's decision in William J. Jones Insurance Trust is in some doubt.

At issue in a third case, *Lambert v. City and County of San Francisco*,⁹⁸ were two measures taken by the City of San Francisco to counter the diminishing supply of affordable housing and the corrosion of the character of mixed-use neighborhoods that were resulting from tourism generation.⁹⁹ First, the City amended its Planning Code and Master Plan to prohibit the employ of residential units for commercial uses except upon approval of a conditional use permit application.¹⁰⁰ Second, it adopted the Residential Hotel Unit Conversion and Demolition Ordinance ("HUCDO"). Independent of the restrictions in the Planning Code and the Master Plan, the HUCDO requires conditioning the conversion of residential units to tourism units on the provision of either a one-to-one

98. 67 Cal. Rptr. 2d 562 (Cal. Ct. App. 1997).

^{94.} Id.

^{95.} Id. at 864.

^{96.} Id. at 866. See also David L. Callies, Regulatory Takings and the Supreme Court: How Perspectives on Property Rights Have Changed from Penn Central to Dolan, and What State and Federal Courts Are Doing About It, 28 STETSON L. REV. 523, 570-71 n.309 (1999) ("[w]hile finding the highway dedication a taking, the court held the city could avoid any takings claims by simply refusing to rezone the subject property without the invalid dedication, pursuing its legitimate interest in declining to rezone property").

^{97.} See Lingle v. Chevron, U.S.A., Inc., 544 U.S. 528, 543 (2005) (asserting that the validity of government action is a due process inquiry that necessarily is precedent to a takings analysis, for "[n]o amount of compensation can authorize such action."). But see Stop the Beach Renourishment v. Fla. Dept. of Envtl. Prot., 130 S. Ct. 2592, 2607 (2010) (plurality opinion) (asserting there is "no reason why [compensation] would be the exclusive remedy for a . . . taking."). The lone court to face the remedies question since Stop the Beach Renourishment rejected as dictum the recent proposition in the Stop the Beach Renourishment plurality opinion that remedies beyond compensation exist for some successful takings claims. Sagarin v. City of Bloomington, 932 N.E.2d 739, 744-45 n.2 (Ind. Ct. App. 2010).

^{99.} *Id.* at 564-65. *See also* San Remo Hotel v. City & Cnty. of San Francisco, 145 F.3d 1095, 1098 (9th Cir. 1998) (discussing several "hotel conversion ordinances" enacted by the City of San Francisco to "stop the depletion of housing for the poor, elderly and disabled").

^{100.} Lambert, 67 Cal Rptr. 2d at 564 (discussing amendment of S.F. PLAN. CODE, § 178(a)(2) & (c) (1981)).

replacement for those lost units or compensation to the city to mitigate a portion of the replacement costs.¹⁰¹

The City Planning Commission administers the Planning Code and the Master Plan, while the Department of Building Inspection administers the HUCDO.¹⁰² In acquiring two independent appraisals and narrowly following the generally-applicable mitigation formula mandated by the HUCDO, the City's Department of Building Inspection determined that Lambert's proposed replacement of twenty-four of his residential units warranted a payment of \$600,000 in replacement costs.¹⁰³ Lambert offered only \$100,000.104 Meanwhile, the City Planning Commission exercised its discretionary authority by denying Lambert's application to convert these twenty-four residential units into tourism units.¹⁰⁵ The Planning Commission's stated reasons for denving the application included non-compliance with the Planning Code and the Master Plan provisions regarding the preservation of an affordable housing supply¹⁰⁶ and neighborhood character,¹⁰⁷ as well as those aimed at preventing traffic congestion.¹⁰⁸

107. Id. at 567.

^{101.} Id. at 564-65 (discussing S.F. ADMIN. CODE, § 41.13(a) (1990)).

^{102.} See Opposition to Petition for Writ of Certiorari at 2-3 Lambert, 67 Cal. Rptr. 562 (No. 99-967), 1999 WL 33632464.

^{103.} See Lambert, 67 Cal. Rptr. at 570 (Strankman, J., dissenting) (citing government replacement cost appraisals of \$488,584 and \$612,887). Some commentators question whether such a fee structure actually could offset the lost affordable housing in light of the extraordinary real estate escalation of the day in San Francisco. See, e.g., E-mail from Brian Weeks, Deputy Public Advocate, State of N.J., to Timothy M. Mulvaney, Assoc. Professor of Law, Tex. Wesleyan Univ. Sch. of Law (June 29, 2009) (on file with author). Mr. Weeks authored a brief on behalf of the States of New Jersey, Colorado, Delaware, Hawaii, Maryland, Missouri, Montana, Oklahoma, and West Virginia as Amici Curiae in support of the respondents, the City and County of San Francisco. See Brief of the States of New Jersey, Colorado, Delaware, Hawaii, Maryland, Missouri, Montana, Oklahoma and West Virginia as Amici Curiae in Support of the Respondents San Remo Hotel, L.P. v. City & County of San Francisco, 543 U.S. 1032 (2005) (No. 04-340), 2005 WL 508086.

^{104.} Lambert, 67 Cal. Rptr. 2d at 570 (Strankman, J., dissenting). While the Board of Permit Appeals, in its review of the determination that the HUCDO applied to Lambert's units, invited Lambert to acquire his own appraisal, he apparently did not. *Id.* at 571 (Strankman, J., dissenting). Since the City arrived at the \$600,000 figure by inserting its appraisal figures into a legislatively-mandated mitigation formula, Lambert's "offer" of \$100,000 could be considered irrelevant because there was no competing appraisal—or other variable—for the parties to negotiate.

^{105.} Id. at 563-64. Lambert argued that "[i]t is clearly of no significance to property owners which department or officer of the City demands an extortionary payment in exchange for a discretionary permit... and which one denies the permit when the demand is not paid...." Petitioners' Reply to Brief in Opposition at 3, Lambert, 67 Cal. Rptr. 562 (No. 99-697) 1999 WL 33632465.

^{106.} Lambert, 67 Cal. Rptr. at 566.

^{108.} Id. Unlike the City of Little Rock's denial at issue in Goss, the permit denial at issue in Lambert did not cite the applicant's refusal to comply with a proposed exaction as a reason for the denial. Id. Lambert suggested that the reasons stated in the Planning Commission's permit denial amounted to "subterfuge," "pretense," and an "interagency shell game." Petitioners' Reply to Brief in Opposition, at 3-4. The parties also disagreed on

Lambert filed suit, alleging that the Planning Commission denied the permit application because Lambert would not agree to what he believed amounted to an extortionate demand in violation of *Nollan* and *Dolan*.¹⁰⁹ The appellate court refrained from conducting a substantive review of any pre-permit-decision negotiations between any City agency and Lambert under the heightened exaction takings scrutiny of *Nollan* and *Dolan*.¹¹⁰ The court made this decision based on the fact that the Planning Commission took neither the \$600,000 nor a permitted use from him.¹¹¹ Instead, the court conducted a rational basis review, ultimately concluding that the reasons offered by the Planning Commission for denying the permit application were reasonable.¹¹²

The U.S. Supreme Court rejected Lambert's petition for certiorari.¹¹³ However, joined by Justices Kennedy and Thomas, Justice Scalia wrote, in dissenting from the denial of certiorari, that "[t]here is no apparent reason why the phrasing of an extortionate

109. See Lambert, 67 Cal. Rptr. at 566-67.

110. Id. at 568-69.

111. Id. at 569. In dissent, Judge Strankman posited that the exaction must meet the heightened scrutiny of the Nollan "essential nexus" test and the Dolan "rough proportionality" test, as a "legitimate state interest[]" is not enough to "support unrelated permit exactions." Id. at 571-72 (Strankman, J., dissenting) (citing Nollan v. Cal. Coastal Comm'n, 483 U.S. 825, 837 & n.5 (1987)) (suggesting that such heightened scrutiny is required to prevent "improper leveraging of the state's police power"). While disparate views on the proportionality of an exacted fee to the impacts posed by Lambert's development under the Dolan standard are conceivable, it is difficult to understand how a fee contributing to replacing the housing stock lost via conversion would not bear an essential nexus to the purposes of a regulation seeking to preserve the housing stock. Even if one agrees that the access way parallel to the water in Nollan did not bear an "essential nexus" to the scenic access way perpendicular to the water that the development restriction sought to protect, the exaction of a housing supply mitigation fee, if conditioned upon a permit issued to Lambert, seems the epitome of a proper exaction under the Nollan "essential nexus" standard. Of course, in other situations, there may be a clear proportionality between the proferred condition and the anticipated impact under Dolan, though Nollan could instill taking liability fears in the regulating entity. Fenster, Constitutional Shadow, supra note 4, at 747.

112. Lambert, 67 Cal. Rptr. 2d at 568. In other words, the California Court of Appeals held that the Lamberts had no constitutional right to a permit for the land use change for which they applied.

113. See Lambert v. City & Cnty. of San Francisco, 120 S. Ct. 1549 (2000) (denying certiorari). The California Supreme Court originally granted certiorari in *Lambert*, but later dismissed review as improvidently granted. See Schwartz, supra note 55, at 6. However, as one commentator notes, the California Supreme Court did not authorize republication of the Court of Appeal's opinion, whereby there is "no published precedent in California to prevent developers from seeking relief under this [proposed exaction] principle in the future." *Id.*

whether the Planning Commission determined that a mitigation fee of \$600,000 would be appropriate, or whether the Planning Commission or any other City agency bargained with the Lambert's over the amount of any mitigation fee. These factual disputes, however, do not detract from the discussion of *Lambert* for purposes of this Article's distinguishing between proposed-versus-imposed exactions, for the Planning Commission also contended that, even assuming that it had unsuccessfully attempted to impose the \$600,000 replacement fee, the heightened scrutiny of *Nollan* and *Dolan* is inapplicable. *See* Respondent's Opposition to Petitioner's Petition for Writ of Certiorari at 2, *Lambert*, 67 Cal. Rptr. 562 (No. 99-697) 1999 WL 33632464.

demand as a condition precedent rather than as a condition subsequent should make a difference." 114

Justice Scalia's dissent from the denial of certiorari is puzzling for at least two reasons. First, despite the divergence between the then-recent decision of the Eighth Circuit in Goss and the California appellate court's decision in Lambert, Justice Scalia found this case an exception to the Supreme Court's ordinary practice against reviewing cases where there is no "conflict of authority on the precise point[.]"¹¹⁵ Second, Justice Scalia invoked the rationale from the Supreme Court's 1980 opinion in Agins v. Tiburon by contending that an "unjustified denial can constitute a taking[.]"¹¹⁶ That Justice Scalia later signed on to the unanimous 2005 opinion in Lingle v. Chevron holding that the Agins test is inappropriate in takings analyses suggests that Justice Scalia may have reconsidered the position he espoused five years earlier in his dissent from the denial of certiorari in Lambert.¹¹⁷

Justice Scalia's dissent from the denial of certiorari—which, of course, is not based upon full consideration of the merits and is not binding on any court—also is far from unequivocal. He suggests that "the subject of any proposed taking in the present case is far from clear[,]"¹¹⁸ that there may be a "plausible" basis for distinguishing completed takings from proposed conditions that are never actually imposed,¹¹⁹ and that this temporal proposed-versus-imposed distinction "raises a question that will doubtless be presented in many cases."¹²⁰ However, the dissent from the denial of certiorari does make one point abundantly clear. In *City of Monterey v. Del Monte Dunes at Monterey, Ltd.*,¹²¹ the Court just one year prior to *Lambert* had unanimously stated that *Dolan*'s rough proportionality test "was not designed to address . . . questions arising where . . . the landowner's challenge is based not on excessive ex-

117. See Lingle v. Chevron U.S.A, Inc., 544 U.S. 528, 548 (2005).

^{114.} Lambert, 120 S. Ct. at 1551 (Scalia, J., Kennedy, J., & Thomas, J., dissenting from the denial of certiorari).

^{115.} Id. at 1552 (Scalia, J., Kennedy, J., & Thomas, J., dissenting from the denial of certiorari).

^{116.} Id. at 1551 (Scalia, J., Kennedy, J., & Thomas, J., dissenting from the denial of certiorari).

^{118.} See Lambert, 120 S. Ct. at 1551 (Scalia, J., Kennedy, J., & Thomas, J., dissenting from the denial of certiorari).

^{119.} *Id.* at 1551-52 (Scalia, J., Kennedy, J., & Thomas, J., dissenting from the denial of certiorari). Indeed, to present a prima facie exaction takings claim, a claimant must identify an exaction, and this exaction must amount to a taking of property that, if imposed in isolation, would require compensation. Seen in this light, the *Nollan* and *Dolan* decisions are in some ways quite narrow: even conditions that, if imposed in isolation, would amount to a taking, are not considered takings if they are directly connected to, and roughly proportionate with, the external concerns raised by the development application.

 $^{120.\} Id.$ at 1552 (Scalia, J., Kennedy, J., & Thomas, J., dissenting from the denial of certiorari).

^{121. 526} U.S. 687 (1999).

actions but on denial of development."¹²² The dissent from the denial of certiorari in *Lambert* makes evident that Justice Scalia and two of his brethren that remain on the current Court agree that this quoted language from *Del Monte Dunes* does not resolve the proposed-versus-imposed exaction takings issue.¹²³

In addressing the Koontz case, the three-member appellate panel in Florida had only these very limited judicial annotations in William J. Jones Insurance Trust, Goss, and Lambert to inform their decision. Two of these three judges recently sided with the conclusions of William J. Jones Insurance Trust and Goss, as well as the pronouncements made by Justice Scalia in Lambert, in holding that the Nollan and Dolan tests are applicable not only to conditions that actually are imposed, but also to conditions that merely are proposed.¹²⁴ Applying the nexus and proportionality standards, the panel affirmed a trial court's deduction that the conservation restriction self-proposed by Koontz was "enough" mitigation for the wetlands destruction associated with Koontz's development proposal.¹²⁵ Therefore, the additional offsets suggested by the District at the pre-decisional stage amounted to an unconstitutional exaction taking.¹²⁶ The Florida court, however, departed from the holdings in both William J. Jones Insurance Trust and Goss with respect to the remedy. The *Koontz* panel awarded the prevailing claimant compensation for the lost rent of his entire underlying parcel and the permit that the District had originally denied.¹²⁷

^{122.} Id. at 703

^{123.} However, the Koontz court asserted that the Dolan majority "implicitly rejected" the argument that non-imposed conditions are not subject to the heightened "rough proportionality" standard because Justice Stevens addressed the argument (and, in actuality, misstated the underlying facts) in his Dolan dissent. Koontz IV, 5 So. 3d 8, 11 (Fla. 5th DCA 2009). The Koontz court's assertion conflicts with traditional notions of judicial review for many reasons. For instance, as a dissenting Judge explained, the court's interpretation of Dolan would mean that Justice Scalia would have had no reason to dissent from the denial of certiorari in Lambert. See id. at 20 (Griffin, J., dissenting). Furthermore, were dissenting opinions afforded the authority to set binding precedent by raising an innumerable amount of issues unaddressed in the majority opinion, the opposite of which the majority must have implicitly agreed, it stands to reason that members of the judiciary would clamor to be in the dissent rather than the majority in nearly every case.

^{124.} See Koontz IV, 5 So. 3d at 12 n.4.

^{125.} Id. at 12 n.5.

^{126.} See id. Even if Nollan and Dolan are applicable to proposed conditions, under the factual circumstances of Koontz it is difficult to imagine how replacing, improving, or preserving wetlands does not bear an "essential nexus" to the impact of the development—the loss of wetlands—that the regulation at issue sought to prevent. Nonetheless, without explanation, the Florida trial court made that finding. Id. at 10.

^{127.} Id. at 17 (Griffin, J., dissenting). "[R]emoval of the unconstitutional condition cannot mean the applicant acquires the right to be free of *any* condition. Such a judicially-invented notion might not do much harm on fourteen acres in the middle of rural central Florida but in a thousand other contexts, it could be disastrous." Id. at 21 (Griffin, J., dissenting).

B. Competing Interests in the Proposed-Versus-Imposed Exaction Debate

William J. Jones Insurance Trust, Goss, Lambert, and Koontz offer a brief glimpse into the contentious considerations in interpreting the temporal question of when the content of the theoretical, the spatial, and the stringency dimensions attach in the exaction takings context. However, the conclusory and, at times, contradictory nature of these cases provide little by way of a substantive analysis of the competing interests at stake. The remainder of this Part aims to fill this foundational gap.

1. Applying the Nollan and Dolan Construct to Proposed Exactions

At first glance, applying the same tests to all conceivable exactions, whether they are proposed prior to an outright permit denial or imposed in a final development approval, makes intuitive sense; otherwise, the propensity for regulators to follow their worst rentseeking tendencies may be too great. This argument suggests that property owners would be beholden to the government's extortionate exaction propositions, lest they side with the empty alternative of an absolute development prohibition.¹²⁸ In the abstract, it may sound illogical to require a property owner to accede to extortionate demands before bringing suit to challenge those demands as unconstitutional takings.¹²⁹ Should the applicability

^{128.} See Nollan v. Cal. Coastal Comm'n, 483 U.S. 825, 837 (1987) (citing J.E.D. Assocs., Inc. v. Town of Atkinson, 121 N.H. 581, 584) (equating an exaction that lacks the requisite nexus to governmental extortion); Town of Flower Mound v. Stafford Estates L.P., 71 S.W.3d 18, 30 n.8 (Tex. Ct. App. 2002) (quoting Alan Romero, Two Constitutional Theories for Invalidating Extortionate Exactions, 78 NEB. L. REV. 348, 349 (1999)) ("exactions may be considered extortionate because the government uses the threat of denial to extract some property interest from the owner, rather than simply trying to mitigate the negative public effects from the proposed land use"); J.E.D. Assocs., Inc. v. Town of Atkinson, 432 A.2d 12, 14 (N.H. 1981) (concluding that, absent proof by the Town of the need for the exaction, an imposed condition was nothing short of "an out-and-out plan of extortion"). But see Fenster, Takings Formalism, supra note 1, at 651 ("In situations in which jurisdictions compete for development and property owners may exit with relative ease or successfully engage in political lobbying, the . . . story of powerful, unchecked local governments is inaccurate and unpersuasive."). One scholar has suggested that Nollan and Dolan are not concerned at all with the right that is infringed; rather, they are focused solely on the behavior of governmental entities. See Hanoch Dagan, Remarks at Georgetown Univ. Law Ctr., Association for Law, Property, and Society (Mar. 2011). However, the U.S. Supreme Court has held that the validity of government action is a due process inquiry that necessarily is precedent to a takings analysis. See Lingle v. Chevron U.S.A., Inc., 544 U.S. 528 (2005).

^{129.} See, e.g., Eagle, supra note 53, at 10104. A concurrence in Koontz suggests that the government retains the right to consider pre-decisional offset proposals from applicants free of the Nollan and Dolan strictures. See Koontz IV, 5 So. 3d at 15 (Orfinger, J., concurring). Nonetheless, apparently at least one property owner did assert a Dolan challenge to a road dedication that he himself had offered. See KMST, L.L.C. v. Cnty. of Ada, 67 P.3d 56, 62 (Idaho 2003).

of *Nollan* and *Dolan* rest solely on how a given landowner reacts to a proposed exaction?¹³⁰

It may seem discomforting that an applicant who stands his ground and refuses an inappropriate exaction would be penalized—in that he could not avail himself of the nexus and proportionality threshold that is more demanding of the government than the alternative *Penn Central* balancing test applicable to ordinary permit denials¹³¹—but an applicant who succumbs to the exaction demand could rely on the Nollan and Dolan tests. There is an instinctive appeal to the argument that the denial of an application based on refusal to comply with an exaction demanded by the government is indistinct from a permit conditioned on that exaction. The government, this theory suggests, would be in a position to threaten every applicant with an outright denial—which are rarely challenged as successful takings under Penn Central-unless the applicant consented to a particular exaction. And it is possible that the applicant would be consenting to proceed with a project that is economically infeasible or unmarketable with that exaction attached. This arguably lends some support to the contention that Nollan and Dolan's underlying premise is to protect against these types of extortionate measures, whether they are presented as the basis of a conditional permit or result in a permit denial.

2. Limiting Application of the *Nollan* and *Dolan* Construct to Imposed Exactions

There are at least three reasons to suggest that the approach offered in the preceding section may amount to an oversimplification of, and an ultimately unsound resolution to, what is in fact a complicated theoretical problem. First, where a proposed exaction is refused or withdrawn, nothing actually has been taken from the applicant. Second, judicial speculation on hypothetical exactions and their hypothetical economic impacts poses a wholly unmanageable system that could require courts to review countless cases that do not present actual controversies. Third, and arguably most importantly as a matter of legal policy, burdening governmental entities with possible takings liability for

^{130.} See Koontz IV, 5 So. 3d at 12 n.4. One amici of Koontz, in its brief to the Florida Supreme Court, contends that the principles of Nollan and Dolan should apply with even greater force where an applicant's refusal to accede to an unconstitutional condition results in a denial. See Brief of Fla. Home Builders Ass'n & Nat'l Ass'n of Home Builders as Amici Curiae Supporting Respondent at 9-10, Koontz IV, 5 So. 3d 8 (SC09-713) 2010 WL 262547 ("Using the classic gun-to-the-head metaphor for extortion, fatally pulling the trigger upon refusal of the threatened party is more repugnant than a mere threat that succeeds in coercing the victim.").

^{131.} See infra notes 80-81 and accompanying text.

statements made during negotiation sessions will place a chilling effect on regulator-landowner coordination. Each of these reasons is taken up below.

First, once the government exercises its discretion to deny a permit application, the applicant has the same development rights that he had before he began the permitting process. Thus, he has forfeited nothing that could be considered "taken."¹³² To pursue a takings challenge, it seems elementary that some identifiable property interest must be "taken" by a valid government action before a court is able to determine if that government action violates the tests set forth in its "takings" jurisprudence. Then, only if that governmental action violates the appropriate test, is just compensation due.¹³³ And if just compensation is due for the taking of property, the public seemingly is entitled to obtain that property for public use.¹³⁴ If compensation were paid for a hypothetical exaction, there would be nothing for the public to obtain.

This is not to suggest that, if a governmental entity or official performs an impermissible act, that entity or official is not subject to a damages or equity suit on some legal theory for injuries sustained.¹³⁵ However, the remedy for a taking is neither damages

^{132.} See, e.g., Koontz IV, 5 So. 3d 8, 20 (Fla, 5th DCA 2009) (Griffin, J., dissenting) ("[I]n what parallel legal universe or deep chamber of Wonderland's rabbit hole could there be a right to just compensation for the taking of property under the Fifth Amendment when no property of any kind was ever taken by the government and none ever given up by the owner?"). Property owners in the position of Mr. Koontz are not without recourse. They have the ability to raise takings challenges to permit conditions, if they so choose, by obtaining the permit with the government's proposed condition attached and then seeking compensation under a traditional exaction claim in the trial court. In Florida, this procedure is codified at FLA. STAT. § 373.617(2) (2010). Still, it seems that the takings challenge would pertain only to property allegedly taken, which in Koontz's case would presumably be the money that the mitigating measures cost upon implementation. Property owners retain the ability to challenge the substantive merit of a permit denial or the conditional grant of a permit. In Florida, this substantive review can take place in an adjudicative proceeding under FLA. STAT. § 120.57 (2010), or in the appellate division under FLA. STAT. § 120.68 (2010). See also Albrecht v. Florida, 444 So. 2d 8, 11 (Fla. 1984). However, in Koontz, the property owner conceded that he had no entitlement to his proposed commercial development. Koontz IV, 5 So. 3d at 15-16 (Griffin, J., dissenting).

^{133.} See, e.g., Covington v. Jefferson Cnty., 53 P.3d 828, 831 (Idaho 2002) (citing Snyder v. Idaho, 438 P.2d 920, 924 (1968)) ("An inverse condemnation action cannot be maintained unless an actual taking of private property is established.").

^{134.} See Echeverria, *Takings and Errors, supra* note 51, at 1084-85 (noting the "bilateral character" of the Takings Clause, in that property owners are entitled to just compensation if their property is taken and "the public is entitled to the benefit of the property it has purchased...").

^{135.} The most probable constitutional basis for such a challenge is the Due Process Clause. *See, e.g.*, Bivens v. Six Unknown Named Agents of the Fed. Bureau of Narcotics, 403 U.S. 388, 389 (1971) (asserting that a due process violation supports a claim for economic damages against federal officials). A tort suit also could serve as the basis for monetary relief, while a claim for equitable relief might arise under federal or state administrative rules. And, of course, if the government is indeed willing to issue the conditional permit, the applicant always has the ability, as stated *supra* note 132, to accept that approval and file suit seeking just compensation based on a takings theory.

nor equity, so that legal theory cannot be based on the Takings Clause. The only takings remedy is just compensation, which is required by the Fifth Amendment only "for payment of an obligation *lawfully incurred*."¹³⁶

Second, there are multiple reasons why a governmental entity might deny a discretionary development permit. One preeminent takings scholar suggests that it would be "foolish[]" for a governmental entity to explicitly record that its denial is based upon a proposed exaction that the applicant refused.¹³⁷ However, so long as the government notes the external effects of the proposed development, it may not be material for takings purposes even if it did state that its denial is based upon the applicant's refusal of a proposed exaction.¹³⁸ That the proposed exaction was actually recorded in the denial seems inconsequential where the government al-

137. Fenster, *Takings Formalism*, *supra* note 1, at 640. *See also* Steven Eagle, Remarks at Georgetown Univ. Law Ctr., Association for Law, Property, and Society (March 2011) (suggesting that there may be a difficult evidentiary burden for plaintiffs challenging an exaction that the government proposed where the government did not state that proffer in writing when it ultimately denied the application).

^{136.} City of Monterey v. Del Monte Dunes at Monterey, Ltd., 526 U.S. 687, 747 (1999) (Souter, J., dissenting) (emphasis added). See also Echeverria, Takings and Errors, supra note 51, at 1067 ("If a government action serves a public use if the legislature has authorized it, it logically follows that an action which is not authorized by the legislature, or which is contrary to legislative direction, cannot serve a public use" as required for a taking). The U.S. Supreme Court unanimously supported the view expressed in Justice Souter's dissenting opinion in *Del Monte Dunes* (and long espoused by Professor Echeverria) in deciding Lingle v. Chevron U.S.A., Inc., 544 U.S. 528 (2005). In *Lingle*, the Court held that the validity of government action is a due process inquiry that necessarily is precedent to a takings analysis, for "[n]o amount of compensation can authorize such action." *Lingle*, 544 U.S. at 543. While some might suggest that a claimant could waive a challenge to the validity of the governmental act in order to proceed with a takings claim, Echeverria poignantly has noted that such a theory is belied by the possibility of a third party challenging the validity of that same act in a separate proceeding. *See* Echeverria, *Takings and Errors*, supra note 51, at 1083-84.

^{138.} But see Lambert v. City & Cnty. of San Francisco, 120 S. Ct 1549, 1550-51 (2000) (denying certiorari) (Scalia, J., Kennedy, J., Thomas, J., dissenting from the denial of certiorari) (suggesting that it would be relevant for the government's position if the government ignored petitioners' refusal to satisfy the government's proposed exaction in ultimately denying development approval). Justice Scalia chastised the lower court in Lambert for "asserting that 'San Francisco did not demand anything' from petitioners, [but] in the next breath [finding] it 'somewhat disturbing that San Francisco's concerns about congestion, parking and preservation of a neighborhood might have been overcome by payment of [a] significant sum of money." Id. at 1550 (emphasis omitted) (quoting Lambert v. City & Cnty. of S.F., 67 Cal. Rptr. 2d 562, 569 (Cal. Ct. App. 1997)). Justice Scalia's assertion seems to implicitly raise a Nollan question: if San Francisco's sole concern is, say, parking, then a fee imposition for housing supply bears no nexus to that concern. However, in ultimately denying Lambert's application to convert residential units to tourist units, San Francisco voiced its concerns on the availability of housing stock. Id. at 1550 (Scalia, J., Kennedy, J., Thomas, J., dissenting from the denial of certiorari). Where there are multiple concerns associated with a development application (e.g., parking, housing stock, traffic congestion, etc.), an important issue is whether exactions should address each one of those concerns for which the application would be denied. Taken to its logical end, Justice Scalia's assertion counsels regulators to demand more exactions, not less. See, e.g., supra note 65 (suggesting that only one of the concerns raised by the development application in Koontz would be offset by the government's proposed exactions).

ways maintained the authority to deny the permit¹³⁹ and the identified proposed exaction was never imposed.¹⁴⁰

Assuming the government did have the authority to deny the permit application outright, is a court to review all of the listed government-proposed exactions and declare that, say, the self-proposed offer by the applicant (for example, in *Koontz*, the self-proposed conservation restriction,¹⁴¹ or, in *Lambert*, the self-proposed \$100,000 impact fee¹⁴²) was "enough" and the others are invalid?¹⁴³ This would mark an unprecedented and ceaseless judicial intrusion into what are traditionally considered substantive local land use control issues.¹⁴⁴

Ordinarily, the validity of the governmental action is a precondition to any successful regulatory takings claim.¹⁴⁵ Moreover, successful takings claims ordinarily arise only where the economic impact of that valid regulatory act is significant. Yet *Nollan* and *Dolan* admittedly—and rather peculiarly—authorize courts to assess the validity of an exaction and to find takings in instances where the economic impact of the exaction is quite modest.¹⁴⁶ But

141. Koontz IV, 5 So. 3d 8, 10 (Fla. 5th DCA 2009).

142. Lambert v. City & Cnty. of San Francisco, 67 Cal. Rptr. 2d 562, 570 (Cal. Ct. App. 1997) (Strankman, J., dissenting).

143. See Koontz IV, 5 So. 3d at 12 and n.5 (affirming a trial court conclusion that a conservation restriction self-proposed by the applicant was "enough" mitigation for the wetlands destruction associated with the applicant's development proposal, such that the exactions proposed by the government necessarily amounted to an exaction taking).

144. See Schwartz, supra note 55, at 7 (suggesting that judicial acceptance of a theory of proposed exaction takings "could serve as a potent weapon for developers" by requiring courts to "subject all manner of permit denials to heightened scrutiny").

145. See, e.g., Goldblatt v. Town of Hempstead, 369 U.S. 590, 592-94 (1962). See also Schwartz, supra note 55, at 1 ("Like other forms of social and economic regulation, land use regulation has traditionally enjoyed a presumption of validity.").

146. It is true that tension continues to exist in delineating due process and takings analyses in the exactions context. In Lingle v. Chevron U.S.A., Inc., 544 U.S. 528, a unanimous 2005 opinion, the U.S. Supreme Court rejected a previously espoused takings test that probed into the validity of the government action, suggesting that such tests instead sound in due process. *Id.* at 540-43. The *Lingle* Court confirmed that regulatory takings inquiries center on the economic impact that a governmental action has upon an individual's property value. *Id.* at 538-40. The exaction takings tests of *Nollan* and *Dolan* seemingly required application of the very substantive analysis rejected in *Lingle* because exactions that result in takings are invalid in the sense that they violate the means-ends nexus and proportionality threshold. Nevertheless, *Lingle* perplexingly preserved *Nollan* and *Dolan*'s tests in the "special context" of exactions. *Id.* at 538, 548.

^{139.} In other words, the approval was "not part of [the applicant's] title to begin with." Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1027 (1992) (footnote omitted).

^{140.} If there were no such concern of an external impact, then the substantive validity of any government action prohibiting development could be called into question as erroneous and violative of the applicant's due process rights. *See Lingle*, 544 U.S. at 542. If there were a concern of an external impact but the government chose *not* to consider an exaction to offset it, current exaction takings law seemingly places no limits on such governmental inaction, despite the ill-effects suffered by the neighbors and nearby residents of the development site. *See* Timothy M. Mulvaney, Address at Gonzaga Univ. Sch. of Law, Faculty Seminar, Where the Wild Things Aren't: Transposing Exaction Takings (Sept. 30, 2010).

even with the peculiar inquiry into the substantive validity of exactions required by *Nollan* and *Dolan*, it is a far stretch to suggest from this peculiarity that courts are to engage in mass speculation in cases where *no* exaction is imposed and there is therefore *no* economic impact that can be examined.

The Koontz facts are illustrative of this point. If the theoretical, spatial, and stringency features of property attached at the mere proposal of an exaction, a thorough judicial analysis in a case like Koontz would include determining the validity of (1) the proposed offsite mitigation on all of the potential offsite mitigation sites, (2) all equivalent hypothetical mitigating measures that the applicant conceivably otherwise could have offered, and (3) the reduction in the development footprint, to determine whether any of these possibilities—if they ever were actually imposed—would have crossed the Nollan and Dolan threshold.¹⁴⁷ Such a multi-layered exercise in speculation seems far outside the bounds of the judicial branch's role.

Requiring courts to predict the exactions a permitting agency might have chosen had it issued a conditional permit, and to assess the hypothetical economic impact that those hypothetical exactions might have amounted to, blurs the very distinction between the courts and the political branches. As the U.S. Supreme Court has noted, "[a] court cannot determine whether a regulation has gone 'too far' [so as to require the payment of just compensation] unless it knows how far the regulation goes."¹⁴⁸ And even if such a speculative review were proper and a court determined that all of the reviewed exactions violate *Nollan* and *Dolan*, it seems appropriate that the regulating entity should have the ability to choose among the assuredly many other conditions that would be "enough" to offset the development's external effects.¹⁴⁹

^{147.} While the *Koontz* trial court apparently focused exclusively on the government's offsite mitigation proposition (which could occur on a number of sites), the government agency had also presented the property owner with the options of proposing any equivalent mitigating measure within the Basin or reducing the size of his development, which would not have required any mitigation. *Koontz IV*, 5 So. 3d at 16 (Griffin, J., dissenting). The *Koontz* appellate court apparently did not take issue with the trial court's failure to undertake an analysis of each possibility. *See id.* at 12 n.5 (stating that "the trial court decided as fact that the conservation easement offered by Mr. Koontz *was enough* and that any more would exceed the rough proportionality threshold, whether in the form of off-site mitigation or a greater easement dedication for conservation") (emphasis added).

^{148.} See MacDonald, Sommer & Frates v. Yolo Cnty., 477 U.S. 340, 348 (1986) (quoting Pa. Coal Co. v. Mahon, 260 U.S. 393, 415 (1922)).

^{149.} In both William J. Jones Ins. Trust and Koontz, the court not only mandated the issuance of a permit in light of a takings finding, but also determined the terms of that permit. See supra notes 91 & 127 and accompanying text. But see Koontz IV, 5 So. 3d at 21 (Griffin, J., dissenting) ("Surely, even the most extreme view that conditions imposed on the issuance of a permit constitute an 'out and out plan of extortion' would, nevertheless, recognize that removal of the unconstitutional condition cannot mean the applicant acquires the right to be free of any condition."). The lack of any definitive, discretionary agency

Third, while it may be the case that the government is required in some circumstances to pay temporary takings compensation for the period of time during which an unconstitutional exaction constrains a landowner's economic use of her property,¹⁵⁰ proposed conditions in instances where the government could have denied the development permit outright rarely if ever constrain a landowner's justified expectations regarding the property's economic uses. Establishing a rule requiring temporary takings liability for proposed conditions would place a momentous chilling effect on cooperative negotiation between regulators and landowners to advance collective land use objectives. (These objectives include, for example, promoting traffic safety and accommodation as in *William J. Jones Insurance Trust*¹⁵¹ and *Goss*,¹⁵² assuring an adequate housing supply as in *Lambert*,¹⁵³ and protecting vulnerable wetlands as in *Koontz*.¹⁵⁴)

150. See First English Evangelical Lutheran Church v. Cnty. of Los Angeles, 482 U.S. 304, 321 (1987) (establishing landowner's right to "compensation for the period during which the taking was effective.").

151. William J. Jones Ins. Trust v. City of Fort Smith, 731 F. Supp. 912, 914 (W.D. Ark. 1990).

152. Goss v. City of Little Rock, 151 F.3d 861, 863 (8th Cir. 1998).

153. Lambert v. City & Cnty. of San Francisco, 67 Cal. Rptr. 2d 562, 566 (Cal. Ct. App. 1997).

decision on which condition(s) might or might not have been imposed can be analogized to the longstanding tenet that a takings claim is not reviewable unless it is ripe. *See, e.g.,* Palazzolo v. Rhode Island, 533 U.S. 606, 620-21 (2001) ("Under our ripeness rules a takings claim based on a law or regulation which is alleged to go too far in burdening property depends upon the landowner's first having followed reasonable and necessary steps to allow regulatory agencies to exercise their full discretion"). However, in an earlier opinion in the *Koontz* litigation, a Floridian appellate panel overturned the trial court's dismissal of Koontz's takings claim by rejecting the government's ripeness defense, holding that Koontz need not continue negotiating with the government until it approves an offer before filing a takings claim. *See Koontz III*, 720 So. 2d 560, 562 (Fla. 5th DCA 1998).

^{154.} See Koontz IV, 5 So. 3d at 10. Dissenting in Koontz, one judge stated that "[i]t will be too risky for a governmental agency to make offers for conditional permit approvals or to offer a trade of benefits out of fear that the offer might be rejected and the condition later found to have lacked adequate nexus or proportionality." Id. at 21 (Griffin, J., dissenting). In light of the risk identified by this dissenting judge, property owners ultimately may suffer. Regulators might choose the risk-averse option of simply denying more permit applications, whereby they would face only the more deferential, ad hoc balancing test of Penn Central in any takings challenge. See Dana, supra note 4, at 1298; Mulvaney, Remnants of Exaction Takings, supra note 4, at 214-16. In some jurisdictions, pre-construction acquiescence to a development condition apparently does not always foreclose the possibility of the developer-even after construction has commenced-challenging that condition as unconstitutional. See, e.g., Sarasota Cnty. v. Taylor Woodrow Homes Ltd., 652 So. 2d 1247, 1252 (Fla. 2d DCA 1995) (holding that the property owner is entitled to apply current (1995) constitutional law to an alleged taking which occurred in 1974 after a contractual concession was acceded without protest); Trimen Dev. Co. v. King Cnty., 877 P.2d 187, 195 (Wash. 1994) (dismissing post-construction challenge to development impact fee on statute of limitations grounds). But see, e.g., Wolverton Assocs. v. Official Creditors' Comm., 909 F.2d 1286, 1297 n.7 (9th Cir. 1990) (citing Cnty. of Imperial v. McDougal, 564 P.2d 14 (1977)) (holding that "enjoyment of the benefits of a conditional use permit bars a landowner or his successor in interest from challenging any conditions that the permit requires");

Yet if all permit application denials that followed some level of failed negotiations were subject to the Supreme Court's exaction takings framework based on even one exaction mentioned by the government during those negotiations, governmental officials would be forced into uncommunicative rejections or unconditioned approvals of development applications when a more amenable compromise may have been available.¹⁵⁵ The potential mutual advantages of growth development and resource protection emanating from the ordinarily fluid negotiating process between applicants and governmental staff persons would be compromised, as the next Part discusses in more detail.¹⁵⁶

IV. THE IMPACT OF SUBJECTING PROPOSED EXACTIONS TO THE EXACTION TAKINGS CONSTRUCT AT THE WATER'S EDGE

This Part considers the limitations that subjecting proposed exactions to a *Nollan* and *Dolan* analysis could have at the water's edge in light of the regulatory focus of this journal volume: the phenomenon of sea level rise. While denying all discretionary development applications in the coastal zone may be the most prudent response to pending sea level rise, this is unlikely a financially and politically practical choice in many jurisdictions.¹⁵⁷ The competing interests of growth development on one hand and the protection of public health and environmental resources on the other necessarily demand that regulatory bodies engage in a balancing analysis. Therefore, though development may be strictly prohibited in identified retreat areas in certain jurisdictions, this Part assumes that some development will continue in

Rossco Holdings, Inc. v. State, 212 Cal. App. 3d 642, 660-61 (Cal. Ct. App. 1989) (landowner corporation forfeited its inverse condemnation claim by complying with permit conditions).

^{155.} For literature suggesting that, even where applied to imposed exactions, Nollan and Dolan encourage such results, see, for example, Fenster, Takings Formalism, supra note 1, at 652-65; Mulvaney, Remnants of Exaction Takings, supra note 4, at 214-15.

^{156.} See, e.g., Fenster, Constitutional Shadow, supra note 4, at 741 (contending that exactions "play a crucial regulatory and ideological role in bringing flexibility to an otherwise inflexible process, ameliorating the negative consequences of controversial new development proposals while persuading political opposition to accept them").

^{157.} See, e.g., CSA INT'L, INC., SEA LEVEL RISE RESPONSE STRATEGY WORCESTER COUNTY, MARYLAND 1-3, 2-7, 3-14 & 3-28 (2008), available at http://landuse.law.pace.edu/ landuse/documents/laws/reg3/WorcesterCntyMDPlanning08.pdf (noting that in Worcester County, Maryland, only 5% of the residential parcels projected to be inundated by 2100 under the "worst case scenario" of a 1.47 meter sea level rise are in areas designated for conservation, while the remainder is available for possible development, and suggesting that adopting retreat "as the only response strategy . . . would be improbable" in light of short term costs, including the "massive cut in property tax revenues," and the "extremely politically unfavorable" nature of making the "drastic decision[]" to restrict public investment.).

areas of accommodation that nonetheless are vulnerable to the effects of sea level rise. $^{\rm 158}$

A. Discouraging Pre-Decisional Interaction Between Landowners and Regulators

Pre-decisional meetings between regulators and applicants are quite common in the course of the balancing analysis in areas where at least some development will be accommodated. Indeed, it is difficult to conceive of a realistic development application that would *not* trigger pre-decision discussions between the regulator and the applicant. Yet subjecting an exaction to a takings challenge under *Nollan* and *Dolan* at the moment it is proposed in a negotiating session could foreclose, for all intents and purposes, the possibility of such a session ever taking place.

A permitting official's fear of encumbering his or her agency with an exaction taking at the pre-decisional stage could expose the "landowner to the treadmill effect of repeated denials without any indication from governmental agencies of changes in [the landowner's] proposal that would permit an economically beneficial use of his property."¹⁵⁹ Conversely, these fears could result in the equally socially detrimental result of the government's conferring unconditional approvals—i.e., waiving its regulatory responsibility—for projects with negative community impacts.¹⁶⁰ Ironically, the very exaction system that was created to bring about an

^{158.} Within these accommodation areas, this Part focuses on exactions that are attached to development approvals on an ad hoc basis, as opposed to exactions mandated by generally applicable legislation. However, to the extent legislation creates a formula or schedule for the imposition of exactions that retains some discretionary role for regulators in individual cases, this Part is also relevant. For a discussion of the distinction between adjudicative and legislative exactions for takings purposes, *see supra* notes 50-53 and accompanying text.

^{159.} Estuary Props., Inc. v. Askew, 381 So. 2d 1126, 1137 (Fla. 1st DCA 1979) rev'd on other grounds sub. nom. Graham v. Estuary Properties, Inc., 399 So. 2d 1374 (Fla. 1981). See also UNDERKUFFLER, supra note 12, at 156; Jonathan M. Davidson et al., "Where's Dolan?": Exactions Law in 1998, 30 URB. LAW. 683, 697 (1998) (suggesting Nollan and Dolan create a "chilling effect" on local governments' use of exactions); Fenster, Takings Formalism, supra note 1, at 665 (suggesting that, in risk-averse jurisdictions with the political will to deny development permits outright, "the property owner is significantly worse off than if she could bargain freely with the local government over conditions that might win an approval").

^{160.} These waivers predictably would confer an unfair windfall on particular property owners at the public's expense. Third-party suits to challenge such waivers have faced mixed results. *Compare* Dudek v. Umatilla Cnty., 69 P.3d 751, 758 (Or. Ct. App. 2003) (rejecting neighbor challenge to county's waiver of road widening and improvement requirements for fear that imposing the requirement might violate *Dolan's* proportionality threshold), *with* McAllister v. Cal. Coastal Comm'n, 87 Cal. Rptr. 3d 365, 384 (Cal. Ct. App. 2009) (concluding that the record did not support the Coastal Commission's defense of its issuance of a permit allowing erection of a house in an environmentally sensitive area on the ground that failure to issue the permit would have been a compensable taking).

outcome serving the interests of all parties would often have precisely the opposite effect. From a normative perspective, it is unlikely that such absolutism—making final decisions on discretionary permits without attempting to find a negotiated solution amenable to all parties—is what a large contingency of society demands of its government officials.¹⁶¹

B. Lost Benefits on the Coast

The lost benefits of regulator-landowner negotiations could be particularly acute for the nation's coastlines, where municipalities are in the midst of a complex effort to respond to sea level rise. This acuteness can be attributed in part to the fact that the potential impacts associated with coastal land use intensification in the face of rising sea levels are particularly wide-ranging. These impacts include, but certainly are not limited to, erosion of beaches, heightened coastal flooding, increased public health and safety risks, and damaged public infrastructure.¹⁶² But even more significant for exaction takings purposes than the diversity of the impacts, this acuteness can also be attributed to the fact that the magnitude of these impacts is quite difficult to forecast with any precision.

The rapid and continuing development of advanced scientific tools to predict and measure these threats makes fashioning responsive measures an exceptionally fluid exercise in coastal areas. Exactions that have been employed in the past in an effort to respond to such impacts include both retreat measures—such as setback provisions, conservation easements, rolling easements, and development elevation—and defensive measures—such as shoreline enhancement requirements, armoring (e.g., bulkheads, seawalls, retaining structures, revetments, dikes, tide gates, storm surge barriers, etc.), and land surface elevation. Yet both regulators and landowners are continually exploring new, creative solu-

^{161.} See Fennell, supra note 4, at 5 (contending that both Nollan and Dolan block what could be mutually beneficial dealings between local governments and developers); Fenster, Takings Formalism, supra note 1, at 675-78 (same).

^{162.} See, e.g., Patricia E. Salkin, Can You Hear Me Up There? Giving Voice to Local Communities Imperative for Achieving Sustainability, 4 ENVTL. & ENERGY L. & POL'Y J. 256, 289 (2009); Meg Caldwell & Craig Holt Segall, No Day at the Beach: Sea Level Rise, Ecosystem Loss, and Public Access Along the California Coast, 34 ECOLOGY L.Q. 533, 534 (2007); David Hunter & James Salzman, Negligence in the Air: The Duty of Care in Climate Change Litigation,155 U. PA. L. REV.1741, 1763 (2007); Marc R. Poirier, A Very Clear Blue Line: Behavioral Economics, Public Choice, Public Art and Sea Level Rise, 16 S.E. ENVTL. L.J. 83, 85-93 (2007); James G. Titus, Does the U.S. Government Realize that the Sea is Rising? How to Restructure Federal Programs so that Wetlands and Beaches Survive, 30 GOLDEN GATE U.L. REV. 717, 725-33 (2000); Nicholas A. Robinson, Legal Systems, Decisionmaking, and the Science of Earth's Systems: Procedural Missing Links, 27 ECOLOGY L.Q. 1077, 1088-89 (2001).

tions to a natural phenomenon that they still do not fully understand. It would seem quite prudent for each party to at least consider and discuss any innovative remediative or restorative proposals offered by the other party, in light of the often varied sets of experiences and perspectives on both sides. The dynamism of the boundary between land and water, and the unique nature of any particular parcel at or near that boundary, calls for a flexible, evolutionary, and, where possible, collaborative approach.¹⁶³

A system that encourages regulators and applicant landowners to convene at the pre-decisional stage offers the possibility of developing what Mark Fenster refers to as "site- and dispute-specific terms of compromise[,]" which have advantages for both the landowner and the community members (and resources) that regulators are charged with protecting.¹⁶⁴ Exactions can enable responsible growth and enlarge local economies,¹⁶⁵ while simultaneously promoting the efficient use of infrastructure and protection of the environment by assuring that developers and their customers contribute their cost-share of the infrastructural or environmental resources they are anticipated to utilize or impair.¹⁶⁶

Fenster does not doubt that, at times, these attempts at coordination can be "quite messy."¹⁶⁷ However, he argues persuasively that the very legitimacy and effectiveness of the local government model demands such debate within the political system.¹⁶⁸ This potential for delegitimization stems from at least two sources. First, the manifestation of pre-decisional exaction takings fears squanders the expertise of the engineers and environmental scientists employed to assess development projects' impacts and to identify alternative or provisional ways in which such a project could proceed. Second, and more broadly, the loss of attempts at a collective resolution can damage confidence in the social processes that are essential to the very functionality of local governance.¹⁶⁹

^{163.} See, e.g., Laurie Reynolds, Local Subdivision Regulation: Formulaic Constraints in an Age of Discretion, 24 GA. L. REV. 525, 563-66 (1990).

^{164.} See Fenster, Takings Formalism, supra note 1, at 617.

^{165.} See Been, supra note 4, at 483 (citing Elizabeth A. Deakin, The Politics of Exactions, 10 N.Y. AFF. 96, 98-100 (1988)).

^{166.} See, e.g., Arthur C. Nelson, Development Impact Fees, 54 J. AM. PLAN. ASS'N 3, 4 (1988); Mark P. Barnebey et al., Paying for Growth: Community Approaches to Development Impact Fees, 54 J. AM. PLAN. ASS'N 18, 23-24 (1988).

^{167.} See Fenster, Takings Formalism, supra note 1, at 617.

^{168.} Id. at 668-78.

^{169.} See, e.g., Poirier, Virtue of Vagueness, supra note 36, at 190-91 (discussing the essential nature of collective processes); Fenster, Takings Formalism, supra note 1, at 673; Jody Freeman & Laura I. Langbein, Regulatory Negotiation and the Legitimacy Benefit, 9 N.Y.U. ENVTL. L.J. 60, 110 (2000) (suggesting that negotiated solutions legitimize environmental policy choices).

V. CONCLUSION

In *Nollan* and *Dolan* and their exaction takings progeny, the judiciary has presented multiple and conflicting theories of property rights; has only alluded to the spatial characteristics of the property interest subject to those theories; and has addressed how stringently those interests will be protected by establishing the elusive "nexus" and "proportionality" tests. Yet despite this overall lack of absolute clarity on the relevant property interest's theoretical, spatial, and stringency features, it is property's temporal characteristics that appear to be the most perplexing and unsettled within exaction takings law. In focusing on the temporal features of the property interest at stake, this Article explores whether the takings construct ordinarily applied when an exaction is *imposed* is also applicable at the point in time when an exaction is merely *proposed*.

The piece offers three reasons to suggest that only upon the imposition of an exaction should the existing exaction takings construct attach as to any particular claimant. First, where a proposed exaction is refused or withdrawn, no property has been taken. Second, judicial speculation on the substantive worth of hypothetical exactions suggests such matters are not suitable for review. Third, burdening governmental entities with possible takings liability for statements made during negotiation sessions places a chilling effect on regulator-landowner coordination. The last of these three is likely the most significant from a legal policy perspective, particularly on the nation's coastlines, where such coordination can be especially useful in light of the uncertainties surrounding the extent of and impacts associated with sea level rise.

The lack of reasoned judicial guidance on issues of temporality in exaction takings law is hindering the ultimate employment of an important regulatory tool for local governments. Until the proposed-versus-imposed question is appropriately resolved, the discretionary governmental power to condition development approvals—particularly as a tool to adapt to a complex, developing phenomenon such as sea level rise—will continue to raise indeterminate and unnecessary takings liability risks.

SEA LEVEL RISE AND GULF BEACHES: THE SPECTER OF JUDICIAL TAKINGS

DONNA R. CHRISTIE*

I.	INTRODUCTION	313
II.	THE STOP THE BEACH RENOURISHMENT CASE	315
	A. In the Florida Courts	315
	B. In the U.S. Supreme Court	317
III.	JUDICIAL TAKING, SEA LEVEL RISE, AND	
	BEACH RESTORATION	321
IV.	CONCLUSION	325

I. INTRODUCTION

The BP oil spill recently focused the nation's attention on the importance of beaches to the economies of the states bordering the Gulf of Mexico.¹ These beaches have, however, been under attack for many decades by erosion from storms and other natural forces, as well as construction and maintenance of navigation inlets and rampant coastal development. Texas, which has one of the highest coastal erosion rates in the country, reports that "64 percent of the Texas coast is eroding at an average rate of about 6 feet per year with some locations losing more than 30 feet per year."² Of the 825 miles of Florida's sandy beaches, 59% or over 485 miles has experienced erosion, with about 47% experiencing "critical erosion."³ Sea

^{*} Elizabeth C. & Clyde W. Atkinson Professor of Law, Florida State University College of Law; B.S. Chem. 1969, University of Georgia; J.D. 1978, University of Georgia; Post Doc. 1978-1980, Marine Policy and Ocean Management Program, Woods Hole Oceanographic Institution.

^{1.} See generally Ilan Brat & Jeffery Ball, The Gulf Oil Spill: Tar Balls Avoid Mississippi—But So Do Tourists, WALL ST. J., June 14, 2010, at A4; Sara K. Clarke & Kevin Spear, Florida Panhandle Hotels Hurt by Oil Spill's Effects; Beachfront Properties Report Year-Over-Year Declines in Revenue During Crucial Months of June, July and August, L.A. TIMES, Oct. 23, 2010, at B2; Rick Jervis, Gulf Region Eyes Recovery as Oil Spill Losses Mount; Attention Swings to Long-term Solutions, USA TODAY, Sept. 20, 2010, at A1, available at http://www.usatoday.com/news/nation/2010-09-19-bp-oil-spill-well-killed_N.htm; Campbell Robertson, Effects of Spill Spread as Tar Balls Are Found, N.Y. TIMES, July 7, 2010, at A12, available at http://www.nytimes.com/2010/07/07/us/07spill.html.

^{2.} Coastal Erosion, TEX. GEN. LAND OFFICE, http://www.glo.texas.gov/what-we-do/caring-for-the-coast/coastal-erosion/index.html (last visited May 9, 2011).

^{3.} Beach Erosion Control Program, FLA. DEP'T OF ENVTL. PROT., http://www.dep.state.fl.us/beaches/programs/bcherosn.htm (last updated Apr. 11, 2010). "Critically Eroded Shoreline" is defined as "a segment of shoreline where natural processes or human activities have caused, or contributed to, erosion and recession of the beach and dune system to such a degree that upland development, recreational interests, wildlife habitat or important cultural resources are threatened or lost." FLA. ADMIN. CODE, r. 62B-36.002(4) (2010).

level rise will exacerbate these erosion rates.⁴ In many Gulf of Mexico states, however, the projected rate of beach loss due to sea level rise is overwhelmed by the current background rate of erosion. In Florida, for example, because the erosion rate is already so substantial, beach restoration and nourishment are considered to be economically viable adaptations to sea level rise for the next 50-100 years.⁵ While restoration is arguably not a long-term solution to sea level rise, beach restoration has many benefits over armoring of the shoreline where the level and scale of development makes retreat economically unviable. While armoring may protect structures, it will inevitably lead to loss of beaches, habitat and tidal public trust lands.⁶

The continued viability of beach restoration as an adaptation strategy presumes that current legal regimes for carrying out these projects can withstand constitutional challenges and that takings challenges and compensation of littoral property owners will not be part of the cost of the projects. In *Stop the Beach Renourishment, Inc. v. Florida Department of Environmental Protection*,⁷ Florida withstood a first attack on the Beach and Shore Preservation Act (BSPA or the Act)⁸ as well as a challenge to the Florida Supreme Court's interpretation of the common law principles embodied in the Act. The case provided the opportunity, however, for Justice Scalia to introduce his theory of a new genre of "takings" under the Fifth and Fourteenth amendments—judicial takings.⁹

This Article discusses the *Stop the Beach Renourishment* case in both the Florida and U.S. Supreme Courts, and reviews Justice Scalia's theory of judicial takings. It then reviews the continuing challenges to beach restoration as a beach management and sea level rise strategy, both from the perspective of the legal issues that remain unresolved and the chilling effect of the specter of judicial taking.

^{4.} See Stephen P. Leatherman, Social and Economic Costs of Sea Level Rise, in SEA LEVEL RISE: HISTORY AND CONSEQUENCES, 181, 189 (Bruce C. Douglas et al. eds., 2001).

^{5.} Nicole Elko, Pinellas Cnty. Dep't of Envtl. Mgmt., Planning for Climate Change: Recommendations for Local Beach Communities 13-14 (2009) (unpublished manuscript, on file with the author).

^{6.} Jenifer E. Dugan & David M. Hubbard, *Ecological Responses to Coastal Armoring* on Exposed Sandy Beaches, 74 SHORE & BEACH 10, 10 (2006); See also Jenifer E. Dugan et al., *Ecological Effects of Coastal Armoring on Sandy Beaches*, 29 MARINE ECOLOGY 160 (2008).

^{7. 130} S. Ct. 2592 (2010).

^{8.} Beach and Shore Preservation Act, FLA. STAT. §§ 161.011-161.45 (2010).

^{9.} Stop the Beach Renourishment, Inc., 130 S. Ct. at 2602.

II. THE STOP THE BEACH RENOURISHMENT CASE

A. In the Florida Courts

Beach restoration under the BSPA requires the state to establish an erosion control line (ECL) based on the Mean High Water Line (MHWL), with discretion to also take into account the engineering requirements for the project, the extent of erosion or avulsion, and the protection of upland property ownership.¹⁰ Once the boundary is adopted by the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees), which holds title to sovereignty lands in Florida, the fixed ECL replaces the ambulatory MHWL as the boundary between state and littoral property.¹¹ Title to all land seaward of the ECL is:

vested in the state by right of its sovereignty, and title to all lands landward of [the ECL] shall be vested in the riparian upland owners whose lands either abut the erosion control line or would have abutted the line if it had been located directly on the line of mean high water on the date the board of trustees' survey was recorded.¹²

Common law rights associated with littoral ownership— "including but not limited to rights of ingress, egress, view, boating, bathing, and fishing"¹³—are specifically preserved by the BSPA. The right to accretions, however, is specifically abrogated by the terms of the Act.¹⁴

The permit for the 6.9 mile beach restoration project for Walton County and Destin was upheld in an administrative hearing,¹⁵ but on appeal the Florida First District Court of Appeals (DCA) jeopardized the Florida Beach Erosion Control Program by finding that beachfront property owners had been deprived

^{10.} See FLA. STAT. § 161.161(4)-(5) (2010).

^{11.} See FLA. STAT. § 161.191(1). Littoral property is land bordered by an ocean or a lake. See 78 AM. JUR. 2D Waters § 30 (2010).

^{12.} FLA. STAT. § 161.191(1).

^{13.} FLA. STAT. § 161.201. The Act further protects upland owners by providing that "[i]n addition the state shall not allow any structure to be erected upon lands created, either naturally or artificially, seaward of any erosion control line . . . except such structures required for the prevention of erosion. Neither shall such use be permitted by the state as may be injurious to the person, business, or property of the upland owner or lessee; and the several municipalities, counties and special districts are authorized and directed to enforce this provision through the exercise of their respective police powers." *Id.*

^{14.} The boundary will no longer change "either by accretion or erosion or by any other natural or artificial process[.]" FLA. STAT. § 161.191(2).

^{15.} Walton Cnty. v. Stop the Beach Renourishment, Inc., 998 So. 2d 1102, 1106-07 (Fla. 2008).

of constitutionally protected littoral rights, specifically the right to accretions and the right of contact with the water, without just compensation. 16

The Florida Supreme Court framed the challenge to the BSPA as: "On its face, does the Beach and Shore Preservation Act unconstitutionally deprive upland owners of littoral rights without just compensation?"¹⁷ The Act would survive such a facial challenge unless "no set of circumstances exists under which the statute would be valid."18 The court analyzed the statute in the context of a situation where the ECL was set at the boundary line between the state-owned lands and the upland, private property owner,¹⁹ and the beach restoration merely reinstated the pre-avulsive status quo after a hurricane.²⁰ The court found that private property rights of littoral owners must be balanced against the state's duty. both under the Florida Constitution and the public trust doctrine, to protect the state's beaches.²¹ "[J]ust as with the common law," the court concluded, "the Act facially achieves a reasonable balance of interests and rights to uniquely valuable and volatile property interests."22

The Florida Supreme Court faulted the DCA for not considering the role of avulsion,²³ and it seems clear that if the beach restoration project were characterized as an avulsive event, no property rights would have been affected under common law principles.²⁴ The upland owner would no longer own property directly bordering the sea and consequently could not claim accretions. But the Florida Supreme Court was not referring to the beach restoration project as the relevant avulsive event.²⁵ Instead, the beach restoration project was characterized as the state acting to recover its property lost to hurricane-induced avulsion.²⁶ The court concluded that the

^{16.} Save Our Beaches, Inc. v. Fla. Dep't of Envtl. Prot., 27 So. 3d 48, 50, 59-60 (Fla. 1st DCA 2006).

^{17.} Walton Cnty., 998 So. 2d at 1105 (footnotes omitted).

^{18.} Id.at 1109 (citing Fla. Dep't of Revenue v. City of Gainesville, 918 So. 2d 250, 256 (Fla. 2005)).

^{19.} Id. at 1117-18 n.15.

^{20.} Id. at 1116.

^{21.} Id. at 1110-11 (quoting FLA. CONST., art. X, § 11).

^{22.} Id. at 1115

^{23.} Id. at 1116.

^{24.} Avulsion, a sudden and perceptible change in the location of the shoreline, does not alter the boundary between the state and upland owner. *See, e.g.*, Bd. of Trs. of the Internal Improvement Trust Fund v. Sand Key Assocs., 512 So. 2d 934, 945 n.6 (Fla. 1987) ("When 'new' land is formed by the process by [sic] avulsion, title remains in its former owner.") (citations omitted).

^{25.} Walton Cnty., 998 So. 2d at 1116.

^{26.} *Id.* This was an unusual application of the doctrine that a littoral owner has a reasonable amount of time to reclaim land after an avulsive event. The court accorded the state the same right as the upland owner to recover its land after an avulsive event, but the only totally, non-submerged land owned by the state prior to the avulsion was the tideland be-

Act is facially constitutional because it simply reflects the common law principle that allows a littoral owner the right to re-claim land lost to avulsion within a reasonable time.²⁷

Florida courts have consistently stated that littoral rights are vested property rights which require compensation if taken by the state,²⁸ but, the court distinguished the right to accretions from other presently exercised rights associated with the right of access and view.²⁹ The right to accretions was labeled a future, contingent right³⁰ that was not implicated in beach restoration projects.³¹ The asserted right of contact with the water was dismissed as merely ancillary to preservation of the right of access and irrelevant in the context of the BSPA, because the Act preserved access to the water.³²

The Florida Supreme Court's analysis of the rights of accretion and the right of contact with the water formed the basis of a request for rehearing by the property owners' association, Stop the Beach Renourishment (STBR). Upon denial of a hearing,³³ STBR petitioned the U.S. Supreme Court for *certiorari*.³⁴ The case afforded the Supreme Court an opportunity to address directly the issue of whether a court's decision that redefines property rights can be a taking of property without just compensation under the Fifth and Fourteenth amendments—a judicial taking.³⁵

B. In the U.S. Supreme Court

From both a factual and legal standpoint, the *STBR* case provided a weak foundation for Justice Scalia to mount his argument for a theory of judicial takings. Although the Court split on the ba-

32. *Id.* at 1119-20.

tween the MHWL and the low tide line. This land is, however, critical to the public's access to the beach and water. *See generally* Donna R. Christie, *Of Beaches, Boundaries and SOBs*, 25 J. LAND USE & ENVIL. L. 19, 49 (2009).

^{27.} Walton Cnty., 998 So. 2d at 1117-18.

^{28.} See, e.g., Sand Key Assocs., 512 So. 2d at 936; Brickell v. Trammel, 82 So. 221, 227 (Fla. 1919); Thiesen v. Gulf, Fla. & Ala. Ry. Co., 78 So. 491, 506-07 (Fla. 1917); Broward v. Mabry, 50 So. 826, 830 (Fla. 1909).

^{29.} Walton Cnty., 998 So. 2d at 1112 (asserting that "[t]he rights to access, use, and view are rights relating to the present use of the foreshore and water").

^{30.} *Id.* (asserting that "[t]he right to accretion and reliction is a contingent, future interest that only becomes a possessory interest if and when land is added to the upland by accretion or reliction").

^{31.} *Id.* at 1118-19 (stating that because none of the common law justifications for the doctrine of accretions applied in the circumstances of beach restoration under the BSPA, the doctrine was not relevant).

^{33.} Stop the Beach Renourishment, Inc. v. Fla. Dep't of Envtl. Prot., 130 S. Ct. 2592, 2600-01 (2010).

^{34.} Id. at 2601.

^{35.} *Id.* at 2596, 2610; *see also* Christie, *supra* note 26, at 64-67 (a general survey of judicial and scholarly views on judicial taking prior to *STBR*).

sis for review, the Justices unanimously affirmed that the Florida Supreme Court's decision did not constitute a taking of property rights³⁶ or even that the case presented a "close" question.³⁷ The Court found that the Florida Supreme Court decision clearly effected no change in state law.³⁸ In the view of Justices Kennedy (joined by Justice Sotomayor) and Breyer (joined by Justice Ginsberg), because no property rights were impaired and no compensable taking could result no matter what kind of test the Court applied, the Court should refrain from introducing a new constitutional takings principle.³⁹ To make the case for the concept of judicial taking, Justice Scalia took the position in his plurality opinion⁴⁰ that the Court could not decide whether the case presented a judicial taking of property without determining whether a judicial taking.⁴¹

The Fifth Amendment of the Constitution was originally applied to require compensation when the government directly appropriated property,⁴² but the just compensation requirement has been extended to legislative and regulatory action that "goes too

37. Id. at 2611.

39. Id. at 2613 (Kennedy, J., concurring in part and concurring in the judgment). Justice Kennedy wrote that the "case does not require the Court to determine whether, or when, a judicial decision determining the rights of property owners can violate the Takings Clause" Id. Justice Breyer agreed, seeing "no need" to rule on the issue of judicial takings "now[.]" Id. at 2619 (Breyer, J., concurring in part and concurring in the judgment).

 $40.\ Id.$ at 2596. Justice Scalia was joined in his opinion by Chief Justice Roberts and Justices Thomas and Alito.

41. *Id.* at 2602-03 (plurality opinion). Justice Scalia criticized Justice Breyer for arguing that it was unnecessary for the Court to decide whether a judicial taking exists or the appropriate standard of review. He stated that

[o]ne cannot know whether a takings claim is invalid without knowing what standard it has failed to meet. Which means that Justice Breyer must either (a) grapple with the artificial question of what would constitute a judicial taking if there were such a thing as a judicial taking (reminiscent of the perplexing question how much wood would a woodchuck chuck if a woodchuck could chuck wood?), or (b) answer in the negative what he considers to be the "unnecessary" constitutional question whether there is such a thing as a judicial taking.

Id.

^{36.} Stop the Beach Renourishment, Inc., 130 S. Ct. at 2613 (plurality opinion), 2613 (Kennedy, J., concurring in part and dissenting in part), 2618 (Breyer, J., concurring in part and dissenting in part), 2613 (Justice Stevens did not participate in the case).

^{38.} Id. at 2611-12. The Court concluded that Florida law recognizes that the state has the right to fill in its submerged land adjacent to littoral property "so long as it does not interfere with the rights of the public and the rights of littoral landowners." The property owners did not meet their burden of demonstrating that they had "rights to future accretions and contact with the water superior to the State's right to fill in its submerged land." Asserting that Florida law treats the filling of state submerged land as avulsion, the Court found that state law recognized no exception to the doctrine when the state causes the exposure of submerged land adjacent to littoral property. Finally, the Court concurred that the right to accretions was not "implicated" in beach restoration "as there can be no accretions to land that no longer abuts the water." *Id.*

^{42.} See Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1014 (1992).

far" in reducing the beneficial use and value of property commonly known as a regulatory taking.⁴³ Justice Scalia rejected the argument that the branch of government was relevant in the application of the principle that "the Takings Clause bars *the State* from taking private property without paying for it[.]"⁴⁴ He insisted that the constitutional standard applies to the act and not the actor.⁴⁵ "It would be absurd[,]" Justice Scalia declared, "to allow a State to do by judicial decree what the Takings Clause forbids it to do by legislative fiat."⁴⁶

In his concurring opinion in Hughes v. Washington,⁴⁷ Justice Potter Stewart had earlier suggested the possibility of a judicial taking when a court decision constitutes "a sudden change in state law, unpredictable in terms of the relevant precedents."48 While adopting the concept of judicial taking. Justice Scalia rejected this as the relevant test. He reasoned that the predictability of a court's decision affecting property entitlements was irrelevant.⁴⁹ Instead, Justice Scalia's test focuses on the effect on existing property rights: "If a legislature or a court declares that what was once an established right of private property no longer exists, it has taken that property³⁵⁰ While using absolute terms that seem to suggest a *per se* taking rule,⁵¹ later in the case, he gives a hint of how judicial taking might fit into traditional taking doctrine. He explains that "the manner of state action may matter: Condemnation by eminent domain, for example, is always a taking, while a legislative, executive, or judicial restriction of property use may or may not be, depending on its nature and extent."52 This statement seems to concede that both the nature and degree of infringement of property rights are as relevant to a judicial impairment of property rights as to a similar impairment of rights by the legislature

^{43.} *Id.*; see also Pa. Coal Co. v. Mahon, 260 U.S. 393, 415 (1922) (finding that a regulation could be the equivalent of an act of eminent domain if it "goes too far" in diminishing the value of the land).

^{44.} Stop the Beach Renourishment, Inc., 130 S. Ct. at 2602.

^{45.} Id.

^{46.} Id. at 2601.

^{47. 389} U.S. 290 (1967) (Stewart, J., concurring).

^{48.} Id. at 296-97.

^{49.} Stop the Beach Renourishment, Inc., 130 S. Ct. at 2610 (a decision could be predictable but confiscatory, or unpredictable but merely clarifies property rights that were previously unclear).

^{50.} Id. at 2602.

^{51.} See id. at 2601. This use of absolutist language is likely related to the specific facts of the case. Justice Scalia notes that it is not necessary to determine whether riparian rights are an easement because they are as fully protected as an estate in land. *Id.* (citing *Yates v. Milwaukee*, 10 Wall. 497, 504 (1871)). Applying this standard, the taking of the right to accretions would be a per se taking requiring compensation.

^{52.} Id. at 2602.

or an executive agency. That is, a *Penn Central* balancing test⁵³ would normally apply.⁵⁴ This approach would be consistent with Justice Scalia's position that the same standards apply to all branches of government in applying the takings clause.

Justice Kennedy, joined by Justice Sotomayor, did not view the case as requiring the Court to determine "whether, or when" a judicial taking might arise.⁵⁵ He extensively reviewed the "difficulties" that should be taken into account before adopting a theory of judicial takings, including the political nature of property,⁵⁶ the lack of eminent domain power in the judiciary,⁵⁷ the procedural issues involved in how to raise a judicial takings claim,⁵⁸ and the question of what the remedy would be for a judicial taking.⁵⁹ The Due Process Clause, in Justice Kennedy's view, provides an adequate constraint on the judiciary in protecting private property.⁶⁰

If a judicial decision, as opposed to an act of the executive or the legislature, eliminates an established property right, the judgment could be set aside as a deprivation of property without due process of law. The Due Process Clause, in both its substantive and procedural aspects, is a central limitation upon the exercise of judicial power. And this Court has long recognized that property regulations can be invalidated under the Due Process Clause.⁶¹

Justice Kennedy deemed it "not wise" to devise a new remedy when it has not been shown that "usual principles, including con-

^{53.} Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104, 124-25 (1978). The *Penn Central* test weighs the extent that the regulation interferes with the property owner's investment-backed expectations against the character of the government action.

^{54.} See Lingle v. Chevron U.S.A. Inc., 544 U.S. 528 (2005) (reviewing and summarizing takings analysis).

^{55.} Stop the Beach Renourishment, Inc., 130 S. Ct. at 2613 (Kennedy, J., concurring in part and dissenting in part) "In the exercise of their duty to protect the fisc, both the legislative and executive branches monitor, or should monitor, the exercise of this substantial power. Those branches are accountable in their political capacity for the proper discharge of this obligation." *Id.*

^{56.} Id. at 2613-14.

^{57.} *Id.* at 2614, 2618 ("[T]he Takings Clause implicitly recognizes a governmental power while placing limits upon that power.... There is no clear authority for [the] proposition [that courts have eminent domain power].... [T]he substantial power to decide whose property to take and when to take it should be conceived of as a power vested in the political branches and subject to political control.").

^{58.} *Id.* at 2616-17 ("[I]t may be unclear in certain situations how a party should properly raise a judicial takings claim.").

^{59.} Id. at 2617 ("It is . . . questionable whether reviewing courts could invalidate judicial decisions deemed to be judicial takings; they may only be able to order just compensation.").

^{60.} *Id.* at 2615.

^{61.} Id. at 2614.

stitutional principles that constrain the judiciary like due process, are somehow inadequate to protect property owners."⁶²

The concept of a judicial taking was only adopted by the four justices in the plurality, but it must be observed that although the other four participating justices did not appear inclined to accept the theory, none of the justices in *STBR* expressly rejected it. On this basis, property rights advocates are viewing the case as opening the door for development of a judicial taking doctrine.⁶³

III. JUDICIAL TAKING, SEA LEVEL RISE, AND BEACH RESTORATION

The intersection of land and sea has always been not only a particularly vulnerable and special environment, but has also been subject to a unique legal regime. Over many centuries, the common law has developed to balance public and private rights in the ocean and shore. While concepts like the public trust doctrine have been codified and even incorporated in state constitutions, the increased intensity of use of coastal areas and new developments and pressures on the fragile coastline often present novel questions that will require the courts to fill gaps or clarify the application of the concepts in the context of new circumstances. The courts need the independence necessary to allow common law concepts, such as the public trust doctrine and custom, to evolve to meet the changing needs of society in regard to the use and protection of the shore.

In juxtaposition to the idea that courts should be able to evolve common law principles to address changing circumstances and societal needs, the theory of judicial taking presumes that courts require additional constraints in addressing these issues of state property law.⁶⁴ As noted by Justice Kennedy in *STBR*, the due process clause already provides both procedural and substantive limi-

^{62.} Id. at 2607, 2617-18.

^{63.} See generally Ilya Shapiro & Trevor Burrus, Judicial Takings and Scalia's Shifting Sands, 35 VT. L. REV. 423 (2010); Robert H. Thomas et al., Of Woodchucks and Prune Yards: A View of Judicial Takings from the Trenches, 35 VT. L. REV. 437 (2010).

^{64.} Justice Scalia's frustration with state courts may arise from the response of many courts to his opinion in *Lucas*, which held that a regulation that takes all value of land is a categorical taking unless the prohibited use of the property did not inhere in the owner's title based on background principles of state property law. *See* Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1029 (1992). Justice Scalia has asserted that "*Lucas*... 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" and that 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." Stevens v. City of Cannon Beach, 114 S. Ct. 1332, 1334 (1994) (Scalia, J., dissenting from denial of certiorari) (quoting Hughes v. Washington, 389 U.S. 290, 296-97 (1967)).

tations on state courts that eliminate or substantially change property rights by arbitrary or irrational rulings.⁶⁵ An arbitrary or irrational standard provides state courts some needed flexibility in dealing with gaps in the law or adapting to changing circumstances but may not provide a clear or predictable result. Justice Scalia's discussion of judicial taking did not explain, however, why notoriously complex and unpredictable takings analysis⁶⁶ would provide a more adequate or predictable remedy.⁶⁷

Even though the theory of judicial taking was not adopted by a majority of the Court in *STBR*, the case does send a message to state courts. In fact, six justices agreed (albeit not on the same grounds) that state supreme court decisions that eliminated existing property rights can be found unconstitutional by federal courts, inviting federal review of state property law questions.⁶⁸

This chilling message may have already affected the Texas Supreme Court in the recent *Severance v. Patterson* case.⁶⁹ After several decades of Texas courts recognizing that an established public easement to use a Texas beach moved or "rolled" when the beach moved as a result of erosion or avulsion,⁷⁰ the Texas Supreme Court surprisingly rejected, as a matter of Texas property law, that a public use easement could "roll" or migrate after an avulsive event onto "previously unencumbered beachfront property[.]"⁷¹ The

Id. at 2619.

69. Severance v. Patterson, No. 09-0387, 2010 Tex. LEXIS 854, (Tex. Nov. 5, 2010), reh'g granted.

70. Id. at *50-51.

71. *Id.* at *47. The reasoning for the rejection of the rule is quite unclear. Texas continues to recognize the rule the state has applied that after an avulsive event the boundary

^{65.} Stop the Beach Renourishment, Inc., 130 S. Ct. at 2614 (Kennedy, J., concurring in part and dissenting in part). In Lingle v. Chevron, the Court recently clarified the dichotomy between due process violations and takings. 554 U.S. 528 (2005). Justice Kennedy's analysis in STBR reasonably relates to that dichotomy in the context of the existence of a judicial takings doctrine.

^{66.} See generally Carol M. Rose, Mahon Reconstructed: Why the Takings Issue Is Still a Muddle, 57 S. CAL. L. REV. 561 (1984).

^{67.} Of course, a finding of a judicial taking would seem to necessarily provide a remedy of just compensation, but this aspect of judicial taking theory is perhaps the most difficult to rationalize. Justice Kennedy explains the problems associated with a compensation remedy for a judicial taking and why such a remedy may be inappropriate. *See Stop the Beach Renourishment, Inc.*, 130 S. Ct. at 2616-17 (Kennedy, J., concurring in part, dissenting in part).

^{68.} Justice Breyer noted in his concurring opinion that discussion of judicial taking "invite[s] a host of federal takings claims without the mature consideration of potential procedural or substantive legal principles that might limit federal interference in matters that are primarily the subject of state law." *Id.* at 2618-19 (Breyer, J., concurring in part and dissenting in part). Justice Breyer went on to state that

the approach the plurality would take today threatens to open the federal court doors to constitutional review of many, perhaps large numbers of, state-law cases in an area of law familiar to state, but not federal, judges. And the failure of that approach to set forth procedural limitations or canons of deference would create the distinct possibility that federal judges would play a major role in the shaping of a matter of significant state interest—state property law.

case has led to the cancellation of the largest beach restoration project in the history of the state. 72

In another context, STBR has provided some support for beach restoration projects. Avulsion is traditionally defined as an addition to littoral land that forms suddenly and perceptibly and does not change the boundary between the state and the landowner.73 However, very few cases have addressed whether beach restoration projects are subject to the common law rule of avulsion in regard to the boundary.⁷⁴ The U.S. Supreme Court in STBR found that the Florida court applied the doctrine of avulsion to the beach restoration project,⁷⁵ and that because state law created no exception when the avulsion was caused by the state, the boundary does not move.⁷⁶ Consequently, the state retains ownership of the previously submerged lands.⁷⁷ A New Jersey Supreme Court case, *City* of Long Branch v. Jui Yung Liu,78 had seemed to be "on hold" pending the U.S. Supreme Court's determination of the nature of avulsion. In that case, the question was whether oceanfront property owners had gained title to the created beach that would entithe them to compensation for its condemnation by the city of Long Branch.⁷⁹ The New Jersey Supreme Court extensively cited STBR

73. See, e.g., Stop the Beach Renourishment, Inc., 130 S. Ct. at 2599 (stating "whether an avulsive event exposes land previously submerged or submerges land previously exposed, the boundary between littoral property and sovereign land does not change; it remains (ordinarily) what was the mean high-water line before the event. See Bryant v. Peppe, 238 So.2d 836, 838–839 (Fla.1970); J. Gould, Law of Waters § 158, p. 290 (1883).").

74. See supra, note 38. The situation could be considered outside the application of the common law rule because the exposure of the land is through the action of the state (often called "artificial avulsion"), rather than caused by natural action of wind and water. A number of cases, however, have addressed other filling of waterfront land and found the action constituted avulsion. See City of Waukegan v. Nat'l Gypsum Co., 587 F. Supp. 2d 997, 1005 (N.D. Ill. 2008) (explaining that "[t]he same rules apply both to natural avulsions (e.g., a sudden storm or flood) and artificial avulsions (e.g., excavation along waterfront property)."); New Jersey v. New York, 523 U.S. 767, 784 (1998) (recognizing the filling of submerged land around Ellis Island as an "avulsive" change under the common law); J.P. Furlong Enters. v. Sun Exploration & Prod. Co., 423 N.W.2d 130, 134 (N.D. 1988); Cinque Bambini P'ship v. State, 491 So. 2d 508, 520 (Miss. 1986).

75. To be precise, the Florida Supreme Court never stated that beach restoration was an avulsive event, but only that after an a avulsive event—in the case of a hurricane, a littoral owner had a reasonable time to reclaim his or her land. Walton Cnty. v. Stop the Beach Renourishment, Inc., 998 So. 2d 1102, 1117 (Fla. 2008).

between state and private upland property is the post-avulsion MHWL. *Id.* at *36-37. It is not necessarily intuitive that property owner's expectations as "ordinary hazard" of ownership include "losing property to the public trust as it becomes part of the wet beach or submerged under the ocean . . . ," but that they do not expect a public easement on the adjacent land to move with the migrating beach. *Id.* at *38.

^{72.} See Ian White, Galveston: State Kills West End Beach Restoration Project, DAILY NEWS, Nov. 16, 2010, available at http://www.khou.com/news/neighborhood-news/Galveston-State-kills-West-End-beach-restoration-project-108431359.html.

^{76.} Id.

^{77.} Id. at 1117-18.

^{78. 4} A.3d 542 (N.J. 2010).

^{79.} Id. at 548.

to support its conclusion that the doctrine of avulsion applied to the beach restoration project and that title to the filled land remained in the state.⁸⁰

The U.S. Supreme Court's upholding of state law that does not make exceptions for "artificial avulsion" like the state restoration of beaches and agreeing that the right to accretions is not implicated in such projects does not necessarily clear the way for beach restoration to continue. The doctrine of avulsion is a two-sided sword in the case of beach restoration. In Walton County, the Florida Supreme Court noted that "if the ECL does not represent the pre-hurricane MHWL, the resulting boundary between sovereignty and private property might result in the State laying claim to a portion of land that, under the common law, would typically remain with the private owner."⁸¹ The U.S. Supreme Court in STBR also made reference to the fact that the case was decided on the basis that the ECL was being set at the "pre-existing mean highwater line"⁸² and that setting the ECL landward of the pre-existing MHWL would result in a taking.83 These observations lead to the conclusion that if, for example, an ECL is set at the existing MHWL after an avulsive event that scours away 100 feet of beach, the state's claim to the restored beach would be a taking of the littoral owner's property requiring compensation. The additional costs of acquiring ownership of the restored beach would likely lead to the termination of such projects.

In most situations, however, the avulsive event will not be the only cause of the beach migration. In one of the few cases addressing the issue, a Texas appellate court held that for littoral owners to claim that the boundary had not moved prior to the restoration project, the owners had to establish that *all* the loss of the disputed land was due to avulsion.⁸⁴ If states widely adopt this standard,

^{80.} Id. at 550-51, 560.

^{81.} Walton Cnty. 998 So. 2d at 1117-18 n.15 (explaining that the court would not address this "as-applied" issue in the facial challenge to the case).

^{82.} Stop the Beach Renourishment, Inc. v. Fla. Dep't of Envtl. Prot., 130 S. Ct. 2592, 2599 n.2 (2010).

^{83.} *Id.* ("Respondents concede that, if the erosion-control line were established land-ward of that, the State would have taken property.").

^{84.} In City of Corpus Christi v. Davis, the court held that

[[]i]t is undisputed that not all the shoreline loss was attributable to sudden and obvious causes, although it is true that hurricanes and northers have been responsible for a substantial part of the total loss of the shoreline. Nevertheless, the evidence is that forces other than hurricanes and northers, such as summertime night winds and quick water action, are at work slowly shifting away the sands of North Beach. Such forces are classically erosive, not avulsive. The Davises failed to overcome the presumption that the State held title to the disputed acreage by proving that the total loss of the shoreline resulted from avulsive action.

⁶²² S.W.2d 640, 646 (Tex. App. 1981). See also Christie, supra note 26, at 51-63.
there will only be rare, if any, occasions when the littoral owners can carry the burden of proof.

IV. CONCLUSION

Sea level rise resulting from global warming presents one of the greatest challenges to climate change adaptation. The intensity and economic value of coastal development as well as the value of beaches to the coastal economies of Gulf of Mexico states continues to make beach restoration an economically viable option for adaptation to sea level rise—at least in the short term. As a sea level rise strategy, beach restoration may be more in the nature of "stalling" than adapting, but there is little doubt about its importance, even if only as a continuing response to background levels of erosion to protect the tourism economy and upland property.

Of course, beach restoration projects are not something new. Beach nourishment as an erosion strategy began as early as the 1930s,⁸⁵ but as technologies have improved and funding has become more available, these projects have become a primary tool for beach management and erosion mitigation. Florida now manages over 200 miles of restored beach,⁸⁶ and until the *STBR* case, there had been no legal challenges to its programs. Now, however, challenges to beach programs both in Florida and Texas supported by property rights organizations are proliferating. Unfortunately, there are a plethora of unresolved legal issues that can serve to derail the reliance on beach restoration as a sea level rise adaptation strategy. The specter of judicial takings is just one hurdle for states in confronting these issues, and it serves as a signal that Justice Scalia will continue to pursue his aggressive agenda of property rights protection.⁸⁷

^{85.} COMM. ON BEACH NOURISHMENT & PROT., NAT'L RESEARCH COUNCIL, BEACH NOURISHMENT AND PROTECTION 58-60 (1995).

^{86.} See generally Beach Erosion Control Program, supra note 3.

^{87.} There had been speculation that cases like *Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l Planning Agency*, 535 U.S. 302 (2002), and *Lingle v. Chevron U.S.A. Inc.*, 544 U.S. 528 (2005), represented a retrenchment of Supreme Court's aggressive development of the takings doctrine. *STBR* suggests this conclusion may be unjustified. *See, e.g.*, Laura S. Underkuffler, Tahoe's *Requiem: The Death of the Scalian View of Property and Justice*, 21 CONST. COMMENT. 727 (2004).

WETLANDS OR SEAWALLS? ADAPTING SHORELINE REGULATION TO ADDRESS SEA LEVEL RISE AND WETLAND PRESERVATION IN THE GULF OF MEXICO*

NIKI L. PACE°

I.	INTRODUCTION
II.	SEA LEVEL RISE AND SHORELINE MANAGEMENT
	A. Sea Level Rise & the Gulf of Mexico
	B. Adapting to Sea Level Rise
	1. Retreat
	a. Setbacks
	b. Rolling Easements
	2. Defend
	a. Beach Nourishment
	b. Shoreline Armoring
	C. Strategies for Wetland Preservation:
	Living Shorelines
III.	PROPERTY RIGHTS AFFECTING SHORELINE REGULATION. 341
	A. Accretion and Avulsion
	B. The Public Trust Doctrine
	1. The Public Trust Doctrine in the Five Gulf States345
	a. Alabama
	<i>b. Florida</i>
	c. Louisiana
	d. Mississippi
	e. Texas
	2. The Public Trust Doctrine & Shoreline
	Regulation
	C. The Takings Clause
	1. Takings Challenges to Shoreline Armoring
	a. North Carolina
	b. South Carolina
	2. Other Takings Challenges to Shoreline
	Development in the Gulf of Mexico
IV.	CONCLUSION

^{*} This research was funded under award number NA10OAR4170078 from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the authors and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce.

[°] Research Counsel, Mississippi-Alabama Sea Grant Legal Program; Adjunct Professor, University of Mississippi School of Law. I would like to thank my research assistant April Hendricks for her assistance.

I. INTRODUCTION

Shorelines, in their natural state, are continuously evolving environments shaping the ever-important interface between land and water. For centuries, shorelines have provided people with ways of access and transportation, places to fish, and areas to swim and recreate. Dating back to Roman times, the public's interest in access to that land-water interface has been recognized in property law.¹

However, public access to the shoreline finds itself increasingly pitted against upland property owners' efforts to maintain a static demarcation of their property lines. That is, waterfront property owners, in hopes of beating back erosion and rising seas, are frequently erecting hard structures along the water's edge. In the last century, population pressures along the U.S. coastline have exploded, intensifying development pressures in environmentally sensitive areas.² As development expands, so does the desire of property owners to protect their investment. Facing coastal storms and sea level rise, developers and waterfront property owners are placing greater pressures on state and local governments for permission to armor the shore. In the case of beaches, public expenditures for beach restoration have escalated.³ Efforts to beat back the sea have intensified, but at what cost?

As more and more of the nation's bays and estuaries are armored, the American public is losing important habitat, ecosystem services, and the tradition of public access to the shoreline. Rather than marshy wetlands and sandy beaches along which the public has enjoyed access since the country's founding, the water's edge is increasingly converted to seas abutting bulkheads and seawalls, which cause the wet beach to essentially wash away. In 2007, the National Research Council released *Mitigating Shore Erosion Along Sheltered Coast*, a report that looks at the challenges of addressing shoreline erosion along sheltered coastlines, such as bays and estuaries.⁴ The report draws attention to cumulative impacts of shoreline armoring and the need for a new regulatory approach

^{1.} See James G. Wilkins & Michael Wascom, *The Public Trust Doctrine in Louisiana*, 52 LA. L. REV. 861, 863 (1992) ("Under Roman law the sea and seashore, the air, and running water were common things.").

^{2.} M.S. Peterson et al., Habitat Use by Early Life-History Stages of Fishes and Crustaceans Along a Changing Estuarine Landscape: Differences Between Natural and Altered Shoreline Sites, 8 WETLANDS ECOLOGY & MGMT. 209, 209 (2000).

^{3.} See generally Beach Nourishment, W. CAROLINA UNIV., http://www.wcu.edu/1038.asp (last visited May 9, 2011) (providing a comprehensive compilation of beach renourishment in the United States, including cost).

^{4.} NAT'L RESEARCH COUNCIL, MITIGATING SHORE EROSION ALONG SHELTERED COASTS 1 (2007).

for lower-energy shores.⁵ And unfortunately, as climate change impacts intensify over the next century, so will the loss of shore-line through rising seas.

For these reasons, addressing climate change requires a new approach to shoreline regulation. Even modest projections show that sea level rise is likely to have a substantial impact on coastal communities along the Gulf of Mexico.⁶ As sea level rise accelerates and storm intensity increases, state and local governments must reevaluate their existing framework for shoreline management. Traditional approaches to defend or armor the shoreline against the rising sea do not take into account loss of estuarine habitat and ecosystem services provided by wetlands.⁷ By 2004, national wetland habitat had dropped over 50%, falling from historic levels of 220 million acres to 107 million acres.⁸ These wetlands provide essential habitats for a wide range of animals including birds, fish, and the economically significant Gulf shrimp as well as invaluable ecosystem services like protection from storm surge.⁹ Almost 70% of commercial fishery species in the United States depend on near-shore habitat "at some time during life."¹⁰ The potential loss of these areas as a result of the combined effect of sea level rise and armoring could cost Gulf of Mexico fisheries staggering amounts of money.

As shorelines encroach upon the built environment over the next century, coastal communities face a difficult decision—retreat inland or defend against rising seas. Further complicating this decision is the need to balance the public's interest in the water's edge with waterfront property owners' interest in safeguarding their investment. In response, some governments are increasingly limiting waterfront property owners' right to armor their waterfront property in favor of preserving the natural shoreline.¹¹ Unsurprisingly, this approach finds no favor with waterfront property owners who raise the specter of regulatory takings challenges. The potential for takings lawsuits has slowed government willingness to limit hard structures along the shore.

^{5.} See id. at 3-5.

^{6.} See E.A. PENDLETON ET AL., U.S. GEOLOGICAL SURVEY, COASTAL VULNERABILITY ASSESSMENT OF THE NORTHERN GULF OF MEXICO TO SEA-LEVEL RISE AND COASTAL CHANGE 1 (2010), available at http://pubs.usgs.gov/of/2010/1146/pdf/ofr2010-1146.pdf.

^{7.} See NAT'L RESEARCH COUNCIL, supra note 4, at 4.

^{8.} T.E. Dahl, U.S. Fish & Wildlife Serv., Status and Trends of Wetlands in the Conterminous United States 1998-2004 57 (2005).

^{9.} LADON SWANN, THE USE OF LIVING SHORELINES TO MITIGATE THE EFFECTS OF STORM EVENTS ON DAUPHIN ISLAND, ALABAMA USA, 1 (2008).

^{10.} Peterson et al., supra note 2, at 209.

^{11.} See Strategies for Wetland Preservation: Living Shorelines, infra section II.C.

This Article examines the conundrum of shoreline regulation in the face of increasing sea level rise in the Gulf of Mexico and the need for wetland preservation. The Article will first examine the challenges of sea level rise and the current options for coastal communities. This Section will explore the traditional approach of shoreline armoring and consider an alternative: living shorelines. The Article next turns to the legal dynamic facing managers when determining appropriate shoreline regulations, particularly the need to balance the state's obligations under the public trust doctrine with private property owners' claims under the takings clause of the Fifth Amendment. Finally, the Article suggests recommendations for resolving the conflict between public and private interest along bay and estuary shorelines.

II. SEA LEVEL RISE AND SHORELINE MANAGEMENT

While political debate over climate change continues in the United States, the scientific community has reached consensus on the matter—climate change is occurring and impacts are expected to increase.¹² As defined by the Intergovernmental Panel on Climate Change (IPCC) (the leading international scientific body for assessing climate change), climate change

refers to a change in the state of the climate that can be identified . . . by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity.¹³

The IPCC goes on to conclude that "[w]arming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level."¹⁴ Regardless of one's beliefs about the origins of climate change, the impacts are demonstrable. Coastal communities ignore the rising seas at their own peril.

^{12.} Naomi Oreskes, Beyond the Ivory Tower: The Scientific Consensus on Climate Change, 306 SCI. 1686 (2004); See also William R. L. Anderegg et al., Expert Credibility in Climate Change, 107 PROC. NATL ACAD. SCI. USA 12107, 12107-12109 (2010).

^{13.} INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: SYNTHESIS REPORT 30 (Abdelkader Allali et al. eds., 2007) [hereinafter Synthesis REPORT], available at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf.

^{14.} Id.

A. Sea Level Rise & the Gulf of Mexico

In 2007, the IPCC released its most recent report-the Fourth Assessment. According to the Fourth Assessment Report, global average surface temperature has risen 0.74° Celsius (1.3° Fahrenheit) over the last century (1906-2005).¹⁵ The rate of Arctic temperature increase is almost double that of the global average.¹⁶ Warming temperatures have led to corresponding increases in sea level rise.¹⁷ The Fourth Assessment Report concluded that between 1961 and 2003, sea levels rose at an average rate of 1.8 millimeters per year, resulting in a moderate increase of 0.17 meters over the last century.¹⁸ Over the next 100 years, the Report projects less than one meter of average sea level rise.¹⁹ However, since the release of the Fourth Assessment Report, other researchers have suggested that the IPCC's sea level rise estimates are too conservative and could be as high as 1.4 meters by 2100.²⁰ The IPCC is currently preparing its Fifth Assessment with an anticipated release date of early 2015²¹ and will include updated sea level rise projections.²²

In addition to the IPCC's analysis of sea level rise, U.S. federal agencies are also tracking sea level rise with particular emphasis on domestic variability. For instance, the U.S. Army Corps of Engineers,²³ the National Oceanic and Atmospheric Administration²⁴ (NOAA), the U.S. Geological Survey²⁵ (USGS), and the Environ-

^{15.} Id.

^{16.} *Id*.

^{17.} Id.

^{18.} Id.; see also CHRIS WOLD ET AL., CLIMATE CHANGE AND THE LAW 20 (2009) (discussing impacts of accelerated melting arctic ice).

^{19.} WOLD, *supra* note 18, at 20.

^{20.} *Id.*; see Susan Solomon et al., A Closer Look at the IPCC Report, 319 SCIENCE 409, 409-10 (2008).

^{21.} INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, SCOPE, CONTENT AND PROCESS FOR THE PREPARATION OF THE SYNTHESIS REPORT (SYR) OF THE IPCC FIFTH ASSESSMENT REPORT (AR5) 6 (2010), *available at* http://www.ipcc.ch/meetings/session32/ syr_final_scoping_document.pdf.

^{22.} Agreed Reference Material for the IPCC Fifth Assessment Report, INTERGOVERN-MENTAL PANEL ON CLIMATE CHANGE, http://www.ipcc.ch/pdf/ar5/ar5-outline-compilation.pdf (indicating that chapter 13 of the fifth assessment report will contain updated sea level rise projections).

^{23.} U.S. ARMY CORPS OF ENG'RS, CIRCULAR NO. 1165-2-211, WATER RESOURCE POLICIES AND AUTHORITIES INCORPORATING SEA-LEVEL CHANGE CONSIDERATIONS IN CIVIL WORKS PROGRAMS (2009).

^{24.} See Sea Level Trends, NAT'L OCEANIC & ATMOSPHERIC ADMIN., http://tidesandcurrents.noaa.gov/sltrends/sltrends.shtml (last visited May 9, 2011).

^{25.} See E. Robert Thieler et al., National Assessment of Coastal Vulnerability to Sea-Level Rise, U.S. GEOLOGICAL SURVEY, http://woodshole.er.usgs.gov/project-pages/cvi/ (last visited May 9, 2011).

mental Protection Agency²⁶ (EPA) are all working to analyze U.S. sea level rise impacts and ways to best address those impacts. The EPA first released sea level rise projections in 1983 and has continued to update projections since that time.²⁷ James G. Titus, of the EPA, has long called for sea level rise planning.²⁸

In 2000, the U.S. Geological Survey conducted an assessment of the Gulf of Mexico's vulnerability to sea level rise.²⁹ Therein, the authors noted that the Gulf of Mexico shoreline is predominately composed of barrier islands, lagoons, marshes, and deltas, making the shoreline an overall high-risk area for sea level rise.³⁰ The authors found that areas around New Orleans, Louisiana, were particularly susceptible to sea level rise while portions of Florida were more modestly impacted.³¹ In 2010, building upon the original Gulf of Mexico assessment, the USGS conducted a northern Gulf of Mexico assessment, targeting the areas from Galveston, Texas to Panama City, Florida.³² In conducting the assessment, the authors considered the impacts of six variables on coastal response to sea level rise: geomorphology, historical shoreline change rate, regional coastal slope, relative sea level change, mean significant wave height, and mean tidal range.³³ After considering all the factors, the researchers found that areas of the Louisiana coast and the Mississippi barrier islands were at greatest risk to sea level rise along the Northern Gulf of Mexico.³⁴

Although the exact rates of sea level rise are uncertain, potential coastal impacts include: "shoreline erosion, storm-surge flooding, saltwater intrusion into groundwater aquifers, inundation of wetlands and estuaries, and threats to cultural and historic re-

- 32. PENDLETON ET AL., supra note 6, at 1.
- 33. Id.

^{26.} See Sea Level Rise Reports, ENVTL. PROT. AGENCY, http://epa.gov/climatechange/effects/coastal/slrreports.html (last visited May 9, 2011) (listing all EPA SLR reports).

^{27.} U.S. ENVTL. PROT. AGENCY, EPA 230-R-95-008, THE PROBABILITY OF SEA LEVEL RISE 139 (1995); see also James G. Titus, Does the U.S. Government Realize that the Sea is Rising? How to Restructure Federal Programs so that Wetlands and Beaches Survive, 30 GOLDEN GATE U. L. REV. 717, 724-725 (2000) (discussing EPA and IPCC projected sea level rise)[hereinafter The Sea is Rising].

^{28.} See James G. Titus, Planning for Sea Level Rise Before and After a Coastal Disaster, in GREENHOUSE EFFECT AND SEA LEVEL RISE: A CHALLENGE FOR THIS GENERATION (Michael C. Barth & James G. Titus eds., 1984) [hereinafter Planning for Sea Level Rise], available at http://epa.gov/climatechange/effects/coastal/SLRChallenge.html.

^{29.} E. ROBERT THIELER & ERIKA S. HAMMAR-KLOSE, NATIONAL ASSESSMENT OF COASTAL VULNERABILITY TO SEA-LEVEL RISE: PRELIMINARY RESULTS FOR THE U.S. GULF OF MEXICO COAST (1999), *available at* http://pubs.usgs.gov/of/2000/of00-179/index.html (last modified Aug. 15, 2006).

^{30.} Id. at Discussion.

^{31.} Id.

^{34.} *Id.; see also* VIRGINIA R. BURKETT ET AL., U.S. GEOLOGICAL SURVEY, SEA-LEVEL RISE AND SUBSIDENCE: IMPLICATIONS FOR FLOODING IN NEW ORLEANS, LOUISIANA 63 (2003), *available at* http://www.nwrc.usgs.gov/hurricane/katrina_rita/Sea-Level-Rise.pdf. (Most of New Orleans metro area is sinking relative to mean sea level).

sources as well as infrastructure."35 In spite of the welldocumented risk the Gulf of Mexico shores face from sea level rise, coastal land use planning rarely takes these risks into account. For instance, a recent study of land use planning along the U.S. Atlantic Coast found that 60% of land susceptible to one meter of sea level rise is likely to be developed while less than 10% of the same area is reserved for conservation.³⁶ This continued development along the coast combined with rising seas threatens the survival of existing coastal wetlands by eliminating the valuable wetland habitat.³⁷

A new study released in late 2010 suggests that coastal wetlands are more sensitive to destruction by rising sea levels than previously thought.³⁸ Under a "rapid" sea level rise scenario, most coastal wetlands worldwide will disappear by the end of the twenty-first century.³⁹ Even under a conservative slow sea level rise projection, many wetlands will be lost, particularly those with low levels of sedimentation and low tidal ranges.⁴⁰ Resources and ecosystem services provided by coastal wetlands will face greater threats as "sea-level rise inundates wetlands."⁴¹ Critical services provided by coastal wetlands include "absorbing energy from coastal storms, preserving shorelines, protecting human populations and infrastructure, supporting commercial seafood harvests, absorbing pollutants and serving as critical habitat for migratory bird populations."42

B. Adapting to Sea Level Rise

Essentially, policymakers are faced with two primary strategies for adapting to rising sea levels: defend or retreat.⁴³ That is, regulators may attempt to hold back the sea through a combination of walls and other hard structures along with land-elevating techniques like beach restoration.⁴⁴ The second option, retreat, in-

^{35.} PENDLETON ET AL., supra note 6, at 1 (internal citation omitted).

^{36.} J G Titus et al., State and Local Governments Plan for Development of Most Land Vulnerable to Rising Sea Level Along the U.S. Atlantic Coast, 4 ENVTL. RES. LETTERS 1, 1 (2009) [hereinafter State and Local Governments Plan].

^{37.} Id.

^{38.} See Matthew L. Kirwan et al., Limits on the Adaptability of Coastal Marshes to Rising Sea Level, 37 GEOPHYSICAL RES. LETTERS L23401 1 (2010).

^{39.} Id. 40. Id. at 4.

^{41.} Many Coastal Wetlands Likely to Disappear This Century, Scientists Say, SCI. DAILY (Dec. 3, 2010), http://www.sciencedaily.com/releases/2010/12/101201134256.htm. 42. Id.

^{43.} The Sea is Rising, supra note 27, at 733.

^{44.} Id.

volves abandonment of vulnerable areas as the sea encroaches.⁴⁵ While policy arguments can be made in support of either theory, the likely strategy will include a hybrid approach whereby certain areas are abandoned yet others are heavily defended.

1. Retreat

A retreat approach to sea level rise necessitates relocation of costly infrastructure further inland and therefore can be a difficult choice for local decision-makers.⁴⁶ Ideally, as sea levels rise, development and infrastructure move inland.⁴⁷ Although defense mechanisms historically dominated local government strategies, in more recent times some states have successfully begun incorporating retreat mechanisms into their shoreline management regime. For instance, in the Gulf of Mexico, Florida employs the use of setbacks while Texas law has historically recognized rolling easements along its Gulf-facing beaches (although a recent Texas Supreme Court decision is casting doubt on the continued success of rolling easements in Texas).⁴⁸ The following is a brief discussion of two retreat strategies currently in practice in the Gulf of Mexico.

a. Setbacks

Setbacks are a common approach to limiting development in vulnerable areas and refer to the practice of limiting development seaward of a "setback" line. Establishment of a setback can be based on a variety of factors such as erosion rates, elevation, and projections of future shoreline changes such as sea level rise.⁴⁹ Setbacks operate as a restriction on development and ideally prevent, or diminish, the costly construction of new development in high-risk areas.⁵⁰

Florida began incorporating setbacks into its shoreline management plan in 1970, with an initial fifty-foot setback for construction along sandy beaches.⁵¹ Under Florida's Beach and Shore

^{45.} Id. at 734.

^{46.} Planning for Sea Level Rise, supra note 28; State and Local Governments Plan, supra note 36, at 2.

^{47.} The Sea is Rising, supra note 27, at 734.

^{48.} See Severance v. Patterson, No. 09-0387, 2010 WL 4371438, at *24 (Tex. Nov. 5, 2010) (Medina, J., dissenting) reh'g granted (Mar. 11, 2011).

^{49.} James G. Titus, Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners, 57 MD. L. REV. 1279, 1311 (1998) [hereinafter Rising Seas].

^{50.} The Sea is Rising, supra note 27, at 736.

^{51.} Thomas K. Ruppert, Eroding Long-Term Prospects for Florida's Beaches: Florida's Coastal Construction Control Line Program, 1 SEA GRANT L. & POL'Y J. 74 (2008) [hereinaf-

Preservation Act, counties set a Coastal Construction Control Line (CCCL) to limit development along Florida's beaches with the stated purpose of preserving and protecting beaches "from imprudent construction" which may, among other things, increase erosion, jeopardize adjacent properties, or limit public access.⁵² However, Florida's CCCL is, at best, a mixed success. Even with the CCCL Program in place, development of major structures, such as condominiums and resorts, in close proximity to the beach continues.⁵³ As others have noted, the CCCL suffers from a variety of problems including administrative challenges, difficulty with maintaining up to date CCCLs, use of variances, emergency permitting, and after the fact permitting.⁵⁴

b. Rolling Easements

To address the migratory nature of shorelines (and therefore the migration of the dry beach), Texas recognizes a rolling easement to preserve existing public access to Gulf-facing beaches.⁵⁵ In other words, where the state can prove a historic use of the dry beach. Texas law recognizes a public access easement that migrates (or "rolls") with the vegetation line.⁵⁶ In 1959, Texas enacted the Open Beaches Act, which recognized the public's right to access Gulf beaches and acknowledged Texas' common law history of applying a rolling public easement from the line of vegetation to the shore.⁵⁷ The Open Beaches Act embodies Texas' public policy of "free and unrestricted" access along publically owned beaches and to privately owned beaches where the public has acquired an easement.⁵⁸ The Act provides an enforcement mechanism for protecting public access rights to Texas beaches.⁵⁹ In 2009, Texas went a step further and incorporated the Open Beaches Act into the state constitution.⁶⁰ The Texas Constitution now includes a provision designed to protect the right of the public, individually

ter Coastal Construction Control Line]. Counties without an established CCCL continue to use the fifty foot setback. Id. at 74 n.76. See also FLA. STAT. §§ 161.052, 161.053(11) (2010).

^{52.} FLA. STAT. § 161.053(1)(a) (establishing the CCCL but exempting existing sea walls and shoreline protection structures).

^{53.} See THOMAS K. RUPPERT ET AL., ERODING LONG-TERM PROSPECTS FOR FLORIDA'S BEACHES: FLORIDA'S COASTAL MANAGEMENT POLICY 67 (2008). See generally Coastal Construction Control Line, supra note 51.

^{54.} Coastal Construction Control Line, supra note 51, at 84-94 (providing a detailed discussion of problems facing the CCCL Program).

^{55.} Severance v. Patterson, No. 09-0387, 2010 WL 4371438, at *2 (Tex. Nov. 5, 2010) reh'g granted (Mar. 11, 2011).

^{56.} Id.

^{57.} See Tex. Nat. Res. Code §§ 61.011-61.026 (2009).

^{58.} Id. § 61.013; Severance, 2010 WL 4371438, at *3.

^{59.} TEX. NAT. RES. CODE § 61.018.

^{60.} TEX. CONST. art. 1, § 33.

and collectively, to access and use the public beaches bordering the seaward shore of the Gulf of Mexico.⁶¹ Building is prohibited in this area, including erection of fences.⁶²

However, enforcement of the rolling easement in Texas was challenged in recent litigation.⁶³ Though it began in federal court,⁶⁴ the litigation led to a clarification of Texas property law with regard to rolling easements from the Texas Supreme Court.⁶⁵ The ruling calls into question the historic practice of applying the rolling easement to beachfront property following a storm event.⁶⁶ While the court acknowledged that an easement to the dry beach (below the vegetation line) may still persist following a storm, the court, for the first time, required the state to prove the easement rather than allowing the easement to naturally roll with the vegetation line (as occurs in the case of erosion).⁶⁷ In March 2011, the Texas Supreme Court agreed to re-hear this case.⁶⁸ Regardless, the Texas application of rolling easements is limited to the beaches along the Gulf of Mexico and does not apply to bays and estuaries.⁶⁹ Consequently, rolling easements, in their current application, provide no protection to wetland areas.

2. Defend

One need not look far to find locales that have gone to extraordinary measures to defend against rising seas. Consider Venice, Italy, New Orleans, Louisiana, and the Netherlands. While scientists may argue that retreat is the best strategy for addressing sea level rise, as a practical matter, most waterfront property owners are unlikely to voluntarily relinquish their beachfront homes and sparkling coastal views.⁷⁰ Furthermore, over 50% of the U.S. population lives in coastal counties.⁷¹ This highly developed coastline makes retreat a very costly proposal, one that many local govern-

^{61.} Id. at art. I, § 33(b).

^{62.} TEX. NAT. RES. CODE § 61.013.

^{63.} See Severance v. Patterson, 566 F.3d 490 (5th Cir. 2009); Severance v. Patterson, No. 09-0387, 2010 WL 4371438 (Tex. Nov. 5, 2010) reh'g granted (Mar. 11, 2011).

^{64.} Severance, 566 F.3d 490 (5th Cir. 2009).

^{65.} Severance, 2010 WL 4371438, at *11.

^{66.} Id.

^{67.} Id.

^{68.} Oral arguments are scheduled for April 19, 2011. Orders Pronounced March 11, 2011, TEX. SUP. CT., http://www.supreme.courts.state.tx.us/historical/2011/mar/031111.htm.

^{69.} See TEX. NAT. RES. CODE § 61.011(a) (2009).

^{70.} The Sea is Rising, supra note 27, at 735-36.

^{71.} NAT'L OCEANIC & ATMOSPHERIC ADMIN., POPULATION TRENDS ALONG THE COASTAL UNITED STATES: 1980-2008 1 (2004), available at http://oceanservice.noaa.gov/programs/mb/pdfs/coastal_pop_trends_complete.pdf.

ments simply will not consider.⁷² Not only would local governments be faced with the cost of relocating expensive infrastructure, in some instances, local municipalities may actually lose a percentage of their tax base by forcing the relocation or removal of waterfront development. For instance, following Hurricane Katrina, the Mississippi coastal community of Bay St. Louis fought against a federally proposed buyout.⁷³ In a 2007 interview, Jim Thriffiley, then President of the City Council, raised concerns that the buyout would ruin the city's economy by reducing the tax base, causing the unit price of maintaining the roads and infrastructure to "skyrocket[]."⁷⁴ In short, the cost of retreat, combined with the lack of political will amongst local governments, makes retreat an unlikely scenario in the near future. Consequently, local land use planners are forced to consider defense mechanisms in planning for sea level rise.

Historic approaches of addressing erosion and rising seas favor defense mechanisms like construction of seawalls and bulkheads.⁷⁵ Another popular preservation technique for sandy beaches is beach nourishment.⁷⁶ Under either scenario, what was once a dynamic shoreline becomes fixed and static, thereby altering the natural processes.⁷⁷ Both approaches are briefly detailed below.

a. Beach Nourishment

Beach nourishment refers to the practice of placing additional sand on eroded beaches.⁷⁸ As is well understood by coastal engineers, constructing a seawall along a receding shoreline will result in the loss of the sandy beach between the seawall and the water's edge.⁷⁹ Recognizing the public preference for a sandy beach, most

^{72.} See Bruce Eggler, Buyout or sellout?, TIMES-PICAYUNE, Sept. 27, 2007, http://blog.nola.com/times-picayune/2007/09/buyout_or_sellout.html (discussing opposition and costs of a federal buy-out program following Hurricane Katrina); see Peterson et al., supra note 2, at 209 (discussing population and development pressures).

^{73.} See Kathy Lohr, Feds Propose Massive Buyout for Mississippi Coast, NAT'L PUB. RADIO (Nov. 15, 2007), http://www.npr.org/templates/story/story.php?storyId=16132092.

^{74.} Id.

^{75.} Scott L. Douglass & Bradley H. Pickel, *The Tide Doesn't Go Out Anymore—The Effect of Bulkheads on Urban Bay Shorelines*, 67 SHORE & BEACH 19, 19 (1999) [hereinafter *Tide Doesn't Go Out*].

^{76.} Id.

^{77.} Melody Ray-Culp, A Living Shoreline Initiative for the Florida Panhandle: Taking a Softer Approach, 29 NAT'L WETLANDS NEWSL. 9, 19 (2007).

^{78.} *The Sea is Rising, supra* note 27, at 733-34 (citing U.S. ARMY CORPS OF ENG'RS, SHORELINE PROTECTION AND BEACH EROSION CONTROL STUDY 6, 42-46 (1994)).

^{79.} Scott L. Douglass & Bradley H. Pickel, *Headland Beach Construction on Bay Shorelines*, HEADLAND BEACH DEMONSTRATION PROJECT, http://www.southalabama.edu/ cesrp/hbeach.htm (last visited May 9, 2011) [hereinafter *Headland Beach*].

states undertake some form of beach nourishment program to address erosion problems along coastal beaches.⁸⁰

While beach nourishment can be an effective tool for addressing sandy shore erosion, beach nourishment has limited application to bays and estuaries.⁸¹ With the notable exception of Mississippi,⁸² few states undertake beach nourishment along bays and estuaries, and armoring remains the predominate approach.⁸³ In addition, beach nourishment can be a costly endeavor and depends on the availability of new sand that is generally dredged from the ocean floor.⁸⁴

b. Shoreline Armoring

Armoring refers to the use of hard structures such as bulkheads, seawalls, groins, and revetments and generally consists of vertical wall structures.⁸⁵ Along bays and other lower-wave-energy areas, property owners frequently bulkhead their properties against erosion.⁸⁶ This popular erosion control tool, however, is forever altering the dynamic of the nation's coastline.⁸⁷ As one study noted, shoreline armoring of Mobile Bay, Alabama, increased from 8% in 1955 to 30% in 1997.⁸⁸ In 1997, more than 70% of armoring along Mobile Bay consisted of vertical bulkheads.⁸⁹ More recent estimates project that approximately 50% of Mobile Bay is armored.⁹⁰ The researchers also noted a correlation between the increase of shoreline armoring and the influx of population growth along the Bay.⁹¹

Although bulkheads may effectively operate to limit coastal erosion, bulkheads present a variety of disadvantages and often lead to the "unintended . . . consequences [of] vertical erosion, loss of downdrift sediment, and erosion of flanking shores."⁹² Armoring a shoreline destroys the natural variation of the shore and instead

^{80.} Id.

^{81.} Tide Doesn't Go Out, supra note 75, at 19.

^{82.} See Rising Seas, supra note 49, at 1301 n.80 (noting that Mississippi beaches are mostly "man-made" by the U.S. Army Corps of Engineers to protect roads).

^{83.} Rising Seas, supra note 49, at 1301; Headland Beach, supra note 79.

^{84.} Donna R. Christie, *Of Beaches, Boundaries and SOBs*, 25 J. LAND USE & ENVTL. L. 19, 38 (2009).

^{85.} SWANN, supra note 9, at 2; Tide Doesn't Go Out, supra note 75, at 19.

^{86.} Tide Doesn't Go Out, supra note 75, at 19.

^{87.} See *id*; see also State and Local Governments Plan, supra note 36, at 1 (discussing the impact of shore protection structures on wetlands).

^{88.} Tide Doesn't Go Out, supra note 75, at 21.

^{89.} Id. at 22.

^{90.} MISS.-ALA. SEA GRANT CONSORTIUM, SHORELINE PROTECTION ALTERNATIVES (2007), *available at* http://www.masgc.org/pdf/masgp/07-026.pdf.

^{91.} Tide Doesn't Go Out, supra note 75, at 24.

^{92.} SWANN, supra note 9, at 2.

fixes the shoreline at a static point.⁹³ The loss of the intertidal zone is often referred to as a "bathtub" effect, whereby "the gradual sloping transition from water to land is transformed into right angles."⁹⁴ In other words, waves lap against the bulkhead rather than a sloping shoreline, creating the so-called bathtub effect.⁹⁵

Loss of the intertidal zone leads to both ecological and societal harms.⁹⁶ Bulkheads eventually eliminate all intertidal habitat and significantly reduce both the abundance and the diversity of many near-shore species.⁹⁷ Gulf of Mexico marshes provide habitat and refuge for "more than 60 species of birds; 80 species of fish; and many invertebrate, mammal and reptile species."⁹⁸ The associated changes include poor water quality as well.⁹⁹ Intertidal marshes also offer protection against storm surge.¹⁰⁰

Another significant disadvantage of losing the intertidal zone is the restrictions on the public's ability to walk along the shoreline as recognized by the public trust doctrine.¹⁰¹ Other losses include diminished waterfront access for landing boats, recreation, and fishing (historically protected by the public trust).¹⁰² In extreme circumstances, littoral property owners may even lose their waterfront views when armoring structures or dune systems must be built to increasing heights to be effective.¹⁰³

In 2007, the National Research Council aptly summarized the challenges raised by shoreline armoring:

Landowners frequently respond to the threat of erosion by armoring the shoreline with bulkheads, revetments, and other structures. Although the armoring of a few properties has little impact, the proliferation of structures along the shoreline can inadvertently change the coastal environment and the ecosystem services that these areas provide. Managers and decision-makers have been challenged to balance the trade-offs between protection of property and potential loss of landscapes, public access, recreational opportunities,

^{93.} Ray-Culp, supra note 77, at 19.

^{94.} Id.

^{95.} Headland Beach, supra note 79.

^{96.} Tide Doesn't Go Out, supra note 75, at 19.

^{97.} Peterson et al., *supra* note 2, at 218.

^{98.} SWANN, supra note 9, at 2 (citation omitted).

^{99.} Peterson et al., *supra* note 2, at 218.

^{100.} SWANN, *supra* note 9, at 2.

^{101.} Tide Doesn't Go Out, supra note 75, at 19.

^{102.} The Sea is Rising, supra note 27, at 740.

^{103.} Id.

natural habitats, and reduced populations of fish and other living marine resources that depend on these habitats.¹⁰⁴

C. Strategies for Wetland Preservation: Living Shorelines

As can be seen from the previous discussion, current popular defense mechanisms do little to protect wetland areas and, in the case of armoring, may actually lead to the destruction of existing wetland areas along the coastline.¹⁰⁵ More recently, a third approach to shoreline defense is slowly gaining traction with state and local governments-the use of "living shorelines."106 The concept of living shorelines has been described as "a suite of bank stabilization and habitat restoration techniques to reinforce the shoreline, minimize coastal erosion, and maintain coastal while processes protecting. restoring. enhancing, and creating natural habitat."107

Living shorelines refer to the use of "living plant material, oyster shells, earthen material, or a combination of natural structures with riprap or offshore breakwaters to protect property from erosion."¹⁰⁸ In lower energy wave areas such as bays and estuaries, living shorelines provide a practical alternative to commonly used hard structures.¹⁰⁹ Rather than single purpose shoreline armoring, living shorelines "serve multiple roles by controlling erosion, maintaining natural coastal processes, and sustaining biodiversity through land-use management, soft armoring, or combinations of soft and semi-hard armoring techniques."¹¹⁰ Additionally, some studies suggest that construction and maintenance of living shorelines is more economical than armoring with hard structures and also requires less maintenance over time.¹¹¹

However, living shorelines are not suited for high-energy areas like open beaches, where beach nourishment remains a better means for addressing erosion.¹¹² In areas of low energy, vegetative plantings alone may suffice while areas of moderate wave energy

^{104.} NAT'L RESEARCH COUNCIL, supra note 4, at 1.

^{105.} Ray-Culp, supra note 77, at 19.

^{106.} See generally MISS.-ALA. SEA GRANT CONSORTIUM, supra note 90 (providing general information about living shorelines); Ray-Culp, supra note 77, at 19; SWANN, supra note 9, at 1.

^{107.} SWANN, supra note 9, at 2 (citation omitted).

^{108.} MISS.-ALA. SEA GRANT CONSORTIUM, supra note 90.

^{109.} Ray-Culp, supra note 77, at 10.

^{110.} SWANN, supra note 9, at 1.

^{111.} MISS.-ALA. SEA GRANT CONSORTIUM, *supra* note 90; *see also* SWANN, *supra* note 9, at 10.

^{112.} Tide Doesn't Go Out, supra note 75, at 19, 25.

may require hybrid approaches such as plantings combined with a wooden breakwater.¹¹³ Where appropriately installed, living shorelines maintain and sometimes increase wetlands and intertidal habitat, providing flood control, water quality enhancement, and preservation of the land/water interface providing water access for animals and people.¹¹⁴

Currently, living shorelines are actively encouraged in northwest Florida through Project GreenShores.¹¹⁵ The GreenShores program, which targets habitat restoration and creation, has been applied across the North America.¹¹⁶ In Florida, focus lies on restoring Pensacola Bay to "stabilize[] shorelines and provide[] essential habitat for wildlife propagation and conservation."¹¹⁷ In the other Gulf states, living shorelines are allowed, but the current regulatory process continues to favor the traditional approach of bulkheading bays and estuaries. For instance, Alabama encourages use of native wetland vegetation for shoreline stabilization but lacks a streamlined permitting process.¹¹⁸ However, efforts are underway to streamline the permitting process for living shorelines in Alabama¹¹⁹ and Mississippi,¹²⁰ with the hope that landowners will begin shifting away from hard structures in favor of living shorelines.¹²¹

III. PROPERTY RIGHTS AFFECTING SHORELINE REGULATION

When deciding what shoreline management strategies to employ, local decision-makers must keep in mind not only the importance of shoreline preservation, but also how established legal

117. FLA. DEP'T OF ENVTL. PROT., NW. DIST., supra note 108.

^{113.} Ray-Culp, *supra* note 77, at 10; *see also* MISS.-ALA. SEA GRANT CONSORTIUM, *supra* note 90 (detailing various types of shoreline stabilization structures and their uses, including hybrid structures).

^{114.} MISS.-ALA. SEA GRANT CONSORTIUM, supra note 90.

^{115.} FLA. DEP'T OF ENVTL. PROT., NW. DIST., *Project GreenShores*, http://www.dep.state.fl.us/northwest/Ecosys/section/greenshores.htm (last visited May 9, 2011).

^{116.} Id. In addition to Florida, both Canada and New York have programs. GREEN-SHORES, http://www.greenshores.ca/ (last visited May 9, 2011); GREEN SHORES NYC, http://www.greenshoresnyc.org/Site/Green_Shores_NYC.html (last visited May 9, 2011).

^{118.} ALA. ADMIN. CODE r. 220-4-.09(4)(b)(6) (2007).

^{119.} See Mobile District, U.S. Army Corps of Engineers, Proposed General Permit for Living Shorelines for Use within the State of Alabama, SAM-2010-1482-SPG (Jan. 21, 2011), available at http://www.sam.usace.army.mil/rd/reg/PN/currentPNs/SAM-2010-01482-SPG.pdf.

^{120.} See Mobile District, U.S. Army Corps of Engineers, Proposed General Permits for Minor Structures and Activities within the Coastal Counties of the State of Mississippi, SAM-2010-1343-SPG (Jan. 25, 2011), available at http://www.sam.usace.army.mil/rd/reg/ PN/currentPNs/SAM-2010-1343-SPG.pdf.

^{121.} Chris Boyd & Niki Pace, Homeowners Guide to Permitting Living Shorelines in Mississippi and Alabama, MISS.-ALA. SEA GRANT LEGAL PROGRAM, http://masglp.olemiss.edu/living_shorelines.pdf (last visited May 9, 2011).

doctrines will affect the favored strategy. For instance, decisionmakers must consider what their legal responsibilities are under the public trust doctrine.¹²² Likewise, lawmakers must recognize that certain regulatory decisions may lead to takings claims by the impacted landowners.¹²³ Further complicating the matter is the migratory nature of waterfront property lines and the rights of upland property owners, known as littoral rights.¹²⁴

To this end, local decision-makers are faced with three possible scenarios. In one scenario, regulators can continue to permit shoreline armoring. Local governments will evade regulatory takings challenges for permit denials but will lose valuable habitat and public trust land along the shoreline. On the other hand, regulators may ban shoreline armoring, thereby preserving the natural shoreline and the public interest in the land/water interface. However, property owners may argue that a regulatory taking occurred through this permit denial. In the third scenario, regulators may choose to ban hard structures along bays and estuaries in favor of living shorelines. Using living shorelines, landowners are afforded protection against erosion, and the public trust interest in the land/water interface is preserved. Yet, because living shorelines allow property owners to accrete land, this concept raises a separate public trust issue—namely that living shorelines will deplete what were once submerged lands belonging to the state. In the context of these three possibilities, the applicable legal concepts are explored in greater detail below.

A. Accretion and Avulsion

Before considering the impacts of the public trust doctrine and possible takings claims, regulators must recognize the migratory nature of waterfront property lines and how that migration may impact future claims. As previously discussed, shorelines are naturally evolving environments where the land/water boundary often varies as a result of erosion and sedimentation.¹²⁵ To address the

^{122.} See Alexandra B. Klass, Modern Public Trust Principles: Recognizing Rights and Integrating Standards, 82 NOTRE DAME L. REV. 699, 730-742 (2006) (examining judicial decisions requiring states to consider public trust obligations in state actions); Joseph L. Sax, Some Unorthodox Thoughts About Rising Sea Levels, Beach Erosion, and Property Rights, 11 VT. J. ENVTL. L. 641, 643 (2010).

^{123.} See J. Peter Byrne, Rising Seas and Common Law Baselines: A Comment on Regulatory Takings Discourse Concerning Climate Change, 11 VT. J. ENVTL. L. 625, 625 (2010); Rising Seas, supra note 49, at 1334.

^{124.} See BLACK'S LAW DICTIONARY 1018 (9th ed. 2009) (defining littoral as "[o]f or relating to the coast or shore of an ocean, sea, or lake").

^{125.} Ray-Culp, supra note 77, at 9.

ambulatory nature of shorelines, and therefore property lines, common law developed rules to address accretion and avulsion. $^{\rm 126}$

Under common law, shoreline migration resulting from gradual changes is treated distinctly from sudden, or avulsive, events.¹²⁷ In the first instance, the littoral boundary shifts either as a result of accretion (where sediment is added to the shoreline) or erosion (where littoral owners lose land).¹²⁸ Whether by accretion or erosion, the property line continues to track the water line.¹²⁹ However, property lines remain static following an avulsion-the sudden removal of soil and sand following a hurricane or flood.¹³⁰ As characterized by the U.S. Supreme Court, "regardless of whether an avulsive event exposes land previously submerged or submerges land previously exposed, the boundary between littoral property and sovereign land does not change; it remains (ordinarily) what was the mean high-water line before the event."¹³¹ In other words, an avulsive event, by holding the property line static, severs the previous migration of property line from the shoreline and fixes the boundary at a static location.¹³²

B. The Public Trust Doctrine

The public trust doctrine originated in notions of common property in Roman law.¹³³ Under the Justinian Code, the sea and its shorelines were deemed property intended for the use and benefit of the public and were thus incapable of being privately owned.¹³⁴ The concept that the state holds lands submerged beneath navigable waterways in trust for the people further evolved under the English common law and, in turn, was incorporated into American jurisprudence following the American Revolution.¹³⁵ Each of the original thirteen states became the trustee of the sub-

^{126.} See Joseph J. Kalo, North Carolina Oceanfront Property and Public Waters and Beaches: The Rights of Littoral Owners in the Twenty-First Century, 83 N.C. L. REV. 1427, 1434-40 (2005).

^{127.} Christie, *supra* note 84, at 26-27.

^{128.} Id. at 26.

^{129.} Stop the Beach Renourishment, Inc. v. Fla. Dep't of Envtl. Prot., 130 S. Ct. 2592, 2599 (2010).

^{130.} *Id.* Avulsion is literally defined as "a tearing away." BLACK'S LAW DICTIONARY 157 (9th ed. 2009).

^{131.} Stop the Beach Renourishment, Inc., 130 S. Ct. at 2599 (citations omitted) (summarizing the avulsion doctrine in the context of Florida law).

^{132.} Id.

^{133.} See Wilkins & Wascom, supra note 1, at 863-68 (discussing the origin and development of the public trust doctrine).

^{134.} J.B. MOYLE, THE INSTITUTES OF JUSTINIAN D2 (Oxford at the Clarendon Press, 5th ed. 1913); Sarah C. Smith, A Public Trust Argument for Public Access to Private Conservation Land, 52 DUKE L.J. 629, 639 (2002).

^{135.} Wilkins & Wascom, supra note 1, at 864.

merged lands within its borders for the use of the people.¹³⁶ As additional states were admitted into the Union, they too received the title to these lands under the equal footing doctrine, meaning that newly recognized states entered the Union with the same sovereign powers and rights as the original colonies.¹³⁷

Although state implementation of the public trust doctrine varies, some commonalities persist. Under the public trust doctrine, the state holds title to submerged lands underlying navigable waters in trust for the public to protect the traditionally public nature of these lands.¹³⁸ As characterized by the U.S. Supreme Court in Illinois Central Railroad Co. v. Illinois, "[i]t is a title held in trust for the people of the state, that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty of fishing therein, freed from the obstruction or interference of private parties."¹³⁹ In other words, the public trust doctrine extends to the public use of navigation, commerce, and fishing.¹⁴⁰ Although the public trust generally embodies these common elements, actual implementation of the public trust varies by state.¹⁴¹ For instance, some states have expanded the public trust doctrine to encompass recreation¹⁴² and environmental preservation.¹⁴³ The public trust doctrine also operates as a limitation on states' ability to alienate submerged lands "unless conveyed for uses promoting the interest of the public."144 Accordingly, the public may access and use stateowned submerged lands provided that such use does not interfere with the rights of other members of the public.¹⁴⁵

^{136.} Martin v. Waddell, 41 U.S. 367, 410 (1842).

^{137.} *Id.*; see also Phillips Petroleum Co. v. Mississippi, 484 U.S. 469, 474-76 (1988) (holding that Mississippi, upon entering Union, took title to lands lying under waters that were influenced by tide running in Gulf of Mexico but were not navigable-in-fact).

^{138.} Martin, 41 U.S. at 410-11.

^{139.} Ill. Cent. R.R. Co. v. Illinois, 146 U.S. 387, 452 (1892).

^{140.} Id.

^{141.} See generally Robin Kundis Craig, A Comparative Guide to the Eastern Public Trust Doctrines: Classification of States, Property Rights, and State Summaries, 16 PENN ST. ENVTL. L. REV. 1 (2007) (providing a detailed discussion of eastern states' public trust doctrines).

^{142.} Esplanade Props., LLC v. City of Seattle, 307 F.3d 978, 985 (9th Cir. 2002); State v. McIlroy, 595 S.W.2d 659, 665 (Ark. 1980).

^{143.} See Citizens for Responsible Wildlife Mgmt. v. State, 103 P.3d 203, 207-08 (Wash. Ct. App. 2004).

^{144.} Klass, *supra* note 122, at 704; *see also* Craig, *supra* note 141, at 10 (the public trust doctrine limits states' ability to alienate submerged lands).

^{145.} See, e.g., Boone v. Harrison, 660 S.E.2d 704, 711 (Va. Ct. App. 2008) (citing Palmer v. Commonwealth Marine Res. Comm'n, 628 S.E.2d 84, 89 (Va. Ct. App. 2006)).

1. The Public Trust Doctrine in the Five Gulf States

As addressed in great detail by Professor Robin Kundis Craig, each state varies in its application of the public trust.¹⁴⁶ In looking at the five Gulf of Mexico states, notable distinctions persist. While there are general commonalities based upon federal case law, individual state jurisprudence applying the public trust doctrine to the property laws of that state has given rise to unique state-specific public trust doctrines.¹⁴⁷ For the purposes of this discussion of shoreline regulation, the primary issues with regard to the public trust become twofold: 1) determining what land is subject to the public trust (i.e. what is the boundary between the state and the littoral owner); and 2) determining what rights the state extends to those public trust lands. As this article focuses on the Gulf of Mexico, the distinctions of each of the five Gulf states are briefly discussed.

a. Alabama

Alabama's public trust doctrine is poorly developed and limited to the basic federal doctrine.¹⁴⁸ Alabama recognizes the public right to navigation through its Constitution which proclaims that "all navigable waters shall remain forever public highways, free to the citizens of the state and the United States[.]"¹⁴⁹ Courts have extended this right to fishing and submerged lands.¹⁵⁰ Alabama considers all navigable-in-fact waters, as well as all tidal waters, subject to the public trust.¹⁵¹ Along tidal properties, the mean high tide line demarks the upland owner's property from public trust lands.¹⁵² Therefore, under Alabama law, the wet beach belongs to the state, in trust for the public. Allowing armoring of the upland property essentially eliminates the publicly held beach and associated intertidal zone.¹⁵³

b. Florida

Like Alabama, Florida also incorporates the public trust into its constitution: "The title to lands under navigable waters, . . . in-

^{146.} See generally Craig, supra note 141, at 11 (examining the variation of state public trust obligations).

^{147.} Id.

^{148.} Id. at 24.

^{149.} Ala. Const. art. I, § 24.

^{150.} See State v. Harrub, 10 So. 752, 753 (Ala. 1892).

^{151.} Craig, *supra* note 141, at 26-27.

^{152.} Id. (citing Tallahassee Fall Mfg. Co. v. State, 68 So. 805, 806 (Ala. 1915)).

^{153.} Tide Doesn't Go Out, supra note 75, at 19.

cluding beaches below mean high water lines, is held by the state, by virtue of its sovereignty, in trust for all the people."¹⁵⁴ In Florida, littoral rights include "the right of access to the water, the right to use the water for certain purposes, the right to an unobstructed view of the water, and the right to receive accretions and relictions to the littoral property."¹⁵⁵ However, Florida extends the public trust doctrine to all lands below mean high tide.¹⁵⁶ Waters that are subject to the ebb and flow of tide are not necessarily considered navigable for purposes of the public trust and must be "navigable in fact."¹⁵⁷ The public trust interest in the foreshore extends to "navigation, commerce, fishing, and bathing and 'other easements allowed by law."¹⁵⁸ As noted by others, the phrase "and other easements allowed by law" suggests that the Florida public trust doctrine may be expanded.¹⁵⁹

c. Louisiana

While the Louisiana constitution does not explicitly reference the public trust doctrine, the constitution clearly identifies state protection of environmental values: "The natural resources of the state, including air and water, and the healthful, scenic, historic, and esthetic quality of the environment shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people."¹⁶⁰ Courts have interpreted this provision as the state's public trust doctrine.¹⁶¹ Historically, state public trust lands extended to the mean high tide line.¹⁶² Along the seashore, however, Louisiana statutorily declared ownership up to the "highest winter tide, which is lower than the mean

^{154.} FLA. CONST. art. X, § 11.

^{155.} Stop the Beach Renourishment, Inc. v. Fla. Dep't of Envtl. Prot., 130 S. Ct. 2592, 2598 (2010).

^{156.} White v. Hughes, 190 So. 446, 449 (Fla. 1939) ("Private ownership stops at high-water mark.").

^{157.} City of Tarpon Springs v. Smith, 88 So. 613, 619 (Fla. 1921) ("Waters are not under our law regarded as navigable merely because they are affected by the tides."); Lopez v. Smith, 109 So. 2d 176, 179 (Fla. 2d DCA 1959) ("Navigable waters do not extend, however, to all waters merely because they are affected by the tides but which are not in fact capable of navigation for useful public purposes."); Craig, supra note 141, at 36.

^{158.} Brannon v. Boldt, 958 So. 2d 367, 372 (Fla. 2d DCA 2007) (quoting Broward v. Mabry, 50 So. 826, 830 (Fla. 1909)).

^{159.} Craig, *supra* note 141, at 38.

^{160.} LA. CONST. art. IX, § 1; see also, Craig, supra note 141, at 54. See generally Wilkins & Wascom, supra note 1 (for a detailed discussion of the Louisiana public trust doctrine).

^{161.} La. Seafood Mgmt. Council v. La. Wildlife & Fisheries Comm'n, 719 So. 2d 119, 124 (La. Ct. App. 1998) ("Article IX, section 1 of the Louisiana Constitution sets forth this state's Public Trust Doctrine").

^{162.} McCormick Oil & Gas Corp. v. Dow Chem. Co., 489 So. 2d 1047, 1049 (La. Ct. App. 1986).

high tide line.^{"163} Where banks of navigable streams and rivers are privately owned, public trust rights extend to land below the mean high tide line.¹⁶⁴ Louisiana recognizes public trust rights of "navigation, fishery, recreation, and other interests."¹⁶⁵ Public trust rights give a person "the right to fish in the rivers, ports, roadsteads, and harbors, and the right to land on the seashore, to fish, to shelter himself, to moor ships, to dry nets, and the like, provided that he does not cause injury to the property of adjoining owners."¹⁶⁶ Relying on the public trust doctrine, Louisiana courts have upheld erosion control measures, denying claims that the measures resulted in a taking of oyster beds.¹⁶⁷

d. Mississippi

Although Mississippi does not constitutionally reference the public trust doctrine, two statutory provisions of state law codify Mississippi's public trust: the Public Trust Tidelands Act¹⁶⁸ and the Coastal Wetlands Protection Act.¹⁶⁹ Under the Public Trust Tidelands Act, the state declares its public policy:

[T]o favor the preservation of the natural state of the public trust tidelands and their ecosystems and to prevent the despoliation and destruction of them, except where a specific alteration of specific public trust tidelands would serve a higher public interest in compliance with the public purposes of the public trust in which such tidelands are held.¹⁷⁰

Likewise, the Coastal Wetlands Protection Act declares:

[T]he public policy of this state [is] to favor the preservation of the natural state of the coastal wetlands and their ecosystems and to prevent the despoliation and destruction of them, except where a specific alteration of specific coastal wetlands would serve a higher public interest in compliance

^{163.} Craig, supra note 141, at 58 (citation omitted); LA. CIV. CODE art. 451 (2009) ("Seashore is the space of land over which the waters of the sea spread in the highest tide during the winter season.").

^{164.} See LA. CIV. CODE art. 456.

^{165.} LA. REV. STAT. § 41:1701 (2009).

^{166.} LA. CIV. CODE art. 452.

^{167.} Avenal v. State, 886 So. 2d 1085, 1103-09 (La. 2004); *see also* Klass, *supra* note 122, at 711-12 (discussing the Louisiana Supreme Court's rationale in allowing the diversion project without finding a taking of the oyster beds).

^{168.} MISS. CODE §§ 29-15-1 to 29-15-7 (2010).

^{169.} Id. §§ 49-27-1 to 49-27-5.

^{170.} Id. § 29-15-3(1).

with the public purposes of the public trust in which coastal wetlands are held.¹⁷¹

As set forth by the Public Trust Tidelands Act, submerged lands and tidelands are geographically subject to the public trust, and the state holds the title to these lands in trust for the people.¹⁷² The Mississippi legislature has distinguished tidelands from submerged lands, noting that tidelands are "covered and uncovered by water" due to tidal action on a daily basis,¹⁷³ whereas submerged lands are those which continually remain covered with water in areas affected by the ebb and flow of the tide.¹⁷⁴ The Act further recognizes that the boundary separating the public trust tidelands from upland property—the mean high water line¹⁷⁵—is ambulatory and that lands subject to the public trust can increase, as rising sea levels submerge land not typically subject to the ebb and flow of the tide, and decrease, as accretion causes land to gradually accumulate along the shoreline.¹⁷⁶

In Cinque Bambini Partnership v. State, the Mississippi Supreme Court outlined the purposes to which public trust lands may be devoted, noting that, by adapting to suit the needs of society, the public trust is not static.¹⁷⁷ These purposes include, but are not limited to, transportation,¹⁷⁸ fishing,¹⁷⁹ swimming and recreation,¹⁸⁰ the development of mineral resources,¹⁸¹ and environmental preservation.¹⁸² The Mississippi Supreme Court further clarified ownership of accreted lands and littoral property rights in *Bayview Land, Ltd. v. State.*¹⁸³ While naturally occurring accretions continue to track the shifting high tide mark, the court distinguished artificial accretions such as "the accumulation of oyster shells over time, or what is known as 'wharfing out' into the water, which is establishing or affixing to the land a permanent structure

181. Id. at 633.

^{171.} Id. § 49-27-3.

^{172.} Id. § 29-15-5.

^{173.} Id. § 29-15-1(h).

^{174.} Id. § 29-15-1(g).

^{175.} Id. § 29-15-3(2) ("It is hereby declared to be a higher public purpose of this state and the public tidelands trust to resolve the uncertainty and disputes which have arisen as to the location of the boundary between the state's public trust tidelands and the upland property and to confirm the mean high water boundary line as determined by the Mississippi Supreme Court, the laws of this state and this chapter.").

^{176.} Id. § 29-15-7(2).

^{177. 491} So. 2d 508, 512 (Miss. 1986).

^{178.} See Rouse v. Saucier's Heirs, 146 So. 291, 292 (Miss. 1933).

^{179.} See State ex rel. Rice v. Stewart, 184 So. 44, 50 (Miss. 1938).

^{180.} Treuting v. Bridge & Park Comm'n, 199 So. 2d 627, 632-33 (Miss. 1967).

^{182.} MISS. CODE § 49-27-3 (2010).

^{183. 950} So. 2d 966 (Miss. 2006).

to some point within a navigable body of water."¹⁸⁴ When evaluating ownership of artificial accretions to property, the Public Trust Tidelands Act requires courts to use the mean high tide line of coastal property as of July 1, 1973 (the effective date of the Coastal Wetlands Protection Act), rather than the date of Mississippi's admission into the Union.¹⁸⁵

e. Texas

Texas has a long tradition of recognizing public access to its Gulf beaches.¹⁸⁶ "[S]oil covered by the bays, inlets, and arms of the Gulf of Mexico within tidewater limits belongs to the State, and constitutes public property that is held in trust for the use and benefit of all the people."¹⁸⁷ In a recent Texas Supreme Court decision, the court summarized Texas public trust lands:

Having established that the State of Texas owned the land under Gulf tidal waters, the question remained how far inland from the low tide line did the public trust—the State's title—extend. We answered that question in *Luttes v. State*. This Court held that the delineation between State-owned submerged tidal lands (held in trust for the public) and coastal property that could be privately owned was the "mean higher high tide" line under Spanish or Mexican grants and the "mean high tide" line under Anglo-American law. The wet beach is owned by the State as part of the public trust, and the dry beach is not part of the public trust and may be privately owned. Prior to *Luttes*, there was a question whether the public trust extended to the vegetation line. *Luttes* established the landward boundary of the public trust at the mean high tide line.¹⁸⁸

^{184.} Id. at 968-69.

^{185.} Id. at 976-77, 981-82.

^{186.} See Severance v. Patterson, No. 09-0387, 2010 WL 4371438, at *5 (Tex. Nov. 5, 2010) reh'g granted (Mar. 11, 2011).

^{187.} Id. (quoting Lorino v. Crawford Packing Co., 175 S.W.2d 410, 413 (Tex. 1943)); Landry v. Robison, 219 S.W. 819, 820 (1920) ("For our decisions are unanimous in the declaration that by the principles of the civil and common law soil under navigable waters was treated as held by the state or nation in trust for the whole people."); see also TEX. NAT. RES. CODE § 11.012(c) (2010) ("The State of Texas owns the water and the beds and shores of the Gulf of Mexico and the arms of the Gulf of Mexico within the boundaries provided in this section, including all land which is covered by the Gulf of Mexico and the arms of the Gulf of Mexico either at low tide or high tide.").

^{188.} Severance, 2010 WL 4371438, at *6 (citations omitted).

Recognizing the scarcity of water as a public resource, Texas applies the public trust to all navigable water bodies and underlying beds. This right has been codified by the Texas Water Code:

The water of the ordinary flow, underflow, and tides of every flowing river, natural stream, and lake, and of every bay or arm of the Gulf of Mexico, and the storm water, floodwater, and rainwater of every river, natural stream, canyon, ravine, depression, and watershed in the state is the property of the state.¹⁸⁹

Likewise, the Texas Supreme Court recognizes a long standing rule of state ownership of lands underlying navigable waters.¹⁹⁰ Because of Texans' historic use of the "dry beach," a public easement often exists along Gulf beaches.¹⁹¹ As discussed previously, the Texas Open Beaches Act, later enacted as a constitutional amendment, provides additional protections of public beach access.¹⁹² The beaches provide a source of transportation, commerce, and recreation. The mean high tide mark delineates the "wet beach" from the "dry beach." Landowners may own property extending to the mean high tide mark but the "wet beach" is held by the State in public trust.¹⁹³

2. The Public Trust Doctrine & Shoreline Regulation

By definition, the public trust doctrine impacts littoral property rights along the shoreline. Essentially, the public trust doctrine forces the state to play the dual role of regulator and property owner.¹⁹⁴ Because states generally own the shoreline along with the submerged lands in trust for the public, the public is entitled to use of the intertidal area.¹⁹⁵ This can include use of the wet beach for passage and recreation as well as preservation of coastal wetlands for habitat. However, by allowing shoreline armoring, states are both failing to protect public trust land and aiding in its destruction.¹⁹⁶ The challenge becomes how to strike a balance be-

^{189.} TEX. WATER CODE § 11.021(a) (2010).

^{190.} City of Galveston v. Mann, 143 S.W.2d 1028, 1033 (Tex. 1940); see also Cummins v. Travis Cnty. Water Control & Improvement Dist. No. 17, 175 S.W.3d 34, 48 (Tex. App. 2005).

^{191.} Severance, 2010 WL 4371438, at *3-*4 (citations omitted).

^{192.} See supra section II.B.1.b.

^{193.} See TEX. NAT. RES. CODE § 61.014 (2010).

^{194.} Sax, supra note 122, at 643.

^{195.} See generally, Craig, *supra* note 141, 6-10 (discussing state ownership of submerged lands and ownership of beds and banks where waters are navigable-in-fact).

^{196.} See Madeline Reed, Comment, Seawalls and the Public Trust: Navigating the Tension Between Private Property and Public Beach Use in the Face of Shoreline Erosion, 20 FORDHAM ENVTL. L. REV. 305, 307-311 (2009).

tween the competing interests of private property owners and the public's interest in state public trust lands.¹⁹⁷

Going back to the three potential scenarios, the public trust doctrine supports the second possibility-banning shoreline armoring—and as will be discussed below, the public trust doctrine, as a background principle of property law, may absolve takings claims.¹⁹⁸ For instance, in 2004, the Louisiana Supreme Court, relying in part on the state's public trust doctrine, found no taking occurred when the state allowed an erosion control project that negatively impacted oyster beds.¹⁹⁹ The court expressly recognized that the project, designed to preserve its coastline, "fits precisely within the public trust."200 Loss of the coastline presents not only environmental concerns, but also health, safety, and public welfare concerns "as coastal erosion removes an important barrier between large populations and ever-threatening hurricanes and storms."201 The state's interest in preventing coastal erosion superseded the impacts to oyster beds.²⁰² This decision suggests that, at least in Louisiana, permitting living shorelines would better serve the state's public trust obligations than allowing bulkheading of the shoreline.

However, just as the public trust doctrine supports banning shoreline armoring, the doctrine has also functioned as an impediment to alternative shoreline management techniques, such as living shorelines, in at least one state. In Alabama, the use of living shorelines requires the littoral property owner to enter into a deed restriction, fixing the property line at "pre-living shoreline" boundary.²⁰³ Any newly accreted land occurring after the installation of the living shoreline, which would traditionally accrue to the private property owner, instead remains the property of the

^{197.} Sax, supra note 122, at 644-45.

^{198.} Rising Seas, supra note 49, at 1313; Meg Caldwell & Craig Holt Segall, No Day at the Beach: Sea Level Rise, Ecosystem Loss, and Public Access Along the California Coast, 34 ECOLOGY L.Q. 533, 567-68 (2007).

^{199.} See Avenal v. State, 886 So.2d 1085, 1101 (La. 2004); Klass, supra note 122, at 711-12.

^{200.} Avenal, 886 So. 2d at 1101.

^{201.} Id.

^{202.} Id. at 1102.

^{203.} ALA. CODE § 9-15-55(d) (2010); see also Proposed General Permit SAM-2010-1482-SPG, supra note 119 (noting the need for coordination with Alabama State Lands and that shoreline accretion resulting from living shorelines may not result in a change in property boundaries.).

state.²⁰⁴ This deed restriction requirement, in a state that traditionally permits bulkheads along its estuarine shoreline,²⁰⁵ has caused a chilling effect on the use of living shorelines in Alabama. One way to overcome these concerns may be to implement a fixed property line, as Mississippi established through the Public Trust Tidelands Act.²⁰⁶ As previously discussed, artificial accretions do not divest Mississippi from ownership of its submerged lands.²⁰⁷ To the extent that living shorelines are treated as artificial accretions, Mississippi will not lose any public trust lands through permitting living shorelines. While Alabama law, in essence, effectuates the same result, imposition of the deed restriction steers many Alabama property owners away from living shorelines in favor of shoreline stabilization structures that will not accrete land, and therefore, not require a deed restriction.

C. The Takings Clause

As noted by Professor Joseph Sax, the relationship between public trust ownership of submerged lands and takings claims of upland owners increases the challenge of applying traditional takings rules.²⁰⁸ The Takings Clause originates with the Fifth Amendment of the U.S. Constitution and expressly prohibits government seizure of private property for public use without just compensation.²⁰⁹ The Takings Clause serves the purpose of protecting certain individuals from "bear[ing] public burdens," which are more fairly "borne by the public as a whole."²¹⁰ Readily identifiable takings claims occur when the government physically invades and

^{204.} ALA. CODE § 9-15-55.(d) (2010). See also Spottswood v. Reimer, 41 So.3d 787, 795-796 (Ala. Civ. App. 2009) (landowner "has a right to land created in front of her land by artificial accretion that is superior to the right of the State if neither the landowner nor his or her predecessor in title is responsible for the artificial accretion of the land but has an inferior right to that of the State if the landowner or his or her predecessor in title is responsible for the artificial accretion.") (emphasis added).

^{205.} Through regulation, Alabama does restrict the ability to construct bulkheads and similar devices along Gulf beaches. ALA. ADMIN. CODE r. 335-8-2-.08 (2010). At the administrative level, regulatory takings challenges to the regulation have been unsuccessful. *In re* Gulf Towers Condo. Assn., v. Ala. Dep't Envtl. Mgmt. No. 02-04, 2003 WL 676058 (Ala. Dept. Env. Mgmt. Feb. 25, 2003); *In re* Garrison v. Ala. Dep't Envtl. Mgmt. No. 04-12, 2005 WL 6194618 (Ala. Dept. Env. Mgmt. Nov. 4, 2005).

^{206.} MISS. CODE §§ 29-15-1 to 29-15-7 (2010).

^{207.} Bayview Land, Ltd. v. State, 950 So. 2d 966, 983 (Miss. 2006).

^{208.} Sax, supra note 122, at 644-45; see also Michael A. Hiatt, Come Hell or High Water: Reexamining the Takings Clause in a Climate Changed Future, 18 DUKE ENVTL. L. & POLY F. 371, 381-385 (2008) (discussing the collision of state's public trust obligations with the takings clause).

^{209.} U.S. CONST. amend. V.

^{210.} Nathan Jacobsen, Sand or Concrete at the Beach? Private Property Rights on Eroding Oceanfront Land, 31 ENVIRONS: ENVTL. L. & POL'Y J. 217, 221 (2008) (citing Armstrong v. United States, 364 U.S. 40, 49 (1960)).

occupies an individual's property.²¹¹ Physical takings can extend to grants of public access to private property as well.²¹² Regulatory takings, however, can be more difficult to define.²¹³

The doctrine of regulatory takings is designed "to identify regulatory actions that are functionally equivalent to the classic taking."214 Local governments, through land use planning and zoning requirements, frequently impose limits on the use of private property.²¹⁵ A taking occurs when those restrictions go "too far."²¹⁶ However, ascertaining precisely when a regulation goes "too far" can be challenging for courts. In conducting an analysis, courts frequently apply a balancing test set out by the U.S. Supreme Court in Penn Central Transportation Company v. City of New York.²¹⁷ In Penn Central, the Court set out three considerations when evaluating a takings claim: 1) "[t]he economic impact of the regulation;" 2) how, and to what extent, the regulation has "interfered with [reasonable] investment-backed expectations;" and 3) the "character of the government[] action" (i.e., whether the government action promotes the common good or causes a particular individual to disproportionally bear the burden).²¹⁸

Then, in *Lucas v. South Carolina Coastal Council*, the Supreme Court recognized a per se taking for any regulation that deprived a property owner of "all economically beneficial uses" of his or her property.²¹⁹ The Court found that unless common law nuisance or a background principle of property law justified the regulation, the property owner is entitled to compensation.²²⁰ Where a regulation does not constitute a per se taking, courts continue to apply the *Penn Central* factors.²²¹

1. Takings Challenges to Shoreline Armoring

Considering the migratory nature of shorelines, legal issues arising from shoreline management are frequently raised in the context of regulatory takings.²²² Courts have routinely denied reg-

^{211.} Id.

^{212.} Id. at 222.

^{213.} Id.

^{214.} Stop the Beach Renourishment, Inc. v. Fla. Dep't of Envtl. Prot., 130 S. Ct. 2592, 2601 (2010) (quoting Lingle v. Chevron U.S.A., Inc., 544 U.S. 528, 539 (2005)).

^{215.} Jacobsen, supra note 210, at 222.

^{216.} Id.

 $^{217.\ 438\ {\}rm U.S.}\ 104\ (1978)$ (finding no taking when a city restricted the height of a building).

^{218.} $I\!d.$ at 124.

^{219. 505} U.S. 1003, 1019 (1992).

^{220.} Id. at 1029.

^{221.} See Penn Cent. Transp. Co., 438 U.S. at 138.

^{222.} Sax, supra note 122, at 641.

ulatory takings assertions against shoreline management decisions where those decisions were grounded in common law. For example, in *Stevens v. City of Cannon Beach*, the Oregon court found no takings when the city denied a landowner's request to construct a seawall along the dry beach because, under Oregon law, the landowners never possessed a right to obstruct public access to the dry-sand beach.²²³

As Peter Byrne has argued, in the context of *Lucas*, shoreline regulations "could be upheld if [the regulation] replicated common law principles, but not on the basis that they implement reasonable and necessary protections for the environment and public safe-ty."²²⁴ In the context of shoreline armoring, Jim Titus of the EPA suggests that the public trust doctrine, as a common law principle, would overcome a takings claim under the Lucas application.²²⁵ Professor Sax, additionally, posits that states' role as proprietor, as opposed to regulator, should be considered when evaluating a takings challenge.²²⁶

There is little jurisprudence on regulatory takings arising from the ban of shoreline armoring in the Gulf states primarily due to the continued permitting of such structures. But other states banning or limiting the use of hard structures along the shoreline have faced such challenges. For instance, consider the outcome of takings claims in North Carolina and South Carolina following restrictions on shoreline armoring.

a. North Carolina

Through the Coastal Area Management Act, North Carolina prohibits shoreline armoring.²²⁷ Implementing rules provide: "Permanent erosion control structures may cause significant adverse impacts on the value and enjoyment of adjacent properties or public access to and use of the ocean beach, and, therefore, are prohibited. Such structures include bulkheads, seawalls, revetments, jetties, groins and breakwaters."²²⁸ In the 1990s, property

^{223.} See Stevens v. City of Cannon Beach, 854 P.2d 449, 460 (Or. 1993).

^{224.} Byrne, *supra* note 123, at 634.

^{225.} Rising Seas, supra note 49, at 1354-59; see also Caldwell & Segall, supra note 198, at 567-68.

^{226.} See Sax, supra note 122, at 643-44 (suggesting that a state's legal position as a landowner may be more favorable than as a regulator).

^{227.} N.C. GEN. STAT. § 113A-100 (2010); 15A N.C. ADMIN. CODE 7H.0308(a)(1)(B) (2010) (referred to as the "hardened structure rule" in *Shell Island Homeowners Association v. Tomlinson.* 517 S.E.2d 406, 409 (N.C. Ct. App. 1999)).

^{228. 15}A N.C. ADMIN. CODE 7H.0308(a)(1)(B).

owners unsuccessfully challenged the rule on several grounds, including takings.²²⁹

In Shell Island Homeowners Association v. Tomlinson, condo owners sought permits to erect hard structures along Mason's Inlet to protect the resort from erosion.²³⁰ In rejecting property owners' assertions, the court noted that plaintiffs' allegations of property invasion and reduced value "clearly stem[med] from the natural migration of Mason's Inlet "231 The court dispelled with the notion that plaintiffs have a legal right to protect property from erosion.²³² Specifically, "[t]he courts of [North Carolina] have considered natural occurrences such as erosion and migration of waters to be, in fact, natural occurrences, a consequence of being a riparian or littoral landowner, which consequence at times operates to divest landowners of their property."233 The court distinguished between the "naturally occurring phenomena" and the regulatory actions of the state, identifying migration and erosion as the primary causes of the condo owner's property loss.²³⁴ Accordingly, the state's enforcement of the regulations was "merely incidental to these naturally occurring events."235

b. South Carolina

South Carolina restricts shoreline armoring through its Beachfront Management Act.²³⁶ Following Hurricane Hugo, the legislature amended the Act in 1990.²³⁷ As amended, the Act has consistently maintained a policy that embraces beach renourishment, discourages or prohibits construction on or near the active beach, and

^{229.} Shell Island Homeowners Ass'n v. Tomlinson, 517 S.E.2d 406, 414 (N.C. Ct. App. 1999); Kalo, *supra* note 126, at 1488-90 (providing a full discussion of littoral rights in North Carolina).

^{230.} Shell Island Homeowners Association, Inc., 517 S.E.2d at 409.

^{231.} Id. at 414.

^{232.} Id. ("[P]laintiffs have based their takings claim on their need for 'a permanent solution to the erosion that threatens its property,' and the premise that '[t]he protection of property from erosion is an essential right of property owners' The allegations ... have no support in the law, and plaintiffs have failed to cite ... any persuasive authority for the proposition[.]").

^{233.} Id.

^{234.} Id. at 415.

^{235.} Id. The resort was erected after the passage of the hardened structure rule and was therefore at all times subject to this regulation. Id. at 416.

^{236.} S.C. CODE §§ 48-39-10 to 48-39-360 (2009).

^{237.} S.C. Coastal Conservation League & Sierra Club v. S.C. Dep't of Health & Envtl. Control, 1998 WL 377936, at *3 (S.C. Admin. Law Judge Div. June 16, 1998). Multiple appeals followed this administrative decision, ultimately leading to a ruling that groins were not covered by these provisions. S.C. Coastal Conservation League v. S.C. Dep't of Health & Envtl. Control, 582 S.E.2d 410 (S.C. 2003).

encourages development to retreat from the shoreline,²³⁸ thereby protecting the state's beach/dune system from unwise construction.²³⁹ The Act notes that the use of armoring in the form of seawalls, bulkheads, and rip-rap has not proven effective in reducing coastal erosion; to the contrary, hard erosion control structures make beachfront property more susceptible to erosion while threatening the dry sand beach that drives the state's tourism industry.²⁴⁰ Employing a setback line, South Carolina prohibits new construction of hard erosion control structures seaward, unless the structures are created to protect a public highway.²⁴¹ Existing armoring devices may be maintained in their present condition but may not be enlarged or strengthened.²⁴² After June 30, 2005, any seawall or other hard structure that is more than 50% destroyed may not be rebuilt or replaced and must be removed at the owner's expense.²⁴³ By reducing the number of armoring devices along the beaches, the state contends that beaches will be less vulnerable to damage from wind and wave action and that the beach/dune system will be better protected.²⁴⁴

South Carolina courts have on occasion considered application of the BMA in the context of takings claims. In *Wooten v. South Carolina Coastal Council*, a landowner brought a regulatory takings claim against the Coastal Council after being denied a permit to construct a bulkhead.²⁴⁵ In 1991, Wooten applied for a permit to bulkhead a lot she received as a gift from her mother in 1988.²⁴⁶ Wooten sought to fill 85% of her land to build a house, and thus the bulkhead was "not merely to control erosion."²⁴⁷ After the permit was denied, Wooten filed suit in 1994 claiming that the permit denial changed her useable property interest after she had acquired the property.²⁴⁸ The court held that Wooten's property was

^{238.} See S.C. CODE 48-39-250, 48-39-260, 48-39-280(A) (2009); see also S.C. CODE REGS. 30-1(B) (2010) (acknowledging state policy to protect tidelands, the development pressures occurring in tidelands, and the need to evaluate a range of alternatives when considering development in these areas).

^{239.} S.C. CODE § 48-39-250(11) (2009).

^{240.} Id. § 48-39-250(5).

^{241.} Id. § 48-39-290(B)(2)(a). To determine the depth of the setback line, the beach's average annual erosion rate is calculated and multiplied by forty. This distance is then measured inland of the baseline, the most landward point of erosion at any time during the past forty years, to establish the actual location of the setback line. Id. § 48-39-280(B).

^{242.} Id. § 48-39-290(B)(2)(b)(vi).

^{243.} Id. §§ 48-39-290(B)(2)(b)(iii)-(c). See also, Hollis Inabinet, Comment, Finding Common Ground on Shifting Sands: Coastal Zone Regulatory Bodies, Governance, and Program Effectiveness in South Carolina, 17 SOUTHEASTERN ENVTL. L.J. 429 (2009) (providing an overview of coastal management in South Carolina).

^{244.} S.C. CODE § 48-39-260.

^{245.} Wooten v. S.C. Coastal Council, 510 S.E.2d 716, 717 (S.C. 1999).

^{246.} Id.

^{247.} Id. at 718.

^{248.} Id. at 717.

subject to the restriction on use when she acquired title after the 1977 enactment of the Coastal Zone Management Act.²⁴⁹ Because "[t]he proscribed use interests were not part of Wooten's title when she acquired the property," no compensable regulatory taking had resulted from the denial of the permit.²⁵⁰

Later, in *McQueen v. South Carolina Coastal Council*, the court again considered whether a permit denial for a bulkhead constituted a compensable taking.²⁵¹ McQueen purchased two lots in the early 1960s, and the lots remained unimproved until McQueen sought a permit to bulkhead his lots in 1991.²⁵² By the early 1990s, both lots were substantially "tidelands or critical area saltwater wetlands[,]" as a result of naturally-occurring erosion. ²⁵³ The permit sought to backfill the areas, permanently destroying the critical area environment on the lots.²⁵⁴ The Council denied McQueen's bulkhead permit, which would allow for the land to be developed.²⁵⁵ McQueen alleged that the permit denial constituted a regulatory taking.²⁵⁶

After a lengthy appeal process,²⁵⁷ the case was remanded back to South Carolina by the U.S. Supreme Court for reconsideration in light of *Palazzolo v. Rhode Island*.²⁵⁸ In *Palazzolo*, the Supreme Court held that a pre-existing regulation was not, in itself, dispositive "either in the context of determining ownership rights under background principles of state law or in determining the investment-backed expectation factor in a partial taking."²⁵⁹ Stipulating that McQueen suffered a total taking of his property, the South Carolina court considered whether background principles of South Carolina law absolved the state from compensating McQueen.²⁶⁰ Because McQueen's property had reverted to tidelands prior to his

^{249.} Id. See also Beard v. South Carolina Coastal Council, 403 S.E.2d 620, 622 (S.C. 1991) (holding that denial of permit for primary reason that proposed construction would have violated Coastal Zone Management Act did not result in unconstitutional taking of area between existing wall and proposed wall).

^{250.} Wooten, 510 S.E.2d at 718; see also, Douglas T. Kendall, Preserving South Carolina's Beaches: The Role of Local Planning in Managing Growth in Coastal South Carolina, 9 S.C. ENVTL. L.J. 61, 75 (2000).

^{251.} McQueen v. South Carolina Coastal Council, 580 S.E.2d 116, 117 (S.C. 2003).

^{252.} Id. at 118.

^{253.} Id.

^{254.} Id.

^{255.} Id.

^{256.} Id.

^{257.} See Jennifer Dick & Andrew Chandler, Shifting Sands: The Implementation of Lucas on the Evolution of Takings Law and South Carolina's Application of the Lucas Rule, 37 REAL PROP. PROB. & TR. J. 637, 669-73 (2003), for a discussion of the McQueen case history prior to this decision.

^{258.} *McQueen*, 580 S.E.2d at 118; *see also* Palazzolo v. Rhode Island, 533 U.S. 606 (2001) (involving a partial takings of property including wetlands in Rhode Island).

^{259.} McQueen, 580 S.E.2d at 119 (citing Palazzolo, 533 U.S. at 626, 629-30). 260. Id.

application for a permit to construct a bulkhead and fill in these lands, the tidelands had become public trust property subject to state ownership.²⁶¹ Therefore, the court held that McQueen did not have a property right to fill in these lands, and the state need not compensate McQueen for refusing to grant him a permit to do what he cannot otherwise lawfully do.²⁶² "Any taking McQueen suffered is not a taking effected by State regulation but by the forces of nature and McQueen's own lack of vigilance in protecting his property."²⁶³

Although South Carolina's shoreline regulations are primarily aimed at beach preservation, the preceding cases suggest that South Carolina could apply similar restrictions to non-beach shorelines without incurring compensable takings of private property. Prior to *Palazzolo*, South Carolina case law indicated that any landowner taking title after enactment of the Coastal Zone Management Act may lack reasonable investment-backed expectations because of pre-existing wetland regulations.²⁶⁴ However, as discussed, this notion was rejected by the Supreme Court in *Palazzolo*.²⁶⁵ The *McQueen* decision nevertheless suggests that the public trust doctrine, as a background principle of South Carolina property law, may relieve the state from compensating landowners for restricting the use of bulkheads and other shoreline armoring techniques.²⁶⁶

2. Other Takings Challenges to Shoreline Development in the Gulf of Mexico

Within the Gulf states, there is little case law addressing regulatory takings claims in the context of shoreline armoring. However, Florida, with the most developed shoreline management requirements, has on occasion addressed the issue of takings claims in the context of denials of other types of coastal development permits. Florida courts have consistently held that an unlawful taking will not be established merely because a state agency denies a permit for a particular use that is the most profitable or

^{261.} Id. at 120.

^{262.} Id.

^{263.} Id.

^{264.} Id. at 118.

^{265.} Palazzolo v. Rhode Island, 533 U.S. 606, 626, 630 (2001).

^{266.} McQueen, 580 S.E.2d at 119. But see S.C. Coastal Conservation League v. S.C. Dep't of Health and Envtl. Control, 582 S.E.2d 410, 413 (S.C. 2003) (holding that groins are not considered hard erosion control structures, which are statutorily limited to seawalls, bulkheads, and revetments).

desirable to the property owner.²⁶⁷ Moreover, as long as some economically viable use can be made of the property as a whole, a permit denial typically will not constitute a taking.²⁶⁸ State agencies have the responsibility to balance the health and safety of the public and the private property rights of the landowner; accordingly, when considering granting coastal development or armoring permits to landowners, agencies reserve the right to deny such permits when the resulting construction threatens injury to the public.²⁶⁹

Several cases, decided prior to *Lucas*, considered takings claims resulting from the landowner being denied permission to construct a bulkhead. In State Department of Environmental Regulation v. Schindler, the court articulated the "parcel as a whole" standard.²⁷⁰ There, a landowner distinguished between 1.65 acres of uplands and 1.85 acres of wetlands on his property, claiming that the denial of a permit to construct a bulkhead constituted a taking of the submerged portions of his property.²⁷¹ Schindler contended that the submerged lands could be of no commercial use without the construction of the bulkhead and permit to fill the land.²⁷² The court found that, to determine if a taking of private property has occurred, the proper focus is on the "extent of the [state's] interference with the landowner's rights in the parcel as a whole" and that a taking will not necessarily occur simply because the state denied a permit that would have benefited the landowner.²⁷³ Under a prethe upland portions property vious owner, of the contained two rental properties, and an environmental management consultant testified that the submerged property complemented upland property through the installation of boardwalks, gazebos, or fishing piers.²⁷⁴ These facts indicated that the property could, as a whole, be economically viable in the absence of the bulkhead and without the proposed filling in of the submerged area; therefore, as a whole, the property still had reasonable economic use, even though the use is not that which the owner considered most profitable.²⁷⁵

^{267.} See Graham v. Estuary Props., Inc., 399 So. 2d 1374, 1383 (Fla. 1981) and Key Haven Associated Enters., Inc. v. Bd. of Trs. of Internal Improvement Trust Fund, 427 So. 2d 153, 159-60 (Fla. 1983).

^{268.} Dep't of Envtl. Reg. v. Mackay, 544 So. 2d 1065, 1066 (Fla. 3d DCA 1989).

^{269.} See Graham, 399 So. 2d at 1377, 1381.

^{270. 604} So. 2d 565, 568 (Fla. 2d DCA 1992).

^{271.} Id. at 567.

^{272.} Id.

^{273.}Id.at 568 (quoting Fox v. Treasure Coast Reg'l Planning Council, 442 So. 2d 221, 225 (Fla. 1st DCA 1983)).

^{274.} Id. at 567.

^{275.} Id. at 568.

Also, in Graham v. Estuary Properties, Inc. (another pre-Lucas decision), a landowner sought permission for a proposed development project that called for the destruction of 1,800 acres of black mangroves to create a 7.5-mile interceptor waterway.²⁷⁶ Estuary Properties claimed that the function of the destroyed mangroves in the ecosystem would be replaced by the installation of the waterway; however, both the Lee County Board of Supervisors and the Florida Land and Water Adjudicatory Commission found that the destruction of the mangroves would negatively impact the region and consequently denied the permit.²⁷⁷ Estuary claimed that the denial constituted an unlawful taking of its property because, without the proposed waterway, it could derive no economic benefit from the land.²⁷⁸ The court held that "[t]he owner of private property is not entitled to the highest and best use of his property if that use will create a public harm[;]" thus, Estuary Properties was not entitled to construct the waterway if such construction polluted the neighboring bays.²⁷⁹ Moreover, the Commission's refusal to allow the waterway was not a refusal to allow any development on the property whatsoever: Estuary Properties would still have been allowed to develop the property, provided that the mangroves were not destroyed in the process.²⁸⁰ Though the interceptor waterway would increase the value of the property, its disallowance did not constitute a taking because its creation would result in pollution and, thus, cause injury to the public.²⁸¹

Applying Graham, the court in Fox v. Treasure Coast Regional Planning Council likewise found no compensable taking where a landowner's permit request to construct a retirement community on a parcel of land containing wetlands required the wetland area be preserved.²⁸² Per Graham, the state must balance the public welfare with the landowner's property interests in permitting future developments, and property owners are not entitled to the highest and best use of their property if such use creates a public harm.²⁸³ Accordingly, the state acted within its power to deny a landowner's request to develop a portion of his property without

^{276. 399} So. 2d 1374, 1376 (Fla. 1981).

^{277.} Id. at 1376-77.

^{278.} Id. at 1382.

^{279.} Id. (citing Goldblatt v. Town of Hempstead, 369 U.S. 590 (1962)).

^{280.} See id.

^{281.} Id.

^{282. 442} So. 2d 221, 225 (Fla. 1st DCA 1983).

^{283.} Id. at 226.
compensation, provided that the land, taken as a whole, still has a reasonable economic use. $^{\rm 284}$

In a converse scenario, the U.S. Supreme Court, construing Florida property law, recently ruled that a state's beach nourishment projects did not constitute a taking of the littoral property owner's rights.²⁸⁵ While "[s]tates effect a taking if they recharacterize as public property what was previously private property[,]" Florida's placement of sand upon state owned submerged lands did not merit a taking because the submerged lands were state property.²⁸⁶ Even though the fill of submerged lands separated the littoral property line from the water's edge, no taking occurred.²⁸⁷ In reaching this conclusion, the Court relied on two principles of property law: 1) "the State as owner of the submerged land adjacent to littoral property has the right to fill that land, so long as it does not interfere with the rights of the public and the rights of littoral landowners[;]" and 2) "if an avulsion exposes land seaward of littoral property that had previously been submerged, that land belongs to the State even if it interrupts the littoral owner's contact with the water."288 Finding no exceptions to these rules in Florida property law, the Court concluded that the littoral property owners had suffered no taking of their property.²⁸⁹ Applying this concept to a bulkheading restriction, however, may prove difficult since the landowner stands to lose property through erosion unless given an alternative means of erosion control, such as living shorelines.

Taking these decisions in context with other Supreme Court takings jurisprudence,²⁹⁰ a regulation that bans shoreline armoring is unlikely to result in a regulatory taking so long as certain criteria are met. First, *Lucas* provides that the regulation cannot destroy all economic value causing a per se taking. As others have observed, preventing bulkheading will not effectuate an immediate destruction in value but will instead allow erosion to take place slowly over time.²⁹¹ Likewise, the North Carolina decision in *Shell*

^{284.} See *id*. If the landowner can still use his property as a whole in an economically viable manner, then no taking has occurred, despite the fact that the state has prohibited development on certain portions of the land in question.

^{285.} Stop the Beach Renourishment, Inc. v. Dep't of Envtl. Prot., 130 S. Ct. 2592, 2612 (2010).

^{286.}Id.at 2601 (citing Webb's Fabulous Pharmacies, Inc. v. Beckwith, 449 U.S. 155, 163-65 (1980)).

^{287.} Id. at 2612.

^{288.} Id. at 2611.

^{289.} Id. at 2612 (noting that the State did not relocate the property line).

^{290.} Lucas v. South Carolina Coastal Council, 505 U.S. 1003 (1992); Palazzolo v. Rhode Island, 533 U.S. 606 (2001).

^{291.} See Shell Island Homeowners Ass'n v. Tomlinson, 517 S.E.2d 406, 414-15 (N.C. Ct. App. 1999).

Island specifically acknowledged that the property loss was the result of a naturally occurring process, and the state's regulation was merely incidental.²⁹² Even where an anti-armoring ban may destroy all economic value, governments may overcome takings claims where the regulation is grounded in either common law nuisance or background principles of law.²⁹³ By relying on the state's public trust doctrine as a background principle of law, regulations banning armoring in efforts to preserve the land/water interface could successfully survive takings claims.²⁹⁴ Second, where the regulation does not effect a *per se* taking, it will be evaluated on a case-by-case basis utilizing the Penn Central balancing test.²⁹⁵ The court will consider a property owner's reasonable expectations and the government's action (in this instance, action to preserve public trust land), along with the economic impact of the regulation.²⁹⁶ In this context, a state's public trust obligations weigh in favor of restrictions on shoreline armoring.²⁹⁷ Additionally, incorporating living shorelines into the regulatory process provides the property owner with an alternative erosion control measure, mitigating the impact of armoring restrictions.

IV. CONCLUSION

While many states pay detailed attention to beach preservation, far less consideration is afforded to shoreline management along bays and estuaries. If the current trend of bulkheading continues, the Gulf of Mexico coastline stands to lose substantial quantities of existing marshes and wetlands.²⁹⁸ As goes the marsh, so go the numerous environmental and social benefits such as habitat preservation, water quality, and fishing opportunities.²⁹⁹ Given the correlation between the rate of bulkheading and land development, the proper solution to natural shoreline preservation should include a multifaceted approach—one that restricts shoreline armoring in favor of living shorelines while at the same time addresses land use policies promoting development along the coastline. For instance, changes to the National Flood Insurance Policy, which currently subsidizes flood insurance in high-risk are-

^{292.} Id. at 415.

^{293.} Lucas, 505 U.S. at 1029.

^{294.} Caldwell & Segall, *supra* note 198, at 567-68; *Rising Seas, supra* note 49, at 1356-61.

^{295.} Lingle v. Chevron U.S.A., Inc., 544 U.S. 528, 538-39 (2005) (citing Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104 (1978)).

^{296.} Penn Cent. Transp. Co., 438 U.S. at 124.

^{297.} See id. at 138.

^{298.} See Tide Doesn't Go Out, supra note 75, at 23-25.

^{299.} See id.

as, could potentially reduce the development pressures along the shore, thereby reducing the rate of new shoreline armoring.³⁰⁰ Combining changes to land-use development policies with new shoreline regulations will offer greater protection to existing natural shorelines.

One certainty exists. Managing the ambulatory nature of property rights along the shoreline will continue to present unique challenges.³⁰¹ As sea levels rise and tidal waters encroach further upon private waterfront properties, regulatory difficulties will likely increase, leaving state and local governments to find an appropriate balance between public and private interest in the shore.

^{300.} See The Sea is Rising, supra note 27, at 769-70. 301. See Sax, supra note 122, at 647.

ROLLING EASEMENTS AS A RESPONSE TO SEA LEVEL RISE IN COASTAL TEXAS: CURRENT STATUS OF THE LAW AFTER SEVERANCE V. PATTERSON

RICHARD J. MCLAUGHLIN* HARTE RESEARCH INSTITUTE FOR GULF OF MEXICO STUDIES

I.	IMPACTS OF SEA LEVEL RISE ON GULF COASTS	365
II.	AN INTRODUCTION TO ROLLING EASEMENTS AND	
	THE TEXAS OPEN BEACHES ACT	368
III.	INCORPORATING ROLLING EASEMENTS INTO TEXAS	
	COMMON LAW	373
IV.	SEVERANCE V. PATTERSON – THE U.S. COURT OF	
	APPEALS FOR THE FIFTH CIRCUIT ENTERS THE FRAY	377
V.	THE TEXAS SUPREME COURT SIGNIFICANTLY WEAKENS	
	ROLLING EASEMENTS	380
	A. Severance Ignores the Geologic Realities Along	
	the Texas Gulf Coast	382
	B. Severance Treats Usage Rights and Property	
	Rights Differently	383
	C. Severance Rules that Easements Do Not Shift	
	Due to the Forces of Nature	385
VI.	ACTIONS SUBSEQUENT TO THE SEVERANCE DECISION	387
VII.	POTENTIAL IMPACT OF SEVERANCE ON ROLLING	
	EASEMENTS IN FLORIDA AND OTHER STATES	388
VIII.	ARE ROLLING EASEMENTS A VIABLE TOOL TO	
	Address Sea Level Rise?	390
IX.	CONCLUSION	392

I. IMPACTS OF SEA-LEVEL RISE ON GULF COASTS

Climate change during the next century is expected to cause significant modifications to the world's coastal zones.¹ Increases in

^{*} Endowed Chair for Marine Policy and Law, Harte Research Institute for Gulf of Mexico Studies, Texas A&M University—Corpus Christi. The author wishes to acknowledge the assistance and guidance provided by J.B. Ruhl and the other participants of the Symposium on Sea Level Rise and Takings Law held at Florida State University College of Law, April 23, 2010. Additional thanks to Jim Gibeaut, Fred McCutchon, Arthur Park, and Sonia McLaughlin for their contributions. This research was funded under award number NA100AR4170078 from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce.

^{1.} See generally INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY (Martin Parry et al. eds., 2007), available at http://www.ipcc.ch/ipccreports/ar4-wg2.htm.

storm severity due to changes in precipitation patterns coupled with sea level rise will inundate and erode coasts causing a net loss of shorefront, threatening infrastructure, and increasing the likelihood of coastal flooding. Coastal areas along much of the Gulf of Mexico are exceptionally susceptible to changes due to relative sea-level rise and storm damage because the land is relatively lowlying and is subject to high levels of land subsidence.² Rising sea levels will result in more frequent and longer inundation of freshwater marshes, swamps, and brackish marshes.³ As coastal wetland areas are flooded by saline waters, they will be converted eventually to open water and their environmental benefits lost.⁴ Changes to wetlands, beaches, dunes, and barrier islands will reshape public and private property boundaries on a vast scale and intensify existing coastal land use conflicts.

Without effective legal and policy approaches to deal with these changing conditions, litigation will become an increasingly common method of resolving disputes, and many of the gains provided by coastal management plans may be diminished. For example, many coastal managers are recognizing that decades of armoring projects (e.g., bulkheads, jetties, riprap, etc.) are causing natural sand and sediment migration processes to change, causing a large amount of beaches and coastal wetlands to be lost.⁵ Armoring coasts comes with significant socioeconomic and ecological costs. These include new barriers to public access, aesthetic and visual impacts, and, most critically, loss of beaches and coastal wetlands due to their inability to retreat before the rising sea.⁶

For decades, the experiences of Texas in providing the public with access to its beaches, through the innovative Texas Open Beaches Act, have served as a model for those who seek to limit the detrimental effects of changes to the nation's shorelines, including sea-level rise.⁷ One of the foundations of Texas' beach protection program is the incorporation of dynamic public

^{2.} See generally E.A. PENDLETON ET AL., U.S. GEOLOGICAL SURVEY, COASTAL VULNERABILITY ASSESSMENT OF THE NORTHERN GULF OF MEXICO TO SEA-LEVEL RISE AND COASTAL CHANGE (2010), available at http://pubs.usgs.gov/of/2010/1146/pdf/ofr2010-1146.pdf.

^{3.} See Paul A. Montagna et al., South Texas Climate 2100: Coastal Impacts, in THE CHANGING CLIMATE OF SOUTH TEXAS 1900-2100: PROBLEMS AND PROSPECTS, IMPACTS AND IMPLICATIONS 57, 71 (Jim Norwine & Kuruvilla John eds., 2007), available at http://www.texasclimate.org/Home/BookChangingClimateofSouthTexas/tabid/485/ Default.aspx.

^{4.} *Id*.

^{5.} Megan Higgins, Legal and Policy Impacts of Sea Level Rise to Beaches and Coastal Property, 1 SEA GRANT L. & POLY J. 43, 51 (2008).

^{6.} Meg Caldwell & Craig Holt Segall, *No Day at the Beach: Sea Level Rise, Ecosystem Loss, and Public Access Along the California Coast,* 34 ECOLOGY L.Q. 533, 539-40 (2007).

^{7.} See discussion infra Part II.

easements that move with the vegetation lines and allow the public to use the dry sand portions of the beach as well as prevent man-made structures or other obstacles from encroaching on the public's easement.⁸ However, this well established "rolling easement doctrine," which is the centerpiece of Texas' open beaches program, was recently dealt a significant setback by the State Supreme Court in the case of Severance v. Patterson.⁹ The decision has caused legal turmoil along much of the Texas coast and will likely subject the state to years of litigation.¹⁰ For example, a few days after the decision was handed down, the Texas General Land Commissioner cancelled a \$40 million beach renourishment project because state law prohibits the spending of public money to benefit private property.¹¹ Simultaneously, private property owners are predicted to begin to erect hard structures to save their houses from the sea.¹² There is little question that the state's role as a test bed for innovative methods of dealing with coastal change, including sea-level rise, has been severely diminished as a result of these recent legal changes.

In coming years, as clearly illustrated by cases such as *Severance*, it is likely that legal conflicts will grow between coastal private property owners who are intent on protecting their property from the dangers of erosion and rising sea levels and the government, which seeks to restrict those actions to benefit the public. Disputes between these two competing interests will trigger additional regulatory takings issues and resulting litigation.¹³ Moreover, traditional common law rules may not adequately address the unique circumstances created by global sea level rise.¹⁴ Joseph Sax, in a recent article, contends that the common law rules, which generally allow the littoral owner to occupy and productively use the area landward of the mean high-tide line and conversely authorize the state to use the area seaward of that line for public passage and recreation and to protect coastal wetland

^{8.} See infra notes 21-55 and accompanying text.

^{9.} No. 09-0387, 2010 WL 4371438 (Tex. Nov. 5, 2010), reh'g granted (Mar. 11, 2011).

^{10.} See discussion infra Part V.

^{11.} Harvey Rice, State Calls Off Big Galveston Beach Project: Recent Texas High Court Ruling on Open Beaches Act Gets Blame, HOUS. CHRON., Nov. 16, 2010, at 1 [hereinafter Rice, State Calls Off Beach Project], available at http://www.chron.com/disp/ story.mpl/metropolitan/7295713.html.

^{12.} Id.

^{13.} See Joseph L. Sax, Some Unorthodox Thoughts About Rising Sea Levels, Beach Erosion, and Property Rights, 11 VT. J. ENVTL. L. 641 (2010) (describing how the context of traditional regulatory takings law will change as a result of sea level rise). For a discussion of regulatory takings jurisprudence, see Timothy M. Mulvaney, Proposed Exactions, 26 J. LAND USE & ENVTL. L. 277 (2011).

^{14.} Sax, supra note 13, at 645.

habitats, fail to address contemporary circumstances.¹⁵ Sax argues that in the absence of sea level rise, the boundary between these two interests moves modestly back and forth over time and allows the two uses to coexist with relatively little conflict.¹⁶ However, where the sea is substantially and continuously rising, and where storm surges more often wipe away large areas of beach and other coastal areas, littoral owners will be much more inclined to try to build protective devices to hold back the sea.¹⁷ This will exacerbate all of the problems associated with armoring, causing coastal wetlands to disappear and triggering substantially more legal conflict and litigation.¹⁸

There are some circumstances where engineered solutions such as seawalls, groins, levees, or jetties may be a necessary response to the threat of sea-level rise. However, most experts in the field believe that these hard structure approaches should be reserved for truly "inevitable cities in impossible places," and then only in those areas that are particularly well suited and defensible.¹⁹ An alternative approach known as "living shorelines" is gaining increasing acceptance by the coastal scientific and policy communities.²⁰ The concept uses plants, including salt marsh grasses, mangroves, as well as structural materials such as oyster shells, earthen material, or riprap to protect property from erosion.²¹ The purpose of living shorelines is to provide habitat that will grow and change as the levels of the sea change, in contrast to seawalls and other forms of armouring, which are a fixed height and lead to the conversion of coastal wetlands and other habitat to open water.²²

II. AN INTRODUCTION TO ROLLING EASEMENTS AND THE TEXAS OPEN BEACHES ACT

Implementing an effective policy/legal regime that discourages armoring and encourages alternative approaches to sea level rise, such as that envisioned under a living shoreline scenario,

21. See generally id. See also MASGC Focus on Living Shorelines, MISS.-ALA. SEA GRANT CONSORTIUM, http://www.masgc.org/page.asp?id=235 (last visited May 9, 2011).

^{15.} Id.

^{16.} Id. at 642.

^{17.} Id.

^{18.} See id. at 642-644.

^{19.} JOHN S. JACOB & STEPHANIE SHOWALTER, TEXAS SEA GRANT, THE RESILIENT COAST: POLICY FRAMEWORKS FOR ADAPTING THE BUILT ENVIRONMENT TO CLIMATE CHANGE AND GROWTH IN COASTAL AREAS OF THE U.S. GULF OF MEXICO 5, 9 (2007), available at http://nsglc.olemiss.edu/TheBuiltEnvironment08-sm_000.pdf.

^{20.} See generally, Niki L. Pace, Wetlands or Seawalls? Adapting Shoreline Regulation to Address Sea Level Rise and Wetland Preservation in the Gulf of Mexico, 26 J. LAND USE & ENVTL. L. 327 (2011).

^{22.} See id. and sources cited within.

will be difficult to achieve. Lurking in the background will be an ongoing governmental concern that property owners will challenge such policies as regulatory takings requiring compensation. Despite this reality, a policy tool known as "rolling easements" has received significant attention as a potential response to future sea level rise while avoiding many of the risks associated with regulatory takings.

The concept of employing rolling easements as a method of dealing with sea level rise was originally proposed by Jim Titus, of the United States Environmental Protection Agency, in a series of articles beginning in the early 1990s.²³ In broad terms, a rolling easement allows publicly owned tidelands to migrate inland as a result of sea level rise or other natural forces at the expense of existing structures, thereby protecting ecosystem structure and function.²⁴ As envisioned by Titus, a state would enact "a statute declaring that all future development is subject to the rolling easement."25 All bulkheads, seawalls, etc., would be prohibited, and individual structures, coastal land development projects, and activities involving the filling of wetlands would "be subject to [a] rolling easement as [a] condition for [obtaining a] building permit."26 Titus believes that regulatory takings claims under the Fifth and Fourteenth Amendments of the United States Constitution would generally not be successful because affected property owners do not suffer large economic deprivations based on the fact that many decades may pass before the property is lost to the rising sea,²⁷ and this implies a small discounted value for any future loss.²⁸ Moreover, governments may wish to bypass takings issues by paying the relatively small cost of eminent domain purchases of the easement.²⁹

Texas is most frequently associated with the rolling easement doctrine and has applied it more forcefully and for a longer period of time than any other U.S. state.³⁰ However, unlike Titus' vision of a forward-looking doctrine that protects coastal habitats from future environmental loss, Texas' application of the doctrine is based not on environmental concerns but on traditional notions

^{23.} See generally James G. Titus, Greenhouse Effect and Coastal Wetland Policy: How Americans Could Abandon an Area the Size of Massachusetts at Minimum Cost, 15 ENVTL. MGMT. 39 (1991); James G. Titus, Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners, 57 MD. L. REV. 1279 (1998) [hereinafter Titus, Rising Seas].

^{24.} See Higgins, supra note 5, at 51.

^{25.} Titus, Rising Seas, supra note 23, at 1310 tbl.2.

^{26.} Id.

^{27.} Id. at 1384-85.

^{28.} Id. at 1384-87, 1390.

^{29.} Id. at 1390.

^{30.} Caldwell & Segall, supra note 6, at 570.

of beach access and public exploitation of coastal areas.³¹ It is in fact rooted in an over 150-year-old Texas tradition of using the beaches along barrier islands facing the Gulf of Mexico for transportation, camping, fishing, swimming, and other public uses.³² These public uses were so well accepted that historically, the public as well as most private landowners believed "that the state retained ownership of both the 'wet' and 'dry' [portions of] beaches."³³ This understanding came to an end in 1958 when the Texas Supreme Court in *Luttes v. State*³⁴ ruled that the state only owned the wet sand portion of the beach and that private landowners possessed ownership rights over the dry sand portion above the mean high tide line.³⁵

The *Luttes* ruling shocked the public and generated sufficient public political pressure to force the Texas Legislature to enact the Texas Open Beaches Act³⁶ (TOBA) the following year. The Act specifically provides that it shall be the state's public policy that "the public shall have the free and unrestricted right of ingress and egress to the larger area extending from the line of mean low tide to the line of vegetation bordering on the Gulf of Mexico."³⁷ Any public easement is conditioned upon a showing that "the public has acquired a right of use or easement to or over an area by prescription, dedication, or has retained a right by virtue of continuous right in the public"³⁸ Additionally, the public's right of access is protected by prohibiting persons from "creat[ing], erect[ing], or construct[ing] any obstruction, barrier, or restraint" that interferes with the public easement.³⁹ It is important to note that TOBA applies only to the approximately 367 miles of beaches bordering the

^{31.} See id. at 570-71 (discussing Texas application of the "rolling easement concept" through the case of Feinman v. Texas, 717 S.W.2d 106 (Tex. App. 1986).

^{32.} See Seaway Co. v. Attorney Gen. of Tex., 375 S.W.2d 923, 930-37 (Tex. Civ. App. 1964) (providing a wonderful historical discussion from a variety of scholarly sources and witness testimony about how the state's beaches have been used by the public since 1836).

^{33.} Neal E. Pirkle, *Maintaining Public Access to Texas Coastal Beaches: The Past and the Future*, 46 BAYLOR L. REV. 1093, 1093 (1994).

^{34. 324} S.W.2d 167 (Tex. 1958).

^{35.} Id. at 191. For an analysis of the Luttes case, see Kenneth Roberts, The Luttes Case—Locating the Boundary of the Seashore, 12 BAYLOR L. REV. 141 (1960).

^{36.} TEX. NAT. RES. CODE §§ 61.001-61.026 (1959).

^{37.} TEX. NAT. RES. CODE § 61.011(a) (2009).

^{38.} *Id.* Under Texas common law, establishing an easement by prescription requires the following five elements: "(1) possession of the land; (2) use or enjoyment of it; (3) an adverse or hostile claim; (4) an inclusive dominion over the area and appropriation of it for public use and benefit; and (5) for more than the ten year statutory period." Villa Nova Resort, Inc. v. State, 711 S.W.2d 120, 127 (Tex. App. 1986). An easement by dedication requires either some form of written document, or the state must meet the following four criteria to prove an implied dedication: "(1) the landowner induced the belief that he intended to dedicate the area in question to public use; (2) the landowner was competent to do so, i.e., had fee simple title; (3) the public relied on the acts of the landowner and will be served by the dedication; and, (4) there was an offer and acceptance of the dedication." *Id.* at 128.

^{39.} TEX NAT. RES. CODE § 61.013(a).

Gulf of Mexico and does not apply to the approximately 3,300 miles of tidal bay-facing shores in the state.⁴⁰

At one time, it was thought that the public would have a difficult time proving the background principles of prescription, dedication, or continuous right that TOBA requires as a condition of creating a public easement on the dry sand portion of the beach.⁴¹ However, since its inception, Texas courts have been exceedingly deferential to the policies established under TOBA. An unbroken line of decisions have found that the public has acquired easements by prescription or dedication along large portions of the state's Gulf-facing beaches.⁴² One appellate court even found that the doctrine of custom, made famous by the well known Oregon State Supreme Court case of *State ex rel. Thornton v. Hay*,⁴³ could be applied in Texas so as to open up the entire system of Gulffacing beaches to the public easement.⁴⁴ While the doctrine of custom has not gained judicial traction, the courts have historically been quite willing to interpret TOBA broadly.⁴⁵

42. For analyses of these cases, see Mark D. Holmes, Comment, What About My Beach House? A Look at the Takings Issue as Applied to the Texas Open Beaches Act, 40 HOUS. L. REV. 119, 125-32 (2003); Pirkle, supra note 33, at 1097-1100.

^{40.} See Caring for the Coast, TEX. GEN. LAND OFFICE, http://www.glo.texas.gov/whatwe-do/caring-for-the-coast/index.html (last visited May 9, 2011). The Texas General Land Office has estimated that "64 percent of the Texas coast is eroding at an average rate of about 6 feet per year with some locations losing more than 30 feet per year." *Coastal Erosion*, TEX. GEN. LAND OFFICE, http://www.glo.texas.gov/what-we-do/caring-for-thecoast/coastal-erosion/index.html (last visited May 9, 2011). According to a report to the Texas Legislature in 2003, roughly 229 of the state's 367 miles of Gulf-facing beaches are experiencing measurable net erosion, and portions of the 3,300 miles of protected bay shoreline may also be experiencing net erosion as well. *See* TEXAS GENERAL LAND OFFICE, COASTAL EROSION PLANNING & RESPONSE ACT (CERPA) REPORT TO THE 78TH TEXAS LEGISLATURE 6, 15 (2003).

^{41.} Proponents of public use would have the difficult task of meeting, on a parcel-byparcel basis all of the traditional common law requirements associated with establishing prescription, dedication, or custom.

^{43. 462} P.2d 671, 676 (Or. 1969).

^{44.} Matcha v. Mattox, 711 S.W.2d 95, 98 (Tex. App. 1986). Neal Pirkle calls *Matcha* "weak precedent," but argues that the court affirmed based on the doctrine of custom to allow the easement to move as the beach changes rather than either prescription or dedication. Pirkle, *supra* note 33, at 1106.

^{45.} According to one well known commentator, "a series of five intermediate decisions from 1979 to 1989 effectively eliminated the requirement that the existence of a public easement be affirmatively proved in any meaningful way." See Shannon H. Ratliff, Shoreline Boundaries Part I: Legal Principles, CLE INTERNATIONAL: TEXAS COASTAL LAW D-1, D-19-20 (2005) (footnote omitted). Similarly, Pirkle writes that "Courts have consistently found prescriptive easements in an attempt to maintain the public's right of access to Texas coastal beaches." Pirkle, supra note 33, at 1097. Regarding implied dedication, he notes

Although the Texas Supreme Court has not specifically held that an easement to the beach may be based on implied dedication, the court appears unconcerned with a line of appellate court rulings which consistently apply this doctrine. Absent legislative action, the Texas courts will probably continue to recognize the public's right in beaches through easements formed by implied dedication.

Id. at 1100.

In the 1980s and early 1990s the Legislature amended TOBA to further strengthen the public easement.⁴⁶ For every transaction since August 26, 1985 that conveys land located seaward of the Intracoastal Waterway,⁴⁷ all executory contracts must contain language that expressly acknowledges that the purchaser has acquired an easement up to the vegetation line.⁴⁸ Among other warnings, is the following:

If the property is in close proximity to a beach fronting the Gulf of Mexico, the purchaser is hereby advised that the public *has acquired* a right of use or easement to or over the area of any public beach by prescription, dedication, or presumption, or has retained a right by virtue of continuous right in the public since time immemorial, as recognized in law and custom.⁴⁹

In addition the document must contain the following language in capital letters, "STRUCTURES ERECTED SEAWARD OF THE VEGETATION LINE (OR OTHER APPLICABLE EASEMENT BOUNDARY) OR THAT BECOME SEAWARD OF THE VEGETATION LINE AS A RESULT OF NATURAL PROCESSES SUCH AS SHORELINE EROSION ARE SUBJECT TO A LAWSUIT BY THE STATE OF TEXAS TO REMOVE THE STRUCTURES."⁵⁰

The full consequence of this amendment is somewhat confusing because its use of the phrase, "the public *has acquired* a right of use or easement[,]" seems to declare *prima facie* the existence of an easement on all Gulf-facing beaches rather than to require a finding of a public easement by prescription, dedication, or custom, which is required in other parts of the Act.⁵¹ Despite this confusion, it is clear that the intent of the amendment was to legislatively approve the rolling easement rule and to put all purchasers or lessees, after October 1, 1986, on notice that their structures will be subject to the easement and removed if in violation.⁵²

In 1991, the legislature also eliminated the requirement that the public's easement be "subject to proof" and replaced it with

^{46.} For a discussion of these amendments see Ratliff, supra note 45 at D21- D22.

^{47.} The use of the language "seaward of the Gulf Intracoastal Waterway" is curious because it seems to be contrary to other references in TOBA that the Act is limited to beaches "bordering on the seaward shore of the Gulf of Mexico[.]" TEX. NAT. RES. CODE §§ 61.011(a), 61.012, 61.013(c), 61.023 (2009). This may imply that the Act also applies to the barrier island's bayward-facing shores. Despite this confusion, in practice, the presumption is that TOBA only applies to Gulf-facing beaches. *See* Ratliff, *supra* note 45, at D-16-17.

^{48.} TEX. NAT. RES. CODE § 61.025.

^{49.} Id. (emphasis added).

^{50.} Id.

^{51.} Id. (emphasis added). See Ratliff, supra note 45 at D21.

^{52.} See Holmes, supra note 42, at 141-42.

language that provides that in beach areas located seaward of the vegetation line it is presumed that "there is imposed on the area a common law right or easement in favor of the public"⁵³ Again, the breadth and content of this presumption is unclear. However, these collective statutory and judicial developments during the 1980s and early 1990s have resulted in subsequent courts commonly granting summary judgment to the government to remove structures seaward of the vegetation line even in the absence of case-specific evidence of public use.⁵⁴

In 2009, the state took another step toward strengthening TO-BA when 77% of voters approved a referendum that incorporates the most important provisions of TOBA into the state constitution.⁵⁵ This referendum came about in response to controversial legislation introduced in the aftermath of Hurricane Ike in 2008 that exempted some areas of the coast from the requirements of TOBA.⁵⁶ The successful referendum makes it much more difficult for legislators in the future to weaken or change the popular piece of legislation. As a result of TOBA's influence, it is well settled and accepted that most of the state's most popular beaches are burdened by public easements through the background principles of prescription, dedication, or custom.⁵⁷

III. INCORPORATING ROLLING EASEMENTS INTO TEXAS COMMON LAW

Decades of judicial findings reflecting that the public has access to most of the state's Gulf-facing beaches under the common law have generally been accepted by private property owners with minimal protest.⁵⁸ In contrast, littoral property owners⁵⁹ have been

^{53.} Compare Tex. NAT. Res. CODE § 61.020(2) (1978), with Tex. NAT. Res. CODE § 61.020 (2009).

^{54.} See Ratliff, supra note 45, at D-21 to D-22.

^{55.} TEX. CONST. art. 1, §33; All 11 Proposed Constitutional Amendments Pass in Texas, CALLER.COM (Nov. 4, 2009, 6:40 AM), http://www.caller.com/news/2009/nov/04/all-11proposed-constitutional-amendments-pass-tex/.

^{56.} See Harvey Rice & Matt Stiles, Battle for a Beach, HOUS. CHRON., Jun. 4, 2009, at 1, available at http://www.chron.com/disp/story.mpl/ike/galveston/6457063.html.

^{57.} For a list of these beaches, see Jeffrey S. Boyd, *Enforcement Rights (and Wrongs)* Under the Open Beaches Act, CLE INTERNATIONAL: TEXAS COASTAL LAW B-1, B-5 (2005). See also Ratliff, supra note 45, at D-16 to D-25 (Agreeing that Texas Courts have unanimously found these background principles to apply, but disagreeing with the logic and legal authority used in the holdings).

^{58.} This is not meant to imply that property owners didn't challenge the application of these doctrines to their coastal property. However, these challenges involved factual matters relating to their specific beach parcels and not the existence of the doctrine itself. For a discussion of these cases, see Pirkle, *supra* note 33, at 1095-1100.

^{59.} TEX. NAT. RES. CODE § 61.001(6) (2009) (defining "littoral owner" to include a "lessee, licensee, or anyone acting under the littoral owner's authority").

much more reluctant to accept that the public's easement shifts with naturally changing shorelines.⁶⁰ This is especially true given the fact that most of the state's beaches are eroding,⁶¹ and a large number of beachfront structures eventually found themselves located partially or wholly seaward of the line of vegetation and in violation of the public easement.⁶² As these beaches are eroding, the vegetation line which marks the inland boundary of the public easement moves landward also.⁶³ Many of the state's formerly wide dry-sand beaches are being narrowed to the point that if homes or other structures remain on the beach, the public is no longer able to use the beach, especially at high tide.⁶⁴ For example, in 2004, as a consequence of a series of major high tide events and tropical weather systems, 116 homes were documented to be seaward of the vegetation line and subject to removal.⁶⁵

While the notion of a rolling easement is implied by the language in TOBA,⁶⁶ it wasn't until 1986 that the concept was judicially articulated for the first time in *Feinman v. State*.⁶⁷ After Hurricane Alicia caused several houses to be located seaward of the new vegetation line, the Texas Attorney General refused to allow the houses to be repaired and threatened to remove them from the beach.⁶⁸ The *Feinman* court was asked to answer "whether [TOBA] requires the State to re-establish its easement each time the line of vegetation moves, or whether the Act allows the public's easement to [automatically] move with the" changing vegetation line.⁶⁹ After describing the purposes and public policy intended by the Act, the court acknowledged that its language was ambiguous regarding whether the easement rolls automatically or must be reestablished whenever a new line is created.⁷⁰ However, analogizing to a long line of cases that upheld changes in

^{60.} The rolling easement doctrine is of great concern to private property owners because it increases both the scope and extent of the OBA. Without the doctrine, the OBA applies to fewer houses because the public easement would be static rather than dynamic. See discussion in Holmes, *supra* note 42, at 135-37.

^{61.} See Coastal Erosion, supra note 40.

^{62.} See Eddie R. Fisher & Angela L. Sunley, A Line in the Sand: Balancing the Texas Open Beaches Act and Coastal Development (2007), available at http://www.csc.noaa.gov/cz/CZ07_Proceedings/PDFs/Tuesday_Abstracts/2658.Fisher.pdf.

^{63.} *Id*.

^{64.} *Id*.

^{65.} Id.

^{66.} TEX. NAT. RES. CODE § 61.011 (2009) (providing that "the public shall have the free and unrestricted right of ingress and egress to the larger area extending from the line of mean low tide to the line of vegetation bordering on the Gulf of Mexico"); TEX. NAT. RES. CODE § 61.001(5) (defining "line of vegetation" as "the extreme seaward boundary of natural vegetation which spreads continuously inland").

^{67. 717} S.W.2d 106, 108-11 (Tex. App.1986).

^{68.} Id. at 107.

^{69.} Id. at 108.

^{70.} Id. at 109.

easements due to accretion or erosion, the court pointed out that "[t]his proposition that a public easement may move with the changes in the waterways it borders is not a novel idea. Courts have upheld the concept of a rolling easement along rivers and the sea for many years without using the phrase 'rolling easement."⁷¹ Additional emphasis was placed on the fact that the purpose of the Act was to provide the public with unrestricted access to public beaches and that not allowing the easement to shift would in some cases cause the easement to entirely disappear.⁷² It concluded "that the vegetation line is not stationary and that a rolling easement is implicit in the Act."⁷³

Since *Feinman*, Texas courts have consistently held that the public beach easement automatically moved up or back to each new vegetation line and that the state did not have to re-establish that the easement exists with each new shift of the vegetation line. For example, in *Arrington v. Texas General Land Office*, the littoral owners argued that the boundary of the easement does not move with the new vegetation line unless the state proves that the public actually used the new area bounded by the line.⁷⁴ In rejecting this argument, the *Arrington* court ruled that

[o]n the contrary, once a public beach easement is established, it is implied that the easement moves up or back to each new vegetation line, and the State is not required to repeatedly re-establish that an easement exists up to that new vegetation line (but only that the line has moved).⁷⁵

In the very important recent case of *Brannan v. State*,⁷⁶ the court went one step further in supporting the enforcement of the rolling easement doctrine by holding that the easement applies equally to existing structures as it does to the active introduction of a new structure.⁷⁷ As in the previously discussed cases, *Brannan* involved a number of houses that were ordered removed after a tropical storm moved the vegetation line landward of where the houses were located.⁷⁸ The homeowners, among other arguments, asserted that they were not in violation of the rolling easement because TOBA's "authority to enjoin encroachments on the public

^{71.} Id. at 110.

^{72.} Id. at 111.

^{73.} Id.

^{74. 38} S.W.3d 764, 766 (Tex. App. 2001).

^{75.} Id. at 766 (citation omitted).

^{76.} No. 01-08-00179-CV, 2010 Tex. App. LEXIS 799 (Tex. App. Feb. 4, 2010).

^{77.} Id. at *44-45.

^{78.} Id. at *4.

easement targets the active introduction of a structure onto an existing public easement area" and not existing structures such as their longstanding homes.⁷⁹ They contended that this was a matter of first impression⁸⁰ and focused solely on the definition of "encroachment" to support their contention that the Legislature "intended the Act to apply only to the active introduction of a new 'improvement, maintenance, obstruction, barrier, or other encroachment on a public beach."⁸¹ After examining TOBA's legislative history, statutory construction, and the Legislature's intent, the court refused to give the term "encroachment" such a narrow meaning and concluded that the Act applies to anything that interferes with the public's use of the easement.⁸² According to the court, it doesn't matter whether the owner of the property actively introduces the obstruction or the easement rolls to a portion of the property that formerly had not been located on the easement.⁸³

In addition, the *Brannan* court found that a regulatory taking did not occur "either under common law or under [TOBA] because the public's easement was established by dedication under the common law."⁸⁴ Because this constitutes a background principle of Texas law, it does not constitute a taking under the standard provided in the U.S. Supreme Court's *Lucas* decision.⁸⁵

The acceptance and judicial support of rolling easement doctrine as articulated by the *Feinman-Arrington-Brannan* line of cases is confined to the construction and policy implications of TOBA and to relevant state common law. Some commentators have questioned the decisions for not relying upon a broad public trust rationale rather than statutory and common law authority.⁸⁶ However, it is important to point out that unlike most states, the State of Texas may grant submerged lands to individuals unburdened by an implied reservation in favor of the public trust.⁸⁷ According to one court, imposing restrictions on the use and development of submerged lands under the public trust doctrine "has

^{79.} Id. at *44.

^{80.} Id. at *63-64.

^{81.} *Id.* at *44.

^{82.} Id. at *47-50.

^{83.} Id. at *50.

^{84.} Id. at *65.

^{85.} See Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1029-30 (1992) (stating that the enforcement of existing easements would not entitle a landowner to compensation as a regulatory taking).

^{86.} See Caldwell & Segall, supra note 6, at 571.

^{87.} Robin Kundis Craig, A Comparative Guide to the Western States' Public Trust Doctrines: Public Values, Private Rights, and the Evolution Toward an Ecological Public Trust, 37 ECOLOGY L.Q. 53, 181-82 (2010) [hereinafter, Craig, Western States' Public Trust Doctrines].

not fared well in Texas jurisprudence."⁸⁸ Given the reluctance of Texas courts to apply the public trust doctrine under well-accepted circumstances, such as the state granting submerged lands to individuals, it is highly unlikely that they will apply the doctrine to the more controversial situation of creating public easements on dry-sand beaches.⁸⁹

IV. SEVERANCE V. PATTERSON–THE U.S. COURT OF APPEALS FOR THE FIFTH CIRCUIT ENTERS THE FRAY

The well-established line of state appellate court decisions that upheld the rolling easement doctrine was challenged most recently by Carol Severance, a California resident who purchased three rental homes on Galveston Island in April 2005.⁹⁰ At the time that she purchased the properties, Severance "had reason to know that the location of the vegetation line could pose a problem."⁹¹ In fact, in 1999, the state had listed two of her homes as "seaward of the vegetation line and referred them to the Attorney General for possible removal."⁹² Moreover, her sales contract contained the disclosure language warning that the structure could be removed by the state⁹³ as mandated by TOBA.⁹⁴ Five months after Severance's purchase, Hurricane Rita damaged the properties and moved the vegetation further landward.⁹⁵

In 2006, after years of litigation and political debate as well as a two-year moratorium to study the matter, State General Land Commissioner Jerry Patterson enacted a plan to offer property owners financial assistance to remove their homes from the public portion of the beach.⁹⁶ After state officials conducted a survey of the vegetation line and found that Severance's property fell seaward of the line, she was contacted and offered \$40,000

^{88.} Natland Corp. v. Baker's Port, Inc., 865 S.W.2d 52, 60 (Tex. App. 1993). See also Ratliff, supra note 45, at D-20 to D-21.

^{89.} For a state-by-state comparison of the public trust, see Robin Kundis Craig, A Comparative Guide to the Eastern Public Trust Doctrines: Classifications of States, Property Rights, and State Summaries, 16 PENN ST. ENVTL. L. REV. 1, 21-24 (2007), and Craig, Western States' Public Trust Doctrines, supra note 87, at 93-198.

^{90.} Severance v. Patterson, 485 F. Supp. 2d 793, 797 (S.D. Tex. 2007).

^{91.} Id.

^{92.} Id.

^{93.} Id.

^{94.} See TEX. NAT. RES. CODE § 61.025 (2009).

^{95.} Hurricane Rita hit Southeast Texas and Southwest Louisiana on September 23, 2005. TEXAS ALMANAC 141 (2010). It was a category-3 strength storm and resulted in three deaths, three injuries, and \$2.1 billion in property damage. *Id*.

^{96.} See Texas Open Beaches Enforcement Policy, TEX. GEN. LAND OFFICE (Sept. 18, 2006), http://www.glo.state.tx.us/coastal/beachdune/openbeaches.html.

for removing the home.⁹⁷ Severance and a number of other homeowners refused the offer and filed suit to prevent the State from enforcing TOBA.⁹⁸

She sought declaratory and injunctive relief in federal court to prevent the State from violating her rights under the Fourth, Fifth, and Fourteenth Amendments to the federal Constitution.⁹⁹ More "[s]pecifically, she allege[d] (1) regulatory and (2) 'physical invasion' takings . . . without just compensation; (3) violation of substantive due process; and (4) an unreasonable seizure of her property."¹⁰⁰ The District Court dismissed the suit, ruling that the constitutional claims were not ripe and could not be adjudicated until the State enforces TOBA and removes the property from the beach.¹⁰¹ It went on to point out that the public's rolling easement was established long before Severance purchased her beach property and is one of the "background principles" of Texas littoral property law.¹⁰² Severance appealed her Fourth and Fifth Amendment challenges to the rolling easement theory to the U.S. Court of Appeals for the Fifth Circuit.¹⁰³

In a two to one decision, a Fifth Circuit panel affirmed the District Court's dismissal of Severance's takings claim under the Fifth Amendment of the U.S. Constitution, ruling that her claim was unripe.¹⁰⁴ However, the panel found the Fourth Amendment seizure claim to be ripe and certified three questions to the Texas Supreme Court to address Severance's claim.¹⁰⁵ These questions included the following:

1. Does Texas recognize a "rolling" public beachfront access easement, *i.e.*, an easement in favor of the public that allows access to and use of the beaches on the Gulf of Mexico, the boundary of which easement migrates solely according to naturally caused changes in the location of the vegetation line, without proof of prescription, dedication or customary rights in the property so occupied?

^{97.} Severance v. Patterson, No. 09-0387, 2010 WL 4371438 (Tex. Nov. 5, 2010), reh'g granted (Mar. 11, 2011); Severance, 485 F. Supp. 2d at 798.

^{98.} Id.

^{99.} Id.

^{100.} *Id*.

^{101.} Id. at 802.

^{102.} Id. at 804.

^{103.} See Severance v. Patterson, 566 F.3d 490 (5th Cir. 2009).

^{104.} Id. at 504.

^{105.} Id. at 500, 503-04.

- 2. If Texas recognizes such an easement, is it derived from common law doctrines or from a construction of the OBA?
- 3. To what extent, if any, would a landowner be entitled to receive compensation (other than the amount already offered for removal of the houses) under Texas's law or Constitution for the limitations on use of her property effected by the landward migration of a rolling easement onto property on which no public easement has been found by dedication, prescription, or custom?¹⁰⁶

The Fifth Circuit panel majority was clearly skeptical of the analysis and authorities cited by the long line of lower Texas courts in support of the rolling easement doctrine calling them "utterly inconsistent."¹⁰⁷ It noted that there are "obvious conceptual difficulties in concluding that an easement is established by implied dedication or prescription, for example, over areas on which the public has never set foot."¹⁰⁸ It went on, in a footnote, to criticize each decision individually, commenting, "[i]ndubitably, no 'fixed' background principles of state law are articulated, only mutually inconsistent post hoc rationales."¹⁰⁹

Judge Wiener, in his dissent, accused the majority of not just erroneously interpreting Texas law, but also doing the bidding of ideologically-driven property rights advocates.¹¹⁰ He pointed out that Ms. Severance was a California resident who was "represented by counsel furnished *gratis* by the Pacific Legal Foundation[,]" a California-based public interest law firm which has been long known for "defending the fundamental human right of private property."¹¹¹ According to Judge Wiener, the real object of the suit is "not to obtain reasonable compensation for a taking of properties either actually or nominally purchased by Severance, but is to eviscerate the OBA, precisely the kind of legislation that, by its own declaration, the Foundation targets."¹¹² He contended that the majority panel's decision had the "unintentional effect of enlisting the federal courts and, via certification, the

112. Id.

^{106.} Id. at 504.

^{107.} Id. at 499.

^{108.} Id. at 502.

^{109.} Id. at 499 n.8.

^{110.} Id. at 504-05 (Wiener, J., dissenting).

^{111.} Id. at 504 (internal alterations omitted).

Supreme Court of Texas, as unwitting foot-soldiers in this thinly veiled Libertarian crusade."¹¹³

V. THE TEXAS SUPREME COURT SIGNIFICANTLY WEAKENS ROLLING EASEMENTS

The politically-charged missives contained in the Fifth Circuit's majority and dissenting opinions set the stage for Texas Supreme Court's entrance into the *Severance* dispute. Obviously aware of the controversy that its decision would generate, the Supreme Court waited to publicly release its opinion until Friday afternoon, November 5, 2010, three days after national and state elections that included the Governor's race.¹¹⁴

Overturning decades of state appellate precedent, the Texas Supreme Court ruled that rolling easements *do* exist under Texas law if they were created by the slow process of erosion, but that they *do not* exist if created by a sudden and rapid change known as "avulsion."¹¹⁵ According to the Court, the public may no longer have access to the beach where Ms. Severance's home is located because Hurricane Rita allegedly caused the shift of the vegetation line.¹¹⁶ Consequently, because an avulsive act caused the vegetation line to move, the existing prescriptive easement does not "roll," and the state must provide proof that a prescriptive easement has been reestablished on the beach up to the new vegetation line.¹¹⁷ Proof of a new prescriptive easement is required even though an existing easement was established as early as 1975 immediately seaward of Severance's property.¹¹⁸ It is very unlikely that the state will be able to make this showing because until Hur-

^{113.} Id.

^{114.} On November 2, 2010, Republican Rick Perry was elected to an unprecedented third term as Governor.

^{115.} See Severance v. Patterson, No. 09-0387, 2010 WL 4371438, *11 (Tex. Nov. 5, 2010), reh'g granted (Mar. 11, 2011). "Erosion is the gradual and imperceptible wearing away of land bordering on a body of water by the natural action of the elements. Avulsion is . . . the sudden and perceptible alteration of the shoreline by action of the water[.]" JOSEPH J. KALO ET AL., COASTAL AND OCEAN LAW: CASES AND MATERIALS 50 (3d ed. 2007) (emphasis added). Under the English common law and as a general rule in most U.S. States, "where the shoreline is gradually and imperceptibly changed or shifted by accretion, reliction or erosion, the boundary line is extended or restricted in the same manner. The owner of the littoral property thus acquires title to all additions arising by accretion or reliction, and loses soil that is worn or washed away by erosion. However, any change in the shoreline that takes place suddenly and perceptibly does not result in a change of boundary or ownership." Id.

^{116.} See Severance, 2010 WL 4371438, at *2. Whether the public has an easement on Severance's property will be determined in federal court. Id. at *4 n.6.

^{117.} *Id*. at *1.

^{118.} Id. at *2.

ricane Rita shifted the vegetation line in 2005, the public had no need to use that portion of the beach.

One very odd aspect of the Court's holding is the distinction that it created between the legal effects of avulsive versus erosional changes to the beach. Never before had the state adopted a distinction between erosion versus avulsion in the coastal context.¹¹⁹ For example, in *City of Corpus Christi v. Davis*, a private land owner argued that he should be compensated because four acres of his eighteen-acre parcel had disappeared due mainly to hurricanes.¹²⁰ The State leased the by-then-submerged acres to the City of Corpus Christi, which filled them and used them as a public park.¹²¹ The landowner sued the State arguing that he had never lost title to the tract because the loss of land resulted from avulsive actions of a hurricane.¹²²

The court of appeals in *Davis* rejected the landowner's theory that avulsive changes should be treated differently than erosional changes. First, it noted that unlike some other states, Texas has only applied the distinction to river cases and that neither the Texas Supreme Court nor any other court had applied it to coastal property.¹²³ Second, it found the landowners had not proved that the loss was caused by a sudden avulsive event rather than by gradual erosion or a combination of the two and therefore it did not have to rule on the distinction.¹²⁴

According to well-known Texas attorney and coastal boundary expert Shannon Ratliff, no published opinion since *Davis* has considered whether the erosion versus avulsion distinction could apply to coastal land.¹²⁵ In fact, Ratliff contends that it is difficult to conceive of any sudden and severe weather event that could be entirely separated from those non-storm wind and wave actions that carve and contour the state's beaches on a daily basis.¹²⁶

As shown below, this view of coastal processes is borne out by scientific observation and analysis. Hurricanes, tropical storms, strong winds, and high tides are always present along the Gulf of Mexico. These episodic natural events cannot be separated and disentangled from one another as envisioned by the majority in

^{119.} See generally Ratliff, supra note 45, at D-29 to D-30.

^{120.} City of Corpus Christi v. Davis, 622 S.W.2d 640, 642 (Tex. App. 1981).

^{121.} Id.

^{122.} Id.

^{123.} Id. at 643-46. 124. Id. at 642-46.

^{125.} Ratliff, supra note 45, at D-30.

^{126.} Id. See also Forrest J. Bass, Comment, Calming the Storm: Public Access to Florida's Beaches in the Wake of Hurricane-Related Sand Loss, 38 STETSON L. REV. 541, 561 (2009) (stating that compensation to private property owners is "unfeasible in light of the dynamic fluctuations resulting from daily changes in the tide and seasonal damage resulting from hurricanes and other severe weather events").

Severance; such an undertaking would be an extraordinarily difficult, if not impossible, task. For example, two of Ms. Severance's beach properties were already on a list published in 1999 of homes that were on the public beach easement.¹²⁷ Exactly how to allocate what proportion of the cause of the shift in the vegetation line that occurred as a result of ongoing erosion prior to and after 1999, as opposed to changes directly and solely caused by Hurricane Rita, may never be known. Rita was clearly not the sole cause of the exposure of Ms. Severance's property to the beach and Gulf; the property certainly has been subjected to episodic erosional events over centuries. An approach of applying a limited exception to the migration of a dynamic coastal right of access, by carving out avulsive events from the history of continual beach movement, would lead to a "proportional cause" analysis similar to the approach used in personal injury cases, and would always require a jury trial to determine the location of any easement for beach access.

A. Severance Ignores the Geologic Realities Along the Texas Gulf Coast

A more serious problem with the "avulsion" versus "erosion" approach is that it does not accurately reflect geologic reality along the Texas coast. No coastline can be viewed through the "snapshot" of a limited span of time. Coastal erosion is episodic, not either "imperceptible" or "avulsive" as indicated in the court's majority opinion. Viewed over time, and when tracked over seventy years of measurement by the University of Texas Bureau of Economic Geology,¹²⁸ erosion rates are not uniform or predictable but do exhibit trends that are discernable over time.¹²⁹

Landward retreat of the vegetation line is caused by waves reaching above the normal wet line on the beach and eroding the vegetated sand, burying vegetation with eroded sand, or both.¹³⁰ This process requires only moderately high waves and elevated water levels of two to four feet depending on the width and height of the fronting beach.¹³¹ Ongoing erosion of the beach is occurring as a historical constant on the majority of Texas' Gulf beaches. The ongoing nature of erosion causes a narrower beach

^{127.} See Severance v. Patterson, 485 F. Supp. 2d 793, 800 (S.D. Tex. 2007).

^{128.} See James C. Gibeaut et al., *The Texas Shore Line Change Project*, BUREAU OF ECON. GEOLOGY, http://www.beg.utexas.edu/coastal/intro.php (last visited May 9, 2011).

^{129.} See id.; Index Map, BUREAU OF ECON. GEOLOGY, http://www.beg.utexas.edu/ coastal/imsindexNew.php (last visited May 9, 2011).

^{130.} See James C. Gibeaut et al., Threshold Conditions for Episodic Beach Erosion Along the Southeast Texas Coast, 52 GULF COAST ASS'N OF GEOLOGICAL SOC'YS TRANSACTIONS 1, 1-4 (2002).

^{131.} See id. at 8-10.

and a situation where a relatively small storm event may cut back the vegetation line. Any significant landward movement of the vegetation line is normally rare, but is often indistinguishable from an event that may be termed avulsive, except in degree. Thus, ongoing beach erosion before a storm increases the likelihood of such an avulsive event.¹³²

The episodic nature of vegetation line retreat is in contrast to the relatively slow and gradual seaward movement of vegetation as fair-weather conditions prevail and vegetation is able to grow seaward. Furthermore, the seaward advance of vegetation does not usually occur as a line marching seaward but rather in a patchy pattern of vegetation that may eventually fill in and form a new vegetation line.¹³³ This process is critical to the coast because vegetation is essential for capturing windblown sand and establishing stable dunes that help protect landward areas from storm impacts and slow the rate of shoreline retreat.¹³⁴ This gradual advance and establishment of the vegetation line and protective dunes will not occur if houses or structures are in the area where the beach would normally build up and create conditions for vegetation to grow.¹³⁵ Thus, the presence of houses in the would-be vegetation zone prevents the establishment of vegetation and the formation of dunes, leaving the coast in a degraded and more hazardous state.

Given this geologic reality in which landward movements of dune vegetation lines are normally caused by episodic events, sometimes of relatively small size and duration, the reestablishment of protective dunes will not occur if structures exist on the beach, and the majority decision establishes a policy that exacerbates the degradation of Texas beaches. By weakening the ability of the state to control or remove structures seaward of the dune vegetation line, shoreline retreat will accelerate. The title held by private property owners will be lost, as stated in the majority's opinion, and the public will be excluded from larger and larger portions of Gulf-facing beaches.

B. Severance Treats Usage Rights and Property Rights Differently

The *Severance* majority obviously recognized the practical and legal difficulties associated with applying the erosion versus avul-

^{132.} For similar insights on Florida's beaches, see Donna R. Christie, *Of Beaches, Boundaries and SOBS*, 25 J. LAND USE & ENVTL. L. 19, 52 (2009).

^{133.} See Robert A. Morton et al., Stages and Durations of Post-Storm Beach Recovery, Southeastern Texas Coast, U.S.A., 10 J. COASTAL RES. 884, 905 (1994).

^{134.} See id.

^{135.} See id. at 902.

sion distinction as it pertains to coastal public and private ownership of beach property. It rejected the distinction as it applies to the delineation of boundaries by noting that "[w]e have not accepted such an expansive view of the doctrine[.]"¹³⁶ It condoned the notion that losing title to private property to the public trust as it becomes part of the wet-sand beach or submerged land due to "natural forces of wind, rain, and tidal ebbs and flows" combined with seasonal hurricanes and tropical storms "is an ordinary hazard of owning [beach] property."¹³⁷ Yet, under the same natural conditions, it felt that it is far less reasonable to encumber private property with incorporeal rights such as a public easement on a "portion of a landowner's property that was not previously subject to that right of use."¹³⁸ In his dissenting opinion, Judge Medina pointed to the illogical nature of such a ruling by noting that:

a property owner loses title to land if, after a hurricane or tropical storm, such land falls seaward of the mean high tide. On the other hand, this same hurricane, under the Court's analysis, requires the state to compensate a property owner for the land that now falls seaward of the vegetation line unless it was already a part of the public beachfront easement.¹³⁹

The majority refers to "honoring reasonable expectations in property interests."¹⁴⁰ These reasonable expectations are applied in the context of the Fourth Amendment to the United States Constitution, as it must under the record in this case.¹⁴¹ The court then applies this reasonableness standard as the basis for distinguishing between boundary delineation for ownership and boundary delineation for easements.¹⁴² However, the court is much less concerned with preserving investment-backed expectations when the government action takes fee simple title to the land than when the government action invades a landowner's interest, for example with an easement across the property. This concern over propertybacked expectations is especially curious given the fact—noted by the court—that most coastal property owners were fully aware that the public may have an easement on their beach property at

^{136.} Severance v. Patterson, No. 09-0387, 2010 WL 4371438, *22 n.16 (Tex. Nov. 5, 2010), reh'g granted (Mar. 11, 2011).

^{137.} Id at *10.

^{138.} Id.

^{139.} Id. at *18 (Medina, J., dissenting).

^{140.} Id. at *10 (citing Phillips Petroleum Co. v. Mississippi, 484 U.S. 469, 482 (1988)).

^{141.} See id. at *2.

^{142.} Id. at *10.

least since the 1985 amendments to TOBA,¹⁴³ which required express disclosure of the possibility of rolling easements,¹⁴⁴ and the 1986 *Feinman* decision, which judicially recognized the doctrine.¹⁴⁵

C. Severance Rules that Easements Do Not Shift Due to the Forces of Nature

In addition to the perceived unfairness of burdening property owners with easements created by sudden weather events, the majority also incorrectly found that easements, once established, cannot be changed without the consent of the parties.¹⁴⁶ It found no authority for the contention that in the absence of mutual consent, an easement forever remains in the dry sand and can move onto new portions of the parcel or a different parcel.¹⁴⁷

Moreover, it dismissed as "inconsistent with easement law" a long line of Texas oil and gas cases cited by the dissent that establishes that easements may shift to ensure that the purpose of the dominant property interest is reasonably fulfilled.¹⁴⁸ For example, it is well established in Texas that "oil and gas leases convey an implied easement to use the surface as reasonably necessary to fulfill the purpose of the lease."149 While "[t]he purpose of the easement cannot expand, . . . under certain circumstances, the geographic location of the easement may."150 Similarly, Texas has long recognized that roads acquired by prescription "due to rains and washouts along a river bottom, would ordinarily vary some from a path established many years ago. It does not follow that rights acquired by the public years ago were lost by failure of the public to travel the full width of the old road."151 The Restatement (Third) of Property (Servitudes) supports this by providing that easements "should be interpreted to give effect to the intention of the parties ascertained from the language used in the instrument, or the circumstances surrounding creation of the servitude, and to carry out the purpose for which it was created."¹⁵²

^{143.} Id. at *8.

^{144.} Tex. Nat. Res. Code § 61.025 (2009).

^{145.} Feinman v. State, 717 S.W.2d 106, 108-11 (Tex. App. 1986).

^{146.} Severance, 2010 WL 4371438, at *9, *12 (citing Holmstrom v. Lee, 26 SW.3d 526, 533 (Tex. App. 2000)).

^{147.} *Id.* (citing JON W. BRUCE & JAMES W. ELY, JR., THE LAW OF EASEMENTS AND LICENSES IN LAND § 7.13, at 7-30 (2009)).

^{148.} Id. at *12 (citing Holmstrom v. Lee, 26 SW.3d 526, 533 (Tex. App. 2000)).

^{149.}Id.at *17 (Medina, J., dissenting) (citing Sun Oil Co. v. Whitaker, 483 S.W.2d 808, 810 (Tex. 1972)).

^{150.} Id. (comparing Marcus Cable Assocs. v. Krohn, 90 S.W.3d 697, 701 (Tex. 2002) with Godfrey v. City of Alton, 12 Ill. 29 (1850)).

^{151.} Nonken v. Bexar Cnty., 221 S.W.2d 370, 374 (Tex. App. 1949).

^{152.} Restatement (Third) of Prop.: Servitudes § 4.1 (2000).

The majority also failed to consider the trend in other coastal states to recognize easements on beachfront property as notably different from inland property as a result of daily-tidal fluctuations, sea level rises, and catastrophic weather events.¹⁵³ For example, the North Carolina Supreme Court relied on the Texas cases of *Seaway*¹⁵⁴ and *Feinman*,¹⁵⁵ among others, to hold that public easements over dry sand beaches should not be treated as precise, permanent boundaries, but should shift with dynamic natural changes of the beachfront.¹⁵⁶ The court made no distinction between erosion and avulsion and specifically mentioned "ocean storms" as agents of coastal change.¹⁵⁷ It reversed the lower court's ruling that required precisely defined easements finding that:

[t]o require that there be no change, or at most only very slight change, in a road traveled by many for the prescriptive period over an area highly vulnerable to the forces of wind, shifting sand, ocean tide, flooding from ocean or sound, etc., would effectively bar the acquisition of a prescriptive easement in many locales of the coastal area of our state.¹⁵⁸

The Georgia Supreme Court has similarly ruled that a beachfront easement that allowed public access "is subject to expansion or contraction by the forces of nature."¹⁵⁹

By creating this unwarranted legal distinction between coastal change caused by erosion versus avulsion, the Texas Supreme Court has enacted a rule that ignores geologic processes that shape Texas' beaches and accelerates continued coastal degradation. It rejects a rational, well-accepted, and easy-to-apply rule, which recognizes that easements in coastal areas are dynamic and by necessity need to move with physical changes of the beach. Instead, it has chosen a policy that freezes the easement in place and guarantees that the state and private property owners will be embroiled in expensive litigation for many decades. This approach fails to consider the nature and purpose of the public's right of access, which is unique to the coast. Additionally, though riverine and coastal boundaries are not completely analogous, even navigable

^{153.} See Bass, supra note 126, at 559-60.

^{154.} Seaway Co. v. Attorney Gen. of Tex., 375 S.W.2d 923 (Tex. App. 1964).

^{155.} Feinman v. State, 717 S.W.2d 106 (Tex. App. 1986).

^{156.} Concerned Citizens of Brunswick Cnty. Taxpayers Assoc. v. Holden Beach Enters., 404 S.E.2d 677, 684-85 (N.C. 1991).

^{157.} Id. at 683.

^{158.} Id.

^{159.} Bruce v. Garges, 379 S.E.2d 783, 785 (Ga. 1989) (footnote omitted).

rivers are burdened by their historic use as private and commercial routes, and where the riverbed shifts, the easement for navigation also shifts. 160

VI. ACTIONS SUBSEQUENT TO THE SEVERANCE DECISION

About one week after the *Severance* case was handed down, the Commissioner of the Texas General Land Office, Jerry Patterson, cancelled a long scheduled \$40 million project that would have placed new sand in front of 450 homes on six miles of the most rapidly eroding beach on the west end of Galveston Island.¹⁶¹ This was the same area in which Carol Severance's properties were located.¹⁶² According to Commissioner Patterson, the renourishment project had to be cancelled because of a constitutional prohibition against spending public money to improve private property.¹⁶³ Ironically, by the time that the project was cancelled, Severance had already accepted "more than \$1 million from the sale of two rental properties under the Federal Emergency Management Agency's hazard mitigation acquisition program, intended to buy homes in areas prone to repeated flooding¹⁶⁴ Records indicated that these homes were sold at pre-storm market values of \$336,000 and \$813,000.165

Severance's neighbors on the west end of Galveston Island were understandably upset about the Commissioner's decision and an emergency meeting of the Galveston City Council was called to discuss the issue.¹⁶⁶ The city led an effort to get every property owner on the beach to approve an agreement restoring the public easement.¹⁶⁷ Several property owners asserted that they would only sign the easement document if it provided for a fixed boundary and not a rolling easement.¹⁶⁸ However, Commisioner Patterson took the position that they would give the property owners thirty days to come up with the signatures of all the affected property

^{160.} Feinman, 717 S.W.2d at 110 (citing Barney v. City of Keokuk, 94 U.S. 324, 339-40 (1876); Luttes v. State, 324 S.W.2d 167 (Tex. 1958); Cnty. of Hawaii v. Sotomura, 517 P. 2d 57, 61 (Haw. 1973); Horgan v. Town Council, 80 A. 271 (R.I. 1911); City of Chicago v. Ward, 48 N.E. 927 (Ill. 1897); Godfrey v. City of Alton, 12 Ill. 29, 36 (Ill. 1850); Mercer v. Denne, 2 Ch. 538 (Eng. 1905)).

^{161.} Rice, State Calls Off Beach Project, supra note 11.

^{162.} See id.

^{163.} *Id*.

^{164.} Harvey Rice, *Buyout a Boon to Victor in Beach Suit*, HOUS. CHRON., Nov. 21, 2010, at B1 [hereinafter Rice, *Buyout a Boon*].

^{165.} Id.

^{166.} Rob Nixon, Texas Open Beaches Act–The Fight Continues . . ., TEX. GULF COAST SURFING MAG., Dec. 2010, at 12, 16.

^{167.} Rice, Buyout a Boon, supra note 164.

^{168.} *Id*.

owners but would only accept the reinstatement of the rolling easement as defined by the Open Beaches Act.¹⁶⁹ Given the fact that a single holdout property owner could stop the plan and that property owners are located throughout the nation and even out of the country,¹⁷⁰ it is highly unlikely that the compromise will succeed.

The Texas General Land Office is moving forward to petition the Texas Supreme Court for a rehearing on the case before it is transferred back to the U.S. Fifth Circuit Court of Appeals for its ruling.¹⁷¹ By January 2011, nearly two dozen amicus briefs were submitted in favor of the Texas General Land Office request.¹⁷² On March 11, 2011, the Texas Supreme Court granted the motion for rehearing.¹⁷³ Despite broad opposition to the *Severance* ruling from coastal cities and counties, grassroots citizens groups, the Chamber of Commerce, and academics, few observers believe that the Supreme Court will modify its decision on rehearing.

VII. POTENTIAL IMPACT OF *Severance* on Rolling Easements in Florida and Other States

Texas has served as a model for many coastal states that have adopted versions of the rolling easement doctrine.¹⁷⁴ It is unlikely that the *Severance* decision will have much impact on most of these states. None have applied the doctrine as forcefully or broadly as Texas. Moreover, unlike Texas, which has applied it primarily to promote beach access, most states have adopted aspects of the doctrine to restrict coastal armoring and minimize damage to fragile and dynamic environmental resources such as sand dune systems.¹⁷⁵

In the Gulf Region, Florida may be an exception to this observation and may be strongly impacted by the *Severance* ruling. Among all the states, Florida has moved furthest toward adopting a rolling easement doctrine similar to the one in place in Texas.

^{169.} Id.

^{170.} Id.

^{171.} See Joint Motion for Rehearing for Defendants-Appellees, Severance v. Patterson, 2010 WL 4371438 (Tex. Nov. 5, 2010) (No. 09-0387), available at http://www.supreme.courts.state.tx.us/ebriefs/09/09038710.pdf.

^{172.} All briefs can be found at the Texas Supreme Court Website. *Case Search*, SUP. CT. TEX.,http://www.supreme.courts.state.tx.us/opinions/case.asp?FilingID=30434 (last visited May 9, 2011).

^{173.} See Press Release, Texas General Land Office, Texas Open Beaches Act Gets Second Chance (Mar. 11, 2011), available at http://www.glo.texas.gov/glo_news/press_releases/2011/MARCH/Open-Beaches.pdf.

^{174.} These include Maine, North and South Carolina, Massachusetts, Rhode Island, and Oregon. See Caldwell & Segall, supra note 6, at 572; Higgins, supra note 5, at 51.

^{175.} See Caldwell & Segall, supra note 6, at 572.

The Florida Supreme Court's landmark case of *City of Daytona Beach v. Tona-Rama, Inc.*, found that the public may have a customary right of access to dry-sand portions of Florida's beaches.¹⁷⁶ While rejecting state-wide application, the court found that the public's right to access and use a particular area of privatelyowned beach depends on proof that the general portion of the beach in question is consistent with the public's claim of recreational use of the sandy area that "has been ancient, reasonable, without interruption and free from dispute."¹⁷⁷ This acceptance of a customary easement as an underlying common law background principle provides a foundation for courts in the future to take the next step by ruling that the boundary between public and private property rolls with natural changes to the beach.

In fact, the doctrine of establishing rolling easements in the state was directly addressed by Florida's Fifth District Court of Appeal in Trepanier v. County of Volusia.¹⁷⁸ As a result of severe erosion caused by hurricanes occurring in 1999 and 2004, public use of the beach shifted inland and onto the Trepanier's beachfront property.¹⁷⁹ Like many Florida beaches, the public has long been allowed to drive and park on portions of the beach.¹⁸⁰ The County prohibited vehicles within a created thirty-foot Habitat Conservation Zone (HCZ) in order to ensure endangered sea turtles' health.¹⁸¹ Posts reflecting driving lanes are moved periodically to reflect varying conditions on the beach.¹⁸² Because of the erosion, the county moved the public-driving boundary and the HCZ inland onto a portion of the Trepanier's property.¹⁸³ The property owners claimed inverse condemnation, based on the county's alleged appropriation of their property for driving and parking lanes in the absence of a valid easement.¹⁸⁴

In defense, the county argued that "[n]ot only can title change because of the advances and retreats of the sea, but also the location and extent of easements or right of use along waterways move with changes in the tide."¹⁸⁵ The court did not accept the county's rolling easement argument, primarily because it did not have proof as to whether boundary change occurred as a result of avulsion or

^{176.} City of Daytona Beach v. Tona-Rama, Inc., 294 So. 2d 73, 78 (Fla. 1974).

^{177.} Id. at 77-78.

^{178.} Trepanier v. Cnty. of Volusia, 965 So. 2d 276 (Fla. 5th DCA 2007).

^{179.} Id. at 278.

^{180.} Id.

^{181.} Id. at 279.

^{182.} Id.

^{183.} Id.

^{184.} Id.

^{185.} *Id* at 292.

erosion and remanded for further findings.¹⁸⁶ It reiterated that Florida, unlike Texas, had a general rule that avulsion in coastal areas does not change boundaries.¹⁸⁷ It distinguished the public policy pronouncements made in the Texas case of *Matcha v. Mattox*¹⁸⁸ as unique to that jurisdiction and stated that the migration of the public's customary use of the beach is dependent on proof of avulsion versus erosion.¹⁸⁹ Finally, it made clear "that a question as important as the meaning and scope of *Tona-Rama* and the migration of the public's customary right to use of the beach will ultimately have to be determined by the Supreme Court of Florida, not this court."¹⁹⁰

Given the inevitable and growing tensions between public beach access and private property rights along the heavily developed Florida coast, it is likely that the legal question deciding whether rolling easements do or do not exist will likely be addressed by the Florida Supreme Court in the relatively near future. How much impact the Texas Supreme Court's *Severance* decision may have should the Florida Supreme Court take up the issue is open to speculation. However, it is safe to assume that having the highest court in the state where the rolling easement doctrine is most visibly associated and actively applied reject an important portion of the doctrine will likely weaken its persuasive authority in Florida and elsewhere.

VIII. ARE ROLLING EASEMENTS A VIABLE TOOL TO ADDRESS SEA LEVEL RISE?

Commentators continue to advocate the viability of rolling easements as an effective tool to address sea level rise.¹⁹¹ Their use in more rural, undeveloped coastal areas may be especially valuable. Unlike urban areas where ecological losses are lower and replacement costs higher, imposing rolling easements in undeveloped areas will allow nature to take its course so that dune areas and coastal wetlands may migrate inland with the rising seas.¹⁹² Consequently, implementation in rural areas will be less expensive

^{186.} Id at 292-293.

^{187.} Id at 293 (citing Siesta Props. v. Hart, 122 So. 2d 218 (Fla. 2d DCA 1960)).

^{188. 711} S.W.2d 95 (Tex. App. 1986).

^{189.} See Trepanier, 965 So. 2d at 292-93.

^{190.} Id. at 293 n.21. For further analysis, see Bass, supra note 125; Christie, supra note 132, at 48-50.

^{191.} See Caldwell & Segall, supra note 6, at 550-78; Higgins, supra note 5, at 51-52, 64; Sandra S. Nichols & Carl Bruch, New Frameworks for Managing Dynamic Coasts: Legal and Policy Tools for Adapting U.S. Coastal Zone Management to Climate Change, 1 SEA GRANT L. & POL'Y J. 19, 28-30 (2008).

^{192.} See Caldwell & Segall, supra note 6, at 551, 572-74.

should the state decide to purchase the easements and landowners will have an incentive to incorporate the risk caused by rising seas into their future land use decisions knowing that the possibility of armoring is not an option.¹⁹³

Rolling easements remain an important policy tool to address sea level rise in Texas, albeit at a much reduced level of effectiveness as a result of the Severance decision. Along Gulf-facing beaches, the state can employ a three-prong strategy to respond to sea level rise and prevent inappropriate beach-front development. First, as a result of TOBA and decades of judicial deference aiding its active implementation, structures on the beach can be removed as the dune vegetation line moves inland as a result of sea level rise.¹⁹⁴ Second, the state has the very strong Dune Protection Act.¹⁹⁵ which requires counties with beaches bordering on the Gulf of Mexico to identify critical dunes and prevent construction too close to established dune protection lines.¹⁹⁶ Finally, based on this statutory authority, some counties are beginning to adopt strong setback rules that prevent development from up to 350 feet from dune protection lines.¹⁹⁷ By requiring all new construction to be located a significant distance landward of dune vegetation lines, and by having a legal mechanism to remove existing structures that encroach on the beach, the State is in a strong position to begin transitioning toward a living shorelines approach to sea level rise.

Of course, the *Severance* decision will cast a shadow for many years over this strategy to respond to sea level rise. No one can predict how the courts will apply the term "avulsion" to the coast. There is no workable basis for distinguishing between storms that cause the public easement to migrate versus storms that do not. As written, *Severance* invites beachfront property owners to characterize every storm as "avulsive." In fact, in a companion case currently before the court, Pacific Legal Foundation, which represented Carol Severance, is now pointing to the findings of the *Severance* decision and labeling 1998's Tropical Storm Frances "unusually strong avulsion."¹⁹⁸ The success or failure of property owners to portray every storm as avulsive will determine whether Texas can respond to the threat posed by sea level rise along its Gulf-

^{193.} See id.

^{194.} See discussion supra Parts II, III.

^{195.} Tex. Nat. Res. Code §§ 63.001-63.181 (2009).

^{196.} TEX. NAT. RES. CODE §§ 63.011, 63.091.

^{197.} Jessica Savage, *Nueces to Discuss Beach Setback Rule*, CORPUS CHRISTI CALLER-TIMES, Dec. 16, 2010, at A1.

^{198.} Personal communication from Ken Cross, Assistant Attorney General for the State of Texas (January 5, 2011).

facing beaches. If property owners are successful, and are allowed to rebuild and fortify structures seaward of dune vegetation lines, this will greatly diminish the state's ability to effective response to sea level rise. At the very least, the state will be embroiled for decades in repetitious and wasteful litigation.

It is also important to keep in mind that regardless of Severance, the protections provided by TOBA and the Dune Protection Act only apply to beaches facing the Gulf of Mexico.¹⁹⁹ The innovative beach protection practices for which Texas is best known do not apply to the 3,300 miles of shorelines in Texas that face bays rather than the Gulf of Mexico. The doctrine of rolling easements does not exist along the beaches facing the Laguna Madre or the state's other extensive bay systems. As a consequence, armoring and other engineered methods of protecting property from rising seas and other weather-related hazards continue to take place on a large scale in many coastal areas. Despite a state policy that favors non-structural erosion response techniques over structural methods and a trend toward regional bay planning efforts, such as those undertaken by the Galveston Bay Program²⁰⁰ and the Coastal Bend Bays and Estuary Program.²⁰¹ hardened structures are still being constructed in bay-facing areas. For example, it is estimated that "10 percent of the [Galveston Bay] shoreline has been bulkheaded or converted to docks or revetments."202 Absent an expansion of TOBA to non-Gulf-facing beaches, which no one foresees as a political possibility, rolling easements as a tool to respond to sea level rise will remain unavailable along the vast majority of the Texas coast.

IX. CONCLUSION

Climate change and sea level rise are reshaping the world's coastlines. Low-lying coastal areas along the Gulf of Mexico are especially vulnerable to changes caused by rising sea levels and storm damage. Loss of beaches, critical dune systems, and coastal wetlands will accelerate due to their inability to retreat before the rising sea. The great promise of using the rolling easement doctrine as tool to respond to the impacts of sea level rise still exists

^{199.} See supra note 40 and accompanying text.

^{200.} See Galveston Bay Nat'l Estuary Program, The Galveston Bay Plan: The Comprehensive Conservation and Management Plan for the Galveston Bay Ecosystem (1994), available at http://gbic.tamug.edu/GBPlan/GBPlan.html.

^{201.} See COASTAL BEND BAYS & ESTUARIES PROGRAM, COASTAL BEND BAYS PLAN: TO CONSERVE AND MANAGE THE COASTAL BEND BAYS OF SOUTH TEXAS (1998), available at http://www.cbbep.org/publications/virtuallibrary/cbbin.pdf.

^{202.} GALVESTON BAY NAT'L ESTUARY PROGRAM, supra note 200, at 129.

but has been dealt a heavy blow as a result of the recent *Severance* decision.²⁰³ In that decision, the Texas Supreme Court overturned decades of judicial precedent by ruling that rolling easements may no longer be applied to provide the public with access to beaches that have been impacted by hurricanes and other storm events. Private beach-front property owners may now exclude the public from using significant portions of the state's beaches and prevent the state from removing structures that are currently obstructing the public easement and disrupting the rebuilding of healthy dunes that reduce the threat from high-water events associated with sea level rise.

The court ignored geologic reality and created a rule that treats "avulsion" and "erosion" as static and unrelated events. No coastline can be viewed through the snapshot of a limited span of time. Coastal erosion is episodic rather than "imperceptible" or "avulsive" as indicated by the *Severance* court. Judicial rules that treat boundaries on dry-sand beaches as precise, permanent features rather than constantly shifting dynamic systems misrepresent reality and distort informed coastal decision-making.

Once treated as the national model and test-bed of innovative uses of the rolling easement doctrine, Texas must now begin a long process of legislative and judicial retrenchment. As a result of the lack of guidance provided by the Severance court, years of protracted litigation between the state and private landowners will be required to redefine boundaries and determine the proper balance of interests along the coast. Long-planned responses to the encroachment of the sea will likely be put on hold until these property disputes are settled. For example, so-called soft defenses that include beach renourishment, dune restoration, and shoreline stabilization using vegetation have already been discontinued until public/private beachfront boundaries are clarified.²⁰⁴ Moreover, other states such as Florida, which have traditionally looked to Texas' long experience as a leader in beach access and dune protection matters, will likely rethink this relationship as a consequence of the legal confusion created by the Severance decision.

Coastal communities are best served if authorities, with robust stakeholder involvement, develop "guidelines on preferred shoreline and buffer management practices that support adaptive strategies for responding to" sea level rise.²⁰⁵ Prior to the *Severance* decision, Texas had a strong foundation for such an approach with

^{203.} Supra notes 114-160 and accompanying text.

^{204.} See discussion of the cancellation of a \$40 million beach renourishment project as a result of *Severance* in Rice, *State Calls Off Beach Project, supra* note 11 and accompanying text.

^{205.} Nichols & Bruch, supra note 191, at 34.

the combination of TOBA, Dune Protection Act, and local dune setback ordinances.²⁰⁶ Instead, the Texas Supreme Court has rejected a rational, well-accepted, and easy to apply policy that recognizes that easements in coastal areas are dynamic and by necessity need to move with physical changes of the beach. Instead, it has chosen a policy that freezes the easement in place and guarantees that the state will be involved in expensive litigation for many decades. The only people who should be happy about the *Severance* ruling are the relatively small number of beach homeowners who will be allowed to keep their properties on the beach and the large contingent of coastal geologists, meteorologists, historians, and attorneys who will be asked to sort out this unworkable new rule.

^{206.} See discussion supra notes 194-197 and accompanying text.

PUBLIC TRUST AND PUBLIC NECESSITY DEFENSES TO TAKINGS LIABILITY FOR SEA LEVEL RISE RESPONSES ON THE GULF COAST

ROBIN KUNDIS CRAIG*

I.	INTRODUCTION	396
II.	LUCAS'S "BACKGROUND PRINCIPLES" OF STATE PROPERTY	
	LAW, THE PUBLIC TRUST DOCTRINE,	
	AND PUBLIC NECESSITY	399
III.	THE GULF STATES' PUBLIC TRUST DOCTRINES AND	
	REGULATORY TAKINGS LIABILITY FOR COASTAL DEFENSE	
	AND IMPROVEMENT	403
	A. State Public Trust Doctrines in General	403
	B. Alabama's Public Trust Doctrine and	
	Taking Claims	404
	C. Florida's Public Trust Doctrine and Takings Claims	406
	D. Louisiana's Public Trust Doctrine and	
	Takings Claims	409
	E. Mississippi's Public Trust Doctrine and	
	Takings Claims	411
	F. Texas's Public Trust Doctrine and Takings Claims 4	413
	G. Summary Regarding the Gulf States' Public Trust	
	Doctrines	418
IV.	THE GULF STATES' PUBLIC NECESSITY DOCTRINES AND	
	REGULATORY TAKINGS LIABILITY FOR COASTAL DEFENSE	
	AND IMPROVEMENT	419
	A. Public Necessity in General	419
	B. Public Necessity and Takings Claims in Alabama	422
	C. Public Necessity and Takings Claims in Florida	423
	D. Public Necessity and Takings Claims in Louisiana	
	E. Public Necessity and Takings Claims in Mississippi.	428
	F. Public Necessity and Takings Claims in Texas	429
	G. Summary of the Gulf States'	
	Public Necessity Doctrines	430
V.	CONCLUSION	431

^{*} Attorneys' Title Professor of Law and Associate Dean for Environmental Programs, Florida State University College of Law, Tallahassee, Florida. My thanks to Tim Mulvaney and the other organizers of this Sea Grant conference for inviting me to participate. I may be reached at rcraig@law.fsu.edu.

I. INTRODUCTION

The states bordering the Gulf of Mexico-Alabama, Florida, Louisiana, Mississippi, and Texas-face numerous challenges in coastal management along those shores, including water pollution from the Mississippi River, substantial subsidence, loss of coastal wetlands, and recurring hurricanes and tropical storms. However, a coastal management problem of increasing importance in the climate change era is sea level rise, and measures to adapt and respond to sea level rise will pose many legal challenges for state and local governments. Constitutional challenges that governmental regulation has taken private property in violation of the federal Constitution are likely to be a significant psychologically, if not always financially-subset of those legal challenges to coastal management measures.

According to the U.S. Global Change Research Program's 2009 report on climate change impacts in the United States, global average sea level rose approximately eight inches over the last century.¹ In addition, the *rate* of sea level rise is accelerating; indeed, the rate of global average sea level rise over the last fifteen years was double the rate of the prior century.² Sea levels are rising as a result of two forces, both tied to increasing global average temperatures. In the U.S. Southeast, for example, average temperatures have increased 2°F since 1970,³ and climate scientists expect temperatures to increase by 4.5°F to 9°F by the 2080s, depending on emissions scenarios.⁴ First, increasing sea temperatures resulting from increased air temperatures are causing thermal expansion of ocean waters, increasing the volume of the seas.⁵ Second, increased air temperatures are causing land ice to melt, increasing the amount of water in the oceans.⁶

Globally, this ice melting is the great uncertainty regarding sea level rise predictions,⁷ including for the southeast section of the United States. If the entire Greenland ice sheet melts, global average sea level will rise about 20 feet; if the West Antarctica ice sheet melts, global average sea levels will rise about 16 to 20 feet; and if the East Antarctica ice sheet melts, global average sea levels

^{1.} U.S. GLOBAL CHANGE RESEARCH PROGRAM, GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES 18 (2009) [hereinafter 2009 USGCRP REPORT], *available at* http://downloads.globalchange.gov/usimpacts/pdfs/climate-impacts-report.pdf.

^{2.} Id. (footnotes omitted).

^{3.} *Id.* at 111.

^{4.} *Id*.

^{5.} Id. at 18.

^{6.} *Id*.

^{7.} Id. at 114.
will rise about 200 feet.⁸ As the U.S. Global Change Research Program has noted, "[c]omplete melting of these ice sheets over this century or the next is thought to be virtually impossible, although past climate records provide precedent for very significant decreases in ice volume, and therefore increases in sea level."⁹ In the United States, "[r]apid acceleration in the rate of increase in sea-level rise could threaten a large portion of the Southeast coastal zone."¹⁰

The Gulf of Mexico states are more vulnerable to sea level rise than other places globally or in the United States because of land subsidence.¹¹ The Gulf coast already has had "significantly higher rates of relative sea-level rise than the global average during the last 50 years, with the local differences mainly due to land subsidence."¹² These local forces will continue to be important throughout the twenty-first century. Despite uncertainties in ice sheet melting, scientists predict an increase of global average sea level of two feet or more by the end of the century.¹³ Local subsidence will magnify that impact along the Gulf Coast; for example, a two-foot global average increase in sea level will result in a 3.5-foot sea level rise at Galveston, Texas.¹⁴ Indeed, Orrin H. Pilkey and Rob Young recently identified the Gulf Coast and the Mississippi River Delta in particular as "ground zero" of sea level rise issues in the United States.¹⁵

Nor is local subsidence the only phenomenon that will exacerbate the impacts of sea level rise along the Gulf Coast. Hurricanes and lesser storms and the storm surge that they bring also increase the damage from sea level rise.¹⁶ However, "[e]ven with no increase in hurricane intensity, coastal inundation and shoreline retreat [in the U.S. Southeast] would increase as sealevel rise accelerates, which is one of the most certain and most costly consequences of a warming climate."¹⁷ Associated impacts of sea level rise to the Gulf Coast include: changes to the marine ecosystems in the Gulf and hence the livelihoods that depend on fishing, tourism, and recreation;¹⁸ salt-water intrusion into public

^{8.} Id. at 18.

^{9.} Id. (footnotes omitted).

^{10.} *Id.* at 114.

^{11.} Id. at 37, 114.

^{12.} Id. at 37 (footnote omitted).

^{13.} *Id.* at 114.

^{14.} Id. at 37.

^{15.} ORRIN H. PILKEY & ROB YOUNG, THE RISING SEA 141-57 (2009).

^{16. 2009} USGCRP REPORT, *supra* note 1, at 112, 115.

^{17.} Id. at 112 (footnote omitted).

^{18.} Id. at 115-16.

water supplies;¹⁹ and public health threats such as *Vibrio vulnificus*, cholera, and mosquito-borne diseases.²⁰

In the face of these multiple and multiplying threats to public health and welfare from sea level rise and associated climate change impacts, increased state and local government action in and regulation of the Gulf Coast is virtually inevitable. Such governmental oversight will probably range from minimally intrusive actions, such as more detailed hurricane evacuation plans or increased attention to public health preparedness, to—at least potentially—fairly disruptive interference with coastal private property rights, including increasingly stringent coastal retreat policies.²¹

Government action in the Gulf coastal zone that limits or otherwise affects private property rights leaves state and local governments vulnerable to claims that they have taken private property in violation of the federal Constitution²² and the relevant state constitution.²³ However, although such takings claims are likely to be many, and although the threat of takings liability may chill government willingness to respond to sea level rise, not all (and in fact probably not most) takings claims asserted will be successful. In particular, as the U.S. Supreme Court has recognized, no unconstitutional taking of private property occurs under the federal Constitution if the property owner's claimed rights were never part of that owner's title.²⁴ As a result, certain "background principles" of state property law allow the relevant governments to address sea level rise along the Gulf Coast without incurring an obligation to compensate coastal property owners, even if those actions interfere with or prohibit a landowner's desired use of coastal property.²⁵

^{19.} Id. at 113; See also Robin Kundis Craig, A Public Health Perspective on Sea-Level Rise: Starting Points for Climate Change Adaptation, 15 WIDENER L. REV. 521, 529-30 (2010) (discussing the impacts of sea level rise on public water supply).

^{20. 2009} USGCRP REPORT, supra note 1, at 118; Craig, supra note 19, at 529-39.

^{21.} For a more focused discussion of coastal retreat policies, see Elise Jones, *The Coastal Barrier Resources Act: A Common Cents Approach to Coastal Protection*, 21 ENVTL. L. 1015, 1079-80 (1991). For discussions of coastal retreat issues, see generally Martin M. Randall, Comment, *Coastal Development Run Amuck: A Policy of Retreat May Be the Only Hope*, 18 J. ENVTL. L. & LITIG. 145 (2003); Ellen P. Hawes, *Coastal Natural Hazards Mitigation: The Erosion of Regulatory Retreat in South Carolina*, 7 S.C. ENVTL. L.J. 55 (1998).

^{22.} U.S. CONST. amends. V, XIV.

^{23.} FLA. CONST. art. X, § 6(3) (amended 2006); GA. CONST. art. I, § III, ¶ I(a); LA. CONST. art. I, § 4(B)(1) (amended 2010); MISS. CONST. art. 3, § 17; TEX. CONST. art. I, § 17 (amended 2009).

^{24.} Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1027 (1992).

^{25.} *Id.* at 1022-28. Of course, state and local governments may always *choose* to compensate property owners for certain kinds of losses even when the Constitution does not require compensation. For example, when the Florida Legislature acted to control

This Article examines two of these "background principles" of state property law-state public trust doctrines and the doctrine of public necessity-to assess their abilities to insulate state and local coastal regulation from landowner claims of regulatory takings. It begins in Part I by providing the federal constitutional framework for the "background principles" analysis, focusing on the U.S. Supreme Court's 1992 decision in Lucas v. South Carolina Coastal Council.²⁶ In Part II, this Article examines the Gulf states' public trust doctrines as potential defenses to constitutional takings claims, noting that several Gulf states have already found their public trust doctrines to provide an adequate legal basis for uncompensated regulation for coastal protection and restoration. Part III, in turn, examines the lesser-known "background principle" of the public necessity doctrine, which may become of increasing importance to state and local regulation in a climate change era. The Article concludes that state and local governments generally have more tools to protect the coast than are generally acknowledged and that their defenses to coastal takings claims will increasingly strengthen as sea level rise and coastal deterioration become true emergencies and public crises.

II. LUCAS'S "BACKGROUND PRINCIPLES" OF STATE PROPERTY LAW, THE PUBLIC TRUST DOCTRINE, AND PUBLIC NECESSITY

The Fifth and Fourteenth Amendments to the U.S. Constitution prohibit the taking of private property for public use without compensation by, respectively, the federal and state/local governments.²⁷ Until 1922, this prohibition on uncompensated takings of private property was limited to governments' *physical* takings—for example, the condemnation of private land for a public road or a government building.²⁸

In 1922, however, the U.S. Supreme Court decided *Pennsylvania Coal Co. v. Mahon*²⁹ and recognized for the first time that state and local *regulation* might also amount to an unconstitutional taking of private property. As Justice Oliver

brucellosis in cattle, it provided \$12.50 in compensation for each cow destroyed as a result. Conner v. Carlton, 223 So. 2d 324, 325-26 (Fla. 1969).

^{26 . 505} U.S. 1003 (1992).

^{27.} U.S. CONST. amends. V, XIV. *See also* Dolan v. City of Tigard, 512 U.S. 374, 383-84 (1994); Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470, 481 n.10 (1987) (both confirming that the taking prohibition applies to state and local governments through the Due Process Clause of the Fourteenth Amendment).

^{28.} ROBIN KUNDIS CRAIG, THE CLEAN WATER ACT AND THE CONSTITUTION: LEGAL STRUCTURE AND THE PUBLIC'S RIGHT TO A CLEAN AND HEALTHY ENVIRONMENT 149 (2d ed. 2009).

^{29. 260} U.S. 393 (1922).

Wendell Holmes articulated in that decision, "while property may be regulated to a certain extent, if regulation goes too far it will be recognized as a taking."³⁰

The legacy of the *Pennsylvania Coal* decision for regulatory takings analyses has been long and convoluted-and much discussed in legal scholarship.³¹ Although there are many ways to categorize takings claims under the Supreme Court's jurisprudence, the Court has now recognized three essential categories of takings: (1) physical takings of property, which require compensation in all circumstances;³² (2) a small category of per se regulatory takings,³³ where the regulation deprives the landowner of all economic use of the land, which also automatically require compensation; 34 and (3) the much larger category of alleged regulatory takings that merely deprive the owner of some (but not all) uses or value of the property,³⁵ which are evaluated through the three-part balancing test that the Supreme Court established in Penn Central Transportation Co. v. New York City.36

More important for this Article, however, is the fact that *Pennsylvania Coal* effectively eliminated the originally broad police power defense to regulatory takings claims. Fittingly for the subject of sea level rise, the Supreme Court made this point clear in *Lucas*, a takings case involving South Carolina's attempt to regulate and protect its coast.

The *Lucas* Court evaluated whether South Carolina's 1988 Beachfront Management Act effected a taking of Lucas's coastal property.³⁷ The parties conceded that application of the Act

32. Lucas, 505 U.S. at 1015; Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 435-40 (1982).

34. Lucas, 505 U.S. at 1019, 1029, 1031-32.

35. Tahoe-Sierra Preservation Council, 535 U.S. at 323-324.

37. Lucas, 505 U.S. at 1008-09 (citing S.C. CODE ANN. § 48-39-280(A)(2) (Supp. 1988)).

^{30.} Id. at 415.

^{31.} For some of the most recent examples of this scholarship, see generally Eric A. Lindberg, Comment, Multijurisdictionality and Federalism: Assessing San Remo Hotel's Effect on Regulatory Takings, 57 UCLA L. REV. 1819 (2010); Joshua P. Borden, Comment, Derailing Penn Central: A Post-Lingle, Cost-Basis Approach to Regulatory Takings, 78 GEO. WASH. L. REV. 870 (2010); J. Peter Byrne, Rising Seas and Common Law Baselines: A Comment on Regulatory Takings Discourse Concerning Climate Change, 11 VT. J. ENVTL. L. 625 (2010); Kenneth Miller, Penn Central for Tomorrow: Making Regulatory Takings Predictable, 39 ENVTL. L. REP. NEWS & ANALYSIS 10457 (2009).

^{33.} See Tahoe-Sierra Preserv. Council, Inc. v. Tahoe Reg'l Planning Agency, 535 U.S. 302, 325 n. 19 (2002) (noting that "Lucas carved out a narrow exception to the rules governing regulatory takings for the 'extraordinary circumstance' of a permanent deprivation of all beneficial use[.]").

^{36.} *Id.* at 315 n.10 (citing Palazzolo v. Rhode Island, 533 U.S. 606, 617 (2001). Under the *Penn Central* three-part test, courts evaluate: (1) "[t]he economic impact of the regulation on the claimant[;]" (2) "the extent to which the regulation has interfered with distinct investment-backed expectations[;]" and (3) "the character of the government action[.]" Penn Cent. Transp. Co. v. New York City, 438 U.S. 104, 124 (1978).

essentially prohibited all development of plaintiff Lucas's beachfront property,³⁸ and the Court eventually concluded that "[w]here the State seeks to sustain regulation that deprives land of all economically beneficial use, we think it may resist compensation only if the logically antecedent inquiry into the nature of the owner's estate shows that the proscribed use interests were not part of his title to begin with."³⁹

Thus, the Court established, the relevant focus is state *property* law, and the state's general police powers to protect public health, safety, and welfare were not sufficient to insulate South Carolina's legislation from the regulatory takings claim.⁴⁰ While this point perhaps seems obvious now, many states had clung to broad police power defenses to regulatory takings claims. Indeed, in *Lucas* itself, South Carolina argued, and the South Carolina Supreme Court had found, that the Beach Management Act prevented a public harm and hence that the Act was a proper exercise of the police power, insulating the state from takings claims based on the Act's operation.⁴¹

The U.S. Supreme Court, however, found this blanket police power defense to regulatory takings too facile and too broad. While it acknowledged that "many of our prior opinions have suggested that 'harmful or noxious uses' of property may be proscribed by government regulation without the requirement of compensation[,]"⁴² it limited those opinions to merely affirming that regulation could result in a diminution in value without effecting an unconstitutional taking.⁴³ As a result, "that noxious-use logic cannot serve as a touchstone to distinguish regulatory 'takings'—which require compensation—from regulatory deprivations that do not require compensation."⁴⁴

Of course, proper exercise of the police power remains relevant in the *Penn Central* analysis because "the property owner necessarily expects the uses of his property to be restricted, from time to time, by various measures newly enacted by the State in legitimate exercise of its police powers⁴⁵ In contrast, a state

^{38.} Id.

^{39.} *Id.* at 1027.

^{40.} Id. at 1020-22, 1027.

^{41.} Id. at 1020-22.

^{42.} Id. at 1022.

^{43.} *Id.* at 1022-23 ("The 'harmful or noxious uses' principle was the Court's early attempt to describe in theoretical terms why government may, consistent with the Takings Clause, affect property values by regulation without incurring an obligation to compensate—a reality we nowadays acknowledge explicitly with respect to the full scope of the State's police power.").

^{44.} Id. at 1026.

^{45.} Id. at 1027.

or local government has a harder battle when it attempts to prohibit "all economically beneficial use of land:"

Any limitation so severe cannot be newly legislated or decreed (without compensation), but must inhere in the title itself, in the restrictions that background principles of the State's law of property and nuisance already place upon land ownership. A law or decree with such an effect must, in other words, do no more than duplicate the result that could have been achieved in the courts—by adjacent landowners (or other uniquely affected persons) under the State's law of private nuisance, or by the State under its complementary power to abate nuisances that affect the public generally, or otherwise.⁴⁶

As a result, to have a defense against *per se* regulatory takings, "South Carolina must identify background principles of nuisance and property law that prohibit the uses [Lucas] now intends in the circumstances in which the property is presently found."⁴⁷

Given its prominence in the *Lucas* decision, nuisance law (both public and private nuisance) has become the most prominently asserted "background principle" of state property law that can serve as a defense to takings claims.⁴⁸ As the *Lucas* Court allowed, however, other background principles of state property law may similarly accord states and local governments broad regulatory authority protected from regulatory takings claims. The rest of this Article examines two candidate "background principles" for the Gulf of Mexico states dealing with sea level rise and associated problems: the states' public trust doctrines and their public necessity doctrines.

One caveat is necessary, however. The U.S. Constitution protects private property only from actual takings of the property by governments.⁴⁹ Many state constitutions are more protective of private property. For example, the Georgia, Louisiana, and Mississippi Constitutions require compensation when private

^{46.} Id. at 1029 (footnote omitted).

^{47.} Id. at 1031 (emphasis added).

^{48.} See Lingle v. Chevron USA, Inc., 544 U.S. 528, 538 (2005) (quoting Lucas to again emphasize nuisance as a background principle); see also Carlos A. Ball, The Curious Intersection of Nuisance and Takings Law, 86 B.U. L. REV. 819 (2006); Carmon M. Harvey, Comment, Protecting the Innocent Property Owner: Takings Law in the Nuisance Abatement Context, 75 TEMP. L. REV. 635 (2002); Lynda J. Oswald, At the Intersection of Environmental Law and Nuisance Law: Do Right-to-Farm Statutes Result in Regulatory Takings?, REAL ESTATE L.J., Summer 2001, at 69; Robert L. Glicksman, Making a Nuisance of Takings Law, 3 WASH. U. J.L. & POL'Y 149 (2000); Louise A. Halper, Why the Nuisance Knot Can't Undo the Takings Muddle, 28 IND. L. REV. 329 (1995).

^{49.} U.S. CONST. amends. V & XIV.

property is "taken or damaged" for public purposes,⁵⁰ while the Texas Constitution requires compensation whenever private property in "taken, damaged, or destroyed" for public purposes.⁵¹ In these four Gulf states, therefore, the *Penn Central* protection from compensation as a result of regulation that merely diminishes property value or limits some use is absent or greatly attenuated, requiring protective "background principles" to operate with even greater strength.

III. THE GULF STATES' PUBLIC TRUST DOCTRINES AND REGULATORY TAKINGS LIABILITY FOR COASTAL DEFENSE AND IMPROVEMENT

A. State Public Trust Doctrines in General

The U.S. Supreme Court has recognized the existence of a public trust doctrine in the United States, and this doctrine decisively applies to coastal and tidal waters.⁵² Most famously, in *Illinois Central Railroad v. Illinois*, the Court held that states hold title to the lands beneath navigable waters "in trust for the people of the state, that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty of fishing therein, freed from the obstruction or interference of private parties."⁵³ States can expand—and have expanded—upon this basic public trust doctrine in several ways, such as by extending the scope of the trust beyond the navigable-in-fact and tidal waters or by enumerating additional public uses protected by the trust beyond the *Illinois Central* triad of navigation, commerce, and fishing.⁵⁴

In *Illinois Central*, the public trust doctrine acted as a restraint on government action, prohibiting the State of Illinois from completely alienating the public interest in the Chicago Harbor to private parties.⁵⁵ As a result, this public interest, sometimes referred to as the *jus publicum*, continues to inhere in public trust lands and waters even after the state has conveyed bare legal title (the *jus privatum*).⁵⁶ In *Illinois Central*, for example, this

^{50.} GA. CONST. art. 1, § 3, ¶ I(a); LA. CONST. art. 1, § 4(B)(1); MISS. CONST. art. 3, § 17.

^{51.} TX. CONST. art. 1, § 17.

^{52.} Robin Kundis Craig, A Comparative Guide to the Eastern Public Trust Doctrines: Classification of States, Property Rights, and State Summaries, 16 PENN ST. ENVTL. L. REV. 1, 5-11 (2007).

^{53. 146} U.S. 387, 452 (1892).

^{54.} See generally Robin Kundis Craig, A Comparative Guide to the Western States' Public Trust Doctrines: Public Values, Private Rights, and the Evolution Toward an Ecological Public Trust, 37 ECOLOGY L.Q. 53 (2010) (comparing the western states' public trust doctrines); Craig, supra note 52 (comparing the eastern states' public trust doctrines).

^{55.} Illinois Central, 146 U.S. at 452-53.

^{56.} See id.

continuing public interest allowed the State of Illinois to rescind its transfer of submerged lands without penalty.⁵⁷

However, the public trust interest in coastal and navigable waters can also support state regulation to promote or protect the public trust. Moreover, because the public trust doctrine is a "background principle" of state property law, it can become a defense to regulatory takings, as commentators recognized almost immediately after Lucas.58 Indeed, several coastal statesincluding South Carolina, the state of origin of the Lucas decision—have applied their public trust doctrines to defeat takings claims.⁵⁹ Moreover, even where the public trust doctrine does not afford a state a complete defense to a regulatory takings claim, it generally remains relevant to a *Penn Central* analysis, because it helps to define the scope of the owner's property interest and the reasonableness of his or her investment-backed expectations.⁶⁰ Thus, when Gulf states pursue coastal regulation, public-trust-doctrine-based their defense would be that government action in advancement or protection of public interests in the coastal lands and waters cannot constitute a taking.

B. Alabama's Public Trust Doctrine and Takings Claims

Alabama still has an underdeveloped public trust doctrine. Nevertheless, the Alabama Constitution does provide that "all navigable waters shall remain forever public highways, free to the citizens of the state and the United States,"⁶¹ and Alabama case law indicates that the public trust doctrine protects commerce, navigation, and fishing.⁶² Moreover, case law limits the state's ability to alienate publicly owned lands, including wharves.⁶³

While recent development of Alabama's public trust doctrine is limited, the Alabama Supreme Court declared in the nineteenth century that "the people of Alabama own absolutely the oysterbeds and oysters[,]" and such resources may be fished only in

^{57.} Id. at 453-54.

^{58.} E.g., Paul Sarahan, Wetlands Protection Post-Lucas: Implications of the Public Trust Doctrine on Takings Analysis, 13 VA. ENVTL. L.J. 537 (1994).

^{59.} E.g., Glass v. Goeckel, 703 N.W.2d 58, 78 (Mich. 2005); McQueen v. South Carolina Coastal Council, 580 S.E.2d 116, 120 (S.C. 2003); Esplanade Properties, LLC v. City of Seattle, 307 F.3d 978, 985-86 (9th Cir. 2002) (relying on Washington state law).

^{60.} See, e.g., Palazzolo v. Rhode Island, 2005 WL 1645974, at *7 (R.I. Super. 2005) ("Although the Public Trust Doctrine cannot be a total bar to recovery as to this takings claim, it substantially impacts Plaintiff's title to the parcel in question and has a direct relationship to Plaintiff's reasonable investment-backed expectations").

^{61.} Ala. Const. art. I, § 24.

^{62.} Mobile Transp. Co. v. City of Mobile, 44 So. 976, 978-79 (Ala. 1907).

^{63.} Douglass v. City Council of Montgomery, 24 So. 745, 745-46 (Ala. 1898).

accordance with the laws of the state.⁶⁴ Moreover, in so doing, the Alabama Supreme Court clearly recognized a public trust imperative to state regulatory control over oysters:

The State of Alabama owns the absolute property in the oyster-beds and oysters in her navigable waters, holding it in trust for the use and benefit of her people, subject only to the paramount right of navigation; and in the exercise of her property rights, she may, by legislative enactment, grant or give away the right to take oysters, restricting the grant to her own citizens, and qualifying the exercise of it by them by limitations as to time and manner of taking, selling, or transporting, until the oysters have become an article of inter-state commerce, and as such subject to the laws of the United States.⁶⁵

"But this soil is held by the state not only subject to, but in some sense in trust for, the enjoyment of certain public rights, among which is the common liberty of taking fish, as well shell-fish as floating fish. The state holds the propriety of this soil for the conservation of the public rights of fishery thereon, and may regulate the modes of that enjoyment so as to prevent the destruction of the fishery. In other words, it may forbid all such acts as would render the public right less valuable or destroy it altogether. This power results from the ownership of the soil from the legislative jurisdiction of the state over it, and from its duty to preserve unimpaired those public uses for which the soil is held."⁶⁶

In 1936, the Alabama Supreme Court relied on this assertion of public trust authority to uphold Alabama's seafood harvest laws against constitutional challenges.⁶⁷

The oyster and seafood cases in Alabama thus recognize the public trust doctrine as a source of governmental regulatory authority to protect public trust resources. Therefore, they suggest that Alabama could, if properly motivated, use the public trust doctrine as a legal basis for protecting other coastal resources without running afoul of the prohibition on takings.

^{64.} State v. Harrub, 10 So. 752, 753 (Ala. 1892).

^{65 .} Skrmetta v. Alabama Oyster Comm'n, 168 So. 168, 169 (Ala. 1936).

^{66.} Harrub 10 So. at 753 (quoting Smith v. State of Maryland, 59 U.S. 71 (1855)).

^{67.} Skrmetta, 168 So. at 169-70.

C. Florida's Public Trust Doctrine and Takings Claims

Since 1970, the Florida Constitution has incorporated the state's public trust doctrine, declaring that "[t]he title to lands under navigable waters, within the boundaries of the state, . . . is held by the state, by virtue of its sovereignty, in trust for all the people."⁶⁸ This provision also directly limits the state's ability to alienate public trust lands.⁶⁹

In addition, by statute, Florida declares that public lands including sovereign submerged lands subject to the public trust— "shall be managed to serve the public interest by protecting and conserving land, air, water, and the state's natural resources, which contribute to the public health, welfare, and economy of the state."⁷⁰ This provision incorporates a stewardship ethic and states that such lands are held in a public trust.⁷¹

Under Florida's public trust doctrine, "[t]he public has a right to use navigable waters for navigation, commerce, fishing, and bathing and 'other easements allowed by law."⁷² These rights include use of the foreshore.⁷³ Moreover, the lands beneath navigable waters are "trust property and should be devoted to the fulfillment of the purposes of the trust, towit [sic]: the service of the people."⁷⁴

While the Florida Court of Appeals has held that "the public trust doctrine does not preclude a party from asserting that state regulation has resulted in a compensable taking of an interest in property obtained from the state,"⁷⁵ as a practical matter the public trust doctrine does protect the state from takings claims. For example, in the same case, the court found that no takings liability arose when the Florida legislature in 1990 prohibited oil and gas development in certain submerged lands despite existing leases and permits, because "a mere license or permit to use land was not a protected property right which could be taken where the interest was obtained subject to the public trust doctrine."⁷⁶ Similarly, as a result of the public trust doctrine, the state's denial of a permit to construct a private dock in navigable waters was not

^{68.} FLA. CONST., art. 10, § 11.

^{69.} Id.

^{70.} FLA. STAT. § 253.034(1) (2010).

^{71.} Id.

^{72.} Brannon v. Boldt, 958 So. 2d 367, 372 (Fla. 2d DCA 2007) (quoting Broward v. Mabry, 50 So. 826, 830 (Fla. 1909)).

^{73.} Id.

^{74.} Hayes v. Bowman, 91 So. 2d 795, 799 (Fla. 1957).

^{75.} Coastal Petroleum v. Chiles, 701 So. 2d 619, 625 (Fla. 1st DCA 1997).

^{76.} *Id.* at 625 (citing Marine One, Inc. v. Manatee Cnty., 898 F.2d 1490, 1492-93 (11th Cir. 1990)).

a taking, because even riparian owners must show some need before being allowed to use public submerged land.⁷⁷

Finally, most recently, the Florida Supreme Court relied heavily on the state's public trust doctrine while finding that the state's Beach and Shore Preservation Act's scheme for beach renourishment did not effect an unconstitutional taking of littoral owners' riparian rights to accretions, relictions, access, and contact with the water.⁷⁸ The court emphasized that "[u]nder both the Florida Constitution and the common law, the State holds the lands seaward of the MHWL [mean high water line], including the beaches between the mean high and low water lines, in trust for the public for the purposes of bathing, fishing, and navigation."⁷⁹ The court then quoted extensively from its 1919 opinion in *Brickell v. Trammel*, emphasizing that:

"The trust in which the title to the lands under navigable waters is held is governmental in its nature and cannot be wholly alienated by the states. For the purpose of enhancing the rights and interests of the whole people, the states may by appropriate means grant to individuals limited privileges in the lands under navigable waters, but not so as to divert them or the waters thereon from their proper uses for the public welfare, or so as to relieve the states respectively of the control and regulation of the uses afforded by the land and the waters, or so as to interfere with the lawful authority of Congress.

"New states, including Florida, admitted 'into the Union on equal footing with the original states, in all respects whatsoever,' have the same rights, prerogatives, and duties with respect to the navigable waters and the lands thereunder within their borders as have the original 13 states of the American Union. Among these prerogatives are the right and duty of the states to own and hold the lands under navigable waters for the benefit of the people....⁸⁰

These public trust duties and obligations were incorporated into the Florida Constitution, as well, with the result that "the State

^{77.} Krieter v. Chiles, 595 So. 2d 111, 112 (Fla. 3d DCA 1992).

^{78.} Walton Cnty v. Stop the Beach Renourishment, Inc., 998 So. 2d 1102, 1109-11 (Fla. 2008), *aff'd sub nom* Stop the Beach Renourishment, Inc. v. Florida Dep't. Envtl. Prot., 130 S. Ct. 2592 (2010).

^{79.} *Id.* at 1109 (citing FLA CONST., art. X, § 11; White v. Hughes, 190 So. 446, 449 (Fla. 1939); Clement v. Watson, 58 So. 25, 26 (Fla. 1912)).

 $^{80.\} Id.$ at 1110 (quoting Brickell v. Trammell, 82 So. 221, 226 (Fla. 1919)) (citations omitted).

has a constitutional duty to protect Florida's beaches, part of which it holds 'in trust for all the people."⁸¹

The Beach and Shore Preservation Act, in turn, helps the State of Florida to carry out its constitutional public trust duties. According to the Florida Supreme Court:

As explained earlier, the State has a constitutional duty to protect Florida's beaches, part of which it holds in trust for public use. The Beach and Shore Preservation Act effectuates this constitutional duty when the State is faced with critically eroded, storm-damaged beaches.

Like the common law, the Act seeks a careful balance between the interests of the public and the interests of the private upland owners. By authorizing the addition of sand to sovereignty lands, the Act prevents further loss of public beaches, protects existing structures, and repairs prior damage. In doing so, the Act promotes the public's economic, ecological, recreational, and aesthetic interests in the shoreline. On the other hand, the Act benefits private upland owners by restoring beach already lost and by protecting their property from future storm damage and erosion.

To summarize, the Act effectuates the State's constitutional duty to protect Florida's beaches in a way that reasonably balances public and private interests. Without the beach renourishment provided for under the Act, the public would lose vital economic and natural As for the upland owners, resources. the beach renourishment protects their property from future storm damage and erosion while preserving their littoral rights to access, use, and view. Consequently, just as with the common law, the Act facially achieves a reasonable balance of interests and rights to uniquely valuable and volatile property interests.⁸²

Viewed in this light, and given the Act's protection of common-law littoral rights, the Florida Supreme Court concluded that the Act did not effect a taking of private property.⁸³ In June 2010, the U.S. Supreme Court upheld that conclusion, emphasizing as it had in

. . .

^{81.} Id. at 1110-11 (quoting FLA CONST., art. X, § 11).

^{82.} Id. at 1114-15.

^{83.} Id. at 1121.

Lucas the primacy of state property law in evaluating takings claims—and noting the import of Florida's public trust doctrine.⁸⁴

Thus, Florida has a long and continuing tradition of using its public trust doctrine to effectively insulate from constitutional takings claims regulation that seeks to restore the state's coasts and to protect public trust resources. The Florida Supreme Court has arguably now deepened that insulation by explicitly announcing that the State has a *constitutional* public trust duty to protect the state's beaches, shores, and coastlines from erosion and loss of public trust use. The public trust doctrine would thus seem to give Florida and governmental entities within it great latitude to enact coastal regulation free of a duty to compensate private property owners.

D. Louisiana's Public Trust Doctrine and Takings Claims

As in Florida, Louisiana's public trust doctrine gives the state great authority to regulate to protect its coasts without effecting an unconstitutional taking. Moreover, Louisiana connects its public trust doctrine to the protection of environmental values generally, potentially expanding the scope of coastal regulation that would be protected from takings claims.

The Louisiana Constitution proclaims that "[t]he natural resources of the state, including air and water, and the healthful, scenic, historic, and esthetic quality of the environment shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people."⁸⁵ The Louisiana Court of Appeals has identified this constitutional provision as the state's public trust doctrine.⁸⁶ In addition, the Louisiana Constitution restricts the state's ability to alienate public trust lands.⁸⁷

Louisiana has also codified its public trust doctrine. In current form, the Louisiana statutes provide that:

The beds and bottoms of all navigable waters and the banks or shores of bays, arms of the sea, the Gulf of Mexico, and navigable lakes belong to the state of Louisiana, and the policy of this state is hereby declared to be that these lands and water bottoms, hereinafter referred to as "public

^{84.} Stop the Beach Renourishment, Inc. v. Florida Dep't. Envtl. Prot., 130 S. Ct. 2592, 2597-98, 2611-13 (2010).

^{85.} LA. CONST., art. IX, § 1.

^{86.} Louisiana Seafood Mgmt. Council v. Louisiana Wildlife & Fisheries Comm'n, 719 So. 2d 119, 124 (La. Ct. App. 1998).

^{87.} LA. CONST., art. IX, § 3.

lands", shall be protected, administered, and conserved to best ensure full public navigation, fishery, recreation, and other interests. Unregulated encroachments upon these properties may result in injury and interference with the public use and enjoyment and may create hazards to the health, safety, and welfare of the citizens of this state. To provide for the orderly protection and management of these state-owned properties and serve the best interests of all citizens, the lands and water bottoms, except those excluded and exempted and as otherwise provided by this Chapter or as otherwise provided by law, shall be under the management of the Department of Natural Resources, hereinafter referred to as the "department". The State Land Office, hereinafter referred to as the "office", shall be responsible for the control, permitting, and leasing of encroachments upon public lands, in accordance with this Chapter and the laws of Louisiana and the United States.⁸⁸

Under this codification, the Gulf of Mexico is clearly included within the scope of Louisiana's public trust doctrine.

In addition, the Louisiana courts have relied on the state's public trust doctrine to uphold legislation regulating coastal resources. Thus, the state Marine Resources Conservation Act, which banned gillnetting, worked to fulfill the public trust doctrine:

In order to fulfill the mandate of the Public Trust Doctrine, given the very nature of natural resources, the Legislature may find it necessary from time to time to make adjustments to previously-enacted laws in response to the changes in the variations of natural resources resulting from the use or conservation of those resources.⁸⁹

In addition, the Louisiana Supreme Court has suggested that, under its public trust doctrine, Louisiana can protect its coastline from erosion without effecting a taking, even when the measures it implements damage existing oyster leases.⁹⁰

^{88.} LA. REV. STAT. § 41:1701 (2010).

^{89.} Louisiana Seafood Mgmt. Council, 719 So. 2d at 125.

^{90.} Avenal v. State, 886 So. 2d 1085, 1101-02, 1106 (La. 2004). The role of the public trust doctrine in this case was attenuated, however, because the leases themselves allowed for state actions to protect the coast—although the basis of those lease provisions was, in part, the state's public trust doctrine. *Id.* at 1106.

E. Mississippi's Public Trust Doctrine and Takings Claims

The Mississippi courts have not squarely addressed the issue of whether the Mississippi public trust doctrine provides a defense against regulatory takings claims.⁹¹ Moreover, as noted, the Mississippi Constitution is more protective of private property rights than the U.S. Constitution, providing that "[p]rivate property shall not be taken or damaged for public use, except on due compensation being first made to the owner or owners thereof, in a manner to be prescribed by law[.]"⁹² As a result, when highway construction altered the use of the tidelands, the state constitution required compensation if nearby landowners could show that the alteration resulted in a loss or diminution of their view of the ocean or access to the tidelands.⁹³

Nevertheless, Mississippi property law would limit the type of takings claims available in response to coastal regulation, because riparian and littoral rights in Mississippi are mere licenses or privileges that can be revoked through the police power without compensation.⁹⁴ In addition, although case law is not clear on the point, Mississippi law does suggest that the state's public trust doctrine would protect state and local governments from regulatory takings claims.

As a beginning matter, the Mississippi Constitution protects the navigable waters from obstruction,⁹⁵ and the state's statutes establish a public policy to protect coastal resources.⁹⁶ For example, the Public Trust Tidelands Act declares:

the public policy of this state to favor the preservation of the natural state of the public trust tidelands and their ecosystems and to prevent the despoliation and destruction of them, except where a specific alteration of specific public trust tidelands would serve a higher public interest in compliance with the public purposes of the public trust in which such tidelands are held.⁹⁷

^{91.} See Bayview Land, Ltd. v. State *ex rel.* Clark, 950 So. 2d 966, 989-90 (Miss. 2006) (noting that disposition of title issue pursuant to the Public Trust Tidelands Act made a taking analysis unnecessary).

^{92.} MISS. CONST., art. 3, § 17 (emphasis added).

^{93.} Mississippi State Highway Comm'n v. Gilich, 609 So. 2d 367, 377 (Miss. 1992).

^{94.} Id. at 375 (citations omitted).

^{95.} MISS. CONST., art. 4, § 81.

^{96.} MISS. CODE ANN. § 29-15-3 (West 2010).

^{97.} Id.

The Mississippi Supreme Court has twice upheld this Act against constitutional challenges.⁹⁸

Similarly, Mississippi's Coastal Wetlands Protection Act declares in very similar public trust language "the public policy of this state to favor the preservation of the natural state of coastal wetlands and their ecosystems"⁹⁹ Given the role of coastal wetlands in protecting coasts from storm surge and other problems associated with sea level rise,¹⁰⁰ this statutory promotion of the public trust doctrine could provide Mississippi regulators with substantial authority to impinge on coastal property rights.

Mississippi case law very broadly defines the public rights protected under the public trust doctrine, again potentially strengthening the state's regulatory authority. Specifically, the Mississippi public trust doctrine protects the public's right to navigation and transportation, commerce, fishing, bathing, swimming, other recreational activities, development of mineral resources, environmental protection and preservation, and "enhancement of aquatic, avarian, and marine life, sea agriculture, and no doubt others."¹⁰¹

Moreover, the Mississippi Supreme Court has clearly indicated that Mississippi's public trust doctrine is an evolving doctrine intended to protect the needs of the people. First, the court has cited with approval the expansive California public trust doctrine,¹⁰² which can alter private property rights in California.¹⁰³ Second, it has declared "that the purposes of the trust have evolved with the needs and sensitivities of the people—and the capacity of trust properties through proper stewardship to serve those needs."¹⁰⁴

Finally, the Mississippi Supreme Court appears to have taken a pragmatic approach to the public trust doctrine. For example, Mississippi law "prohibits disposition or use of trust property

^{98.} Columbia Land Dev. L.L.C. v. Sec'y of State, 868 So. 2d 1006, 1016-17 (Miss. 2004); Sec'y of State v. Wiesenberg, 633 So. 2d 983, 996 (Miss. 1994).

^{99.} MISS. CODE. ANN. § 49-27-3.

^{100.} National Wildlife Federation, Environmental Defense Fund, & Audubon Society, Working to Restore Coastal Louisiana 1-2, http://www.nwf.org/Regional-Centers/~/media/ PDFs/Regional/South-Central/Wetlands_and_Storm_Surge_Fact_Sheet_2009_03_24.ashx (last visited May 9, 2011).

^{101.} Columbia Land Dev., 868 So. 2d at 1012-13 (summarizing the list of rights from Cinque Bambini P'ship v. State, 491 So. 2d 508 (Miss. 1986)); Wiesenberg, 633 So. 2d at 988-89 (quoting the list of protected rights from Cinque Bambini); Cinque Bambini, 491 So. 2d at 512 (citations omitted).

^{102.} $Cinque \; Bambini,\; 491$ So. 2d at 512 (relying on Marks v. Whitney, 491 P.2d 374 (Cal. 1971)).

^{103.} For a discussion of California's expansive public trust doctrine and its ability to reform private property rights, see Craig, *Western States*, *supra* note 54, at 84-86, 104-15.

^{104.} Wiesenberg, 633 So. 2d at 989 (quoting Cinque Bambini, 491 So. 2d at 512).

except in furtherance of the public purpose."¹⁰⁵ However, when the court upheld the Public Trust Tidelands Act in 1994, the issue before the court was the Act's provisions for establishing the boundary line between public and private lands, which the Act indicated should be the 1973 mean high water line.¹⁰⁶ The Secretary of State argued that the resulting boundary line would constitute an unconstitutional "donation" of public trust lands to private landowners, but the court disagreed, recognizing the Act "as a unified attempt by the Legislature to resolve the discord existing between the State and area landowners."¹⁰⁷

F. Texas's Public Trust Doctrine and Takings Claims

The Texas Constitution states that "[t]he conservation and development of all the natural resources of this State . . . are each and all hereby declared public rights and duties," including "the navigation of its inland and coastal waters" and "the preservation and conservation of all such natural resources" and directly empowers the state legislature to act.¹⁰⁸ In 2005, the Texas Court of Appeals indicated that this provision is relevant to the state's public trust doctrine.¹⁰⁹

Under the Texas common-law public trust doctrine, public rights in public trust lands include hunting, fishing, navigation, "and other lawful purposes."¹¹⁰ Moreover, "[t]he purpose of the State maintaining title to the beds and waters of all navigable bodies is to protect the public's interest in those scarce natural resources."¹¹¹

Much of this state protection comes through statute. For example, under the Texas Coastal Public Lands Management Act of 1973, "[t]he natural resources of the surface estate in coastal public land shall be preserved," including "the natural aesthetic values of those areas and the value of the areas in their natural state for the protection and nurture of all types of marine life and wildlife."¹¹² Uses benefiting the public at large take priority over uses benefiting individuals.¹¹³ However, coastal public lands

^{105.} Cinque Bambini, 491 So. 2d at 513 (citations omitted).

^{106.} Wiesenberg, 633 So. 2d at 990.

^{107.} Id. at 991.

^{108.} TEX. CONST., art. XVI, § 59(a).

^{109.} Cummins v. Travis Cnty Water Control & Improvement Dist. No. 17, 175 S.W.3d 34, 49 (Tex. App. 2005).

^{110.} Diversion Lake Club v. Heath, 86 S.W.2d 441, 444 (Tex. 1935).

^{111.} Cummins, 175 S.W.3d at 49.

^{112.} TEX. NAT. RES. CODE. ANN. § 33.001(b) (West 2009).

^{113.} Id. § 33.001(c).

"exclude beaches bordering on and the water of the open Gulf of Mexico and the land lying beneath this water."¹¹⁴

Such beaches *are* protected, however, under the Texas Open Beaches Act, which guarantees the public "the free and unrestricted right of ingress and egress to and from the stateowned beaches bordering on the seaward shore of the Gulf of Mexico"¹¹⁵ This Act has been the subject of 2010 decisions from both the Texas Supreme Court and the Texas Court of Appeals, discussed below.

Although the Takings Clause in the Texas Constitution is more protective than the federal Takings Clauses,¹¹⁶ several aspects of Texas law indicate that the state has substantial authority to regulate to protect public rights and public welfare in the coast without effecting an unconstitutional taking. First, Texas eliminated riparian and littoral rights for any properties acquired after 1895, limiting takings claims based on those rights.¹¹⁷ Second, with respect to takings claims asserted pursuant to the Texas Constitution, the state retains a broad police power defense to takings liability.¹¹⁸

Third, public trust boundaries (at least the property boundaries between the State and private landowners) are ambulatory under Texas law,¹¹⁹ and in 2005, the Texas Court of Appeals in *Cummins v. Travis County Water Control and Improvement District* held that there could be no takings claim when the state denied private use of public trust submerged lands.¹²⁰ Specifically, when littoral owners along a navigable lake sued claiming a taking because the state denied them a license to build a dock, the court held that the denial of the license was justified on both public trust and police power grounds.¹²¹ The state, as trustee, both has a duty to protect the public's interest in scarce natural resources and "is entitled to regulate those waters and submerged lands to protect its citizens' health and safety and to conserve natural resources."¹²² Thus, a 200-foot "clear zone" was justified to protect public rights in the lake and to protect public water supply, and private rights must

^{114.} Id. § 33.004(11).

^{115.} *Id.* § 61.011(a).

^{116.} TEX. CONST., art. 1, 17 (requiring compensation when private property is damaged for public purposes as well as taken or destroyed).

^{117.} See Cummins v. Travis Cnty Water Control & Improvement Dist. No. 17, 175 S.W.3d 34, 45 (Tex. App. 2005).

^{118.} Id. at 56 n. 13; City of College Station v. Turtle Rock Corp., 680 S.W.2d 802, 804 (Tex. 1984).

^{119.} Natland Corp. v. Baker's Port, Inc., 865 S.W.2d 52, 57 (Tex. App. 1993).

^{120.} Cummins, 175 S.W.3d at 57-58.

^{121.} Id. at 49-56.

^{122.} Id. at 49 (citing Goldsmith & Powell v. State, 159 S.W.2d 534, 535 (Tex. Civ. App. 1942)).

yield to community needs.¹²³ Moreover, the denial of the dock license "does not constitute a taking of the Cumminses' land because the activity prohibited would have occurred on property that is held by the State in trust for the public, to which the Cumminses have no rights, and because the regulation, which ensures an adequate supply of safe drinking water for the public, is a legitimate exercise of the police power."¹²⁴

Cummins thus suggests that as sea level rises along the Texas coast and moves the public trust boundary (generally the mean high tide line) inland, the state's broad regulatory authority over state-owned lands will move with it. In 2010, both the Texas Court of Appeals and the Supreme Court of Texas affirmed this conclusion in the context of the Texas Open Beaches Act, at least with respect to slow, gradual changes along the shoreline. The Court of Appeals' February 2010 decision in Brannan v. State,¹²⁵ while not a public trust doctrine case per se, upheld public rights to access Surfside Beach¹²⁶ under the Texas Open Beaches Act¹²⁷ after 1998's Tropical Storm Frances, despite the destruction of private property.¹²⁸ Moreover, the court upheld a "rolling easement" to accommodate and preserve public rights in the face of an incoming sea.¹²⁹ According to the Court of Appeals, the Beach Act's rolling easement preserves the public beach and was analogous to the ambulatory property lines already recognized along Texas shores.¹³⁰ Thus, no taking of the owner's property rights occurred, especially because the Open Beach Act simply provided a means for the public to enforce rights it had acquired through other common-law means-with common-law public dedication qualifying as a *Lucas* background principle.¹³¹

The Court of Appeals' denial of the beachfront property owners' takings claim in *Brannan* suggested that the State of Texas can claim broad regulatory authority in the face of sea level rise. In November 2010, the Texas Supreme Court decided *Severance v. Patterson*,¹³² limiting the scope of *Brannan* but nevertheless still acknowledging that public easements can move in response to

^{123.} See id. (citing Parker v. El Paso Cnty Water Improvement Dist. No. 1, 297 S.W. 737, 741-42 (Tex. 1927)).

^{124.} Id. at 56 n. 13 (citing City of College Station v. Turtle Rock Corp., 680 S.W.2d 802, 804 (Tex. 1984)).

^{125.} No. 01-08-00179-CV, 2010 WL 375921 (Tex. App. Feb. 4, 2010).

^{126.} Id. at *9-*13.

^{127.} TEX. NAT. RES. CODE ANN. §§ 61.001-61.026 (West 2009).

^{128.} Brannan, 2010 WL 375921, at *17.

^{129.} Id.

^{130.} *Id*. at *13.

^{131.} Id. at *21-22.

^{132.} Severance v. Patterson, No. 09-0387, 2010 WL 4371438 (Tex. Nov. 5, 2010) $reh^{\,\prime}g$ granted (Mar. 11, 2011).

certain kinds of coastal changes.¹³³ The facts in *Severance*, which the Texas Supreme Court decided in response to a certified question from the U.S. Court of Appeals for the Fifth Circuit,¹³⁴ were similar to those in the *Brannan* decision: the public had a preexisting easement to use West Beach in Galveston Island, but no such easement existed to use Severance's property, which was inland of the vegetation line.¹³⁵ "Five months after Severance's purchase, Hurricane Rita devastated the property subject to the easement and moved the line of vegetation landward[,]" such that "the entirety of the house on Severance's property is now seaward of the vegetation line."¹³⁶

While the Texas Supreme Court ultimately concluded that the State's attempt to "roll" the public easement landward in response to Hurricane Rita's devastation of the shoreline was illegal in the absence of proof of a new public easement,¹³⁷ it also emphasized two important distinctions in Texas coastal law. First, with respect to the public easement's ability to move, the court distinguished sudden, avulsive events from slow and gradual changes with respect to the ability of the public easement to move.¹³⁸ As it summarized:

public easements that burden these properties along the sea are . . . dynamic. They may shrink or expand gradually with the properties they encumber. Once established, we do not require the State to re-establish easements each time boundaries move due to gradual and imperceptible changes to the coastal landscape. However, when a beachfront vegetation line is suddenly and dramatically pushed landward by acts of nature, an existing public easement on the public beach does not "roll" inland to other parts of the parcel or onto a new parcel of land. Instead, when land and the attached easement are swallowed by the Gulf of Mexico in an avulsive event, a new easement must be established by sufficient proof to encumber the newly created dry beach bordering the ocean. These public easements may gradually change size and shape as the respective Gulf-front properties they burden imperceptibly change, but they do not "roll" onto previously unencumbered private beachfront

^{133.} Id. at *1.

^{134.} Id.

^{135.} Id. at *3-*4.

^{136.} *Id.* at *4.

^{137.} Id. at *15 (Medina, J., dissenting).

^{138.} Id. at *1.

property when avulsive events cause dramatic changes in the coastline.¹³⁹

The court also figured its decision as a balancing of public and private rights, concluding that:

[t]he public may have a superior interest in use of privately owned dry beach when an easement has been established on the beachfront. But it does not follow that the public interest in the use of privately owned dry beach is greater than a private property owner's right to exclude others from her land when no easement exists on that land.¹⁴⁰

Second, however, the Texas Supreme Court affirmed that the State of Texas continues to own the wet sand portion of the beach up to the mean high tide line, *regardless* of how the beach changes. As the Texas Supreme Court emphasized, "[t]he wet beaches are all owned by the State of Texas, which leaves no dispute over the public's right of use."¹⁴¹ The court noted that it had established in the 1958 decision of *Luttes v. State*:

that the delineation between State-owned submerged tidal lands (held in trust for the public) and coastal property that could be privately owned was the "mean higher high tide" line under Spanish or Mexican grants and the "mean high tide" line under Anglo-American law. The wet beach is owned by the State as part of the public trust, and the dry beach is not part of the public trust and may be privately owned.¹⁴²

As a result, buying coastal property in Texas always carries with it the (uncompensable) risk that the coastal owner will lose that

^{139.} Id. at *1. See also id. at *10-*11 (explaining this distinction at greater length, emphasizing considerations of practicality for gradual changes and considerations of fairness for sudden changes); id. at *15 ("Although existing public easements in the dry beach of Galveston's West Beach are dynamic, as natural forces cause the vegetation and the mean high tide lines to move gradually and imperceptibly, these easements does not migrate or roll landward to encumber other parts of the parcel or new parcels as a result of avulsive events.").

^{140.} Id. at *13.

^{141.} *Id.* at *4 (citing Luttes v. State, 324 S.W.2d 167, 169, 191-92 (Tex. 1958); *see also* TEX. NAT. RES. CODE §§ 61.011, 61.161 (2009) (recognizing the public policies of the public's right to use public beaches and the public's right to ingress and egress to the sea)) (footnote omitted).

^{142.} Id. at *6 (citing Luttes, 324 S.W.2d at 191-92) (citations omitted). See also id. at *10 ("We have never applied the avulsion doctrine to upset the mean high tide line boundary as established by Luttes." (citations omitted)).

property to the state and to the public trust doctrine, even during an avulsive event.¹⁴³

G. Summary Regarding the Gulf States' Public Trust Doctrines

All of the Gulf states recognize state ownership of Gulf of Mexico submerged lands and four (all but Alabama) clearly apply some version of a public trust in those waters.¹⁴⁴ In the face of continual sea level rise and coastal erosion, these background principles of state property law are likely to provide two primary kinds of support to coastal regulation and corresponding insulation from constitutional takings claims.

First, as the recent cases in Texas emphasize, public trust boundaries migrate with changing sea levels, at least so long as the changes are natural and gradual. Climate change-induced sea level rise and ongoing Gulf coastal erosion will generally qualify as gradual changes to the coastline (albeit almost certainly punctuated by storm-driven sudden or avulsive changes, as well), and hence state-owned submerged lands and the states' duties to protect public rights will also migrate inward. Private landowners have little defense against a state's regulation of its own submerged property and the resources contained therein.

Second, state public trust doctrines may support more extensive regulation to protect coastal resources from sea level rise damage. Several progressive states such as California and New Jersey have already used their public trust doctrines to "adjust" public and private rights in waters, including the coast.¹⁴⁵ Mississippi has expressly followed California law and suggested that its public trust doctrine can evolve to meet new public needs,¹⁴⁶ the Texas courts have recognized a rolling public easement, at least with respect to Gulf beaches subjected to gradual changes,¹⁴⁷ Florida public trust law has already effectively insulated coastal takings claims in the face of state regulation,¹⁴⁸

^{143.} Id. at *10.

^{144.} *Id.* at *5 (quoting Lorino v. Crawford Packing Co., 175 S.W.2d 410, 413 (Tex. 1943)); LA. REV. STAT. § 41:1701 (2010); Columbia Land Dev., LLC v. Sec'y of State, 868 So. 2d 1006, 1011-14 (Miss. 2004); Lloyd Enters., Inc. v. Dept. of Revenue, 651 So. 2d 735, 740 (Fla. 5th DCA 1995) (quoting White v. Hughes, 190 So. 446, 449 (Fla. 1939)).

^{145.} Raleigh Ave. Beach Ass'n v. Atlantis Beach Club, Inc., 879 A.2d 112, 121-24 (N.J. 2005) (holding that the state public trust doctrine requires private beach owners to allow the public to use the dry sand areas of privately owned beaches); Nat'l Audubon Soc'y v. Superior Court, 658 P.2d 709, 712, 727-28 (Cal. 1983) (holding that the public trust doctrine can require changes in vested private water rights).

^{146.} Cinque Bambini P'ship v. State, 491 So. 2d 508, 512 (Miss. 1986).

^{147.} Brannan v. State, No. 01-08-00179-CV, 2010 WL 375921, at *9-*13 (Tex. App. Feb. 4, 2010); Severance, 2010 WL 4371438, at *1, *10-*11, *15.

^{148.} See supra notes 68-84 and accompanying text.

and Louisiana law indicates that the state can act to protect its coast from erosion without effectuating a taking.¹⁴⁹ Only Alabama has yet to develop its public trust doctrine, and it may soon have motivation to do so if sea level rise becomes critical or amounts to a public crisis. Gulf state courts and legislatures may well decide to expand upon their existing public trust doctrine precedents in order to base more comprehensive coastal responses upon the public trust doctrine's background limitations on private property rights.

IV. THE GULF STATES' PUBLIC NECESSITY DOCTRINES AND REGULATORY TAKINGS LIABILITY FOR COASTAL DEFENSE AND IMPROVEMENT

A. Public Necessity in General

The doctrine of public necessity has garnered far less court and academic interest in the context of takings claims than either public nuisance or the public trust doctrines. Nevertheless, public necessity is one of two "background principles" in addition to nuisance that the *Lucas* Court explicitly endorsed as a defense to takings claims.¹⁵⁰ Specifically, the Court noted that:

[t]he principal "otherwise" that we have in mind is litigation absolving the State (or private parties) of liability for the destruction of "real and personal property, in cases of actual necessity, to prevent the spreading of a fire" or to forestall other grave threats to the lives and property of others.¹⁵¹

The doctrine of public necessity has long operated as a defense to takings claims because courts recognize that in times of true emergency or public necessity, private rights fall to public need.¹⁵² According to the U.S. Supreme Court itself, "the common law had long recognized that in times of imminent peril—such as when fire threatened a whole community—the sovereign could, with

^{149.} See Avenal v. State, 886 So. 2d 1085, 1101-02 (La. 2004).

^{150.} The other is the federal navigation servitude. Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1028-29 (1992) (citing Scranton v. Wheeler, 179 U.S. 141, 163 (1900)).

^{151.} Id. at 1029 n16 (citing Bowditch v. Boston, 101 U.S. 16, 18-19 (1880); United States v. Pacific R., Co., 120 U.S. 227, 238-239 (1887)).

^{152. &}quot;At such times, the individual rights of property give way to the higher laws of impending necessity." Surocco v. Geary, 3 Cal. 69, 73 (1853).

immunity, destroy the property of a few that the property of many and the lives of many more could be saved." 153

However, two aspects of the public necessity doctrine limit its potential usefulness as a defense to regulatory takings claims in the face of extensive and intrusive governmental regulation of coastal activities. First, most states require an existing or imminent public necessity or emergency before the defense applies. In most classic applications of the public necessity doctrine—government actions responding to a fire¹⁵⁴ or flood¹⁵⁵ this requirement is easily met. For long-term coastal protection, however, a strict legal requirement of an imminent problem or emergency could limit the applicability of a public necessity defense.

States vary in how they conceive of "emergency" and "imminence." Some commentators, for example, put more emphasis on the "necessity" than on the "emergency," explaining that "[t]he right to destroy under such circumstances is a natural right which springs from the necessity of the case. Where, therefore, it is sought by statute to add to the right or to create the right to destroy in case of emergency rather than necessity, such attempt constitutes an exercise of the power of eminent domain and compensation must be made."¹⁵⁶ However, both the Restatement (Second) of Torts and most courts have tended to emphasize the "emergency" aspects of public necessities, restricting the doctrine's use to situations of imminent and serious community peril.¹⁵⁷

Second, governments may assert the public necessity defense only if the destruction or limitation of private property is

PROSSER & KEETON, THE LAW TORTS § 24 (5th ed. 1984) (footnote omitted).

155. See generally, e.g., Dudley v. Orange County, 137 So. 2d 859 (Fla. 2nd DCA 1962); McKell v. Spanish Fork City, 305 P.2d 1097 (Utah 1957); Short v. Pierce Cnty., 78 P.2d 610 (Wash. 1938); Atken v. Village of Wells River, 40 A. 829 (Vt. 1898).

156. City of Rapid City v. Boland, 271 N.W.2d 60, 66 (S.D. 1978) (quoting 1 Nichols, EMINENT DOMAIN, § 1.43(2)). See also Hale v. Lawrence, 21 N.J.L. 714, 729 (N.J. 1848) (noting that the right is "founded upon necessity and not expediency").

^{153.} United States v. Caltex, Inc., 344 U.S. 149, 154 (1952), rehearing denied, 344 U.S. 919 (1953). Prosser explains further:

Where the danger affects the entire community, or so many people that the public interest in involved, that interest serves as a complete justification to the defendant who acts to avert the peril to all. . . . This notion does not require the "champion of the public" to pay for the general salvation out of his own pocket. The number of persons who must be endangered in order to create a public necessity has not been determined by the courts.

^{154.} See generally, e.g., Bowditch, 101 U.S. at 16; Field v. City of Des Moines, 39 Iowa 575 (1874); Surocco, 3 Cal. At 69; American Print Works v. Lawrence, 21 N.J.L. 248 (1850); Hale v. Lawrence, 21 N.J.L. 714 (1848).

^{157.} RESTATEMENT (SECOND) OF TORTS § 196 (1995); *City of Rapid City*, 271 N.W.2d at 66-67; Carolina Beach Fishing Pier, Inc. v. Town of Carolina Beach, 163 S.E.2d 363, 366, 372 (N.C. 1968).

reasonably necessary to address that threat. In the words of the U.S. District Court for the District of Oregon, "[t]he defense applies only when the emergency justifies the action and when the defendant acts reasonably under the circumstances."¹⁵⁸

This second limitation, however, imposes few restrictions on states or local governments wanting to use the doctrine to support extensive coastal regulation, because it would simply require that coastal regulation be reasonable. Therefore, the critical question for the usefulness of the public necessity defense for Gulf states addressing sea level rise and associated problems is how each state views the "actual necessity" requirement. In California, for example, landowners brought a takings claim against the City of Del Mar after the City removed riprap, seawalls, and patios that were encroaching on a beach.¹⁵⁹ The City defended on grounds of both public necessity and nuisance, and the California Court of Appeals distinguished the two defenses precisely on the presence or absence of an existing emergency:

"[U]nder the pressure of public necessity and to avert impending peril, the legitimate exercise of the police power often works not only avoidable damage but destruction of property without calling for compensation. Instances of this character are the demolition of all or parts of buildings to prevent the spread of conflagration, or the destruction of diseased animals, of rotten fruit, or infected trees where life or health is jeopardized."¹⁶⁰

In the nonemergency situation, the government also has the power to declare what constitutes a nuisance and to abate it, after affording the owner reasonable notice and a meaningful opportunity to be heard.¹⁶¹

Thus, the City could remove the structures without compensation, but under a public nuisance—not a public necessity—theory.¹⁶²

162. See id. at 1305-06.

^{158.} Protectus Alpha Navigation Co. v. N. Pac. Grain Growers, Inc., 585 F. Supp. 1062, 1067 (D. Or. 1984). Applying the public necessity doctrine can involve a form of risk-benefit analysis. See John Alan Cohan, Private and Public Necessity and the Violation of Property Rights, 83 N.D. L. REV. 651, 654 (2007) ("Under the necessity doctrine, there is a weighing of interests: the act of invasion of another's property is justified under the necessity doctrine only if done to protect or advance some private or public interest of a value greater than, or at least equal to, that of the interest invaded.").

^{159.} Scott v. City of Del Mar, 58 Cal. App. 4th 1296, 1299-1300 (Cal. Ct. App. 1997). 160. *Id.* at 1305 (quoting House v. L.A. Cnty. Flood Control Dist., 25 Cal. 2d 384, 391 (1944)).

^{161.} Id. at 1305 (citations omitted).

B. Public Necessity and Takings Claims in Alabama

As is true with respect to its public trust doctrine, Alabama has not developed its public necessity doctrine for modern circumstances. Nevertheless, the doctrine is firmly entrenched in early Alabama case law, and application of the doctrine clearly insulates state and local governments from takings claims.

Much of Alabama law supporting the public necessity doctrine is rooted in the maxim *salus populi suprema est lex*,¹⁶³ or, roughly translated, the idea that the overriding needs of the people are the law. In 1854, for example, the Alabama Supreme Court announced that this maxim:

is applied to cases where the rights of the community require that the absolute rights of individuals should be sacrificed, without compensation, if necessary to the end to be obtained. The abatement of public nuisances,—the destruction of private buildings to stop the ravages of fire, quarantine laws, and others of a similar nature, all may be referred to this class; in all such cases, private property is taken without compensation, nor would a claim for compensation be entertained by the courts. The principle is sustained upon the well-known doctrine . . . that, in entering into social government, each individual tacitly consents to be deprived of his absolute rights, whenever necessary to the security, happiness, welfare and prosperity of the mass.¹⁶⁴

In 1898, the Alabama Supreme Court reaffirmed these principles, emphasizing that compensation for official actions taken to deal with a pubic necessity "is [a] matter of grace, and not of right."¹⁶⁵

Nevertheless, the court also noted in the same opinion that in order for public officers to avoid liability, the danger involved must be "pressing and imminent," such as when fire officials destroy property "to prevent the spread of an existing conflagration," or when government officials act "to obstruct or prevent the advance of a hostile army."¹⁶⁶ This case thus suggests that Alabama law requires an existing or imminent true emergency in order for the

^{163.} Stein v. Burden, 24 Ala. 130, 135 (1854); Phoenix Assurance Co. of London v. Fire Dep't, 117 Ala. 631, 649 (1898); Louisville & N.R. Co. v. Scruggs & Echols, 49 So. 399, 401 (Ala. 1909) (McClellan, J., dissenting).

^{164.} Stein, 24 Ala. at 135 (citation omitted).

^{165.} Phoenix Assurance Co., 117 Ala. at 649.

^{166.} Id.

doctrine of public necessity to insulate governmental actions from takings claims.¹⁶⁷

Even so, there is some suggestion in Alabama law that "emergencies" justifying the public necessity doctrine can be of some duration. In 1942, for example, the Alabama Supreme Court announced that war—in this case, World War II—was an emergency justifying the taking of private property without compensation.¹⁶⁸ If Alabama chooses to extend the period of an "emergency" even further, it could increase the relevance of its public necessity doctrine to governmental efforts that address sea level rise and associated climate-change related problems along the Gulf coast.

C. Public Necessity and Takings Claims in Florida

According to the Florida Supreme Court, "it is a well-settled rule that the individual convenience must yield to public necessity."¹⁶⁹ Moreover, that court has made it clear that destruction of private property in the name of public necessity—like abatement of public nuisances¹⁷⁰—is a police power exercise different in kind from eminent domain and hence potentially insulated from takings liability.¹⁷¹ However, Florida common law is also fairly clear that use of the public necessity doctrine to avoid compensation requires both an emergency and exigent circumstances.¹⁷²

Much of Florida's public necessity law developed in the context of agricultural regulation to contain and eliminate plant and animal diseases, and in this context the exigency of the emergency has been critical to the availability of a public necessity defense. Thus, for example, while regulation to prevent and control the spread of citrus canker clearly falls within the state's police power,¹⁷³ the state-agency-ordered destruction of six healthy citrus trees because of the discovery of infected trees

^{167.} See also Louisville & N.R. Co., 49 So. at 401 (emphasizing existence of "casualties such as conflagrations").

^{168.} Kittrell v. Hatter, 10 So. 2d 827, 830-31 (Ala. 1942).

^{169.} Morrison v. Farnell, 171 So. 528, 532 (Fla. 1937).

^{170.} Osceola County v. Best Diversified, Inc., 936 So. 2d 55, 59-60 (Fla. 5th D.C.A. 2006) (holding that inverse condemnation claim regarding a landfill would fail if landfill constituted a public nuisance); Florida Dep't of Envtl. Prot. v. Burgess, 667 So. 2d 267, 270-71 (Fla. 1st DCA 1995) (holding that denial of a state dredge-and-fill permit might not be a taking because "[h]armful or noxious uses of property can be proscribed by government regulation without the requirement of compensation.").

^{171.} Pasternack v. Bennett, 190 So. 56, 58-59 (Fla. 1939).

^{172.} Davis v. City of South Bay, 433 So. 2d 1364, 1366 (Fla. 4th DCA 1983).

^{173.} Haire v. Dep't of Agric. & Consumer Servs., 870 So. 2d 774, 782 (Fla. 2004).

less than 1900 feet away might still support a takings claim.¹⁷⁴ In the Florida Supreme Court's view, "the 'absolute destruction of property is an extreme exercise of the police power and *is justified only within the narrowest limits of actual necessity, unless the state chooses to pay compensation.*"¹⁷⁵ Moreover, "the threat must be 'imminently dangerous."¹⁷⁶

Public necessity measures to combat human or animal diseases are far less likely to require compensation than measures to combat plant diseases. For example, the Florida Supreme Court concluded that no compensation beyond the statutory award of \$12.50 was required for the destruction of cattle when the state was acting to control brucellosis, a highly infectious disease that affects both cattle and people.¹⁷⁷ In contrast, when the state attempted to control the spread of nematodes in citrus and avocado trees by destroying healthy trees in nematode infection zones, the court concluded that the destruction without compensation exceeded the state's police power because the disease spread slowly.¹⁷⁸ Thus, in Florida, "proof of an overriding public necessity" is necessary for the government to avoid compensation.¹⁷⁹

Moreover, the Florida courts construe the timing and extent of the emergency strictly. For example, the Florida Court of Appeals emphasized in 2009 that emergency drainage measures that damage private property are allowed only during a hurricane, not after.¹⁸⁰ The case involved Walton County's diversion of floodwaters in 1995 following Hurricane Opal. While the public necessity doctrine insulated the initial diversion from takings claims, the county kept diverting waters through 2005, causing flooding of private property and subjecting itself to a takings claim.¹⁸¹

In general, therefore, Florida's public necessity doctrine provides only a limited, emergency-based shield against takings claims. Nevertheless, Florida historically has recognized a coastal public necessity doctrine that could be revived to support state and local responses to sea level rise. In 1947, the Florida Supreme Court decided *Paty v. Town of West Palm Beach*,¹⁸² finding that

 ^{174.} Rich v. Dept. of Agric. & Consumer Servs., 898
 So. 2d 1163, 1163-64 (Fla. 2d DCA 2005).

^{175.} Haire.870 So. 2d at 783 (quoting Corneal v. State Plant Bd., 95
 So. 2d 1, 4 (Fla. 1957)).

^{176.} *Id.* at 784; *see also Corneal*, 95 So. 2d at 6.

^{177.} Conner v. Carlton, 223 So. 2d 324, 327-28 (Fla. 1969).

^{178.} Corneal, 95 So. 2d at 4-6.

 ^{179.} Zabel v. Pinellas C
nty Water & Navigation Control Auth., 171 So. 2d 376, 378-80 &
n.9 (Fla. 1965).

^{180.} Drake v. Walton Cnty, 6 So. 3d 717, 720-21 (Fla. 1st DCA 2009).

^{181.} Id. at 721-22.

^{182. 29} So. 2d 363 (Fla. 1947).

there was no legal wrong—and hence no claim for compensation when the Town of West Palm Beach erected a groin that caused damage to land along the ocean.¹⁸³ According to the court, "[t]he waters of the sea are usually considered a common enemy[,]" and the town had the authority to protect Ocean Boulevard and the lands near it.¹⁸⁴

Florida courts continue to cite *Paty* as good law, especially in respect to takings claims under the Florida Constitution. For example, in 1962, the Florida Second District Court of Appeals referred to the *Paty* decision as being part of Florida's public necessity doctrine,¹⁸⁵ and as recently as 2003 it noted that:

In 1947, the Florida Supreme Court held that certain damage to private property simply has no remedy at law. . . . In applying [the *Paty*] rationale to takings claims, Florida courts have held that when government actors cause damage to property as a result of their lawful actions performed without negligence, no compensable taking has occurred under the Florida Constitution.¹⁸⁶

Moreover, while Florida has eliminated the common enemy doctrine for fresh waters,¹⁸⁷ no cases have explicitly done so for the coast. Thus, *Paty* provides potentially interesting precedent for Florida as the state and coastal counties begin to deal with sea level rise.

D. Public Necessity and Takings Claims in Louisiana

The Louisiana Supreme Court has recognized the public necessity defense to takings claims since at least 1882, emphasizing that

[t]here exists an implied assent on the part of every member of society, that his own individual welfare shall, in cases of public necessity, yield to that of the community, and that his property, his liberty, and even his life shall, in certain cases, be placed in jeopardy, or even sacrificed for the public good.¹⁸⁸

^{183.} Id. at 363-64.

^{184.} Id. at 363.

^{185.} Dudley v. Orange Cnty., 137 So. 2d 859, 862-63 (Fla. 2d DCA 1962).

^{186.} Interested Underwriters v. City of St. Petersburg, 864 So. 2d 1145, 1148-49 (Fla. 2d DCA 2003) (citations omitted).

 ^{187.} Westland Skating Ctr., Inc. v. Gus Machado Buick, Inc., 542 So. 2
d $959, \,961{\text{-}}62$ (Fla. 1989).

^{188.} Bass v. State, 34 La. Ann. 494, 495 (1882).

Under this doctrine, private property can be destroyed without compensation to address "some controlling public necessity[,]" such as "to prevent the spreading of a fire, the ravages of pestilence, the advance of a hostile army, or *any other great public calamity*."¹⁸⁹

As the court's characterization of Louisiana's public necessity doctrine suggests, however, Louisiana public necessity law generally requires an emergency. As the Louisiana Court of Appeals stated in 2006, governments can destroy property without compensation only if there is a "grave public emergency."¹⁹⁰ Thus, for example, while "[i]t is true private property may be destroyed to protect public safety[,]" when nothing in the record indicated that an oak tree "posed any immediate peril to the public[,]" compensation was required; a government agency "cannot hide behind the general police powers of the state to justify the sudden destruction of private property in [the] absence of some showing of a public emergency requiring immediate action."¹⁹¹

Importantly, however, the Louisiana courts also limit takings claims related to coastal protection efforts in other ways. For example, in 2002 the Louisiana Court of Appeals found no taking had occurred when the City of Westwego undertook levee repair and built a ring levee around Hontex Enterprises' seafood processing plant, causing flooding of the plant.¹⁹² According to the court, "the building of the temporary ring levee was an action taken to protect the public due to a defective design or defective function of Hontex's water discharge system."¹⁹³ In other words, Hontex itself had created the problem the city was addressing, suggesting a public-nuisance-like and estoppel basis for the City's defense.

More generally, riparian properties in Louisiana are subject to the "ancient" levee servitude under Louisiana law.¹⁹⁴ Pursuant to this servitude, "[u]se of property subject to the levee servitude for levee purposes is not a taking of private property for

^{189.} Id. at 496.

^{190.} Union Planters Bank, NA v. City of Gonzales, 924 So. 2d 272, 276 (La. Ct. App. 2006); *see also* Dep't of Highways v. Sw. Elec. Power Co., 145 So. 2d 312, 315 (La. 1962) (quoting New Orleans Gas-Light Co. v. Hart, 4 So. 215, 217 (La. 1888)) (noting that the police power "is a power, in the exercise of which a man's property may be taken from him, where his liberty may be shackled, and his person exposed to destruction, in cases of great public emergencies").

^{191.} Daniel v. Dep't of Transp. & Dev., 396 So. 2d 967, 972 (La. Ct. App. 1981) (citing Shreveport v. Kansas City S. Ry. Co., 190 So. 404 (La. 1939), cert. denied, 308 U.S. 612 (1939)).

^{192.} Hontex Enters., Inc. v. City of Westwego, 833 So. 2d 1234, 1241 (La. Ct. App. 2002).

^{193.} Id.

^{194.} Pillow v. Bd. of Comm'rs, 369 So. 2d 1172, 1177 (La. Ct. App. 1979). See also Bass v. State, 34 La. Ann. 494, 498-99 (La. 1882) (identifying and describing the levee servitude and noting that actions pursuant to it do not require compensation).

which compensation is due under either the Louisiana or Federal Constitutions[.]"¹⁹⁵

In addition, the Louisiana Supreme Court has been more generous regarding the public necessity defense when it comes to state actions to address coastal erosion. In 2004, for example, it concluded in *Avenal v. State* that no unconstitutional takings had occurred when the Louisiana Department of Natural Resources' coastal restoration project destroyed the value of oyster leases.¹⁹⁶ While the specific provisions of those leases were important to the court's decision,¹⁹⁷ the court also underscored the state's public necessity doctrine and the *Lucas* Court's privileging of that doctrine as a "background principle" of state property law. Specifically, it declared that "the freshening of these waters in order to prevent further coastal erosion and save Louisiana's coast is a matter of 'actual necessity' as it will 'forstall [a] grave threat to the lives and property of others."¹⁹⁸

In *Avenal*, therefore, the Louisiana Supreme Court has already characterized state efforts to address coastal erosion as actions that respond to a public necessity. It would not require much of a leap in logic for the court to characterize governmental responses to sea level rise in the same way, insulating from takings claims state and local efforts to deal with that growing problem.

New 2009 hurricane legislation in Louisiana might also help the Louisiana courts to broaden the characterization of coastal protection efforts as public necessities. This new statute declares that:

Louisiana and its citizens have suffered catastrophic losses and human, economic, and social harm. For the benefit and protection of the state as a whole, its citizens, and its localities, *hurricane protection is vital to survival*... In addition to immediate needs for hurricane protection, coastal land loss in Louisiana continues in catastrophic proportions. Wetlands loss threatens valuable fish and wildlife production and the viability of residential, agricultural, energy, and industrial development in coastal Louisiana.¹⁹⁹

^{195.} Pillow, 369 So. 2d at 1177.

^{196.} Avenal v. State, 886 So. 2d 1085, 1107 n.28 (La. 2004).

^{197.} Id. at 1107-08 n. 28 (noting that the oyster "leases were expressly made subject to \ldots the right of the state to disperse fresh water from the Mississippi River over saltwater marshes to prevent coastal erosion [which] is derived from a background principle of Louisiana law.").

 ^{198.}Id.at 1108 n. 28 (quoting Lucas v. South Carolina Coastal Council, 505 U.S. 1003, 1029 n.16 (1992)).

^{199.} LA. REV. STAT. § 49:214.1(A) (2010) (emphasis added).

Thus, the Louisiana Legislature has arguably already classified both hurricanes and coastal erosion as *ongoing* or *recurring* emergencies, potentially expanding the use of the public necessity doctrine. Such expansion might be particularly relevant to the Coastal Protection and Restoration Authority, which the new legislation creates and empowers "to carry out any and all functions necessary to serve as the single entity responsible to act as the local sponsor for construction, operation and maintenance of all of the hurricane, storm damage reduction and flood control projects in areas under its jurisdiction[.]"²⁰⁰

E. Public Necessity and Takings Claims in Mississippi

The Mississippi courts have recognized the doctrine of public necessity since early in the state's existence. However, like Florida, they take a fairly strict approach to the need for an imminent emergency. Thus, for example, a Mississippi court emphasized that use of the public necessity doctrine requires a situation that "demands immediate action," such as fire, war, pestilence, famine, or flood, and the necessity has to be "apparently present."²⁰¹ In other words, an "extreme necessity" is required.²⁰² By 1874, the Mississippi Supreme Court acknowledged that necessity could be a defense to the destruction of public property, but that the necessity had to be "extreme, imperative and overwhelming[.]"²⁰³ Similarly, in 1936, the Mississippi Supreme Court established that compensation is generally required when government actions destroy private property, even in the face of claims of necessity.²⁰⁴

As is true in Alabama, the Mississippi courts have done little to adapt the public necessity doctrine to modern circumstances. Nevertheless, more recent cases suggest that the Mississippi courts might be willing to expand the availability of public necessity and public safety as defenses to the state's normal compensation requirement. For example, in a series of cases since 1970, the Mississippi courts have recognized that governments can destroy buildings that are unsafe public nuisances without compensation.²⁰⁵ Moreover, in 1999 the Mississippi Supreme Court

- 201. Penrice v. Wallis, 37 Miss. 172, 183 (Miss. Err. & App. 1859) (emphasis omitted).
- 202. The Steamboat Magnolia v. Marshall, 39 Miss. 109, 132 (Miss. Err. & App. 1860).
- 203. McLaughlin v. Green, 50 Miss. 453, 465 (Miss. 1874).
- 204. State Highway Comm'n v. Buchanan, 165 So. 795, 803 (Miss. 1936).
- 205. Bond v. City of Moss Point, 240 So. 2d 270, 272 (Miss. 1970). *See also* Scarborough v. City of Petal, No. 2009-CA-01431-COA, 2010 WL 3638714, at *3 (Miss. Ct. App. Sept. 21, 2010); Bray v. City of Meridian, 723 So. 2d. 1200, 1203 (Miss. Ct. App. 1998).

^{200.} Id. § 49:214.1(F).

recognized U.S. Supreme Court cases holding that a public health emergency can eliminate the need for pre-deprivation hearings.²⁰⁶

F. Public Necessity and Takings Claims in Texas

Like Florida, Texas has clearly established that the public necessity doctrine is a defense to government destruction of private property. For example, in an early case, the Texas Supreme Court recognized that, at common law, responses to fire constituted a public necessity that was insulated from takings claims.²⁰⁷ Moreover, if the legislature nevertheless provided for compensation, the private property owners had to follow the statute's requirements.²⁰⁸ For over a century, therefore, the Texas courts have recognized that not every government-caused damage to private property must be compensated—only "damages which arise out of or as an incident to some kind of public works."²⁰⁹

Nevertheless, also like Florida, Texas requires an actual or imminent emergency at the time of destruction. As a result, when the Houston police set fire to a house to catch escaped convicts, the Texas Supreme Court acknowledged that they might have a public necessity defense in the resulting lawsuit for damages to the house.²¹⁰ However:

Mere convenience will not suffice. Uncompensated destruction of property has been occasionally justified by reason of war, riot, pestilence, or other great public calamity. Destruction has been permitted in instances in which the building is adjacent to a burning building or in the line of fire and destined to destruction anyway.²¹¹

Moreover, according to the Texas Court of Appeals,

"[w]hile the right exists in the exercise of the police power to destroy property which is a menace to public safety or health, public necessity is the limit of the right and the

208. Id. at 630.

^{206.} Lemon v. Miss. Transp. Comm'n, 735 So. 2d 1013, 1017-18 (Miss. 1999) (citing N. Am. Cold Storage Co. v. Chicago, 211 U.S. 306 (1908); Ewing v. Mytinger & Casselberry, Inc., 339 U.S. 594 (1950)).

^{207.} Keller v. City of Corpus Christi, 50 Tex. 614, 629 (1879).

^{209.} Steele v. City of Houston, 603 S.W.2d 786, 790 (Tex. 1980).

^{210.} Id. at 792.

^{211.} Id.

property cannot be destroyed if the conditions which make it a menace can be abated in any other recognized way."²¹²

To protect this limitation, administrative determinations of public necessity and public nuisance are subject to judicial review.²¹³ However, during a flood, a judge could order the destruction of 160,000 barrels of crude oil that had been released and be protected by the public necessity doctrine.²¹⁴

In terms of the timing of destruction, Texas links its doctrine of public necessity to public nuisance. Specifically:

Where a plaintiff establishes that a governmental entity intentionally destroyed his property because of a real or supposed public emergency, the governmental entity may then defend its actions by proof of great public necessity. In other words, the governmental entity has to show that the property destroyed was a nuisance on the day it was destroyed.²¹⁵

As this quotation suggests, however, there is a suggestion in the inclusion of "supposed" public emergencies that governmental entities are entitled to more leeway during emergencies than when dealing with standard public nuisances.

G. Summary of the Gulf States' Public Necessity Doctrines

As the discussions above demonstrate, all of the Gulf of Mexico states recognize the public necessity doctrine and allow it to serve as a defense to takings claims for governmental actions taken in response to actual emergencies. In terms of coastal management, therefore, easy cases for reliance on the doctrine include immediate state and local responses to hurricanes, floods, levee failures, and storm surge. The doctrine could also potentially be helpful in supporting governmental responses to immediately catastrophic dead zones.

However, the public necessity doctrine may be of more limited assistance in avoiding takings claims when the Gulf states and

^{212.} West v. City of Borger, 309 S.W.2d 250, 253 (Tex. Civ. App. 1958) (quoting City of Houston v. Lurie, 224 S.W.2d 871, 879 (Tex. 1949)).

^{213.} Stockwell v. State, 221 S.W. 932, 934 (Tex. 1920) (dealing with control of citrus canker).

^{214.} Davenport v. E. Texas Ref. Co., 127 S.W.2d 312, 316 (Tex. Civ. App. 1939).

^{215.} Patel v. City of Everman, 179 S.W.3d 1, 11 (Tex. App. 2004) (citations omitted); see also City of Houston v. Crabb, 905 S.W.2d 669, 674 (Tex. App. 1995) (holding that when the city destroyed a building as a public nuisance, it had to show that the building was a nuisance on the day it was demolished).

local governments deal with the longer-term and gradual process of sea level rise. Two sets of issues are likely to emerge among the states. First, Florida and Louisiana have already established (but have failed to develop) precedent that suggests that public necessity with respect to coastal management might be treated differently than public necessity elsewhere, while Alabama and Mississippi retain considerable legal space to develop their public necessity doctrines. As sea level rise becomes an increasingly pressing concern, therefore, courts in these states could choose to evolve their common-law doctrines away from a strict emergency requirement, making them more supportive of longer-term governmental actions to address this problem.

Second, at some point in the future, the impacts of even gradual sea level rise may achieve emergency status. For example, sea level rise may eventually destroy public water supplies by intruding into coastal aquifers, inundate hazardous materials facilities in ways that contaminate nearby properties, or create conditions that contribute to the spread of diseases such as cholera, malaria, or dengue fever.²¹⁶ In these circumstances, state legislatures, local governments, and state courts may all conclude that emergency conditions exist, making the public necessity doctrine available to shield governmental action from takings liability.

The fact that individual storm events are likely to punctuate the cumulative impacts from gradual sea level rise with a series of short-term disasters may operate to make this second legal possibility for the public necessity defense more likely. Indeed, hurricanes and tropical storms will probably repeatedly provide the final surge that pushes rising salt water over some looming threshold—up the aquifer past the point of water supply recovery, through poorly armored coastal facilities in one massive final act of coastal contamination, or into freshwater wetlands to create new brackish water breeding grounds for mosquitoes. In such situations, the hurricane or storm provides an easy emergency excuse for addressing the longer-term and cumulative problem of sea level rise while simultaneously enveloping those governmental actions within the doctrine of public necessity.

V. CONCLUSION

The potential for regulatory takings liability to chill governmental regulatory efforts to address real public problems is

^{216.} See supra notes 19-20.

well recognized in the literature.²¹⁷ Moreover, Peter Byrne has already lamented the fact that the regulatory takings doctrine, by placing too much emphasis on property owners' common law rights, impairs legislatures' ability to deal adequately with climate change adaptation, especially with regard to the risks that sea level rise is creating.²¹⁸

However, the coasts are special places, legally as well as ecologically and socially. The sovereign submerged lands of the Gulf coast and the waters above them are impressed with a public trust, and one facet of this public trust doctrine in most Gulf states is increased governmental authority to protect public resources in and public use of the coast without incurring constitutional takings liability. Moreover, hurricanes and tropical storms, at the very least, constitute public emergencies in the coastal zone that warrant uncompensated governmental action, and Florida and Louisiana have already suggested that protecting the coast from destruction may warrant broader governmental public necessity authority.

Climate-change-induced sea level rise is providing, and will increasingly continue to provide, state and local governments along the Gulf of Mexico with both opportunities and the need to evaluate (or re-evaluate) the "proper" balance of public and private rights in the coastal zone, especially if ice sheet melting—and hence the rate of sea level rise—accelerate significantly in the next few decades. Proactive coastal states such as New York are already wrestling with these difficult issues. For example, in a November 2010 draft report to the legislature, the New York State Sea Level Rise Task Force found that "[c]urrent investment and land use planning practices by both New York State and local governments are encouraging development in areas at high risk of coastal flooding and erosion" and that:

Over the long term, cumulative environmental and economic costs associated with structural protection measures such as seawalls, dikes, and beach nourishment are expected to be several times more expensive and less effective than non-structural measures such as elevation of

^{217.} E.g., Christopher Gibson, A Look at the Compulsory License in Investment Arbitration: The Case of Indirect Expropriation, 25 AM. U. INT'L. L. REV. 357, 420 & n.224 (2010); Kerry Rittich, The Future of Law and Development: Second Generation Reforms and the Incorporation of the Social, 26 MICH. J. INT'L. L. 199, 216 (2004); Zygmunt J.B. Plater, Environmental Law in the Political Ecosystem—Coping with the Reality of Politics, 19 PACE ENVTL. L. REV. 423, 486 (2002); Christopher P. Yates, Reagan Revolution Redux in Takings Clause Jurisprudence, 72 U. DET. MERCY L. REV. 531, 559 (1995).

^{218.} Byrne, supra note 31, at 626-27.
at-risk structures and planned relocation away from the coastal shoreline.²¹⁹

It recommended community-based approaches to sea level rise adaptation, with some emphasis on funding and education, but also noted that state and regional planning and oversight will be critical.²²⁰ Moreover, the Task Force endorsed governmental action to make coastal retreat more attractive, such as "by requiring development projects to internalize the risks of sea level rise and storms in coastal development planning and decisionmaking" and by requiring "[r]eal estate titles or other consumer-oriented information sources [to] disclose projected risks to the buyer."²²¹ There is no doubt that these recommended governmental actions would progressively decrease the value of coastal properties, especially if combined with insurance reforms that would reduce the availability or increase the cost of insurance for coastal real estate. However, the Task Force also recognized that

[s]ea level rise will have dramatic implications for New York's coastal communities and their natural resources, affecting the entire ocean and estuarine coastline of the state. Every community along the Hudson River from the federal dam at Troy to New York Harbor and along Long Island Sound and the Atlantic coastline will be affected.²²²

The Task Force identified several available choices to the state, but, given these extensive public impacts, concluded that

[i]deally the state will support development of local or regional plans that emphasize long-term reduction or elimination of risk, take into account the cumulative environmental impacts or benefits of decisions, and include the most cost-effective mix of the [identified] solutions tailored to the specific needs of communities and geographic areas.²²³

While the New York Task Force suggested land use planning, real estate rules, and insurance regulation as specific legal means

^{219.} New York STATE SEA LEVEL RISE TASK FORCE, DRAFT REPORT TO THE LEGISLATURE 15 (Nov. 2010), available at http://www.dec.ny.gov/docs/administration_pdf/ slrtdrpt.pdf.

^{220.} *Id*. at 16, 44-46. 221. *Id*. at 46.

^{221.} *Id.* at 40 222. *Id.* at 6.

^{223.} Id. at 44.

for rethinking public and private interests affected by sea level rise, states' public trust doctrines and public necessity doctrines are the "background principles" that might insulate these changes to state property law from takings liability. Throughout the United States, the public trust doctrine has often served as a mechanism for re-evaluating and adjusting this balance between public and private interests.²²⁴ Indeed, all of the Gulf states except Alabama have relied on their public trust doctrines to assert governmental authority to protect larger public interests in the coast, including erosion control and public access to Gulf beaches, at the (at least arguable) expense of private property rights. While the public necessity doctrine has played less of a role in modern society, it nevertheless provides an "ancient" baseline recognition that the critical needs of the community as a whole outweigh the rights of private individuals, especially during crises. As sea level rise in the Gulf of Mexico accelerates and the extent of relative sea level rise there continues to outpace the global average, the perception of sea level rise as a public crisis in the Gulf is only likely to increase, underscoring the need for a revival of the public necessity defense and more communitarian-oriented principles of coastal regulation. Thus, as sea level rise accelerates, the Gulf states' public trust doctrines and their public necessity doctrines are likely to become increasingly important "background principles" of state property law that will increasingly delineate the limitations of private property rights in the coastal zone.

Of course, the availability of these two property law doctrines does not make sea level rise regulation apolitical. To the contrary, implementing sea level rise policies is likely to be contentious, especially as states—like New York—begin to seriously contemplate implementing policies of coastal retreat.²²⁵ Property rights advocates will inevitably decry the "loss" of individual freedoms caused by regulation to deal with sea level rise effectively—and neither coastal nourishment nor coastal armoring are likely to be effective long-term solutions²²⁶—especially if state courts begin reviving, expanding, and evolving common-law public trust and public necessity doctrines to meet the new needs that sea level rise is creating.

In this politically contentious context, therefore, it is worth remembering two other facts about the public interests in sea level

^{224.} See generally Craig, Eastern States, supra note 52, and Craig, Western States, supra note 54 (both describing comprehensively the evolutions of state public trust doctrines in the United States).

^{225.} See PILKEY & YOUNG, supra note 15, at 162-68 (describing various forms of resistance to coastal retreat policies that have already arisen).

^{226.} Id. at 159-82.

rise. First, if ice sheets continue to melt, especially if they melt at an accelerating pace, eventually the sea *will* win, and long-term resistance is expensive, tapping either a limited public fisc or limited private capital that might be more productively and helpfully spent elsewhere rather than to protect doomed private assets. Second, relatedly, ultimately it is the *sea*, not government regulation, that will take these private properties—but how exactly it does so (catastrophic and contaminating destruction versus orderly planned retreat) could have significant, long-term, and highly detrimental impacts for the public welfare overall.

IS SEA LEVEL RISE "FORESEEABLE"? DOES IT MATTER?

JAMES WILKINS *

I.	INTRODUCTION
II.	STATE LAW
	<i>A. Texas</i>
	<i>B. Florida</i>
	1. Florida Local Government Comprehensive Planning
	and Land Development Regulation Act 459
	C. Louisiana
	D. Alabama
	E. Mississippi
III.	WILL TECHNOLOGY ULTIMATELY AFFECT LIABILITY? 483
IV.	IN RE KATRINA CANAL BREACHES
V.	CONCLUSION

I. INTRODUCTION

Of all the folly that has characterized humankind's tenure on the earth, our fights with water have to rank among the most nonsensical. Water's allure powerfully draws humans to its shores to partake of its life-giving properties and aesthetic pleasures.¹ To many, living close to the water is an idyllic lifestyle, a goal and a mark of achievement. Water, however, can be as dangerous as it is beautiful, turning violent at the slightest provocation from wind or gravity to destroy our works and possessions and take our lives. Throughout history some of the most deadly and momentous events have been floods of one kind or another.² Nevertheless, the fear of floods has not deterred people from taking risks near the

^{*} Professor, Director Louisiana Sea Grant Law and Policy Program, Louisiana State University, Baton Rouge. Research for this publication was funded under award number NA10OAR4170078 from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce and by the Louisiana Sea Grant College Program, a part of the National Sea Grant College Program, maintained by NOAA, United States Department of Commerce. The statements, findings, conclusions, and recommendations are those of the authors and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce

^{1.} See U.S. DEP'T OF COMMERCE, NAT'L OCEANIC & ATMOSPHERIC ADMIN. (NOAA), POPULATION TRENDS ALONG THE COASTAL UNITED STATES: 1980-2008 1 (2004), available at http://oceanservice.noaa.gov/programs/mb/pdfs/coastal_pop_trends_complete.pdf.

^{2.} See U.S. DEP'T OF COMMERCE, NAT'L OCEANIC & ATMOSPHERIC ADMIN. (NOAA), FLOODS: THE AWESOME POWER 2-1 to 2-3 (2005), available at http://www.floodsafety.noaa.gov/resources/FloodsTheAwesomePower_NSC.pdf.

water.³ In the U.S., for instance, there has been a massive demographic shift in population to coastal areas despite numerous widely publicized flooding events over the course of our history.⁴ Hurricanes Katrina and Rita in 2005 and Gustav and Ike in 2008 were the latest of a long line of hurricanes that have wreaked havoc and misery on the shores of the Gulf of Mexico.⁵ Yet we doggedly rebuild in the same hazardous areas in the same risky way, assuming that we have seen the worst. We have learned that government will usually rush to our assistance in a disaster even if we are largely responsible for our own predicaments.⁶ Government efforts to reduce flooding damage through programs like the National Flood Insurance Program have not been very effective and have actually encouraged risky development by providing flood insurance that would be difficult to obtain otherwise.⁷

For the past two decades, the specter of global climate change threatening to significantly raise sea levels around the world has added new and troubling uncertainties to planning for coastal hazards.⁸ Some states in the United States have begun to take a more active and aggressive role in coastal hazard mitigation, going beyond the traditional methods of educating the public about risks, offering incentives to change risky behavior and instituting land use controls aimed at moving development to safer areas.⁹ These efforts, however, are not yet widespread; most local governments do little more land use planning and building regulation than is required by the National Flood Insurance Program, or than other laws may require of them.¹⁰ The reasons so many local govern-

5. Nat'l Hurricane Ctr. (NHC), *Hurricane History*, NOAA, http://www.nhc.noaa.gov/ HAW2/english/history.shtml (last visited May 9, 2011).

7. See Raymond J. Burby, Hurricane Katrina and the Paradoxes of Government Disaster Policy: Bringing About Wise Governmental Decisions for Hazardous Areas, 604 AN-NALS AM. ACAD. POL. & SOC. SCI. 171, 173-78 (2006); U. S. SENATE CONG. OVERSIGHT & IN-VESTIGATION REPORT, WASHED OUT TO SEA: HOW CONGRESS PRIORITIZES BEACH PORK OVER NATIONAL NEEDS 11-12 (2009) [hereinafter WASHED OUT TO SEA] (on file with author).

8. See Revkin, supra note 3.

9. See, e.g., Dolan Eversole & Chris Conger, Integrating Science in Hawaii Coastal Land Use Policy, HAW. DEP'T OF LAND AND NATURAL RES. (Mar. 2007), http://hawaii.gov/dlnr/occl/random-files/presentation-3-07.pdf.

10. See Walter Gillis Peacock et al., An Assessment of Coastal Zone Hazard Mitigation Plans in Texas 69-70 (2010), available at http://archone.tamu.edu/hrrc/Publications/ ResearchReports/Downloads/09-01R_An_assessment_of_CZ_Haz_Mit_Plans_

January_11,_2009.pdf. LA. RECOVERY AUTH., OFFICE OF STATE PLANNING TASK FORCE,

^{3.} See Andrew C. Revkin, Climate Experts Warn of More Coastal Building, N.Y. TIMES, July 25, 2006, at F2, available at, http://www.nytimes.com/2006/07/25/science/earth/25coast.html.

^{4.} Id.

^{6.} See generally, The First Year After Hurricane Katrina: What the Federal Government Did, DEP'T OF HOMELAND SEC. (DHS), http://www.dhs.gov/xfoia/archives/ gc_1157649340100.shtm (last modified Oct. 16, 2008) (listing the various forms of federal assistance to Hurricane Katrina victims).

ments are loathe to enact and enforce regulations limiting development in hazardous coastal areas are undoubtedly varied; however, there are two obvious reasons that come to mind. Development is the lifeblood of local governments, resulting in increased business, population, and tax revenues upon which these governments depend. Another factor revolves around private property rights and the issues surrounding the protection of such rights.

The Fifth Amendment of the U.S. Constitution protects rights in private property from unreasonable or excessive interference by government actions furthering public interests.¹¹ This protection has been extended to the states by the Fourteenth Amendment¹² and all state constitutions have adopted similar provisions that are at least as protective of private property rights as the U.S. Constitution and in many cases, more so.¹³ These federal and state constitutional private property provisions and the case law they have generated are known as "takings" law.¹⁴ Generally, under takings law, when government interference with the ownership or use of private property for a public purpose becomes overly burdensome on the property owner, the interfering government is required to pay the owner just compensation for the loss of value caused by the interference.¹⁵ If the property owner can prove that a taking has occurred, the compensation owed by the government can range from the full value of the property to a small percentage depending on the circumstances of the case.¹⁶ Needless to say, most local governments can ill afford to pay compensation to property owners and are therefore fearful of interfering too much with the use of private property by, for instance, prohibiting development in a hazardous area or requiring development setbacks on the shore.¹⁷ The nuances of takings law are fairly intricate and have been the subject of a large body of case law and scholarly writing;

TECHNICAL REPORT: ESTABLISHMENT OF AN OFFICE OF STATE PLANNING FOR THE STATE OF LOUISIANA 9-10 (2008), available at http://lra.louisiana.gov/assets/docs/searchable/task_force/OSP/OSPFinalReport021508.pdf.

^{11.} U.S. CONST. amend. V.

^{12.} U.S. CONST. amend. XIV.

^{13.} See, e.g., LA. CONST. art. I, § 4.

^{14.} See generally Regulatory Takings, GEORGETOWN ENVTL. L. & POL'Y INS., http://www.law.georgetown.edu/gelpi/current_research/regulatory_takings/ (last visited May 9, 2011).

^{15.} *Id. See also* U.S. CONST. amend. V; Stop the Beach Renourishment v. Fla. Dep't Envtl. Prot., 130 S. Ct 2592, 2602 (2010).

^{16.} *Id. See also* Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l Planning Agency, 535 U.S. 302, 328 (2002); Lingle v. Chevron, U.S.A., Inc., 544 U.S. 528, 538-41 (2005).

^{17.} Dwight Merriam, *Taking Aim at Takings Claims*, PLAN. COMMISSIONERS J., Fall 2005, at 3.

anyone interested in the topic will have no trouble finding material for further study.¹⁸

The subject of this Article will be a counterpoint, of sorts, to takings liability for mitigating natural hazards by regulating private development. Local governments' fears of takings liability for actions designed to protect public safety by mitigating hazards may be overblown because of misunderstandings about the nature and application of takings law, but there is also another factor to consider. A flip side of the issue may be emerging because of advances in technology that allow more accurate predictions of hazard risk zones, that is, governments being held accountable and actually found liable for failure to control development or to issue strong warnings regarding risky development in hazardous areas. If a local government entity has control over planning and zoning decisions and possesses special knowledge about the likelihood and severity of risks, and it allows development that results in damage or injury from natural hazards that it knew or should have known about, can it be found liable for the damages? There are several factors that could affect the answer to that question such as whether there is a statute requiring the government to avoid planning decisions that result in flooding, the level of knowledge government possesses about potential hazards and the defenses available to the government, and the most obvious being sovereign immunity and discretionary function immunity. In the end, the issue will boil down the question of reasonableness and how far society is willing to go in imposing paternalistic requirements on government to protect us from our own unwise decisions. If even moderate climate change predictions come to pass, a large proportion of coastal property will be a far riskier place to develop and live on in the not so distant future.¹⁹ Indeed, the current observed average rate of global sea level rise, one foot within the next 100 years, will put many coastal areas in jeopardy, and many areas could experience significantly higher rates of sea level rise.²⁰

Coastal Louisiana, for example, is largely at two feet or less above sea level and much of that land is subsiding, making relative

^{18.} See, e.g., GEORGETOWN ENVTL. LAW & POL'Y INS., supra note 14.

^{19.} INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: IM-PACTS, ADAPTATION AND VULNERABILITY 92 (2007), available at http://www.ipcc.ch/pdf/ assessment-report/ar4/wg2/ar4-wg2-chapter1.pdf; Sea Levels Online, NOAA, http://tidesandcurrents.noaa.gov/sltrends/sltrends.shtml (last visited May 9, 2011); Coastal Zones and Sea Level Rise, U.S. ENVTL. PROT. AGENCY (EPA), http://www.epa.gov/ climatechange/effects/coastal/index.html (last modified Apr. 14, 2010). 20. Id.

sea level rise there even greater than in other areas.²¹ The destruction of coastal property is not merely a cost to the individuals who choose to live there, but it also has great cost to government and society. Storms and sea level rise damage infrastructure built at public expense to support coastal populations, and it must be rebuilt with public funds.²² American society will always provide publically funded disaster relief to people injured by hazards, even those who place themselves in harm's way; one would be hard pressed to find individuals willing to prove their independence and personal responsibility by eschewing public assistance after disasters, even if they eschewed advice against risky development beforehand. The loss of businesses and their customer bases driven away by disasters greatly disrupts local economies.²³ The cost to taxpavers of subsidizing the National Flood Insurance Program's payouts of Katrina and Rita claims was \$18 billion, and there is little chance of the cost being repaid by premiums.²⁴ Thus, regulating development in hazardous areas may not be so paternalistic after all but more a matter of protecting public interests.

The Association of State Floodplain Managers (ASFM) has conducted extensive legal research on lawsuits brought against governments for their actions, either public works projects or permitting decisions, that cause or exacerbate flooding.²⁵ Two ASFM reports, No Adverse Impact And The Courts: Protecting The Property Rights Of All and A Comparative Look Public Liability For Flood Hazard Mitigation, found numerous instances in which governmental entities, usually local governments, were held accountable by courts for flooding damages resulting from public works projects or permitting private projects.²⁶ However, there were also

^{21.} ENVTL. PROT. AGENCY, EPA-230-02-87-026, SAVING LOUISIANA'S COASTAL WET-LANDS: THE NEED FOR A LONG-TERM PLAN OF ACTION 14-15, 16 (1987), available at http://www.epa.gov/climatechange/effects/downloads/louisiana.pdf; See also Subsidence and Sea Level Rise in Louisiana: A Study in Disappearing Land, NOAA MAGAZINE, http://www.magazine.noaa.gov/stories/mag101.htm (last visited May 9, 2011).

^{22.} James G. Titus, *Planning for Sea Level Rise Before and After a Coastal Disaster*, in GREENHOUSE EFFECT AND SEA LEVEL RISE: A CHALLENGE FOR THIS GENERATION ch. 8 (Michael C. Barth & James G. Titus eds., 1984) *available at* http://epa.gov/climatechange/effects/coastal/SLRChallenge.html.

^{23.} See Meucci Cameron, Major Flooding in U.S. Midwest and the Effects on the Economy, ASSOCIATED CONTENT (June 9. 2008), http://www.associatedcontent.com/article/ 812311/major_flooding_in_us_midwest_and_the.html?cat=8.

^{24.} Wendy Blair, National Flood Insurance Program \$18 Billion in the Red, INSUR-ANCE RATE.COM (Aug. 9, 2010), http://www.insurancerate.com/national-flood-insuranceprogram-\$18-billion-in-the-red.php.

^{25.} See Publication and Policy Papers: Legal Papers, ASS'N OF STATE FLOODPLAIN MANAGERS, INC., http://www.floods.org/index.asp?menuID=425&firstlevelmenuID= 179&siteID=1 (last visited May 9, 2011).

^{26.} John A. Kusler, A Comparative Look at Public Liability for Hazard Mitigation, ASS'N OF STATE FLOODPLAIN MANAGERS FOUND. 42-45 (2009) http://www.floods.org/PDF/

many cases where the governmental entity escaped liability for various reasons such as sovereign immunity, discretionary function immunity, the public duty doctrine, the common enemy doctrine, or failure to prove causation.²⁷ The ASFM reports found that governments are more likely to incur liability for structural projects like "grading or filling land or by constructing structural hazard reduction measures such as dikes, dams, and levees" than from "nonstructural loss reduction measures such as inadequate flood warnings, inadequate dissemination of flood information, and other nonstructural flood loss reduction measures[,]" and they are least likely to be liable for "failing to adequately regulate flood prone areas."²⁸ However, there are a substantial number of cases where local governments were found liable when they permitted private actions or projects, such as subdivisions, that caused damage from natural hazards to other people's property.²⁹

As to the important question that will be the subject of this Article—whether governments could face liability in situations where they know or should know of potential hazards threatening a particular piece of property and nonetheless allow development there that is then damaged by the known hazard—the ASFM reports found only one case where the plaintiffs were successful.³⁰ It appears that most of the cases in the ASFM reports deal with flooding from inland water bodies rather than coastal flooding. Sea level rise will initially have the greatest impact on coastal shorelines, and this may be an important distinction when determining causation and assigning liability. Unlike flooding caused by random weather events, sea level rise *as observed* is happening now in known locations and all credible data points to its continued increase.³¹ Only the possible acceleration of sea level rise is subject

- 27. Kusler, *supra* note 26, at 23.
- 28. Id. at 4, 5, 41 (emphasis omitted).
- 29. Id. at 42.
- 30. Id. (referring to Hurst v. United States, 882 F.2d 306 (8th Cir. 1989)).

Mitigation/ASFPM_Comparative_look_at_pub_liability_for_flood_haz_mitigation_09.pdf; Ass'n of State Floodplain Managers Foundation, *Appendix E: Legal Questions and Answers*, in *Coastal No Adverse Impact Handbook* 140 (2005), *available at* http://www.floods.org/ NoAdverseImpact/CNAI_Handbook/CNAI_Handbook.pdf.

^{31.} See Mean Sea Level Trends for Tropical and Gulf of Mexico Stations, NOAA TIDES & CURRENTS [hereinafter Sea Level Trends], http://tidesandcurrents.noaa.gov/sltrends/ tropicaltrends.html (last revised Dec. 9, 2008); U.S. GEOLOGICAL SURVEY (USGS), NATIONAL ASSESSMENT OF COASTAL VULNERABILITY TO FUTURE SEA LEVEL RISE (June 2000) [hereinafter USGS ASSESSMENT], available at http://pubs.usgs.gov/fs/fs76-00/fs076-00.pdf; Jonathan T. Overpeck & Jeremy L. Weiss, Projections of Future Sea Level Becoming More Dire, 106 PROC. OF THE NAT'L. ACAD. OF SCI. OF THE U.S. OF AM. 21461-21462 (2009), available at http://www.pnas.org/cgi/doi/10.1073/pnas.0912878107; PEW CTR. ON GLOBAL CLIMATE CHANGE, CLIMATE CHANGE 2007: SYNTHESIS REPORT OF THE IPCC FOURTH ASSESSMENT REPORT SUMMARY FOR POLICY MAKERS (2007), available at http://www.pewclimate.org/

to scientific uncertainty.³² The current observed rate will cause much damage and disruption. So, for well-informed, enlightened governments there will be no uncertainty to hide behind when defending themselves against permitting decisions that put humans and their property in harm's way.

To assess the risk Gulf Coast local governments face by not at least attempting to direct development away from known hazard areas, it will be necessary to examine existing statutory and case law regarding hazard mitigation and also to look for analogous scenarios where a duty to act on behalf of public safety has been imposed on governments in areas that have traditionally been left to individual choice. The topic is wide and it would be presumptuous to imagine that this Article will provide definitive answers to all of the questions that will be raised, but it will be a necessary preliminary exploration of the issues that we hope will stimulate a much wider inquiry and more scholarly work. The intent is to take the dialogue on government responsibility started by the ASFM and others,³³ and informed by constantly evolving technology, to a new level in the context of a more hazardous coastal world that the best available science says is upon us. We will now examine major points of the controlling law in the Gulf of Mexico region as a starting point for our inquiry.

II. STATE LAW

A. Texas

Texas governmental entities have rarely been held responsible for their actions that cause or exacerbate flooding of other people's property. Before Texas partially abrogated sovereign immunity in 1969 with the passage of the Texas Tort Claims Act (TTCA),³⁴ governmental entities enjoyed common law sovereign immunity from negligence suits for actions taken while carrying out their governmental functions (as opposed to proprietary functions) that, with narrow exceptions, was essentially absolute.³⁵ Since the passage of the TTCA, the door has opened only slightly to government

docUploads/PewSummary_AR4.pdf.

^{32.} See USGS ASSESSMENT, supra note 31.

^{33.} Edward A. Thomas & Sam Riley Medlock, *Mitigating Misery: Land Use and Protection of Property Rights Before the Next Big Flood*, 9 VT. J. ENVTL. L. 155, 157 (2008).

^{34.} Texas Tort Claims Act, TEX. CIV. PRAC. & REM. CODE §§ 101.001 *et seq* (2009).

^{35.} See Hosner v. DeYoung, 1 Tex. 764, 769 (Tex. 1847); see also Walter J. Kronzer III, Development of Common Law Governmental Immunity and Overview of the Texas Tort Claims Act, FINDLAW (1999), http://library.findlaw.com/1999/Nov/1/129168.html.

liability for flooding damages. The TTCA declares sanitary and storm sewers, dams and reservoirs, and zoning planning and plat approval as governmental functions for which governmental entities may be found liable for negligent acts, but only if the injury or damage "arises from the operation or use of a motor-driven vehicle or motor-driven equipment; and the employee would be personally liable to the claimant according to Texas law[.]"³⁶ The TTCA also waives governmental immunity for "personal injury and death so caused by a condition or use of tangible personal or real property if the governmental unit would, were it a private person, be liable to the claimant according to Texas law."³⁷ This second cause of action would usually arise from "premise[s] and special defects" of real property.³⁸

In cases that have been decided under the TTCA, courts have generally marked out the boundaries regarding its liability waiver. Negligence in performing governmental functions will only incur liability if the injury is actually caused by the operation of a motor vehicle or motor driven equipment.³⁹ Another limitation on the

39. City of Houston v. Boyle, 148 S.W.3d 171, 180 (Tex. App. 2004) (stating that "[u]nder the TCA... for the City to waive immunity for property-damage claims, the damage must have been caused by negligent operation or use of a motor vehicle or motor-driven equipment. Because [the defendant's] pleadings do not allege either of these, the general rule of immunity controls."); Ector County v. Breedlove, 168 S.W.3d 864, 866-67 (Tex. App. 2004) (holding that county's road and ditch work that caused flooding of plaintiff's property two years later were governmental functions and immune from liability even though motor driven vehicles and equipment were used to do the work because the TTCA requires that the use of vehicle or equipment have a direct nexus to the injury, essentially that the use actually caused the injury); Wickham v. San Jacinto River Auth., 979 S.W.2d 876, 879-80 (Tex. App. 1998) (stating that since the TCA explicitly excludes "equipment used in connection with the operation of floodgates or water release equipment" from the definition of "motor-driven equipment," the appellants are without a cause of action because "the sole event for which [they] are seeking recovery has as its basis the release of water . . . by means of the floodgates of appellee"); Golden Harvest Inc., v. City of Dallas, 942 S.W.2d 682, 690-91 (Tex. App. 1997) (holding that the city's decision not to pre-release water from a dam that resulted in flooding of plaintiff's property was a discretionary decision and protected by governmental immunity under the TTCA, and further expressing: the fact that the dam's floodgates were motor driven did not place the act within the waiver provisions of the TTCA because motor driven floodgates are not within the purview of the waiver); Bennett v. Tarrant Cnty. Water Control & Imp. Dist. No. One, 894 S.W.2d 441, 451 (Tex. App. 1995) (holding that the water control and improvement district was not liable for flooding plaintiff's homes when it opened floodgates to release excess water in a reservoir because floodgates are not defined as motor driven equipment under the Texas Tort Claims Act's limited waiver of sovereign immunity); Dalon v. City of DeSoto, 852 S.W.2d 530, 536 (Tex. App. 1992) (expressing that Texas courts have consistently upheld the proposition that a municipality "does not waive sovereign immunity as to property damage unless the damage is caused by the negligent act or omission of a state employee and arises from the operation of motor driven equipment" (emphasis omitted) (quoting Dep't of Highways & Pub. Transp. V. Pruitt, 770 S.W.2d 638, 639 (Tex. App. 1989)).

^{36.} TEX. CIV. PRAC. & REM. CODE ANN § 101.021(1)(a), 1(b).

^{37.} Id. § 101.021(2).

^{38.} See id. § 101.022.

TTCA's immunity waiver is for actions that a government is not required by law to perform, that is, the performance of which is left to the discretion of the government.⁴⁰ Courts have held that discretionary actions include: deciding not to prerelease water from reservoirs,⁴¹ sewer system design, failure to correct a negligently designed drainage system,⁴² and being prepared for flooding of low water crossings.⁴³ The Texas Supreme Court had already ruled that the approval of a subdivision plat was a discretionary function and thus immune from liability for negligence before the 1987 amendments to the TTCA classified it as a governmental function, placing it within the very narrow waiver provisions.⁴⁴

It appears then that the wall of sovereign immunity for governmental entities has barely been breached in Texas, at least in the area of flooding impacts resulting from government actions. When property is flooded, plaintiffs have often attempted to recover under the most widely accepted waiver of governmental immunity by claiming that the occupation of, or damage to, private property constitutes a "taking" under federal and state constitutions.⁴⁵

^{40.} TEX. CIV. PRAC. & REM. CODE ANN § 101.056.

⁴¹ See, e.g., Golden Harvest Co., 942 S.W.2d at 687-88 (concluding that since "it was the City's policy not to pre-release water from the . . . [d]am, but to keep the lake at maximum elevation level so that a ready supply of water would be available for use by the residents of the City and for sale to other customers[,]" the failure to pre-release was discretionary and therefore could not subject governmental units to liability); see also Bennett, 894 S.W.2d at 451-52 (noting the "discretionary function exception to the waiver of governmental immunity is designed to avoid judicial review of governmental policy decisions[,]" and holding "that the decision whether to release or pre-release water from the . . . spillway [at issue] constitutes policy formulation for which the Water District is immune from liability").

^{42.} See, e.g., City of San Antonio v. De Miguel, 311 S.W.3d 22, 27-28 (Tex. App. 2010) (concluding that "the City's decision to not fund the construction of [the draining project at issue] does not convert any negligence on the City's part into an intentional taking by the City"); see also City of Borger v. Garcia, 290 S.W.3d 325, 331 (Tex. App. 2009) (citations omitted) (stating "[t]he evidence that raises a fact issue in regard to the adequacy of the planning of the drainage system, at best, raises a fact issue as to whether the City was negligent in its design of the drainage system. This is significant because (1) the design of a street drainage system is a discretionary act for which governmental immunity has not been waived, and (2) the particular design and construction of the drainage system selected by the City is within the City's discretion and may not be reviewed and revised by the courts in a piecemeal fashion").

^{43.} See, e.g., City of Corsicana v. Stewart, 249 S.W.3d 412, 416 (Tex. 2008) (stating that "regardless of whether the City should have been better prepared to respond, the City is immune from liability for discretionary decisions concerning the expenditure of limited resources for the safety of its citizens").

^{44.} City of Round Rock v. Smith, 687 S.W.2d 300, 303 (Tex. 1985) (stating that "plat approval is a discretionary function that only a governmental unit can perform. By definition a quasi-judicial exercise of the police power is exclusively the province of the sovereign. An individual or private corporation cannot exercise the same power"); see also City of Watauga v. Taylor, 752 S.W.2d 199, 202 (Tex. App. 1988) (expressing the view that "a city cannot be held liable for negligently approving a plat" because such approval is "a governmental function and the subject of governmental immunity").

^{45.} See, e.g., City of Midlothian v. Black, 271 S.W.3d 791, 799 (Tex. App. 2008).

"To recover under article I, section 17 of the Texas Constitution, a claimant must establish that (1) the governmental entity intentionally performed certain acts, (2) that resulted in a taking of the property, (3) for public use."⁴⁶ The finding that a government knew or should have known property damage would result from its actions is considered necessary to meet the public purpose requirement for successful takings claims.⁴⁷ Examples of actions the courts have found that constitute a taking include: recurrent release of water from a reservoir,⁴⁸ approval of a subdivision plat that diverted water onto other property,⁴⁹ design of a highway that caused flooding,⁵⁰ a decision not to pre-release water from a reservoir,⁵¹ drainage projects,⁵² design of dam and floodgates that

There is a clear and unambiguous waiver of immunity from suit for inversecondemnation claims within article I, section 17 of the Texas Constitution also known as the "takings clause." Therefore, governmental immunity does not shield [the City] from a properly pled claim for compensation under the state constitutional takings clause.

Id. (citation omitted). See also TEX CONST. art. I, § 17.

^{46.} State v. Agnew, No. 13-05-00143-CV, 2006 WL 1644678, at *2 (Tex. App. June 15, 2006).

^{47.} See City of Dallas v. Jennings, 142 S.W.3d 310, 314 (Tex. 2004) (citation omitted) (concluding: "There may well be times when a governmental entity is aware that its action will necessarily cause physical damage to certain private property, and yet determines that the benefit to the public outweighs the harm caused to that property. In such a situation, the property may be 'damaged for public use."); see also Tarrant Reg1 Water Dist. v. Gragg, 151 S.W.3d 546, 555 (Tex. 2004) (citation omitted) (noting that "requisite intent is present when a governmental entity knows that a specific act is causing identifiable harm or knows that the harm is substantially certain to result. In the case of flood-water impacts, recurrence is a probative factor in determining the extent of the taking and whether it is necessarily incident to authorized government activity, and therefore substantially certain to occur").

^{48.} *Tarrant*, 151 S.W.3d at 559 (holding "that the construction and operation of the . . [r]eservoir necessarily caused recurrent destructive changes in flood characteristics at the Gragg Ranch that rendered the property unusable for its intended purpose and resulted in a taking").

^{49.} *E.g.*, Kite v. City of Westworth, 853 S.W.2d 200, 201 (Tex. App. 1993) (holding diversion of water caused by a municipality's approval of a plat can constitute a taking).

^{50.} Harris Cnty. Flood Control Dist. v. Adam, 56 S.W.3d 665, 670 (Tex. App. 2001) (stating: "To the extent . . . that the District exercised control over the design of Beltway 8 with knowledge that its decisions would likely result in more severe flooding conditions than would otherwise occur, [the petition] alleges facts that could constitute an intentional taking"); *see also* Soule v. Galveston Cnty., 246 S.W.2d 491, 492 (Tex. Civ. App. 1951) (holding governmental unit may divert water onto adjoining land if landowners are justly compensated).

^{51.} E.g., Golden Harvest Co. v. City of Dallas, 942 S.W.2d 682, 690 (Tex. App. 1997).

^{52.} E.g., City of Perryton v. Huston, 454 S.W.2d 435, 438 (Tex. Civ. App. 1970) (holding that city is liable for damages if water flow is altered to increase flow on a private landowner's property).

endangered other property, 53 and releasing sewage water from a treatment plant. 54

The intent element in takings claims has sometimes been a high hurdle for plaintiffs to clear. The courts have linked intent with the public purpose requirement of the Texas constitution, holding that takings claims may not be sustained for damage resulting from mere negligence.⁵⁵ "When damage is merely the accidental result of the government's act, there is no public benefit and the property cannot be said to be 'taken or damaged for public use.³⁵⁶ To prove governmental intent to occupy or damage private property, it is not enough to show that the act causing the damage was intentional, but rather that the government "(1) knows that a specific act is causing identifiable harm; or (2) knows that the specific property damage is substantially certain to result from an authorized government action-that is, that the damage is necessarily an incident to, or necessarily a consequential result of [sic] the government's action[,]" thereby conferring a public benefit.⁵⁷ In the context of flooding, courts have often looked at the recurrence of flooding as a critical piece of evidence in determining intent to cause the damage, and a single flooding event has not been considered a taking.⁵⁸ "Thus, the general rule is that a single flood event does not rise to the level of a taking."⁵⁹ Courts have found the reguisite intent to damage lacking in other situations: increasing flow of water in a canal that burst,⁶⁰ a drainage and road project that

^{53.} *E.g.*, City of Waco v. Rook, 55 S.W.2d 649, 653 (Tex. Civ. App. 1932) (holding that landowners can recover for physical injury to the land caused by construction of a dam).

^{54.} Abbott v. City of Kaufman, 717 S.W.2d 927, 928-29, 932-33 (Tex. App. 1986) (holding government is not immune from damages caused by sewage plant flooding plaintiffs' property).

^{55.} City of Dallas v. Jennings, 142 S.W.3d 310, 313 (Tex. 2004).

^{56.} *Id.* (emphasis omitted) (quoting Tex. Highway Dep't v. Weber, 219 S.W.2d 70, 71 (1949)); *see also* Tarrant Reg'l Water Dist. v. Gragg, 151 S.W.3d 546, 554-55 (Tex. 2004) (quoting Steele v. City of Houston, 603 S.W.2d 786, 792 (Tex. 1980)) (stating that "our Constitution provides for compensation only if property is damaged or appropriated 'for or applied to public use.").

^{57.} *City of Dallas*, 142 S.W.3d at 314; *see also* Tex. Highway Dep't v. Weber, 219 S.W.2d 70, 71 (1949) (holding that "[t]he spreading of the fire onto the [appellant's premises] was purely and solely the result of negligence; in no conceivable way can it be said that the hay crop was taken or damaged for public use").

^{58.} See Tarrant, 151 S.W.3d at 555; see also supra text accompanying note 47 (pertaining to requisite intent and flood-water impacts).

^{59.} Evatt v. Tex. Dep't of Transp., No. 11-05-00031-CV, 2006 WL 1349352, at *5 (Tex. App. May 18, 2006). See also Wickham v. San Jacinto River Auth., 979 S.W.2d 876, 880 (Tex. App. 1998) ("We find no Texas cases specifically holding that a single, temporary event can support a claim for nuisance.").

^{60.} Maverick Cnty. Water & Improvement Dist. v. Reyes, No. 04-03-00421-CV, 2003 WL 22900914, at *3 (Tex. App. Dec. 10, 2003) (citations omitted) (stating that "[a] nuisance claim cannot be made merely by pleading negligent acts and labeling them a nuisance. To maintain a cause of action for nuisance, a plaintiff must be able to show the alleged nui-

caused "occasional or intermittent overflows,"⁶¹ deciding to repair rather than replace aging drainage pumps,⁶² failing to correct a negligently-designed drainage system,⁶³ failing to plead that the city knew its approval of a subdivision plat was "necessarily an incident to, or necessarily a consequential result of" [sic]" the project,⁶⁴ and the use of flowage easements to disperse excess flood waters four times in twenty years.⁶⁵

Another issue that may affect government liability for takings in Texas is whether property owners can maintain a claim when the government action occurred before they acquired title. In *City* of Round Rock v. Smith, the Texas Supreme Court decided a case brought by homeowners alleging that the city had taken their property by approving a subdivision plat which subsequently resulted in the flooding of their homes.⁶⁶ Prior to the plaintiffs purchasing their homes, the developer of the subdivision filled in the tract's natural drainage areas and platted lots over them that the city approved.⁶⁷ The developer then sold the lots to a builder who built the houses purchased by the plaintiffs.⁶⁸ Plaintiffs allege that a severe rainstorm flooded the subdivision at least in part because of the destruction of the drainage channels.⁶⁹ The homeowners brought suit against the city for negligence, or, in the alternative, the taking of their property by approving the plat over the filled watercourses.⁷⁰

After deciding that approval of a subdivision plat is a governmental function and therefore immune from suit except under the

63. City of San Antonio v. De Miguel, 311 S.W.3d 22, 27-28 (Tex. App. 2010), (concluding that "the City's decision to not fund the construction of [the drainage project] does not convert any negligence on the City's part into an intentional taking by the City.").

sance is inherent in the condition or thing itself, beyond that arising from alleged improper or negligent use.").

^{61.} Hubler v. City of Corpus Christi, 564 S.W.2d 816, 821 (Tex. Civ. App. 1978) (citations omitted) (stating that "occasional or intermittent overflows do not constitute a taking.").

^{62.} City of Van Alstyne v. Young, 146 S.W.3d 846, 850 (Tex. App. 2004) (concluding that "[t]he City's knowledge of alleged problems with the sewer pumps . . . is not the same as knowledge that their decision not to replace the pumps would result in a flood of the [property owners'] home.").

^{64.} City of Midlothian v. Black, 271 S.W.3d 791, 800 (Tex. App. 2008); *see also* City of Keller v. Wilson, 168 S.W.3d 802, 830 (Tex. 2005) (concluding that the property owners failed to prove "that the City knew the plans it approved were substantially certain to increase flooding on [their] properties.").

^{65.} Bennett v. Tarrant Cnty. Water Control, 894 S.W.2d 441, 448 (Tex. App. 1995) (holding that city enforcement of existing easement does not constitute a taking under the circumstances of the case).

^{66. 687} S.W.2d 300, 301 (Tex. 1985).

^{67.} Id.

^{68.} Id.

^{69.} Id.

^{70.} Id.

very narrow waiver provisions of the Texas Tort Claims Act, the court turned to the takings claim.⁷¹ The court, without any discussion, ruled that the filling of the watercourses had been "consented to" by the developer, satisfying the requirements of the Texas Constitution that property not be taken, damaged, or destroyed for a public purpose "unless by the consent" of the owner and since the homeowners claimed their title through the developer they were not entitled to compensation.⁷² City of Round Rock is disturbing because of how it might apply in coastal areas. It is becoming clear that a key element in addressing natural hazard mitigation is effective land use planning which is almost exclusively a local government function.⁷³ Local governments are usually in a better position to know of hazards than developers and certainly more so than homebuyers. Policies that allow reckless disregard for the long-term consideration of public safety need to be reexamined, especially in areas likely to be affected by sea level rise. At some point in the future, assuming only the observed current rate of sea level rise, such policies will result in much human and economic devastation.74

In summary, Texas courts have not found governments liable under the TTCA for negligence in planning decisions or public works projects that cause property damage from flooding. The requirement that the negligence be in conjunction with the use of a motor vehicle or motor-driven equipment and the discretionary function immunity have been an effective wall against liability. Plaintiffs have had more success in property damage cases by claiming an unconstitutional taking of private property so long as they can prove that the act intentionally damaged the property and thus the damage was done for a public purpose. If the act that caused the damage occurred before the injured party acquired the property, the claim may be barred if the court finds the previous owner "consented" to the taking.

B. Florida

As discussed in this section, extensive development in the state of Florida has spawned many disputes over the diversion of water by private or public entities onto other people's property. A number of these "water wars" have been the subject of lawsuits. Florida

^{71.} Id. at 302-03.

^{72.} Id. at 303 (emphasis omitted).

^{73.} See Eversole & Conger, supra note 9.

^{74.} See Revkin, supra note 3.

waived absolute sovereign immunity from negligence liability in 1973 when it passed a tort claims act modeled closely after the Federal Tort Claims Act.⁷⁵ While rejecting pre-waiver immunity theories such as "general duty-special duty" and the "governmental-proprietary" distinctions,⁷⁶ Florida courts have struggled to find consistency in their application of the waiver, applying an implied exception for discretionary functions based on a nebulous four-part test,⁷⁷ a "known dangerous condition" factor,⁷⁸ embracing the previously-rejected public duty doctrine before again rejecting it⁷⁹ and employing a "foreseeable zone of risk" factor.⁸⁰ The court's meanderings between the opposing banks of the immunity waiver have left a confusing wake, prompting one Florida Supreme Court justice to remark that the parameters of sovereign immunity were an "enigma . . . now shrouded in mystery."⁸¹ Other commentators

78. See, e.g., Dep't of Transp. v. Neilson, 419 So. 2d 1071, 1077 (Fla. 1982) ("This is not to say, however, that a governmental entity may not be liable for an engineering design defect not inherent in the overall plan for a project it has directed be built, or for an inherent defect which creates a known dangerous condition.").

79. See Dep't of Health & Rehabilitative Servs. v. Yamuni, 529 So. 2d 258, 261 (Fla. 1988) (stating that "the categories set out in *Trianon* offer only a rough guide to the type of activities which are either immune or not immune. The test for determining immunity, and for determining which category the activity falls into, is still *Commercial Carrier's* operational versus planning dichotomy."); see also Trianon Park Condo. Ass'n, Inc. v. City of Hialeah, 468 So. 2d 912, 917-18 (Fla. 1985) (citations omitted) (expressing that "legislative enactments for the benefit of the general public do not automatically create an independent duty to either individual citizens or a specific class of citizens. . . . [T]here is not now, nor has there ever been, any common law duty for either a private person or a governmental entity to enforce the law for the benefit of an individual or a specific group of individuals"). But see Pollock v. Florida Dept. of Highway Patrol, 882 So. 2d 928 (Fla. 2004) which seemed to resurrect, at least temporarily, Florida's public duty doctrine.

80. See Kaisner v. Kolb, 543 So. 2d 732, 735 (Fla. 1989) (stating that "[w]here a defendant's conduct creates a foreseeable zone of risk, the law generally will recognize a duty placed upon defendant either to lessen the risk or see that sufficient precautions are taken to protect others from the harm that the risk poses").

81. Neilson, 419 So. 2d at 1079 (Sunberg, J., dissenting) ("In a laudable effort to simplify the distinction between those acts of governmental agencies which still enjoy immunity and those which do not, it occurs to me that the majority has simply exchanged one set of result descriptive labels for another. Hence, the irreconcilable results among the several

^{75.} See FLA. STAT. § 768.28 (2010).

^{76.} See, e.g., Commercial Carrier Corp. v. Indian River Cnty., 371 So. 2d 1010, 1016 (Fla. 1979) (footnote omitted) ("Predicating liability upon the 'governmental-proprietary' and 'special duty-general duty' analyses has drawn severe criticism from numerous courts and commentators. Consequently, we cannot attribute to the legislature the intent to have codified the rules of municipal sovereign immunity through enactment of section 768.28, Florida Statutes (1975).").

^{77.} See id. at 1022 (citation omitted) (stating that "although section 768.28 evinces the intent of our legislature to waive sovereign immunity on a broad basis . . . certain 'discretionary' governmental functions remain immune from tort liability. This is so because certain functions of coordinate branches of government may not be subjected to scrutiny by judge or jury as to the wisdom of their performance. In order to identify those functions, we adopt [an] analysis . . . which distinguishes between the 'planning' and 'operational' levels of decision-making by governmental agencies.").

have thoroughly explored sovereign immunity in Florida, and we need not retrace their work here.⁸² While the overall state of sovereign immunity in Florida may be somewhat confused, it is safe to say that plaintiffs are more likely to prevail in suits seeking redress for government-caused flooding than in Texas. Florida cases deciding government liability for flood damage have used several theories to determine the boundaries of sovereign immunity in the flood damage context, which we will explore in some detail now.

Before the waiver of sovereign immunity, as in Texas, the primary avenue to seek redress against governments for flooding damage to property was through a takings claim; that did not change with Florida's waiver of immunity. Courts have found that government-caused flooding constituted a taking on numerous occasions.⁸³ The factual scenarios typically involve drainage and water management projects,⁸⁴ road and other construction projects,⁸⁵ but also include issuing permits for pumping irrigation water⁸⁶ and flooding land for mosquito abatement.⁸⁷ Exceeding or violating flowage easements can also give rise to government liability⁸⁸ and, of particular interest to our discussion, so can approval of

84. See Drake, 6 So. 3d at 721 (involving drainage for flood protection through natural drain that had previously been closed).

85. See generally Lawrence, 102 So. 2d at 146 (dealing with the diversion of surface waters); see also Assocs. of Meadow Lake, 706 So. 2d at 52 (holding that a city park construction project that caused flooding of plaintiff's property, but that was later corrected, could still be a temporary taking); *Elliott*, 281 So. 2d at 396 (describing situation where road construction blocked the natural flow of rainwater); *Kendry*, 213 So. 2d at 26-29 (concluding that state road construction project conducted in violation of easements that resulted in flooding plaintiff's property when it rained was a permanent invasion because it was "reasonably expected to continually reoccur in the future" and was therefore a taking).

86. Crowley Museum & Nature Ctr., 993 So. 2d at 610.

87. DiChristopher, 908 So. 2d at 497.

88. Hall v. City of Orlando, 555 So. 2d 963, 966 (Fla. 5th DCA 1990) (where a city road project that would increase the use of a draining easement resulted in liability); *Kendry*, 213

district courts of appeal are not harmonized, but rather the confusion is compounded. The enigma is now shrouded in mystery.").

^{82.} See generally William N. Drake, Jr. & Thomas A. Bustin, Governmental Tort Liability in Florida: A Tangled Web, FLA. BAR J., Feb. 2003, at 8; see also Thomas A. Bustin & William N. Drake, Jr., Judicial Tort Reform: Transforming Florida's Waiver of Sovereign Immunity Statute, 32 STETSON L. REV. 469 (2003).

^{83.} See Town of Miami Springs v. Lawrence, 102 So. 2d 143, 146 (Fla. 1958); Drake v. Walton Cnty., 6 So. 3d 717, 721 (Fla. 1st DCA 2009); Crowley Museum & Nature Ctr., Inc. v. Sw. Fla. Water Mgmt. Dist., 993 So. 2d 605, 610 (Fla. 2d DCA 2008); DiChristopher v. Bd. of Cnty. Comm'r, 908 So. 2d 492, 497 (Fla. 5th DCA 2005); Assocs. of Meadow Lake, Inc. v. City of Edgewater, 706 So. 2d 50, 52 (Fla. 5th DCA 1998); S. Florida Water Mgmt. Dist. v. Steadman Stahl, P.A. Pension Fund, 558 So. 2d 1087, 1088 (Fla. 4th DCA 1990); Hillsborough Cnty. v. Gutierrez, 433 So. 2d 1337, 1340 (Fla. 2d DCA 1983); Leon Cnty. v. Smith, 397 So. 2d 362, 363-64 (Fla. 1st DCA 1981); Elliott v. Hernando Cnty., 281 So. 2d 395, 396 (Fla. 2d DCA 1973); Kendry v. State Rd. Dep't, 213 So. 2d 23, 26-28 (Fla. 4th DCA 1968) for examples of government caused flooding that constituted takings.

subdivision plats and subdivision drainage plans. In *Leon County v. Smith*, the county approved a subdivision project with drainage ditches to collect water from the area and disperse it across the plaintiff's land.⁸⁹ After completion, the county accepted ownership of the drainage system and responsibility for controlling and maintaining it.⁹⁰ The plaintiff's land was damaged by water flowing through the drainage system, and the First District Court of Appeal held that the county's actions amounted to a taking despite its assertion that the plaintiff's property was the natural drainage for the subdivision.⁹¹

Failure to ensure that a subdivision drainage system was properly constructed and which resulted in flooding of the plaintiff's property was also found to be a taking in *Hillsborough County v. Gutierrez.*⁹² Florida courts have declined to find that a taking has occurred when "the flooding was not sufficiently extensive to constitute a required 'substantial ouster."⁹³ In *Diamond K Corporation v. Leon County*, the court said a "continuing physical invasion" was required for substantial ouster, and a taking must be a permanent deprivation of "all beneficial use."⁹⁴ There the county's drainage improvement works caused a creek to periodically flood a portion of the plaintiff's property.⁹⁵ The court did not find that sufficient to constitute a taking.⁹⁶ Neither were the temporary dams erected by the county to prevent flooding found to be a taking in *Dudley v. Orange County*.⁹⁷ Evidence from the trial court indicated the county would lower water levels in a lake as soon as possible.⁹⁸

In *Hansen v. City of Deland*, the city pumped flood waters into a dry drainage basin adjacent to plaintiff's property for flood con-

So. 2d at 26 (where a state road construction project conducted in violation of easements resulted in liability).

^{89. 397} So. 2d 362, 363 (Fla. 1st DCA 1981).

^{90.} Id.

^{91.} *Id.* at 363-64 ("The doctrine of sovereign immunity does not allow a governmental agency to take the land of a private citizen without giving that citizen recourse through eminent domain or inverse condemnation proceedings."); *see also* Maday's Wholesale Greenhouses, Inc. v. Indigo Group, Inc., 692 So. 2d 207, 209 (Fla. 5th DCA 1997) (plaintiffs sought injunctive relief which the court said was available and not precluded by sovereign immunity); Kulpinski v. City of Tarpon Springs, 473 So. 2d 813, 814 (Fla. 2d DCA 1985) (city's approval of a subdivision that caused flooding was held to be a taking).

^{92. 433} So. 2d 1337, 1338-40 (Fla. 2d DCA 1983).

^{93.} Bensch v. Metro. Dade Cnty., 541 So. 2d 1329, 1331 (Fla. 3d DCA 1989). ""[T]he flooding must constitute an actual, permanent invasion of the land, amounting to an appropriation of, and not merely an injury to, the property." *Id.* at 1330 (citations omitted).

^{94. 677} So. 2d 90, 91 (Fla. 1st DCA 1996).

^{95.} Id.

^{96.} Id.

^{97. 137} So. 2d 859, 863 (Fla. 2d DCA 1962).

^{98.} Id. at 860.

trol.⁹⁹ The water in the basin stayed at an elevated level partially flooding the private property for fifteen months, killing some of the property owner's trees but not damaging their houses or other structures or denving them access to their homes.¹⁰⁰ The trial court found that the tree damage was "aesthetic, not commercial" constituting at most a tort, and the property owners had not been permanently denied "any reasonable use of their properties."¹⁰¹ The appellate court agreed: "Here, the trial court found that the landowners offered no evidence demonstrating that they suffered a substantial deprivation of all beneficial use of their properties during the period the land was flooded."¹⁰² In finding that flood waters amount to takings, courts have said that the interference must be "for more than a momentary period, and will be continuous or reasonably expected to continuously recur, resulting in a substantial deprivation of the beneficial use of her property,"¹⁰³ or because the recurrence of rain made it a permanent condition.¹⁰⁴

In a few instances governments have been found negligent and subject to the waiver of sovereign immunity for their actions that caused flooding. In *Slemp v. City of North Miami*, the city installed a storm sewer pump system to prevent flooding and then allegedly failed to maintain and operate the system.¹⁰⁵ Citing *Commercial Carrier*'s "operational/planning" distinction, the Florida Supreme Court held that the maintenance and operation of the pumps was not immune from negligence liability because it was an operational level activity.¹⁰⁶ Five years later, the Florida Supreme Court decided a case involving the water management district's operation of its drainage control system, namely, the operation of floodgates, regulation of the flow of water in the canals and water ways of the

^{99. 32} So. 3d 654, 655 (Fla. 5th DCA 2010), reh'g denied (Apr. 16, 2010), review denied, 44 So. 3d 1177 (Fla. 2010).

^{100.} Id.

^{101.} *Id*.

^{102.} Id. at 656.

^{103.} Drake v. Walton Cnty., 6 So. 3d 717, 720 (Fla. 1st DCA 2009) (considering a situation in which county directed a flow of water across private property).

^{104.} Elliott v. Hernando Cnty., 281 So. 2d 395, 396 (Fla. 2d DCA 1973) (road project caused flooding when it rained); *see also* Hillsborough Cnty. v. Gutierrez, 433 So. 2d 1337, 1338 (Fla. 2d DCA 1983) ("Flooding from the diversion of the natural flow of rain waters by an artificial construction is permanent in the sense that rain is a condition reasonably expected to continually re-occur [sic]."); Kendry v. State Rd. Dept., 213 So. 2d 23, 27 (Fla. 4th DCA 1968) (stating that the flooding of plaintiff's property whenever it rains "is permanent in the sense that rain is a condition that is reasonably expected to continually reoccur in the future").

^{105. 545} So. 2d 256, 257 (Fla. 1989).

^{106.} *Id.* (stating that "the city's alleged failure to maintain and operate its pumps properly is an operational level activity and is thus subject to traditional tort analysis").

system, and dredging and cleaning of the system.¹⁰⁷ The court cited with approval the district court's finding that the actions complained of were "operational level activities" and therefore subject to the general waiver of immunity.¹⁰⁸ However, the court differed with the district court's interpretation of section 373.443 of the Florida Statutes, which grants immunity to governmental entities for the failure of storm water management systems due to the control or regulation of such systems.¹⁰⁹ The district court interpreted the specific waiver statute to be consistent with the general waiver and did not grant immunity to operational activities.¹¹⁰ The Florida Supreme Court, however, declined to make such an interpretation and found that the acts giving rise to the suit occurred before the specific immunity statute was amended to cover storm water management systems.¹¹¹ The Florida Supreme Court did not directly hold that the specific immunity statute supersedes the general waiver, but the case raises the question of the viability of operational level liability for the operation of storm water management systems.

Another facet of government liability for flooding is when the governmental entity is found to be the "owner" of property that causes flooding on other property. Florida follows the "modified civil law rule of surface water."¹¹² Generally, the upper estate may

improve and enhance the natural drainage of his land as long as he acts reasonably and does not divert the flow, and that the lower owner is subject to an easement for such flow as the upper owner is allowed to cast upon him. . . . [N]o person [however] has the right to gather surface waters that would naturally flow in one direction and divert them from their natural course and cast them upon lands of the lower owner to his injury.¹¹³

^{107.} Sw. Florida Water Mgmt. Dist. v. Nanz, 642 So. 2d 1084, 1086 (Fla. 1994). 108. *Id.* at 1088.

^{109.} FLA. STAT. § 373.443 (1989) (granting governmental immunity "for the recovery of damages caused by the partial or total failure of any stormwater management system . . . upon the ground that the state or district is liable by virtue" of, *inter alia*, "[c]ontrol or regulation of stormwater management systems. . . .").

^{110.} Nanz v. Sw. Fla. Water Mgmt. Dist., 617 So. 2d 735, 736 (Fla. 2d DCA 1993) (stating that "[t]he immunity granted appears to be related to the planning functions of SWFMD as opposed to its operational activities").

^{111.} Sw. Florida Water Mgmt. Dist. v. Nanz, 642 So. 2d at 1087 (stating that "[t]he legislature amended the [1987] statute in 1989 to provide immunity for stormwater management").

^{112.} Seminole Cnty. v. Mertz, 415 So. 2d 1286, 1289 (Fla. 5th DCA 1982) (stating that the "modified civil law rule" has been applied in Florida in an "almost unbroken line of decisions").

^{113.} Id.

In Seminole County v. Mertz, the county's approval of a subdivision and its drainage plan caused flooding on the plaintiff's land and the county was ostensibly the owner of streets and drainage easements in the subdivision.¹¹⁴ The plaintiffs obtained a permanent injunction against the upper estate and the county to prohibit the damaging flows.¹¹⁵ The county maintained that their "planning and disbursement of water flow is a discretionary act of government" subject to sovereign immunity, but the Fifth District Court of Appeal said that the immunity only applied to tort actions and not to injunctions for water damage so the injunction could be maintained.¹¹⁶

Maday's Wholesale Greenhouses, Inc. v. Indigo Group Inc. involved a city's approval and permitting of a subdivision that caused the plaintiff's property to flood.¹¹⁷ The city became the "dedicated" owner of the roads after the subdivision's completion.¹¹⁸ The plaintiff sought injunctive relief against the city, but the trial court found that the injunction was actually to make the city undertake a "capital improvement or expenditure" to "correct" the flow of surface waters that had been disturbed by the project and thus prohibited by sovereign immunity.¹¹⁹ The court of appeal disagreed, holding that the city had taken control of the problematic property by dedication and thus was subject to "the same common law duty as a private person to properly maintain and operate the property[,]" that is, to act reasonably in altering the flow of surface water so as not to injure the lower estate.¹²⁰ As such, the injunctive relief sought was not barred by sovereign immunity.¹²¹ An alternative cause of action, a water law action, can have a significant effect on a local government's decisions because, while not subjecting the government to liability for damages in tort or takings, the government may in some circumstances end up spending more to correct drainage problems it has created than it would have by condemning the property or paying damages for negligence.

The case of *Drake v. Walton County* is another interesting but troubling case involving the alteration of natural drainage patterns.¹²² The facts are somewhat long and convoluted and must be pieced together from both the majority and dissenting opinions.

^{114.} *Id*. at 1291.

^{115.} See id. at 1287.

^{116.} Id. at 1290-91.

^{117. 692} So. 2d 207, 208 (Fla. 5th DCA 1997).

^{118.} *Id*.

^{119.} Id. at 207, 209.

^{120.} *Id.* at 209. 121. *Id.*

^{122. 6} So. 3d 717, 719 (Fla. 1st DCA 2009).

^{122. 6 50. 50 717, 719 (}Fla. 1st DCA 2009).

The natural outfall of Oyster Lake was across the plaintiff's property.¹²³ The plaintiff's predecessors in interest, with assistance of the state, had altered the natural flow from the lake's outlet by digging a ditch that prevented water from flowing across the plaintiff's property as it had always done.¹²⁴ The plaintiff's purchased the property after the alteration and no water crossed their land until hurricanes and other storms began clogging the culvert that directed the natural outfall under a road which was subsequently cleared by the county.¹²⁵ Clearing the culvert increased the flow, causing it to abandon the ditch and flow across the subject property.¹²⁶ The county attempted, unsuccessfully, to reestablish the flow through the ditch for several years.¹²⁷

The plaintiff's predecessors in interest, who owned the lot adjacent to the plaintiff, sued the county for a taking by the act of clearing the box culverts and sought an injunction to prevent the county from replacing the culverts with an open span bridge and allowing further development that would increase the flow across their property.¹²⁸ Hurricane Ivan blocked the culvert again and the county cleared it and diverted the water around the plaintiff's property to the drainage ditch along the edge of the property.¹²⁹ During the next storm, Hurricane Dennis, the county took steps to shore up the eroding draining ditch and protect the beach house on the adjacent property; however, after the hurricane caused the culvert to clog once again, the county cleared the culvert and angled the ditch across the corner of the plaintiff's property to prevent it from eroding into the adjacent property.¹³⁰ The same scenario was repeated in Hurricane Katrina.¹³¹ The plaintiff's predecessors in interest filed a temporary takings claim against the county for clearing the culvert in the first two storms and a takings claim for actions after Hurricanes Dennis and Katrina; they also sought a mandatory injunction to force the county to remove the angled ditch.¹³²

The trial court ruled that a taking had not occurred because the county was taking emergency action, rather it was simply a restoration of the natural drainage pattern, and that plaintiffs

^{123.} Id.

^{124.} Id. at 719-20.

^{125.} Id. at 719-20. See also id. at 723 (Barfield, J., dissenting).

^{126.} Id. at 723 (Barfield, J., dissenting).

^{127.} Id. at 724 (Barfield, J., dissenting).

^{128.} Id.

^{129.} *Id*.

^{130.} *Id*.

^{131.} *Id*.

^{132.} *Id*.

could not rely on the artificially-established drainage.¹³³ The court of appeals disagreed and said the natural drainage pattern was irrelevant because the plaintiffs reasonably relied on the artificially-established drainage and that the county's reconfiguration of the drainage to the natural area to protect other property owners was a taking.¹³⁴ The court said: "A taking is more likely to have occurred when a governmental action confers a public benefit rather than prevents a public harm."¹³⁵ The dissent strongly criticized the majority's ruling, stating that the county merely cleared the culverts in the natural drainage after Hurricane Opal which restored the natural flow and had in fact attempted to mitigate the effects of the natural flow by channeling it away from most of the property.¹³⁶ The dissent said this was in direct conflict with precedent on surface water law.¹³⁷ Whatever the merits of the parties on either side, this case demonstrates the ridiculous contortions necessary when we refuse to acknowledge that some property is simply not suitable for development.

The last Florida case this Article will discuss is *City of Tarpon Springs v. Garrigan* where the city's furnishing of incorrect FEMA base flood elevations that caused the plaintiff to build houses that were later declared ineligible for federal flood insurance was held to be immune from suit.¹³⁸ Despite the waiver of sovereign immunity statute, the court expressed that the city owed no common law or statutory duty of care to properly enforce the elevation requirements.¹³⁹ This case seems ultimately to rest on the public duty doctrine: "appellant's only responsibility was to the public and there was no special duty owed to appellees as individuals."¹⁴⁰ But there is other language regarding the National Flood Insurance Program that gives pause: "Neither did the federal NFIP enactment create any independent duty of care on the part of appellant."¹⁴¹ The court makes the analogy to building inspections that have been

^{133.} Id. at 719-20.

^{134.} Id. at 720.

^{135.} Id. at 721 (quoting Graham v. Estuary Props., 399 So. 2d. 1374, 1381 (Fla. 1981)).

^{136.} Id. at 725 (Barfield, J., dissenting) (expressing the view that the majority opinion has no legal support).

^{137.} Id. ("The majority opinion appears to hold that a servient tenement, which has been subject to the natural flow of surface water from the dominant tenement for centuries, can divert the natural flow of surface water from the dominant tenement into an artificial channel and thereafter require the dominant tenement to permanently maintain this artificial flow of surface water. This apparent holding is in direct conflict with Westland Skating Center, Inc. v. Gus Machado Buick, Inc., 542 So.2d 959, 961 (Fla.1989).").

^{138. 510} So. 2d 1198, 1199-1200 (Fla. 2d DCA 1987).

^{139.} Id. at 1199.

^{140.} *Id*.

^{141.} *Id*.

held to impose no duty to properly enforce because they are discretionary functions.¹⁴² The court misses an important distinction in that the discretionary part of the NFIP is choosing whether or not to participate. Once that decision is made, and there are not many communities who can afford to forego the opportunity for their residents to purchase flood insurance, enforcement of the ordinance, including requirements to build above the base flood elevation, are mandatory for continued participation in the NFIP.¹⁴³ The ultimate sanction for not enforcing the flood ordinance is removal from the program and all the economic chaos that would follow.¹⁴⁴ So in a sense, enforcing the ordinance as to individuals is required to meet the obligation to the public as a whole.

To summarize, Florida courts have built a somewhat confusing case history under the tort claims act, making it difficult to determine the parameters of immunity. The courts have found local governments liable for negligence in their operation of drainage systems that cause flooding based on an "operational/planning" distinction where operational activities are not afforded discretionary function immunity but planning activities are. The courts have also devised a "foreseeable zone of risk" factor to impose a duty on governments to protect against harm, but they have not yet employed it in flooding cases. Plaintiffs have also sought relief from flooding damage as unconstitutional takings, relief predicated on proof that the flooding is severe enough to constitute a "substantial ouster" or has denied them reasonable use of their property. In addition, Florida plaintiffs seek relief from flooding under the common law of drainage servitudes. Florida uses the modified civil law rule that the lower estate must receive the natural drainage from the upper estate, but the upper estate may not alter the drainage in such a way to make the servitude more burdensome on the lower estate. Courts have found local governments in violation of drainage servitudes for approving subdivisions and drainage systems, which they later owned by dedication, that flood neighboring property. One case held that reestablishing a natural drain after the local government's attempts to alter it to protect private property had failed was a taking.¹⁴⁵ Finally, the National Flood Insurance Program's elevation requirements were held to impose

^{142.} Id.

^{143.} See EMERGENCY MGMT. AGENCY, ENFORCEMENT OF THE ORDINANCE 10-6 (1997), http://149.168.212.15/mitigation/Library/NFIP/NFIP_Unit10.pdf (discussing sanctions for non-enforcement).

^{144.} Id. at 10-6 to 10-8.

^{145.} Drake v. Walton Cnty., 6 So. 3d 717, 717 (Fla. 1st DCA 2009).

no duty to properly enforce the flood ordinance requirements against individuals.

1. Florida Local Government Comprehensive Planning and Land Development Regulation Act

In 1985 Florida enacted the Local Government Comprehensive Planning and Land Development Regulation Act¹⁴⁶ (hereinafter referred to as the "planning statute"). By doing so, Florida became the only state bordering the Gulf of Mexico to require that local governments prepare a comprehensive development plan¹⁴⁷ with regulatory authority to accomplish the elements of the plan.¹⁴⁸ One of the required elements for coastal areas is that the comprehensive plan includes a coastal management element.¹⁴⁹ The coastal management element establishes policies that guide the local government's decisions in implementing program objectives including: "Limitation of public expenditures that subsidize development in high-hazard coastal areas" and "Protection of human life against the effects of natural disasters."150 The coastal management element recognizes that the state government will pay a significant portion of the costs from natural disasters, and "it is the intent of the Legislature that the [mandated] local government comprehensive plans restrict development" in coastal hazard areas.¹⁵¹ The coastal management element is to be based on data including maps showing "areas subject to coastal flooding" and include a "component which outlines principles for hazard mitigation and protection of human life against the effects of natural disaster[.]"¹⁵²

The coastal management element must also contain a component describing how redevelopment shall be used "to eliminate inappropriate and unsafe development in the coastal areas when opportunities arise"¹⁵³ (this could presumably apply when development is destroyed by natural disasters), the designation of "coastal high-hazard areas[,]"—those areas that would be inundated by

^{146.} FLA. STAT. §§ 163.3161-3247 (2010).

^{147.} *Id.* § 163.3167(2) (requiring local governments to "prepare a comprehensive plan . . . or prepare amendments to its existing comprehensive plan to conform it to the requirements of [the statute] and in the manner set out in [the statute]").

^{148.} The statute requires that "[w]ithin 1 year after submission of its revised comprehensive plan for review pursuant to s. 163.3167(2), each county and each municipality shall adopt or amend and enforce land development regulations that are consistent with and implement their adopted comprehensive plan." *Id.* § 163.3202; *see also id.* § 163.3201.

^{149.} Id. § 163.3177(6)(g)(1).

^{150.} Id. §§ 163.3177(6)(g)(1)(g), (h).

^{151.} Id. § 163.3178(1).

^{152.} Id. §§ 163.3178(2)(a), (d).

^{153.} Id. § 163.3178(2)(f).

storm surge from a category one storm based on the SLOSH model for evacuation purposes¹⁵⁴ —and a process for acquisition of coastal properties for the purpose of, among other things, "hazard mitigation."¹⁵⁵ The Florida planning requirements and coastal management element, at least facially, go far beyond any land use requirements in the other Gulf Coast states.¹⁵⁶ In application, the law's effect is not so clear. One study indicates that the cost of disaster relief payments has been much lower in Florida, ostensibly because of the state-mandated local planning,¹⁵⁷ but much risky development still occurs in coastal areas there.¹⁵⁸ The most important question the planning requirement raises for the instant discussion is whether the planning requirements impose a duty on local governments to mitigate natural hazards, such that failing to do so would incur liability.

The planning statute requires local governments to have a comprehensive plan, specifies required elements of the plan, and requires regulations to implement it.¹⁵⁹ But once the plan has been approved by the state, what is the local government's responsibility regarding implementation and enforcement of the plan, and are there any consequences for failing to perform such responsibilities? The statute allows persons affected by development decisions to challenge the decision's compliance with the local comprehensive plan.¹⁶⁰ There have been challenges to local government development decisions based on allegations that the decisions were inconsistent with local comprehensive plans,¹⁶¹ and in

158. Interview with Thomas Ruppert, Florida Sea Grant Specialist (Dec. 21, 2010).

159. See supra discussion notes 147-156 and accompanying text.

^{154.} Id. § 163.3178(2)(h). SLOSH is an acronym for Sea, Lake, and Overland Surges from Hurricanes. Id.

^{155.} Id. § 163.3178(8).

^{156.} Survey of State Land Use and Natural Hazards Planning Laws, 2009, DISAS-TERSAFETY.ORG (on file with author).

^{157.} Raymond J. Burby, Hurricane Katrina and the Paradoxes of Government Disaster Policy: Bringing About Wise Governmental Decisions for Hazardous Areas, 604 ANNALS AM. ACAD. POL. & SOC. SCI. 171, 183 (2006) (citing Tim Chapin, Robert Deyle, & Jay Baker, Reduced Hazard Exposure Through Growth Management? An Evaluation of the Effectiveness of Florida's Hurricane Hazard Mitigation Planning Mandates (Mar. 2006) (Paper prepared for presentation at the 2005 annual conference of the Association of Collegiate Schools of Planning, Kansas City, MO)).

^{160.} FLA. STAT. § 163.3213 (2010) ("It is the intent of the Legislature that substantially affected persons have the right to maintain administrative actions which assure that land development regulations implement and are consistent with the local comprehensive plan.").

^{161.} Bay Cnty. v. Harrison, 13 So. 3d 115, 120 (Fla. 1st DCA 2009) (beachfront resort condominium was consistent with plan); Lake Rosa v. Bd. of Cnty. Comm'rs, 911 So. 2d 206, 210 (Fla. 5th DCA 2005) (dormitory at recreational camp was inconsistent with plan); Baker v. Metro. Dade Cnty., 774 So. 2d 14, 20 (Fla. 1st DCA 2000) (commercial parking to be located in a residential zone was inconsistent with plan); White v. Metro. Dade Cnty., 563 So. 2d 117, 128 (Fla. 3d DCA 1990) (tennis complex in violation of plan).

one case, a developer was ordered to tear down newly constructed apartment complexes that were built in violation of the county's comprehensive plan.¹⁶²

No reported cases were found involving local government development decisions that were inconsistent with a set-back requirement or some other hazard mitigation measure. No local comprehensive development plans were examined for this Article, so it is unclear whether any contain hazard mitigation elements specific enough to support a cause of action for inconsistency with the plan and who would have standing to challenge the government action. Most local ordinances will contain the minimum requirements of the National Flood Insurance Program and will not account for sea level rise or subsidence, and failure to enforce those provisions do not necessarily expose a local government to liability.¹⁶³ If an approved comprehensive plan does contain additional requirements to account for sea level rise or erosion, an inconsistent development decision could be challenged under the planning statute and could possibly be a factor in overcoming a discretionary function defense to negligence.

C. Louisiana

Louisiana is the only state in the United States whose private law, the law regulating interactions between people such as contracts and torts as opposed to criminal law, is based on the civil law system.¹⁶⁴ The general difference between the civil law system and the common law practiced in the other states is that civil law relies more on a statutory framework like the Louisiana Civil Code¹⁶⁵ and the common law jurisdictions are based more on case precedent or "judge made law."¹⁶⁶ In practice, the systems have many similarities,¹⁶⁷ but for our discussion it is important to be

^{162.} Pinecrest Lakes, Inc. v. Shidel, 795 So. 2d 191, 209 (Fla. 4th DCA 2001) ("The statute says that an affected or aggrieved party may bring an action to enjoin an inconsistent development allowed by the County under its Comprehensive Plan. The statutory rule is that if you build it, and in court it later proves inconsistent, it will have to come down. The court's injunction enforces the statutory scheme as written. The County has been ordered to comply with its own Comprehensive Plan and restrained from allowing inconsistent development; and the developer has been found to have built an inconsistent land use and has been ordered to remove it.").

^{163.} See EMERGENCY MGMT. AGENCY, supra note 143 at 10-27.

^{164.} See generally Joachim Zekoll, The Louisiana Private-Law System: The Best of Both Worlds, 10 TUL. EUR. & CIV. L.F. 1 (1995).

^{165.} William Tetley, Mixed Jurisdictions: Common Law vs. Civil Law (Codified and Uncodified), 60 LA. L. REV. 677, 683, 698-701 (2000).

^{166.} Id. at 701.

^{167.} *Id*.

aware that Louisiana courts rely heavily on the Louisiana Civil Code and Revised Statutes in deciding legal disputes.¹⁶⁸ Louisiana generally abolished sovereign immunity against negligence liability in its 1974 constitution: "Neither the state, a state agency, nor a political subdivision shall be immune from suit and liability in contract or for injury to person or property."¹⁶⁹

However, after a series of cases in the 1970s used the public duty doctrine to afford immunity to public entities,¹⁷⁰ the Louisiana Supreme Court decided the case of *Stewart v. Schmieder* in which the city of Baton Rouge was found liable for failing to enforce the city's building code regulations.¹⁷¹ The Court in *Stewart* raised serious doubt as to the continued viability of the public duty doctrine in Louisiana.¹⁷² The Louisiana Legislature eventually responded to *Stewart* by enacting Louisiana Revised Statutes section 9:2798.1 (hereinafter referred to as the "discretionary function statute"), establishing immunity for public entities in performance of their "policymaking or discretionary acts."¹⁷³ While stating that the act is not reestablishing immunity but simply "clarify[ing]" the "parameters" of immunity,¹⁷⁴ the legislature did indeed reestablish immunity of government entities for a large part of their func-

^{168.} Willis-Knighton Med. Ctr. v. Caddo Shreveport Sales & Use Tax Comm'n, 903 So. 2d 1071, 1087 (La. 2005) (footnote omitted) ("Reliance on *jurisprudence constante*, however, is misplaced as will be noted *infra*. Furthermore, we are a civilian jurisdiction in which legislation, the solemn expression of the legislative will, is the superior source of law."); Ardoin v. Hartford Accident & Indem. Co., 360 So. 2d 1331, 1334 (La. 1978) (footnote omitted) ("In deciding the issue before us the lower courts did not follow the process of referring first to the code and other legislative sources but treated language from a judicial opinion as the primary source of law. This is an indication that the position of the decided case as an illustration of past experience and the theory of the individualization of decision have not been properly understood by our jurists in many instances. Therefore, it is important that we plainly state that, particularly in the changing field of delictual responsibility, the notion of Stare decisis, derived as it is from the common law, should not be thought controlling in this state.").

^{169.} LA. CONST. art. XII, § 10.

^{170.} E.g., Perret v. City of Westwego, 364 So.2d 1070, 1071 (La. Ct. App. 1978); Fusilier v. Russell, 345 So.2d 543, 546 (La. Ct. App. 1977); Dufrene v. Guarino, 343 So.2d 1097, 1098 (La. Ct. App. 1977).

^{171. 386} So. 2d 1351, 1358 (La. 1980).

^{172.} *Id.* (stating that "under the jurisprudence of [Louisiana], the mere fact that a duty is of a public nature, and benefits the general public, does not require a conclusion that the city cannot be found liable for the breach of that duty.").

^{173.} LA. REV. STAT. ANN. § 9:2798.1(B) (2011) ("Liability shall not be imposed on public entities or their officers or employees based upon the exercise or performance or the failure to exercise or perform their policymaking or discretionary acts when such acts are within the course and scope of their lawful powers and duties.").

^{174.} *Id.* § 9:2798.1(D) ("The legislature finds and states that the purpose of this Section is not to reestablish any immunity based on the status of sovereignty but rather to clarify the substantive content and parameters of application of such legislatively created codal articles and laws and also to assist in the implementation of Article II of the Constitution of Louisiana.").

tions.¹⁷⁵ The discretionary function statute makes exceptions for actions "not reasonably related to the legitimate governmental objective" and actions that are "criminal, fraudulent, malicious, intentional, willful, outrageous, reckless, or flagrant misconduct."¹⁷⁶ In the context of government liability for flooding, the discretionary function statute has had some effect, but it has not totally absolved governments of responsibility for poor decisions.

Throughout Louisiana's history, flooding has been a problem in this water-rich state.¹⁷⁷ The Louisiana courts are very familiar with causes of action related to flooding; however, this Article will only focus on relatively modern cases decided during the more recent evolution of concepts relating to governmental responsibility. Before the discretionary function statute, Louisiana courts have subjected governmental entities to liability for failing to maintain water levels in a reservoir¹⁷⁸ and for causing flooding from highway construction projects.¹⁷⁹ For our discussion, the most important case decided prior to the enactment of the discretionary function statute is *Eschete v. City of New Orleans.*¹⁸⁰ In *Eschete* the plaintiffs alleged that the city negligently approved new subdivisions knowing that the building of those developments would cause or exacerbate flooding:

The contested petition alleges that the City of New Orleans, through its agents and employees, had known of the "dangerous drainage situation" in the Pines Village area for many years. Knowing in advance that the authorization of new subdivisions in the area would cause flooding, the City of New Orleans has "deliberately, and therefore

^{175.} See David W. Robertson, Tort Liability of Governmental Units in Louisiana, 64 TUL. L. REV. 857, 869 (1990); see also James A. Brown & John C. Anjier, Recent Developments Affecting Louisiana's Discretionary Function Exception: Will Louisiana Follow Gaubert?, 53 LA. L. REV. 1487, 1495-1500 (1993).

^{176. §} 9:2798.1(C)(1), (2) (providing exceptions to the immunity of discretionary acts that are within the scope of "lawful powers and duties").

^{177.} See The Mississippi River and Tributaries Project, U.S. ARMY CORPS OF ENG'RS., http://www.mvn.usace.army.mil/pao/bro/misstrib.htm (last updated May 19, 2004).

^{178.} E.g., Hamilton v. City of Shreveport, 180 So. 2d 30, 31-32 (La. Ct. App. 1965) (suit based on negligence and strict liability of a property owner for damage caused to neighboring property and takings).

^{179.} See, e.g., Semon v. City of Shreveport, 389 So. 2d 438, 440-41 (La. Ct. App. 1980); see also J. B. LaHaye Farms, Inc. v. La. Dep't of Highways, 377 So. 2d 1286, 1288 (La. Ct. App. 1979) (decided on the basis of strict liability under Civil Code Article 667). But see Gabler v. Regent Dev. Corp., 470 So. 2d 149, 161-62 (La. Ct. App. 1985) (where even though the parish may have been negligent in providing an inadequate system, the torrential rains that caused the flooding were an "Act of God" that overwhelmed the other causes such that the parish's negligence was not the proximate cause of the flooding).

^{180. 245} So. 2d 383 (La. 1971).

maliciously" authorized new subdivisions causing flooding during "any ordinary heavy rain fall," thereby increasing plaintiffs' peril. The petition describes the damages resulting from the flooding.

In essence, the plaintiffs allege that the adding of the new subdivisions that overtaxed the drainage system was the wilful[sic] act of the City.¹⁸¹

The Louisiana Supreme Court stated that the cause of action could be sustained because the plaintiff was not seeking to hold the city liable for failing to provide inadequate drainage, which the city maintained was the responsibility of the Sewerage and Water Board, but for adding new subdivisions that it knew would cause flooding problems:

The plaintiffs are seeking to hold the City, not for failing to provide adequate drainage, but for fault in adding new subdivisions, thus increasing the volume of water in the drainage area. In effect, according to the petition, the power to grant or withhold consent for new subdivisions in the Pines Village drainage area effectively controlled the volume of water being discharged in that area.

For its fault, the City may be held liable.¹⁸²

This summation without any reference to maliciousness suggests that merely knowing the consequences can bring fault.

The reasoning of *Eschete* was followed by the Louisiana Fourth Circuit Court of Appeals in *McCloud v. Jefferson Parish*, where the plaintiffs alleged that the parish added new subdivisions "having full knowledge, through its agents and employees, that such additions would overtax the drainage system and thereby cause the hereinabove described damage."¹⁸³ The court said the allegation that the parish had "full knowledge" of the consequences satisfied the reasoning in *Eschete* and even though it did not use the terms "deliberate[ly]" and "malicious[ly]," it still stated a valid cause of action.¹⁸⁴ The same day that Louisiana's Fourth Circuit decided *McCloud*, it ruled in the almost identical case of *Pennebaker v. Jef*-

^{181.} Id. at 384-85.

^{182.} Id. at 385.

^{183. 383} So. 2d 477, 478 (La. Ct. App. 1980).

^{184.} Id.

ferson Parish.¹⁸⁵ The plaintiffs in *Pennebaker* made what the court described as "rather vague"¹⁸⁶ allegations such as

failure to institute a program for coordination of street improvements, building construction, and street drainage to insure that water run off has not been accelerated or routed to the detriment of established property owners [and] . . . allowing street improvements, building construction and street drainage without taking steps to prevent flooding.¹⁸⁷

The court said the allegations were sufficient to state a cause of action under Eschete.¹⁸⁸

In *Keich v. Barkley Place, Inc.*, the plaintiffs alleged that the development of subdivisions in the area of their houses would exacerbate the flooding they had already experienced, an allegation that was supported by the evidence submitted.¹⁸⁹ The plaintiffs sought a permanent injunction against the city and the parish to prevent approval of any more development in the drainage basin, at least until the flooding issues were addressed.¹⁹⁰ The court of appeals declined to grant the injunction, stating that it is a "harsh, drastic, and extraordinary remedy and should issue only where the party seeking it is threatened with irreparable loss or injury without adequate remedy at law" and the flooding that had occurred to that point had not caused irreparable injury.¹⁹¹ The court said, however, that should the plaintiff's property flood, they would have an adequate remedy under *Eschete* to recover damages.¹⁹²

The effect of *Eschete* and its progeny would seem to have been limited by the discretionary function statute, and there are cases that have used discretionary immunity under the statute to shield governments from liability in situations similar to *Eschete*, but as we shall see, the statute has not completely shut the door to government liability for negligence in flooding damage. In *Gleason v*.

^{185. 383} So. 2d 484 (La. Ct. App. 1980).

^{186.} Id. at 486 (stating that "[p]laintiffs' allegation . . . while non-specific seems sufficient to prevent maintenance of the exception of no cause of action.").

^{187.} Id. at 485.

^{188.} Id. at 486.

^{189. 424} So. 2d 1194, 1199 (La. Ct. App. 1982) ("The sum of the testimony of the representatives from the Department is that any significant development of land upstream and south of Barkley Place before certain improvements are made in the drainage area will cause Perkins Road to flood more frequently and cause plaintiffs' homes to flood. This testimony was given by experts and was based on sound engineering calculations; the evaluations and conclusions are not just theoretical speculations.").

^{190.} Id. at 1196.

^{191.} Id. at 1199-2000.

^{192.} Id. at 1200.

Nuco, Louisiana's First Circuit Court of Appeal held that a parish's approval of a subdivision plat with knowledge of flooding and drainage problems was immune from liability under the discretionary function statute.¹⁹³ The court in *Nuco* did not mention *Eschete* or the statutory exception excluding "acts or omissions which constitute criminal, fraudulent, malicious, intentional, willful, outrageous, reckless, or flagrant misconduct"—acts which fit squarely within the holding of *Eschete*.¹⁹⁴

Recently, Louisiana's Fifth Circuit Court of Appeal, in *Fossier* v. Jefferson Parish, held that the parish's decision not to have back-up power for its drainage pumps that failed during a heavy rain event was protected from liability by the discretionary function statute.¹⁹⁵ The court cited the Louisiana Supreme Court's analysis of discretionary function immunity under the Federal Tort Claims Act as applied by the U.S. Supreme Court.¹⁹⁶ Under that analysis, if the decision "involves an element of judgment or choice" and is "grounded in social, economic, or political activity[,]" it can be afforded discretionary function immunity.¹⁹⁷ Another drainage failure case decided by Louisiana's Fifth Circuit was *Marino v. Parish of St. Charles* where the court held that the parish's decisions regarding the capacity of the pumping system and operational procedures of the drainage system were protected discretionary functions.¹⁹⁸

Several cases have held that the alleged negligent acts were not protected by the discretionary function statute. In *Akins v. Jefferson Parish*, Louisiana's Fifth Circuit Court of Appeal said the plaintiff's allegations that the parish "undertook to provide drainage to the subdivisions in question and failed to correct a particular defect after notice" and that their acts were "intentional" and "reckless" was sufficient to state a cause of action, that if proven,

^{193. 774} So. 2d 1240, 1243 (La. Ct. App. 2000).

^{194.} LA. REV. STAT. ANN. § 9:2798.1(C)(2); Eschete v. City of New Orleans, 258 La. 134, 385 (1971).

^{195. 985} So. 2d 255, 256, 259 (La. Ct. App. 2008) (holding that the Parish's actions were discretionary because it "articulated social, economic and political considerations surrounding its decisions regarding the drainage system for this specific area, including financial limitations, safety considerations, equipment availability, and feasibility").

^{196.} Id. at 258-59.

^{197.} $I\!d.$ (quoting Cormier v. T.H.E. Ins. Co., 745 So. 2d 1, 6 (La. 1999)) (discussing the discretionary immunity doctrine).

^{198. 27} So. 3d 926, 932 (La. Ct. App. 2009) ("As in *Fossier*, applying the test to the facts of the instant case, we find that the decisions made in this case involved elements of judgment and choice, which means the Parish's actions were discretionary. The Parish has shown the necessary social and economic consideration surrounding its decisions regarding the choice and operation of the drainage system for this specific area, including the fact that its system met the necessary standards.").

would overcome the discretionary function statute immunity.¹⁹⁹ In *Mitter v. St. John the Baptist Parish*, the same court held that the parish's actions which protected some people from flooding, but which resulted in others being flooded, was not protected by discretionary immunity.²⁰⁰ The court also found that a taking had occurred; therefore, the action was not protected by immunity.²⁰¹

In Saden v. Kirby, the Louisiana Supreme Court held that a parish's failure to fix an electrical problem with its drainage pumps in a timely manner was negligence for which the parish was liable.²⁰² There was no mention of the discretionary function statute, possibly because the parish did not raise it. Courts found negligence on the part of the city in approving development that caused flooding in Warwick Apartments Baton Rouge v. State Through Department of Transportation & Development.²⁰³ Like the Louisiana Supreme Court in Saden, Louisiana's First Circuit Court of Appeal in *Warwick* made no mention of the discretionary function statute. In Verdun v. State Through Department of Health & Human Resources, the plaintiff, who was injured when he entered a polluted lake, claimed that once the decision had been made to warn the public of the danger, the state's failure to do so was not immune from liability because it was within the discretionary function statute's exception for "malicious, intentional, willful, outrageous, reckless; and/or flagrant" acts.²⁰⁴ Louisiana's Fourth Circuit Court of Appeal said that "[w]hether the duty to warn is discretionary at the policy-making level or the operational level depends on the evidence and presents a question of fact" and precluded summary judgment.²⁰⁵

Louisiana courts have been particularly reluctant to find local governments liable for negligence associated with enforcing floodplain regulations. In *Hanks v. Calacsieu Parish Police Jury*, decided before the legislature enacted the discretionary function statute, the court found the parish not liable for failing to verify that the plaintiff had accurately located his property on the flood map.²⁰⁶ The court said such verification was not within the requirements of the parish's floodplain ordinance.²⁰⁷ In another case, when a city approved a subdivision in a known floodplain the court

^{199. 529} So. 2d 27, 30 (La. Ct. App. 1988).

^{200. 920} So. 2d 263, 266 (La. Ct. App. 2005).

^{201.} Id.

^{202. 660} So. 2d 423, 430 (La. 1995).

^{203. 633} So. 2d 895, 899 (La. Ct. App. 1994).

^{204. 559} So. 2d 877, 878-79 (La. Ct. App. 1990).

^{205.} Id. at 879.

^{206. 479} So. 2d 1010, 1014 (La. Ct. App. 1985).

^{207.} Id.

said it was not liable for the plaintiff's flood damage because the city's only obligation was to provide a map showing the 100-year flood zone.²⁰⁸ The city's approval of the subdivision took place before the enactment of the National Flood Insurance Program.²⁰⁹ Kemper v. Don Coleman Jr., Builder, Inc. also concerned a city's approval of a subdivision in a known floodplain where the houses were built with the first floor at or above the 100-year base flood elevation.²¹⁰ The homebuyers were not informed they had purchased homes in a floodplain until the houses flooded.²¹¹ The court held that the city was not negligent because the houses were built in compliance with the floodplain regulations, and though the plaintiffs cited *Eschete* and *Pennebaker*, they had made no allegations or submitted no evidence to prove other development had caused the flooding.²¹² However, the court found that the developer was negligent for not warning the homebuyers about the potential flooding problem.²¹³

While complying with floodplain regulations has generally insulated governments from liability, a disturbing decision by Louisiana's Second Circuit Court of Appeal indicates even less may be required of government. *Ayers v. Brazzell* decided a case in which the parish failed to ensure houses were built to the elevations required by the parish's flood ordinance.²¹⁴ The court said that the discretionary function statute, read in conjunction with other statutes²¹⁵ defining the enforcement of building codes as a discretionary act, supported the defendant's motion for summary judgment.²¹⁶ The decision in *Ayers* is troubling, as was the *City of Tarpon Springs* case from Florida discussed earlier,²¹⁷ because participation in the National Flood Insurance Program (NFIP), though voluntary, is still a vital requirement for economic viability in flood-prone communities.²¹⁸ Once the community has decided to participate and has developed the required flood ordinance estab-

^{208.} See Cimmaron Homeowners Ass'n v. Cimmaron, Inc., 533 So. 2d 1018, 1021 (La. Ct. App. 1988) (evidence was introduced that the floods were greater than 100 year events).

^{209.} Id. at 1022.

^{210. 746} So. 2d 11, 15 (La. Ct. App. 1999).

^{211.} Id.

^{212.} Id. at 16.

^{213.} Id. at 18 (stating that "the [b]uilder, after having made the effort to investigate the suspected flooding problem and having learned of the problem, had a duty to disclose to plaintiffs the information regarding the drainage problem and the risk of flooding.").

^{214. 648} So. 2d 406, 407 (La. Ct. App. 1994).

^{215.} Id. at 409 (discussing LA. REV. STAT. ANN. §§ 9:2798.1; 33:4773; 33:4771).

^{216.} Id.

^{217.} City of Tarpon Springs v. Garrigan, 510 So. 2d 1198 (1987) (holding city immune from liability despite the waiver of sovereign immunity statute because the city owed no common law or statutory duty of care to properly enforce elevation requirements).

^{218.} Emergency Mgmt. Agency, supra note 143 at 10-12 to 10-15.
lishing building regulations in flood zones, it is bound to enforce those regulations or risk losing the availability of flood insurance for everyone in the community;²¹⁹ a potentially devastating economic blow. The proper interpretation of the discretionary function immunity, as it relates to the NFIP, is that the discretion to participate in the program is based on social, economic, and political considerations. Once the local government has assumed the obligation to enforce the flood ordinance, the mechanics of that enforcement are merely operational and not immune from liability.

Since the enactment of the discretionary function statute, plaintiffs have employed other theories of recovery for flooding damages besides negligence. Louisiana recognizes a species of strict liability of the owner or proprietor of property for acts that cause damage to neighboring property.²²⁰ Damages are recoverable when the defendant knew or should have known the exercise of reasonable care would have prevented the damage.²²¹ In Branch v. City of Lafayette, a city drainage project caused the plaintiff's property to flood.²²² The city raised the immunity defense afforded to public entities for damage caused by things in their care and custody when they do not have constructive knowledge of the defect.²²³ Louisiana's Third Circuit Court of Appeal said constructive knowledge, required for negligence under Louisiana Civil Code Article 2317, was not a necessary finding because Article 667 imposes strict liability on a municipality for overflows from its drainage system.²²⁴

The same reasoning was used in *Spiker v. City of Baton Rouge* by Louisiana's First Circuit Court of Appeal when plaintiffs sought relief for damages from an underground drainage system built on a state highway right of way by a parish contractor.²²⁵ The court stated:

A violation of Article 667 is not a tort action in the sense that deliction in its usual connotation is a necessary element. A defendant under Article 667 must repair damage

^{219.} Id. at 10-6 to 10-7, 10-12.

^{220.} LA. CIV. CODE ANN. art 667 (1996) (providing that a proprietor may be liable for damages to a neighbor if the damages could have been prevented with the exercise of reasonable care, but if the damages arise from "ultrahazardous activity", i.e., "pile driving or blasting with explosives" then the "proprietor is answerable for damages without regard to his knowledge or his exercise of reasonable care").

^{221.} Id.

^{222. 663} So. 2d 216, 218 (La. Ct. App. 1995).

^{223.} Id. at 219 (immunity for lack of constructive knowledge is found in LA. REV. STAT. ANN. § 9:2800).

^{224.} Id.

^{225. 804} So. 2d 659, 661-62 (La. Ct. App. 2001).

even though his actions are prudent by usual standards. It is not the manner in which the activity is carried on that is significant; it is the fact that the activity caused damage. Thus, Article 667 expresses the doctrine of strict liability, which does not depend on deliction, whereas, under LSA-C.C. art. 2315, "fault" must be proved. Under LSA-C.C. art. 667, there is recovery despite reasonableness and prudence if the work causes the damage.²²⁶

Neither of these Article 667 cases mentioned the discretionary function statute because it concerns the constitutional waiver of immunity for tort liability,²²⁷ and as the court stated in *Spiker*, an action under Article 667 is not in the strict sense, a tort.²²⁸

As in other states, Louisiana plaintiffs have employed causes of action based on takings when property is physically occupied or damaged for a public purpose,²²⁹ though not as much for flooding damages as we see in Texas and Florida, in part, because the strict liability under Civil Code article 667 affords an alternative means to avoid governmental immunity for negligence. When the state highway department's bridge project altered the flow of two creeks such that they flowed in a different direction and with increased velocity across plaintiff's land subsequently causing increased flooding and erosion, Louisiana's Third Circuit Court of Appeal in *Taylor v. State, Department of Transportation* held that the state had taken the plaintiff's property.²³⁰ The court also found that the state had violated Louisiana Civil Code provisions controlling the obligations of servient and dominant estates dealing with water flowing through their property.²³¹ When another state highway

^{226.} Id. at 663.

^{227.} See LA. CONST. art. XII, 10(A) ("Neither the state, a state agency, nor a political subdivision shall be immune from suit and liability in contract or for injury to person or property.").

^{228.} Spiker, 804 So. 2d at 663; see also Collins v. City of Shreveport, 799 So. 2d 630, 633 (La. Ct. App. 2001) (providing an example in which Louisiana's Second Circuit Court of Appeal found that the city did have actual or constructive knowledge of a blocked storm drain and was therefore liable for damages by things under its control).

^{229.} LA. CONST. art. I, § 4(B)(1) (providing in pertinent part that "[p]roperty shall not be taken or damaged by the state or its political subdivisions except for public purposes and with just compensation paid to the owner or into court for his benefit").

^{230. 879} So. 2d 307, 317 (La. Ct. App. 2004).

^{231.} Id. (stating that the appellee "returned the water to its ordinary channel some 400 feet south of its property and not before the water left its property. . . . [T]he water [now] arrives at the Taylors' property much more quickly than before"). "The owner of the servient estate may not do anything to prevent the flow of the water. The owner of the dominant estate may not do anything to render the servitude more burdensome." LA. CIV. CODE ANN. art. 656 (1977). "The owner of an estate through which water runs, whether it originates there or passes from lands above," is not permitted to "stop it or give it another direction and is bound to return it to its ordinary channel where it leaves his estate." Id. art. 658.

project caused water to flood adjacent land the court held that the state, as the servient estate owner, had violated the Louisiana Civil Code's prohibition against impeding the flow of water across its land such that the dominant estate is flooded.²³² In this case, the plaintiffs sought a mandatory injunction presumably to force alteration of the highway, which the court said was the proper remedy but, in situations where an injunction is too harsh, a court may "substitute compensatory damages as the relief due[.]"²³³

In another case, the plaintiffs' property, which was on the shores of a reservoir with no water level control, was flooded when heavy rains caused the lake level to rise.²³⁴ The plaintiffs sought damages for a taking of their property and an injunction or damages in lieu of injunction.²³⁵ Louisiana's Second Circuit Court of Appeal said the plaintiffs could not recover damages because they had assumed the risk of living in a potentially floodprone area.²³⁶ The language used by the court is particularly pertinent to our discussion:

The plaintiffs no doubt chose to build in the lake area in order to enjoy the lifestyle, scenery, and recreational pursuits afforded by lake living. Just as the dangers of hurricanes are apparent to persons who choose to build improvements on the coastline of the Gulf of Mexico, the dangers of potential flooding should likewise be apparent to persons who choose to build improvements along a lake, particularly one created in part by an uncontrolled spillway.²³⁷

The court further held that the natural servitude of drain provided by Louisiana Civil Code Articles 656 and 658 had been altered by the perpetual servitudes purchased by the Lake Commission from the plaintiffs' ancestors in title so injunctive relief was denied.²³⁸

In summary, Louisiana courts have held that governments can be liable for negligence in approving development that causes or exacerbates flooding. The discretionary immunity afforded by statute in 1985 has been used in some cases to absolve governments of liability in situations similar to *Eschete* but other cases

^{232.} Gaharan v. State Through Dep't of Transp. & Dev., 566 So. 2d 1007, 1009-10 (La. Ct. App. 1990).

^{233.} Id. at 1010.

^{234.} Eubanks v. Bayou D'Arbonne Lake Watershed Dist., 742 So. 2d 113, 114-16 (La. Ct. App. 1999).

^{235.} *Id.* at 118. 236. *Id.* at 117-19.

^{236.} Id. at 117 237. Id.

^{237.} *Id.* 238. *Id.* at 119.

have held that governments are liable under the statute's exceptions. Other courts found governments liable for negligent acts causing flooding with no mention of the discretionary function statute. Louisiana courts have been particularly reluctant to hold governments accountable for their decisions in implementing floodplain regulations, holding in one case that the enforcement of the flood ordinance was discretionary.²³⁹ Governments have been found liable for flooding damages based on causes of action other than negligence, namely, unconstitutional takings for a public purpose, strict liability for damage to neighboring property, and interference with the natural servitude of drainage. These nonnegligence causes of action are not afforded protection by the discretionary function immunity.

D. Alabama

The state of Alabama enjoys absolute sovereign immunity against tort liability under its constitution,²⁴⁰ but state employees may be liable for negligence in their individual capacities.²⁴¹ Municipalities, though not protected by the constitutional immunity, were afforded immunity from negligence by a long line of cases beginning in 1854 for their governmental functions but not their corporate, proprietary, or ministerial functions, or for acts in connection with defects in streets.²⁴² The Alabama legislature attempted to abrogate municipal sovereign immunity in 1907,²⁴³ but the courts refused to interpret the statute as doing so and continued the pre-statutory distinction between governmental and proprietary or ministerial functions, thereby maintaining immunity for most municipal actions.²⁴⁴ That precedent was overturned by the Alabama Supreme Court in *Jackson v. City of Florence*.²⁴⁵ The cur-

^{239.} See, e.g., Ayers v. Brazzell, 648 So. 2d 406, 409 (La. Ct. App. 1994).

^{240. &}quot;[T]he State of Alabama shall never be made a defendant in any court of law or equity." ALA. CONST. art. I, § 14; *see also* Nance v. Matthews, 622 So. 2d 297, 299-300 (Ala. 1993) (concluding that "the State and its agencies possess absolute immunity from suit").

^{241.} See DeStafney v. Univ. of Ala., 413 So. 2d 391, 395 (Ala. 1981) (stating that "[s]ection 14 [of the Alabama Constitution] does not necessarily immunize State officers or agents from individual civil liability").

^{242.} See Jackson v. City of Florence, 320 So. 2d 68, 69-70 (Ala. 1975) (discussing Alabama's legislative background).

^{243.} Id. at 70.

^{244.} *Id.* at 71 (stating "[f]rom that point forward, this court has accepted the interpretation placed on the statute, and has continued to distinguish between governmental functions and corporate or proprietary functions, which has had the effect of making the legislative enactment ineffective in so far as changing the law as it had been judicially declared in this state since 1854").

^{245.} Id. at 75 (stating "that municipal immunity for tort is abolished in this state after the date of this opinion").

rent statute holds municipalities liable for the "carelessness" or "unskillfulness" of their employees in performance of their official duties and also in failing to correct defects in streets, alleys, public ways, and buildings about which they knew or should have known.²⁴⁶ Recovery limits are also imposed by the statute.²⁴⁷

In practice, the Alabama Supreme Court has carved out exceptions to municipalities' exposure to liability. For public service activities of municipalities, such as inspection of private sewer lines²⁴⁸ or electrical lines,²⁴⁹ where imposition of liability would hinder the government's ability to perform the function, there can be immunity:

We believe these public policy considerations, however, override the general rule and prevent the imposition of a legal duty, the breach of which imposes liability, in those narrow areas of governmental activities essential to the well-being of the governed, where the imposition of liability can be reasonably calculated to materially thwart the City's legitimate efforts to provide such public services.²⁵⁰

But the exception is narrow:

[T]he substantive immunity rule of this case must be given operative effect only in the context of those public service activities of governmental entities (not to be confused with the pre-*Jackson* distinction between governmental and proprietary functions) so laden with the public interest as to outweigh the incidental duty to individual citizens.²⁵¹

Alabama has also afforded, through the courts, discretionary function immunity to state employees in their individual capacities²⁵²

^{246.} ALA. CODE § 11-47-190 (2010); see also Stephens v. City of Butler, 509 F. Supp. 2d 1098, 1116 (S.D. Ala. 2007), aff'd sub nom. Stephens v. Lovette, 261 F. App'x. 240 (11th Cir. 2008) ("Plaintiff argues . . . that the Town of Butler is not immune under § 11-47-90 if Lovette's assault and battery was due to Lovette's neglect, carelessness and unskillfulness. However, municipal liability under Section 11-47-190 is based on the doctrine of respondeat superior."); Ott v. City of Mobile, 169 F.Supp.2d 1301, 1314 (S.D.Ala.2001) (quoting Latham v. Redding, 628 So. 2d 490, 495 (Ala. 1993)) ("For the employer to be liable under [the doctrine of respondeat superior], the employee must first be a liable for a tort. 'If the agent is not liable for any tort, the principal is also absolved.").

^{247.} Ala. Code § 11-47-190.

^{248.} E.g., Rich v. City of Mobile, 410 So. 2d 385, 387-88 (Ala. 1982).

^{249.} E.g., Hilliard v. City of Huntsville, 585 So. 2d 889, 891, 893 (Ala. 1991).

^{250.} Rich, 410 So. 2d at 387.

^{251.} Id. at 387-88 (footnote omitted).

^{252.} E.g., Defoor v. Evesque, 694 So. 2d 1302, 1305 (Ala. 1997) (footnote omitted) (citations omitted) ("When a State employee is sued for negligence in an action that is not, in

and by statute to peace officers performing discretionary functions in the line of duty.²⁵³ The interpretation of "carelessness" and "unskillfulness" in the municipal liability statute has been held not to include intentional²⁵⁴ or "wanton"²⁵⁵ acts.

In cases brought for flooding incidents, most involve negligence in failure to maintain drainage systems but there have also been suits brought alleging negligence and takings for flooding from construction projects, violation of drainage servitudes, and negligence in the operation of dams. In City of Birmingham v. Leberte, the evidence showed that the city repeatedly refused to remove obstructions from drainage ditches and pipes, resulting in flooding of the plaintiff's home on several occasions.²⁵⁶ The Alabama Supreme Court affirmed the trial court's finding of negligence and held that each flooding occurrence was a separate cause of action with a new statutory limitations period.²⁵⁷ A similar situation occurred in Lott v. City of Daphne where the city's failure to maintain a gulch that was part of the drainage system was held to be negligence because once the city had undertaken the task of constructing and maintaining the system it had a duty to perform those tasks.²⁵⁸ That reasoning was also used in Lee v. City of Anniston to find the city liable for failure to ensure the safety of its drainage system where a child drowned.²⁵⁹

City of Prattville v. Corley was another case involving a city's failure to maintain a drainage system; the plaintiffs alleged inverse condemnation as well as negligence to avoid the recovery limits in the municipal liability statute,²⁶⁰ and the court agreed

256. 773 So. 2d 440, 446 (Ala. 2000).

257. Id. at 447-49.

258. 539 So. 2d 241, 244 (Ala. 1989).

259. 722 So. 2d 755, 757 (Ala. 1998). But see Furin v. City of Huntsville, 3 So. 3d 256,

271 (Ala. Civ. App. 2008) (city was absolved of its responsibility to clear obstructions from the drainage system when federal regulations prohibited it from doing so).

260. 892 So. 2d 845, 847-48 (Ala. 2003).

effect, an action against the State, the employee may be protected by qualified immunity. Qualified immunity shields a State employee from liability if the employee is engaged in a discretionary function, instead of a ministerial one, when the alleged negligence occurs. Whether a State employee's function was discretionary or ministerial is a question of law.").

^{253.} Ala. Code § 6-5-338 (2010).

^{254.} Scott v. City of Mountain Brook, 602 So. 2d 893, 894-95 (Ala. 1992) (stating that the court "cannot conclude that the terms 'neglect,' 'carelessness,' and 'unskillfulness,' given their plain meanings, encompass intentional interference with a business relationship or a civil conspiracy predicated on a purposeful scheme to damage the plaintiffs"); Brown v. City of Huntsville, 608 F.3d 724, 743 (11th Cir. 2010).

^{255.} Hilliard v. City of Huntsville, 585 So. 2d 889, 892 (Ala. 1991) (citation omitted) ("Section 11-47-190 limits the liability of municipalities to injuries suffered through 'neglect, carelessness or unskillfulness.' To construe this statute to include an action for wanton conduct would expand the language of the statute beyond its plain meaning."); see also Stephens v. City of Butler, 509 F. Supp. 2d 1098, 1116 (S.D. Ala. 2007), aff'd sub nom. Stephens v. Lovette, 261 F. App'x. 240 (11th Cir. 2008).

that the facts and allegations stated a valid claim for inverse condemnation.²⁶¹ The city's approval of construction on a lot adjacent to plaintiff's property which elevated the lot above the grade of the plaintiff's property and caused plaintiff's home to flood was found to constitute negligence in City of Mobile v. Jackson.²⁶² The Alabama Supreme Court held that the statute of limitations did not begin to run until the injury occurred, and that the exceptions to municipal liability created by the court in their earlier decisions (for important functions that would be compromised by imposing liability) did not apply here to grant the city immunity.²⁶³ However, the Alabama Supreme Court found no negligence on the part of the city for approving a subdivision and accompanying drainage system in area known to have flooding problems in City of Birmingham v. Brown.²⁶⁴ The court said that the city employees did not act with "neglect, carelessness, or unskillfulness" when they approved the drainage plan because it was certified by the developer's engineer and met the city's specifications and requirements.²⁶⁵

Flooding events in Alabama can also give rise to a cause of action for an unconstitutional taking of private property. The plaintiff in *City of Tuscaloosa v. Patterson*, who was injured when his property flooded because of negligent construction of a city street project, sued under an inverse condemnation cause of action rather than under a negligence theory.²⁶⁶ The Alabama Supreme Court said that a plaintiff may waive a negligence claim and sue under a takings theory.²⁶⁷ Some plaintiffs plead both negligence and inverse condemnation for various reasons, one of which is avoiding recovery limits.²⁶⁸ Plaintiffs can also employ drainage servitudes as a cause of action against governments in flooding situations. Alabama follows the civil law rule that the owner of the lower land must suffer the natural drainage from the upper land but the own-

265. Id. at 917 (stating that the plaintiffs failed to establish negligence on the city's part).

267. Id.

^{261.} Id. at 848.

^{262. 474} So. 2d 644, 645-46, 649 (Ala. 1985).

^{263.} *Id.* at 649 (quoting Rich v. City of Mobile, 410 So.2d 385, 387 (Ala. 1982)) (stating that the court "created a narrow exception to the rule of general liability for municipalities in situations in which the public policy considerations of a city's paramount responsibility to provide for the public safety, health, and general welfare outweighed the reasons for the imposition of liability on the municipality. This exception to the general rule of liability, however, is to be applied only in 'those narrow areas of governmental activities essential to the well-being of the governed, where the imposition of liability can be reasonably calculated to materially thwart the City's legitimate efforts to provide such public services.").

^{264. 969} So. 2d 910, 911, 917 (Ala. 2007).

^{266. 534} So. 2d 283, 284-85 (Ala. 1988).

^{268.} E.g., City of Prattville v. Corley, 892 So. 2d 845, 847-48 (Ala. 2003).

er of the upper land may not make the servitude more burdensome on the lower estate.²⁶⁹ When the city, as owner of the municipal airport, constructed a drainage project that collected surface water from the airport in ditches and discharged it onto the plaintiff's property, the court of appeals found that the action violated the drainage servitude.²⁷⁰

Other actions by public entities that caused flooding have given rise to lawsuits in Alabama. In a wrongful death by drowning case, a county road crew that breached a beaver dam as part of its routine maintenance operations was not found negligent for failure to warn those downstream of the possible flooding danger.²⁷¹ The county did not raise the defense of sovereign immunity.²⁷² Likewise, the operation of a dam that plaintiffs alleged flooded their property was not negligence on the part of the power company, despite the fact that the company had failed to purchase flood storage easements, because the flooding would have occurred even if the dam had not been in place and the purchase of easements was in compliance with federal regulations.²⁷³ Neither was flooding a trespass found to constitute negligence because, under Alabama law, dam operators only have the responsibility to exercise reasonable care in operating a dam, and the plaintiff's failed to show any negligence.²⁷⁴

The review of Alabama case law reveals a few general principles pertinent to our inquiry. There are significantly fewer cases brought in connection with flooding events in Alabama than in the other states examined so far. While the state is immune from liability, local governments can be liable for neglect or the carelessness or unskillfulness of their employees, and those terms may be

^{269.} Crabtree v. Baker, 75 Ala. 91, 93-94 (1883) (citations omitted) (adopting the principle "that the owner of higher land has a servitude or natural easement upon the lower adjoining land for the discharge of all surface water flowing naturally thereon from the higher land, and the owner of the lower land can not prevent or obstruct the natural passage of such water to the injury of the higher land. . . . [T]he servitude or easement extends only to suface water arising from natural causes, as by the falling of rains and melting of snow; and it does not authorize the proprietor of the higher land, by the collection of water into drains or artificial channels, to precipitate it in increased quantity and volume upon, and to the detriment of the lower land.").

^{270.} City of Mobile v. Lartigue, 127 So. 257, 259-61 (Ala. Ct. App. 1930) ("It seems, and we hold it is, thoroughly established in this state (as well as in most, if not all, other states) that the servitude of the lower tenement to the dominant tenement, with reference to surface waters, extends only to surface waters flowing in their natural channels, and does not authorize the proprietor of the dominant tenement to collect the water into drains or artificial channels and precipitate it in increased quantity and volume upon the lower land to its injury and detriment.").

^{271.} Avery v. Geneva Cnty., 567 So. 2d 282, 285-87 (Ala. 1990).

^{272.} Id. at 285.

^{273.} Ellis v. Ala. Power Co., 431 So. 2d 1242, 1246 (Ala. 1983).

^{274.} Id. at 1245.

fairly fluid. Courts may find immunity when the imposition of liability would thwart an important government function, but this exception to the general rule of liability will be used only sparingly and when the public interest clearly outweighs the duty to the individual. Flooding damage can be redressed through causes of action for inverse condemnation and violation of drainage servitudes. Courts have found local governments liable for failure of drainage systems, public works projects such as roads that cause flooding on neighboring property, approving development that floods neighboring property, and violation of drainage servitudes.

E. Mississippi

The Mississippi Supreme Court abolished the state's judicially created sovereign immunity in 1982 in Pruett v. City of Rosedale except for "legislative, judicial and executive acts by individuals acting in their official capacity, or to similar situations of individuals acting in similar capacities in local governments[.]"²⁷⁵ The court made clear in its opinion that the legislature is the proper branch of government to define the parameters of sovereign immunity.²⁷⁶ The Mississippi Legislature enacted a tort claims statute in 1984 that reaffirmed the existence of sovereign immunity, but provided for suits against the state and political subdivisions in very limited circumstances and laid out in considerable detail the parameters of the immunity they would be afforded.²⁷⁷ The statute made it clear that the waiver of immunity was to be very limited and did not apply to acts that were of a legislative, judicial, or discretionary nature.²⁷⁸ The 1984 statute and subsequent iterations kept delaying the partial waiver's effective date until the Mississippi Supreme Court forced the issue²⁷⁹ and the legislature passed the Mississippi

^{275. 421} So. 2d 1046, 1051-52 (Miss. 1982) ("We agree that the time has arrived when this Court should recognize that the judiciary is no longer the branch of government to supervise and control the extent to which persons with rightful claims against the sovereign may propound those claims. In fact, in a number of cases we already have said the problem is one our system of government places on the legislative branch.").

^{276.} Id. at 1051.

^{277.} MISS. CODE ANN. §§ 11-46-1 TO 11-46-21 (2010).

^{278.} Id.

^{279.} Presley v. Miss. State Highway Comm'n, 608 So. 2d 1288, 1301 (Miss. 1992) (citation omitted) ("To the extent that Miss.Code Ann. § 11-46-6 purports to freeze the doctrine of sovereign immunity to the state of development of the common law prior to *Pruett*, it is void. We deem it only a sufficient pronouncement of the public policy of this State to immunize the State from claims arising thereafter to the extent that this Court would do so applying the evolving standards of common law, including any extensions or contractions of the doctrine deemed appropriate, on a case by case basis and to the extent that those benefitting by the immunity did not prepare themselves by acquiring insurance policies covering the liability in question in the event that immunity did not obtain. So that all will be aware,

Governmental Immunity Act (commonly referred to as the Mississippi Tort Claims Act) in 1992 followed by amendments in 1993.²⁸⁰ The current law provides immunity for discretionary functions.²⁸¹ The Mississippi courts have struggled to find sound footing in their application of the discretionary function immunity but eventually settled on a two-pronged approach: first deciding whether the decision involved "an element of choice or judgment" and second determining "whether the choice involved social, economic or political policy."²⁸² Negligence is not a factor once an action is found to be protected by discretionary function immunity.²⁸³

In the relatively short time since the passage of the Governmental Immunity Act there have only been a few cases decided based on negligence in flooding damage scenarios. In Fisher v. Lauderdale County, the plaintiff's land was allegedly flooded because the county installed culverts of insufficient size and failed to remove beaver dams in a timely fashion.²⁸⁴ The court held that the choice of culvert size was immune from suit because the statute specifying culvert size pertained only to length and not diameter so there was no duty to choose a larger diameter culvert and thus no failure to exercise ordinary care.²⁸⁵ Nor was the county liable for failing to clear the culverts because the Mississippi Supreme Court had held that maintenance of roads was a discretionary function and therefore immune from liability.²⁸⁶ However, in City of Jackson v. Internal Engine Parts Group Inc. the Mississippi Supreme Court held that the city was not immune under the Tort Claims Act (TCA) from liability for flooding damages caused by its failure

280. MISS. CODE ANN. § 11-46-3 (West 1993).

we absolutely decline to further extend the doctrine, other than in the areas preserved in *Pruett*, beyond the date of this case."); see generally Jim Frasier, *Recent Developments in Mississippi Tort Claims Act Law Pertaining to Notice of Claim and Exemptions to Immunity Issues: Substantial/Strict Compliance, Discretionary Acts, Police Protection and Dangerous Conditions*, 76 MISS. L.J. 973 (2007).

^{281.} Id. § 11-46-9(d) (pertaining to immunity and the exercise of discretionary functions).

^{282.} Jones v. Miss. Dep't of Transp., 744 So. 2d 256, 260 (Miss. 1999) (quoting Gollehon Farming v. United States, 17 F.Supp.2d 1145, 1154 (D. Mont. 1998)); see generally Frasier, supra note 279.

^{283.} See Collins v. Tallahatchie Cnty., 876 So. 2d 284, 289 (Miss. 2004) (quoting Harris v. McCray, 867 So. 2d 188, 191 (Miss. 1993) ("When an official is required to use his own judgment or discretion in performing a duty, that duty is discretionary."). "Miss.Code Ann. § 11-46-9(1)(d) exempts governmental entities from liability of a discretionary function or duty 'whether or not the discretion be abused'. Therefore, ordinary care standard is not applicable to Miss.Code Ann. § 11-46-9(1)(d).") (holding that the conduct in this case is immune under the code).

^{284. 7} So. 3d 968, 969 (Miss. Ct. App. 2009).

^{285.} Id. at 971.

^{286.} Id. at 972 (quoting Mohundro v. Alcorn County, 675 So. 2d 848, 853 (Miss. 1996)).

to clear debris from a drainage ditch.²⁸⁷ The court said that the city had allowed a dangerous condition to exist and, because it had actual or constructive knowledge of the obstruction, it was not afforded immunity under the TCA.²⁸⁸ The facts of these two cases seem almost indistinguishable and the opposite results could be because of the failure to plead alternative causes of action.

The existence of a statute mandating the size of sewer lines was the basis for a rather bizarre holding in Fortenberry v. City of Jackson, which involved liability for a sewer back-up.²⁸⁹ The plaintiff's house had been built in a subdivision outside the city limits, not subject to the city's building codes, and several years later it was annexed by the city.²⁹⁰ Six years after the annexation the city adopted ordinances requiring sewer pipes to be of a larger diameter than the builder had installed on the plaintiff's house, but the statute stated it only applied prospectively.²⁹¹ The court of appeals held that the city had imposed a ministerial duty on itself to comply with the standards in the ordinance and therefore was not protected by discretionary function immunity.²⁹² So it seems that the court imposed upon the city the improbable duty of digging up and replacing every non-complying sewer line no matter how old. Proof of causation is often a problem in flood damage cases, though advances in hydrologic modeling will continue to bring more precision to the process.²⁹³

In *Smith v. City of Gulfport*, the plaintiff produced evidence showing that debris the city had allowed to collect in a drainage ditch impeded the flow of water, but the court of appeals said the testimony was not sufficient to prove it actually caused the flooding.²⁹⁴ Heavy rainfall can also be a superseding cause that absolves a city from failure to maintain drainage ditches.²⁹⁵ Mississippi plaintiffs can also seek injunctions as a remedy from government actions that cause flooding. Most of these cases arise when natural

^{287. 903} So. 2d 60, 64 (Miss. 2005).

^{288.} Id.; see also MISS. CODE ANN. 11-46-9(1)(v) (West 1972) (providing immunity to governmental entities and its employees "acting within the course and scope of their employment").

^{289. 2008-}CA-00270-COA, 2010 WL 522647, at *1 (Miss. Ct. App. 2010), rev'd, 2011 WL 448354 (Miss. 2011). See also id. at *9 (King, C.J., dissenting).

^{290.} *Id*. at *1.

^{291.} Id. at *9 (King, C.J., dissenting).

^{292.} Id. at *6-7.

^{293.} See generally Hydrologic Models Meeting the Minimum Requirements of NFIP, FED. EMERGENCY MGMT. ADMIN. (FEMA), http://www.fema.gov/plan/prevent/fhm/en_hydro.shtm (last modified Apr. 22, 2011).

^{294. 949} So. 2d 844, 852 (Miss. Ct. App. 2007).

^{295.} E.g., City of Pascagoula v. Rayburn, 320 So. 2d 378, 381-82 (Miss. 1975); See also City of New Albany v. Barkley, 510 So. 2d 805, 806-07 (Miss. 1987).

drainage servitudes are violated as will be discussed below. In *City* of Jackson v. Robertson, the plaintiff sought damages and an injunction to prevent the city's drainage project from flooding his property.²⁹⁶ The Mississippi Supreme Court said there was no need to prove negligence for a grant of injunctive relief to prevent the city from creating a public nuisance.²⁹⁷ The Mississippi Supreme Court also held that an injunction was a proper remedy to abate flooding from a city road construction project in *City of McComb v.* Rodgers²⁹⁸ and county road projects in Douglas v. Wayne County²⁹⁹ and Stigall v. Sharkey County.³⁰⁰ Citing Robertson, the court in Rodgers said that a mandatory injunction to force the city to correct the problem was appropriate.³⁰¹ However, if an injunction would cause too great a burden on the government, then courts will hold that the available remedy lies in an unconstitutional takings claim or negligence.³⁰²

Claims seeking compensation for unconstitutional takings are employed in some flooding damage cases. The Mississippi Supreme Court said in *McLemore v. Mississippi Transportation Commission*, where a state highway project caused flooding and siltation, that the constitutional prohibition against taking private property without compensation encompassed damage to property that had previously been distinguished as a negligence-based cause of action.³⁰³ Quoting an earlier decision interpreting the Mississippi

302. See City of Water Valley v. Poteete, 33 So. 2d 794, 795 (Miss. 1948). In Poteete, the court stated:

[U]nless his property or a part thereof was actually taken, the abutting property owner was entirely without redress or remedy, however much the public work may have damaged him, until the adoption of Section 17, Constitution 1890, which, for the first time, included the words "or damaged". The abutting owner is by that section given his damages, but it does not have the effect to confer upon him the right through the courts to interfere with the authority vested in the municipality to construct or reconstruct its streets as in the judgment of the municipal authorities is necessary or proper in the public interest.

The injunction should not have been issued, and an order for its dissolution will be made here. The bill states a cause of action for damages in a court of law, and, therefore, the chancery court is hereby directed to order the transfer of the case to the circuit court of the second judicial district of Yalobusha County.

Id. at 795-96.

303. 992 So. 2d 1107, 1108-10 (Miss. 2008) ("While there is an argument that this Court has distinguished cases involving negligence claims, such argument is not applicable

^{296. 44} So. 2d 523, 523 (Miss. 1950).

^{297.} Id. at 525.

^{298. 246} So. 2d 913, 914-915 (Miss. 1971).

^{299. 139} So. 2d 372, 374-77 (Miss. 1962).

^{300. 57} So. 2d 146, 147 (Miss. 1952).

^{301.} See Rodgers, 246 So. 2d at 915 (affirming a chancellor's injunctive decree that "held that the [city] was required to adopt some method to prevent the flooding of the property of appellees. The injunction . . . required a solution to the problem but did not specify what the action must be").

Constitution, the court said: "The citizen must now be held, under this new provision of our fundamental law, to be entitled to due compensation for, not the taking, only, of his property for public use, but for all damages to his property that may result from works for public use."³⁰⁴ A plea for an injunction was held to properly state a cause of action for an unconstitutional taking of property when the imposition of the injunction would be too much of a burden on the government in City of Water Valley v. Poteete.³⁰⁵ Also, the Mississippi Supreme Court said in McDowell v. City of *Natchez* that a plea of negligence when a street project diverted water onto plaintiff's land was sufficient to state a cause of action for a takings.³⁰⁶ However, the Mississippi Court of Appeals refused to allow a negligence claim under the Tort Claims Act for flooding from a state highway project to suffice for a takings claim.³⁰⁷ The court said that the claim was "void of any references to the Mississippi Constitution or to a taking of private property for public use" and that the plaintiff "failed to provide sufficient notice to the defendant of the claims and grounds upon which relief which was sought."308

Drainage servitudes in Mississippi follow the same general rule as in the other states: the owner of the lower estate is bound to receive the natural drainage flow of surface water from the upper land and may do what he can to protect his land from the drainage, but may not cause it to flood the upper estate.³⁰⁹ The owner of

Section 17 requires payment for damage to private property taken for public use whether such damage be the result of negligence or not. ** * liability does not depend on improper construction and maintenance', and if the action be grounded in negligence recovery can be had if there be damage without negligence.

Id. at 500-01 (quoting Thompson v. City of Philadelphia, 177 So. 39, 40 (Miss. 1937)).
307. B & W Farms v. Miss. Transp. Comm'n, 922 So. 2d 857, 859 (Miss. Ct. App. 2006).
308. Id.

309. See Warrior, Inc. v. Easterly, stating:

here. The negligence claims in the instant case pertain to Talbot. The action against MTC is for taking without just compensation pursuant to the constitution.").

^{304.} Id. at 1110 (quoting City of Vicksburg v. Herman, 16 So. 434, 435 (Miss. 1894)).

^{305.} Poteete, 33 So. 2d at 795.

^{306. 135} So. 2d 185, 186 (Miss. 1961). In response to the argument raised by the appellee that a single cause of negligence could not suffice for a takings claim, the Mississippi Supreme Court in *McDowell* stated: "[such] objection was settled in the case of City of Jackson v. Cook, where it was held that the two grounds are not antagonistic or inconsistent, and that the negligence charged is simply an enlargement of the charge of damages without negligence." *Id.* (citation omitted). See also *City of Jackson v. Cook*, where plaintiff plead both negligence and a taking when a city drainage project flooded his property. 58 So. 2d 498, 500 (Miss. 1952). The Supreme Court held that the plaintiff did not have to choose one or the other causes of action:

The law as regards these types of cases appears to be settled. An upper riparian owner may reasonably drain his surface waters into a water course but cannot collect surface waters and discharge them in a body upon adjoining owners. Moreover, an upper riparian owner has no right to collect surface water in an artificial

the upper estate cannot collect the waters flowing across his land and discharge it onto the lower estate with "greater volume or in a more concentrated flow than would have resulted if the natural condition had remained undisturbed[,]" such as through an artificial drainage ditch, thereby making the servitude more burdensome on the lower estate.³¹⁰ However, the owner of the upper estate may improve the drainage on his land such that it flows into a natural water course (a river or stream) even though it causes flooding on the lower estate.³¹¹ In Cauthen v. City of Canton, the city was not liable for causing increased surface water runoff by paving streets because the water flowed into a natural drain, the overflow of which flooded the plaintiff's property.³¹² The court granted a mandatory injunction to force the city to alter a drainage project that gathered, concentrated, and diverted water onto the plaintiff's land in both Robertson³¹³ and Rodgers.³¹⁴ Courts held injunctions against county road projects that blocked a natural drain in *Douglas*³¹⁵ and a drainage ditch in *Stigall*³¹⁶ to be the proper remedy.

In summary, negligence-based causes of action for flooding will fall under the Mississippi Tort Claims Act and be decided using the two-prong discretionary function analysis: first finding wheth-

channel and discharge it or allow it to be discharged upon the lower land at a greater volume or in a more concentrated flow than would have resulted if the natural condition had remained undisturbed. It follows that when an upper owner alters the natural conditions so as to cast upon the lower owner a greater volume or a more concentrated flow of water, the upper owner must take care of the excess by his own means and on his own land or must do so in cooperation with the lower owner.

³⁶⁰ So. 2d 700, 702-03 (Miss. 1978) (citations omitted).

^{310.} Id. at 702.

^{311.} When a real estate developer straightened and enlarged streams that caused the plaintiff's land to flood, the United States District Court for the Northern District of Mississippi said:

After a careful consideration of the difficult question presented, we have decided to follow that line of decisions which hold that the upper owner may reasonably drain his surface waters into the natural water course, in good husbandry, and this right may be exercised by him without any qualification or limit; and if he thereby increase the flow of the stream beyond its capacity, which results in flooding and damaging the lower owner, such damage will be damnum absque injuria; damage without legal injury, for which no right of action will lie.

Haisch v. Southaven Land Co., 274 F. Supp. 392, 398 (N.D. Miss. 1967) (quoting Bd. of Drainage Comm'rs v. Bd. of Drainage Comm'rs, 95 So. 75, 79 (Miss. 1923)); *see also* Miss. State Highway Comm'n v. Tyner, 345 So. 2d 1050, 1051 (Miss. 1977) (holding that the state did not violate the drainage servitude by increasing flow in a natural watercourse which subsequently overwhelmed the plaintiff's culverts and caused flooding).

^{312. 110} So. 123, 123 (Miss. 1926).

^{313.} City of Jackson v. Robertson, 44 So. 2d 523, 523, 525 (Miss. 1950).

^{314.} City of McComb v. Rodgers, 246 So. 2d 913, 914-15 (Miss. 1971).

^{315.} Douglas v. Wayne Cnty., 139 So. 2d 372, 374-375 (Miss. 1962).

^{316.} Stigall v. Sharkey Cnty., 57 So. 2d 146 (Miss. 1952).

er the decision involved an element of choice or judgment and second determining if the choice involved social, economic, or political policy. If these two questions are answered in the affirmative, then the decision will be immune from liability. Statutes that establish requirements for government action have been held to impose a ministerial duty and therefore the action or inaction is not afforded immunity. The courts have, at times, seemed confused in the application of discretionary function immunity. Another possible source of liability under the tort claims act is allowing a dangerous condition to exist on government property with actual or constructive knowledge of the defect. This cause of action seems almost indistinguishable from negligence in some situations but is not protected by discretionary function immunity.

Injunctions requiring corrections to government created flooding conditions have been held not to require a finding of negligence. Injunctions are usually sought for violations of natural drainage servitudes which are outside the purview of the Tort Claims Act. If an injunction would cause too great a burden on the government, courts have said the remedy will be a claim for takings or negligence. Drainage servitudes in Mississippi follow the general requirements seen in other states, namely, that the owner of the lower estate must receive the natural drainage from the upper estate unless the upper estate has altered the drainage in such a way to make it more burdensome on the lower estate. That principle only applies to runoff from land in Mississippi and not to identifiable watercourses such as rivers and streams that the upper estate may cause to increase in volume even though it may flood the lower estate. Several cases have found governments in violation of drainage servitudes.

Unconstitutional takings provide another cause of action outside the Tort Claims Act and its immunities. The Mississippi Constitution uses the "taking" or "damage" language found in other state constitutions thereby allowing suits for flooding private property; however, improper pleadings can defeat a takings claim.

III. WILL TECHNOLOGY ULTIMATELY AFFECT LIABILITY?

The review of state law reveals varying degrees of local governments' exposure to liability for flooding damage. Texas, followed by Alabama and Mississippi, appear to be the states least likely to find local governments responsible for public works projects and planning decisions that cause or exacerbate flooding. Florida and Louisiana case law histories reveal more instances of local government liability in flooding damage situations. However, there were no instances found in the five states where local governments were held liable for permitting development in a flood hazard area that resulted in flooding of the permitted property as opposed to neighboring property, and it would apparently take extraordinary facts and circumstances for that to occur. Such extraordinary facts and circumstances may be upon us, however, and quite possibly sooner than we would like to believe.

Tide gauge data from the last 100 years shows that sea level in the Gulf of Mexico has been steadily rising.³¹⁷ The current average observed rate of global sea level rise (SLR) is about three millimeters per year or about one foot per 100 years.³¹⁸ Again, this is the *observed* rate of SLR, independent of all the controversy, acrimony, and political shenanigans surrounding global climate change.³¹⁹ Many glaciers around the world are melting³²⁰ and sea ice in the arctic is less prevalent during the yearly cycle; these are observations indicating warming seas and thus thermal expansion that will contribute to SLR.³²¹ We need not argue the scientific merits of the various climate change predictions and their possible effects; we can see SLR happening and have no logical reason to believe that the trend will reverse itself, indeed, all indications are that it will continue and even accelerate.³²²

Rising sea level will have a serious, even devastating, effect on some coastal areas, particularly low-lying deltaic coasts such as the Louisiana-Mississippi delta.³²³ Some development will be inundated and much will be more vulnerable to the effects of storms.³²⁴ Never before in history have humans been presented with such a long-term prediction of significant environmental change based on the best available science. How will our institutions and legal systems adapt to the impending changes over the

322. See USGS ASSESSMENT, supra note 31.

^{317.} Sea Level Trends, supra note 31.

^{318.} USGS ASSESSMENT, supra note 31. See also supra note 19.

^{319.} See Lauren Morello, Outgoing Rep. Inglis Blasts GOP Skepticism on Global Warming, GREENWIRE (Nov. 17, 2010), http://www.eenews.net/Greenwire/print/2010/11/17/1 (providing an example of the politically-charged nature of climate change discussions).

^{320.} Glaciers Around the Globe Continue to Melt at High Rates, SCIENCEDAILY (Feb. 4, 2009), http://www.sciencedaily.com/releases/2009/01/090129090002.htm; Mountain Glacier Melt to Contribute 12 Centimeters to World Sea-Level Increases by 2100, SCIENCEDAILY (Jan. 11, 2011), http://www.sciencedaily.com/releases/2011/01/110110103731.htm; State of the Cryosphere: Is the Cryosphere Sending Signals About Climate Change?, NAT'L SNOW AND ICE DATA CTR. (last updated Mar. 12, 2009), http://nsidc.org/sotc/sea_level.html; Earth Observatory: Conclusion, NASA (last updated May 9, 2011), http://earthobservatory.nasa.gov/Features/SeaIce/page5.php.

^{321.} State of the Cryosphere, supra note 320; USGS ASSESSMENT, supra note 31.

^{323.} E.A. PENDLETON ET AL., COASTAL VULNERABILITY ASSESSMENT OF THE NORTHERN GULF OF MEXICO TO SEA-LEVEL RISE AND COASTAL CHANGE: U.S. GEOLOGICAL SURVEY RE-PORT 2010-1146 1 (2010), *available at* http://pubs.usgs.gov/of/2010/1146/. 324. *Id*.

coming decades? We have developed and honed our science and technology to a point where it threatens to outstrip our legal system's ability to play a relevant role in maintaining order. Government's purpose is to protect rights we have decided are worthy of protection and to maintain institutions for societal benefits, such as public safety, functions that would be difficult, if not impossible, for individuals to accomplish. Our relationship with government is "bipolar" in that we want to be left alone to do as we please but we want to be rescued from the consequences of our mistakes. There are not enough resources to fully insure the damage from all catastrophes, especially when people insist on placing themselves and their property in harm's way as we have done by the overdevelopment of many coastal areas.³²⁵

This leaves governments, charged with the responsibility of promoting development and maintaining public safety, with a difficult balancing act. On the one hand, if government regulates land use to protect public safety, by instituting shoreline setbacks for instance, it faces the ire of property owners and possibly lawsuits for taking of private property.³²⁶ On the other hand, if it does not do enough to protect the public from risks it knows or should know are almost certain to occur, it will face the wrath of the injured for failing to protect them.³²⁷ In the latter case the argument would be something like this: "You, local government with a vast array of information at your fingertips, knew or should have known that this area was likely to experience flooding and inundation from sea level rise and you failed to prevent risky development or at least provide adequate warning to the public. You were in a much better position to know the risks than the public and therefore you are negligent." An example of this scenario is a case from Oregon, Hutcheson v. City of Keizer.³²⁸

In *Hutcheson*, the city approved a subdivision in an area it should have known was subject to flooding.³²⁹ The subdivision approval was contingent on review and approval of the developer's engineering site plan, including compliance with the city's drainage requirements.³³⁰ Evidence was presented that the city failed to

^{325.} See Coastal Zones and Sea Level Rise, supra note 19 (discussing the impacts of sea level rise on at-risk areas); see also Burby, supra note 7 (discussing the risks of developing in hazardous areas and proposals to reduce risk and financial loss).

^{326.} See generally Severance v. Patterson, 2010 WL 4371438 (Tex. 2010), reh'g granted Mar. 11, 2011.

^{327.} See e.g., Samuel Goldberg, Falling into the Pacivic: California Landslides and Land Use Controls, 16 S. CAL. REV. L. & SOC. JUST. 95, 133, 136, 144 (2006).

^{328. 8} P.3d 1010 (Or. Ct. App. 2000).

^{329.} Id. at 1012, 1014.

^{330.} Id. at 1014.

review the engineering site plans that showed the home sites were lower than a nearby drainage ditch.³³¹ The plaintiffs purchased houses in a subdivision that later flooded and plaintiff's alleged negligence: "[I]n failing to use reasonable care in reviewing [Epping's] subdivision application and supporting documentation and in approving [Epping's] subdivision and allowing residential development of the subject property with homes now owned by Plaintiffs.""³³² The city contested the facts and contended that its action in approving the subdivision was immune from liability under the Oregon Tort Claims Act's discretionary function immunity.³³³ The court of appeals said that while the subdivision approval may have been a discretionary act and immune under the tort claims act, the approval of the engineering site plan was a non-discretionary duty and thus not immune from liability for negligence.³³⁴ In *Hutcheson*, the city had ordinances pertaining to drainage and flood prevention that the court found imposed a duty on the city to enforce.³³⁵

A statutory duty to reduce flood risks and the authority to regulate land use will be important factors in determining local government liability for flood damage. Communities in flood-prone areas that participate in the National Flood Insurance Program (NFIP) must have ordinances that meet the program's requirements for minimizing flood risks.³³⁶ The NFIP's elevation and land use requirements are based on a 100-year flood models from historical events.³³⁷ The NFIP imposes minimum standards, but it encourages communities to reduce their risk even more through the Community Rating System.³³⁸ At least two studies have determined that the NFIP underestimates flood risks³³⁹ and it does

336. FED. EMERGENCY MGMT. AGENCY (FEMA), NATIONAL FLOOD INSURANCE PROGRAM DESCRIPTION 3 (2002), available at http://www.fema.gov/library/viewRecord.do?id=1480; see also 42 U.S.C. § 4022 (2006); 40 C.F.R. § 60.13 (2010); 44 C.F.R. §§ 59.2, 73.3 (2010).

337. See generally 44 C.F.R. §§ 59.1, 65.6 (identification and mapping of special hazard areas).

^{331.} Id. at 1013-14.

^{332.} Id. at 1012.

^{333.} Id. at 1011; see also OR. REV. STAT. § 30.265(3), (3)(c) (2007) which states: Every public body and its officers, employees and agents acting within the scope of their employment or duties, or while operating a motor vehicle in a ridesharing arrangement authorized under ORS 276.598, are immune from liability for:

⁽c) Any claim based upon the performance of or the failure to exercise or perform a discretionary function or duty, whether or not the discretion is abused. 334. *Hutcheson*, 8 P.3d at 1017.

^{335.} Id. at 1016.

^{338.} Community Rating System, FEMA, http://www.fema.gov/business/nfip/crs.shtm (last modified Feb. 9, 2011).

^{339.} See WASHED OUT TO SEA, supra note 7, at 12; see also U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-09-12, FLOOD INSURANCE: FEMA'S RATE-SETTING PROCESS WARRANTS ATTEN-

not account for sea level rise or subsidence.³⁴⁰ The Stafford Act requires local governments to develop hazard mitigation plans to be eligible for certain disaster relief assistance,³⁴¹ and most local governments in flood prone areas have developed plans. However, the hazard mitigation plans developed pursuant to the Stafford Act have been found to be lacking meaningful substantive measures that would actually reduce risks from flooding,³⁴² and there is apparently no requirement that the plans account for sea level rise or relative sea level rise from subsidence.³⁴³

As discussed earlier, Florida is the only state bordering the Gulf of Mexico that requires local land use planning, and Florida courts have said that local governments must substantially adhere to their comprehensive plans.³⁴⁴ However, there is little indication that local governments would be required to include substantive measures or enforceable policies designed to mitigate risks from sea level rise to secure approval of a comprehensive plan.³⁴⁵ Even if there were such requirements, the remedy for failure to adhere to them would apparently be an injunction to force compliance.³⁴⁶ So, while Florida's requirement for local land use planning goes far beyond the other Gulf Coast states, it still does not establish a statutory duty to mitigate the risks from sea level rise.

We are back then at the question we started with: could a local government, with the general duty to mitigate flood damages, be liable for failing to institute land use and building control measures to protect people from sea level rise? Does the discretion to make decisions on how to best protect public safety based on political, social and economic considerations include the discretion to

343. See ACTUARIAL SOUNDNESS, supra note 339, at 15.

TION 13 (2008) [hereinafter FEMA RATE-SETTING], available at http://www.gao.gov/ new.items/d0912.pdf; U.S. CONG. BUDGET OFFICE, THE NATIONAL FLOOD INSURANCE PRO-GRAM: FACTORS AFFECTING ACTUARIAL SOUNDNESS (2009) [hereinafter ACTUARIAL SOUND-NESS], available at http://www.cbo.gov/ftpdocs/106xx/doc10620/11-04-FloodInsurance.pdf.

^{340.} See ACTUARIAL SOUNDNESS, supra note 339 at 14-15; FEMA RATE-SETTING, supra note 339 at 20-23.

^{341. 42} U.S.C. § 5121 (2006); MITCHELL L. MOSS & CHARLES SHELHAMER, N.Y. UNIV. CTR. FOR CATASTROPHE PREPAREDNESS & RESPONSE, THE STAFFORD ACT: PRIORITIES AND REFORM 12, *available at http://www.nyu.edu/ccpr/pubs/* Report_StaffordActReform_MitchellMoss_10.03.07.pdf.

^{342.} Peacock et al., *supra* note 10, at 69-70; *See, e.g.*, ROD E. EMMER ET AL., HAZARD MITIGATION AND LAND USE PLANNING IN COASTAL LOUISIANA: RECOMMENDATIONS FOR THE FUTURE 27 (2007) (Louisiana Sea Grant College Program), *available at* http://www.lsu.edu/sglegal/pdfs/CompPlanningReport.pdf.

^{344.} FLA. STAT. § 163.3161 (2010); Pinecrest Lakes, Inc. v. Shidel, 795 So. 2d 191, 209 (Fla. 4th DCA 2001). Cf. Kelley M. Jancaitis, Florida on the Coast of Climate Change: Responding to Rising Seas, 31 ENVIRONS. ENVTL. L. & POL'Y J. 157 (2007) (discussing federal and local government land use planning in response to coastal development).

^{345.} See § 163.3161(3) (discussing the intent of the Act).

^{346.} Pinecrest Lakes, 795 So. 2d at 209 (ordering county to comply with its own plan).

ignore clear and imminent dangers? If so, then it would seem we have come the full circle, back to absolute sovereign immunity for these types of decisions. However, there is reason to think that if sea level inundation continues its observed trend, not to mention the accelerated rate predicted by many climate change models, the effects will also submerge the discretionary function immunity defense for those governments who chose to ignore the coming threat. Admittedly, there is scant precedent for this hypothesis,³⁴⁷ and indeed, courts in this country have been reluctant to find governments negligent for approving development in flood risk areas.³⁴⁸ These cases and ones like them, however, involve situations where the hazard is unpredictable and intermittent such as riverine flooding, surface water inundation from rain events, or flooding from coastal storms.

In those situations, there has been a strong public policy argument for absolving governments of responsibility for decisions that could be defended based on reasonable uncertainty because of the idea that governments should be given flexibility in making judgment calls. That deference could very well be eroded by improved predictive capabilities that are becoming more accurate and sophisticated.³⁴⁹ Sea level rise is a different type of hazard because it is ongoing, observable, and relentless, and the areas that will be affected can be determined with great accuracy for a given rate of rise.³⁵⁰ The predicted rate does vary widely³⁵¹ but even the current observed rate of sea level rise will cause significant inundation in many areas.³⁵² With sea level rising, the imprudence of poor plan-

^{347.} See generally Hutcheson v. City of Keizer, 8 P.3d 1010 (Or. Ct. App. 2000) (local government denied sovereign immunity defense where it permitted residential development later damaged by flooding).

^{348.} See Stonacek v. City of Lincoln, 782 N.W. 2d 900, 912 (Neb. 2010) (permitting development below base flood elevation); Okie v. Village of Hamburg, 609 N.Y.S.2d 986, 987, 989 (N.Y. 1994) (holding that "the [v]illage did not knowingly and blatantly violate any safety regulations" when it mistakenly issued building permit in a floodplain); Ayers v. Brazzell, 648 So. 2d 406, 409 (La. Ct. App. 1994) (holding that the Bossier Parish Police Jury's failure to require that homes be built above base flood elevation was discretionary and that they are immune from liability); City of Tarpon Springs v. Garrigan 510 So. 2d 1198, 1199 (Fla. 2nd DCA 1987) (holding that private citizens do not have a right of recovery "against a municipality for negligently maintaining and providing information from public records" where the city provided incorrect base flood elevations).

^{349.} See, e.g., FED. EMERGENCY MGMT. AGENCY (FEMA), HAZUS-MH RIVERINE FLOOD MODEL VALIDATION STUDY, http://www.fema.gov/plan/prevent/hazus/hz_utfldvalstudy.shtm (last visited May 9, 2011); see also Josh O' Leary, Flood Models will Better Prepare Cities, Residents, PRESS-CITIZEN (May 25, 2010), http://www.press-citizen.com/article/20100525/ NEWS01/5250322/Flood-models-will-better-prepare-cities-residents.

^{350.} See generally Sea Level Trends, supra note 31; USGS ASSESSMENT, supra note 31; Overpeck & Weiss, supra note 31; PEW CTR. ON GLOBAL CLIMATE CHANGE, supra note 31. 351. See USGS ASSESSMENT. supra note 31.

^{352.} Overpeck & Weiss, supra note 31.

ning decisions and land use controls will become more evident and unacceptable with each passing year and decade. The perils to life and property will continue to increase rather than fade from memory as do storms that come and go. Bulwarks will have to be continuously improved and strengthened, undoubtedly, largely at public expense. Protection of property by erecting structural defenses will deprive society of valuable, even irreplaceable, natural resources as beaches and highly productive intertidal zones disappear when natural migrations of shorelines are stopped. Many will ask: "Who allowed such foolish development when they knew or should have known of these consequences?"

All of these effects will influence courts in their deliberations and determinations of how much deference to afford governments. Norfolk, Virginia, provides an example of what many coastal areas are already facing and a preview of things to come as sea level continues to rise. Some Norfolk residents living in low-lying areas close to the shore experience regular inundation from lunar tides that has worsened over the last several decades.³⁵³ After intense lobbying by those affected, the city is spending \$1.25 million to raise a section of street and rework storm drains to relieve the problem, and FEMA has provided over \$144,000 to raise six houses.³⁵⁴ Many there, including city officials, seem to understand that these efforts are a temporary patch job that will be overwhelmed if sea level continues to rise and that the money would have been better spent on a more permanent solution such as relocation to higher ground.³⁵⁵ If the city, under its planning authority, decided to allow more development in these flood prone areas, would its foreknowledge of the hazards influence a court's decision whether to afford discretionary function immunity for such a negligent act? It strains common sense to say that it would not.

IV. IN RE KATRINA CANAL BREACHES

What constitutes a policy decision that is protected by discretionary function immunity, and one that is not, is sometimes a slippery concept.³⁵⁶ The case of *In re Katrina Canal Breaches Con*-

^{353.} Leslie Kaufman, Front-Line City in Virginia Tackles Rise in Sea, N.Y. TIMES, Nov. 25, 2010, at A1.

^{354.} Id.

^{355.} Id.

^{356.} James A. Brown & John C. Anjier, Recent Developments Affecting Louisiana's Discretionary Function Exception: Will Louisiana Follow Gaubert?, 53 LA. L. REV. 1487, 1496-99.

solidated Litigation³⁵⁷ could portend how courts might analyze governments' liability for decisions that lead to catastrophic disasters. In 1958 the U.S. Army Corps of Engineers (Corps) began digging a deep draft navigation channel through the marshes of St. Bernard Parish, Louisiana.³⁵⁸ The channel, known as the Mississippi River Gulf Outlet (MRGO), stretches about seventy-six miles from Breton Sound on the Gulf of Mexico northwesterly, skirting the southwest shore of Lake Borne and connecting to the Gulf Intracoastal Waterway (GIWW) east of New Orleans, and then westerly to the Inner Harbor Navigation Canal in New Orleans.³⁵⁹ The purpose of the channel was to provide a shorter and faster shipping route from the Gulf of Mexico to the Port of New Orleans and the upper Mississippi River.³⁶⁰ It was known from the beginning that the MRGO would suffer bank stability and erosion problems that would require substantial corrective measures.³⁶¹ It was also feared that the MRGO would increase storm water penetration into areas near populated portions of St. Bernard and Orleans Parishes thereby threatening flood protection levees.³⁶²

The MRGO was not fully completed until 1968 but was substantially finished in 1965 when Hurricane Betsy caused severe and widespread flooding in New Orleans and St. Bernard Parish to the southeast.³⁶³ Residents of Chalmette in St. Bernard Parish brought suit against the U.S. Government alleging that their property would not have flooded but for the Corps' negligence in designing, constructing, and operating the MRGO.³⁶⁴ The court in Graci v. United States was flatly dismissive of the plaintiff's assertions that the MRGO caused their flooding, repeatedly citing the government's evidence that the MRGO had not contributed to the flooding but, indeed, had even reduced its severity because of its spoil bank and the direction of the storm surge.³⁶⁵ It is unclear from the opinion what evidence the plaintiffs introduced in support of their contention that the MRGO was responsible for the flooding of their property, but the court mentioned none. One piece of evidence examined by the court in In re Katrina was a report on the infamous "funnel effect" caused by storm surge piling up at the tri-

^{357. 647} F. Supp. 2d 644 (E.D. La. 2009).

^{358.} Mississippi River Gulf Outlet, History of MRGO, MRGO.GOV, http://www.mrgo.gov/MRGO_History.aspx (last visited May 9, 2011).

^{359.} Id.

^{360.} Id.

^{361.} In re Katrina, 647 F. Supp. at 653-54.

^{362.} Id. at 677.

^{363.} Id. at 652.

^{364.} Graci v. United States, 435 F. Supp. 189, 190-91 (E.D. La. 1977).

^{365.} Id. at 194-96.

angular confluence of the MRGO and the GIWW thereby increasing its height.³⁶⁶ The report downplayed the funnel's role in exacerbating storm surge and, even though experts questioned that conclusion, the court chose to ignore those countervailing views that the MRGO did indeed cause flooding in 1965.³⁶⁷

In the forty-year interim between Hurricanes Betsy and Katrina a lot of water went under the bridge over the MRGO and GIWW at Paris Road and a lot of changes occurred in the physical conditions of the MRGO and the public's attitude towards it.³⁶⁸ Katrina caused the worst flooding in New Orleans in modern history and was one of the worst natural disasters ever to affect the United States.³⁶⁹ The levees in St. Bernard Parish again failed catastrophically, flooding large populated areas. The plaintiffs in In re Katrina alleged that the Corps' operation and maintenance of the MRGO caused the breaching of the flood protection levees protecting their homes.³⁷⁰ The plaintiffs maintained that the Corps knew from the beginning the MRGO would have problems with bank stability because of the soil type and wave wash from boat traffic and would cause levees to sink;371 that the channel had allowed salt water to invade previously fresh marshes, degrading them into more open water areas³⁷² thereby allowing greater wave fetch; and had allowed the channel to greatly widen, also allowing greater wave fetch.³⁷³ These factors, the plaintiffs alleged, were the cause of the levee failures and the Corps was negligent for failing to take corrective measures such as bank and foreshore stabilization projects.³⁷⁴

^{366.} In re Katrina, 647 F. Supp. at 677-78 (discussing the Bretschneider and Collins report, a study commissioned in 1966 after the *Graci* litigation and Hurricane Betsy).

^{367.} Id. at 677; Interview with Dr. Paul Kemp, Ph.D., Vice President, Louisiana Coastal Initiative (Jan. 12, 2011).

^{368.} See generally Bob Warren, Construction of Barrier Closing the Controversial Mississippi River-Gulf Outlet Now Complete, Corps of Engineers says, THE TIMES-PICAYUNE, July 24, 2009, at 1; Mississippi River-Gulf Outlet (MRGO) Closure, U.S. ARMY CORPS OF ENG'RS, http://www.mvn.usace.army.mil/pd/projectslist/home.asp?projectID=164 (last visited May 9, 2011); Environmental Impacts, MRGO MUST GO, http://mrgomustgo.org/ mississippi-river-gulf-outlet/history/environmental-impacts.html (last visited May 9, 2011); Paul Rioux, Corps officially recommends closing MR-GO, THE TIMES-PICAYUNE (July 3, 2007, 7:49 PM), http://blog.nola.com/times-picayune/2007/07/ corps_officially_recommends_cl.html.

^{369.} Normand Forgues-Roy, Was the Katrina the Biggest, the Worst Natural Disaster in History?, HISTORY NEWS NETWORK (Oct. 24, 2005), http://hnn.us/articles/17193.html; Katrina Joins list of Worst Weather Disasters, LIVESCIENCE (Aug. 30, 2005), http://www.livescience.com/9320-katrina-joins-list-worst-weather-disasters.html.

^{370.} In re Katrina, 647 F. Supp. at 679.

^{371.} Id. at 671-73.

^{372.} Id. at 666.

^{373.} Id. at 671.

^{374.} Id. at 679.

The plaintiffs introduced voluminous amounts of data that the court discussed at length. The court was as dismissive of the Corps' position that the force of the storm was the overriding cause of the breaches as it had been to the plaintiffs' contentions thirty years earlier in *Graci*, even finding that the Corps expert had "manipulated" data to favor the Corps' position.³⁷⁵ The Corps raised the discretionary function immunity available under the Federal Tort Claims Act as part of its defense, claiming that its decisions on maintaining the MRGO were based in policy considerations because mitigation measures required additional authorization and funding which Congress failed to provide.376 The court found the Corps' arguments unpersuasive, and in an extensive discussion of the application of the discretionary function immunity as it relates to safety.³⁷⁷ it found the Corps had undertaken the responsibility for safety and its negligence in failing to install protection or warn Congress of the danger, and thereby acquire funding to shore up the MRGO, was not protected by discretionary function immunity under the FTCA.³⁷⁸ The court's distinctions between decisions protected as policy and those not protected illustrate that this type of analysis is often nebulous and can seem result-oriented.379

In the end, the court held that the Corp's actions were negligent under Louisiana law and not immune from liability.³⁸⁰ The difference between the *Graci* decision and *In re Katrina* can be attributed to several factors such as the changed condition of the MRGO, the surrounding ecosystem, and the availability of advanced scientific tools to prove causation. The court discussed the funnel effect and the 1966 report at length, noting the fact that it was based on rudimentary science and that several experts disagreed with its conclusions.³⁸¹ The court reiterated its position that, even though the funnel *as designed* may have caused flooding, the Corps was immune from liability for the construction and design,

379. See generally id. at 705-17.

380. Id. at 717.

381. Id. at 677.

^{375.} Id. at 687.

^{376.} Id. at 704-717.

^{377.} Id. at 705 (stating that "[w]hile the Corps maintains that all of its decisions were policy driven, when those decisions concern safety and engineering judgments, this exception is not an absolute shield").

^{378.} The court stated: "In the event the Corps' monumental negligence here would somehow be regarded as 'policy' then the exception would be an amorphous incomprehensible defense without any discernable contours. Therefore, there is substantial cause to find the discretionary function exception is inapplicable in this instance." *Id.* at 717. Yet, the court stated several times that the Corps' decision to create the MRGO and the initial design was protected by discretionary function immunity. *Id.* at 702 n.52.

presumably under discretionary function immunity.³⁸² However, the funnel effect that was dismissed in 1977 based on questionable science was accepted in 2009 under the reasoning that modern modeling clearly proved the flooding effect and the corps had allowed deterioration, providing the court an avenue to deny the discretionary function immunity defense.³⁸³

In my view, the case was correctly decided; however, one cannot help but speculate from the tone of the opinion that the disaster and human suffering of the second destruction of St. Bernard Parish in forty years made the court less willing to defer to the Corps' decisions. In re Katrina is based on defects of government property rather than development permits, and as such, is somewhat oblique to the planning scenario, but it is nevertheless instructive and relevant to our discussion. In re Katrina was also heavily based on technical data and information that was lacking in *Graci*; it was also based on the fact that the government had ample knowledge and forewarning of the risks caused by the MRGO and failed to take protective measures. Couching the case in these terms skirts discretionary function immunity, but the opposite view, that the availability of funds and engineering decisions were discretionary, could just as easily have been supported. The court seems to be saying that failure to protect public safety cannot be discretionary when the decision-maker has adequate knowledge of the risk,³⁸⁴ but that principle has not carried the day in other situations.³⁸⁵ Also, the scale of the disaster made the government's decisions seem much less reasonable. Therefore, we may postulate that the better the information available to the decisionmaker, and the larger the scale of potential disaster, the less likely a government will be able to shield itself from liability.

May we surmise that the information available to governments is at the crux of the issue of liability both in overcoming defenses such as discretionary function immunity and proving negligence? While slightly different in each jurisdiction, a tort consists of a duty of care owed to the victim and the breach of that duty which causes damage to the victim. Foreseeability of consequences is the

^{382.} Id. at 685.

^{383.} See supra notes 146-163, 248-255, 282-334 and accompanying text.

^{384.} The court stated: "The Corps cannot mask these failures with the cloak of 'policy.' At some point, simple engineering knowledge—like wave is going to destroy the surrounding habitat and create a hazard—cannot be ignored, and the safety of an entire metropolitan area cannot be compromised." *Id.* At 709.

^{385.} E.g., Nat'l Union Fire Ins. v. United States, 115 F.3d 1415, 1417, 1422 (9th Cir. 1997) (delaying breakwater improvement); United States v. Ure, 225 F.2d 709, 712-13 (9th Cir. 1955) (damage from irrigation canal); Valley Cattle Co. v. United States, 258 F. Supp. 12, 19-20 (D. Haw. 1966) (only preparing for a two year storm).

key in determining legal cause, which in turn determines how far society is willing to go in holding people and governments responsible for their acts.³⁸⁶ Foreseeability is essentially a reasonable person standard that is based, in large part, on reasonably expected knowledge and awareness.³⁸⁷ Is it reasonable, for example, to expect the average person to know that sea level is rising, the rate that it is rising, and which areas will be inundated or unlivable within their lifetimes or the expected life of a typical house? Is it reasonable to expect governments to acquire, understand, and heed such information? These are important questions that courts will consider in deciding whether governments owe a duty to protect people by controlling or preventing development in areas vulnerable to sea level rise.

Several organizations including the National Oceanic and Atmospheric Administration (NOAA), the National Sea Grant College Program (Sea Grant), the Federal Emergency Management Agency (FEMA), the American Planning Association (APA), and the Institute of Business and Home Safety (IBHS), and many state level agencies such as state coastal zone management programs are actively engaged in efforts to inform state and local governments and the public about sea level rise and its probable effects on coastal communities.³⁸⁸ The National Sea Grant College Program, the sponsor of this symposium, is a research, extension, and outreach organization, serving all coastal resources stakeholders and coastal communities. One of Sea Grant's main research and extension areas is "Hazard Resilient Coastal Communities,"389 and a major component is the dissemination of knowledge and information. Sea Grant's reputation among its constituents is as an honest broker, partially because it employs extension agents from the communities they serve whenever possible, means the information it provides is usually perceived as being more credible than that coming from other sources.

Since hurricanes Katrina and Rita in 2005, the Louisiana Sea Grant program and other Gulf Coast sea grant programs have been engaged in an effort to inform communities of the risk they face from natural hazards such as sea level rise and storm surge—

^{386. 57}A AM. JUR. 2D Negligence § 477 (2010).

^{387.} Id.

^{388.} The Ins. Inst. for Bus. & Home Safety, DISASTERSAFETY.ORG, http://www.disastersafety.org/main?execution=e1s1 (last visited May 9, 2011); *Determine your Risk*, FEMA, http://www.fema.gov/plan/determine.shtm (last visited May 9, 2011); Nat'l Oceanic and Atmospheric Admin. (NOAA), NAT'L SEA GRANT OFFICE, http://www.seagrant.noaa.gov (last visited May 9, 2011).

^{389.} See generally Hazard Resilient Coastal Communities (HRCC), NAT'L SEA GRANT OFFICE, http://www.seagrant.noaa.gov/focus/hrcc_page.html (last visited May 9, 2011).

a risk that is increasing because of the observed and predicted sea level rise. Relative sea level rise, due to the combination of subsidence of coastal land and eustatic sea level rise, makes Louisiana much more vulnerable than most other areas.³⁹⁰ Louisiana Sea Grant and the Louisiana Agricultural Center Extension Service education and extension efforts have concentrated on providing educational talks, seminars, and printed and online materials such as the Louisiana Coastal Hazard Mitigation Guidebook to the public.³⁹¹ In our presentations, we talk about the latest technology available to predict the effects of sea level rise and coastal storms and possible solutions such as elevation and land use planning.

For instance, the LSU Hurricane Center uses the ADCIRC model to predict the storm surge and flooding from hurricanes of known parameters. Given a hurricane of particular size, wind strength, forward speed, direction, and landfall topography, the model can predict the areas that will be inundated and by how much to a high degree of accuracy.³⁹² The model has been used to very accurately predict storm surge from many hypothetical storms to give an idea of the most dangerous and vulnerable areas in a given locality. In addition, predicted sea level rise and subsidence can be put into the model to show how these changes can exacerbate the effects of storm surge and flooding. We stress in our presentations to local governments and the public that these tools have proven to be very accurate in their ability to predict hazards, and we are constantly improving them.

With such sophisticated information, a local government can if it has the political will and land use planning authority—control development and construction practices to mitigate the risks from sea level rise and storms that will become more destructive as sea level rises. As we have discussed, planning decisions may require restrictions on the use of private property and will raise the specter of takings lawsuits, but local governments that decline to take action to address the foreseeable effects of sea level rise should also be aware of the potential liability for failing to plan for and mitigate risks. Most jurisdictions rely solely on their flood ordinances required by the NFIP based on the Flood Insurance Rate Maps (FIRMS). FIRMS significantly underestimate flooding risks,³⁹³ a fact confirmed by Louisiana's experience, especially after Hurri-

^{390.} See infra Appendixes A, B; See also Overpeck & Weiss, supra note 31.

^{391.} JAMES G. WILKINS ET AL., LOUISIANA COASTAL HAZARD MITIGATION GUIDEBOOK, LOUISIANA SEA GRANT COLLEGE PROGRAM, *available at* http://www.lsu.edu/sglegal/pdfs/LaCoastalHazMitGuidebook.pdf.

^{392.} See infra Appendixes C, D.

^{393.} See generally FEMA RATE SETTING, supra note 339.

canes Katrina and Rita. Flooding from these hurricanes greatly exceeded the designated flood-prone areas on the existing FIRMS, and the revised FIRMS' base flood elevations are well below the flood levels produced by those hurricanes; the fact that they do not account for observed sea level rise and subsidence makes reliance solely on the FIRMS seems quite unreasonable.³⁹⁴

The technology makes it foreseeable to a reasonable government that the minimum requirements are insufficient to protect public safety and that rising sea level will significantly increase hazards. Other jurisdictions are beginning to recognize the potential for government liability in failing to plan for sea level rise and some are much further advanced in applying precautionary principles.³⁹⁵ It is a trend that seems likely to continue. One must then ask: Is it reasonable or within the bounds of discretion for a government charged with protecting public safety to ignore clear and imminent dangers and require only minimum land use planning measures, thereby failing to prevent catastrophic damage from hurricanes and rising seas? A court viewing the wreckage of some future disaster may not think so.

V. CONCLUSION

The best available scientific information indicates that, in all likelihood, sea level around the world will continue to rise as it has for several thousand years, with the current rate measured at about three milimeters per year. Other evidence points strongly toward acceleration of the rate of sea level rise, but the observed rate alone, if it continues, will cause catastrophic damage to coastal property in many areas. Relative sea level rise and the combination of eustatic sea level rise and the change of land elevations will cause differing effects in different regions. The

^{394.} See Hurricane Katrina Flood Recovery (Louisiana), FEMA, http://www.fema.gov/ hazard/flood/recoverydata/katrina/katrina_la_resources.shtm (last visited May 9, 2011); Hurricane Katrina Surge Inundation and Advisory Base Flood Elevation Maps: St. Tammany Parish, Louisiana, FEMA, http://www.fema.gov/hazard/flood/recoverydata/katrina/ katrina_la_sttammany.shtm (last visited May 9, 2011); FEMA Issues Elevation Guidelines for Post-Katrina Rebuilding, CORE LOGIC, http://www.faflood.com/our-company/newsroom/ 320-fema-issues-elevationguidelines-for-post-katrina-rebuilding (last visited May 9, 2011).

^{395.} See, e.g., Jacqueline Peel & Lee Golden, Planning for Adaption to Climate Change: Landmark Cases from Australia, 2 SUSTAINABLE DEV. L. & POL'Y 37 (2009); Philippa Carmel England, Heating Up: Climate Change Law and the Evolving Responsibilities of Local Government, 13 LOC. GOV'T L. J. 209, 210 (2008); Daniel A. Farber, Adapting to Climate Change: Who Should Pay?, 23 J. LAND USE & ENVTL. L. 1 (2007); Susan Kraemer, Australia to Restrict Coastal Development Due to Global Warming, ECOLOCALIZER, http://ecolocalizer.com/2008/12/13/australia-to-restrict-coastal-development-due-to-globalwarming/ (last visited May 9, 2011).

states bordering the Gulf of Mexico will all experience varying degrees of relative sea level rise, but all will see an increased risk to coastal development. The extent of sea level rise has been accurately mapped for given rates and that information is being disseminated to the public and to local and state governments. In many jurisdictions, local governments have thus far declined to institute land use planning measures to reduce future risks from sea level rise, possibly because they fear legal consequences for interfering with private property.

Governments have been held liable for their permitting decisions that cause or exacerbate flooding on neighboring property in some jurisdictions. Rarely have governments been held accountable for permitting development projects that later flooded from known hazards, and no courts in Gulf of Mexico states have found governments liable for such actions. Various defenses to government liability have shielded governments from liability for planning decisions, the most common being discretionary function immunity. If the sea level continues at its observed current trend, it is clear and reasonably foreseeable that the safety of coastal property and human life will be significantly compromised. Some areas are already experiencing these effects, and improving technology will continually make the risks clearer and more foreseeable. One federal court seems to have been influenced by the great social cost of risky actions in deciding to deny the federal government's immunity defense, and at least one foreign jurisdiction seems to be moving towards greater accountability in government planning for sea level rise. At some point, when the social costs of allowing development to proceed in harm's way outweighs the deference afforded to governments in their planning decisions by the law and the courts, governments will begin to incur liability for their failure to protect public safety.



Appendix A: Historical Gulf of Mexico Sea Level Data. Source: http://tidesandcurrents.noaa.gov/



Appendix B: Comparison of ADCIRC predicted and actual storm surge inundation form Hurricane Ike, 2008. Hurricane Ike ADCIRC storm surge model provided by the LSU Coastal Emergency and Risks Assessment (CERA), University of North Carolina Institute of Marine Sciences, and the Notre Dame Computational Hydraulics Laboratory. Data analysis and map provided by Maurice Wolcott, Coastal GIS Specialist, LA Sea Grant program.



Appendix C: Areas in coastal Louisiana that would be inundated by 1 foot of sea level rise. Data analysis and map provided by Maurice Wolcott, Coastal GIS Specialist, LA Sea Grant program.



Appendix D: Detailed ADCIRC storm surge inundation prediction for Houma, Louisiana. Hypothetical ADCIRC storm surge model provided by the U. S. Army Corps of Engineers. Data analysis and map provided by Maurice Wolcott, Coastal GIS Specialist, LA Sea Grant program.

Houma Airport Area – Category 3 ADCIRC Predicted Flood Extent and Depth



PRACTICAL, LEGAL, AND ECONOMIC BARRIERS TO OPTIMIZATION IN ENERGY TRANSMISSION AND DISTRIBUTION

MIRIAM SOWINSKI*

I.	INTRODUCTION	503
II.	TRANSMISSION MATTERS	504
III.	TRANSMISSION AND RELIABILITY	505
IV.	NEW TRANSMISSION PROJECTS AFFECTING FLORIDA	506
	A. Progress Energy	506
	B. The Southern Company	507
V.	FLORIDA'S TRANSMISSION REGULATORS	508
VI.	MODERN REGULATORY FRAMEWORK	510
VII.	REGULATORY BARRIERS TO OPTIMIZATION	513
VIII.	RECENT FEDERAL LEGISLATION	516
IX.	RECENT FLORIDA LEGISLATION	518
Х.	TARGET LOAD POCKETS	519
XI.	ACCOMMODATING RENEWABLE ENERGY AND THE	
	CHALLENGE OF ESTIMATING TRANSMISSION	
	CONSTRUCTION COSTS	520
XII.	THE TRANSMISSION COST ESTIMATE PROBLEM	521
	A. Per-mile Variations in Cost Estimates	522
	B. Debating Interconnection Costs	523
	C. Benefit and Cost Allocation	524
	D. Environmental Costs and Benefits	525
XIII.	INVESTMENT IN TRANSMISSION AND DISTRIBUTION	526
XIV.	NEGATIVE PRESSURE ON TRANSMISSION AND	
	DISTRIBUTION INVESTMENT	527
	A. The Poor Economy	527
	B. Return on Investment	
XV.	FEDERAL STIMULUS FOR TRANSMISSION INVESTMENT	528
XVI.	CONCLUSION	529

I. INTRODUCTION

The President has stated that the country that harnesses the power of clean, renewable energy will lead the 21st century. Expanding and modernizing the transmission grid by

^{*} The author benefited from the generous guidance of Jim Rossi, Harry M. Walborsky Professor and Associate Dean for Research, Florida State University College of Law.

siting proposed electric transmission facilities will help to accommodate additional electricity generation capacity over the next several decades, including new renewable generation as well as improve reliability and reduce congestion.¹

Electricity transmission and distribution face practical, legal, and economic barriers to optimization, including conflicting sources of law and regulation, pressure from trends toward renewable energy generation, uncertainty in estimating cost of new transmission and distribution infrastructure, and disagreement over who should bear the cost of new transmission lines to accommodate clean energy. For the purpose of this Comment, transmission and distribution optimization is defined as maximum electricity delivery reliability at the lowest marginal cost. As energy demands increase and electric sources shift to renewable and clean energy sources, transmission lines must accommodate greater loads and adapt to transport power from different geographic areas and new generation facilities.

II. TRANSMISSION MATTERS

Adequate electricity transmission and distribution facilities are a necessary element of a competitive energy market. As electricity demand increases and the rise of renewable energy puts additional strain on the existing transmission grid, practical and legal barriers to transmission investment must come down. This Comment discusses the current legal and practical barriers to transmission optimization and suggests opportunities for improvement. The first part of this Comment defines electricity transmission and transmission reliability and describes current transmission projects proposed in Florida. The Comment next describes the current regulatory structure, from the state-centered approach as it functions in Florida, to the Federal regulation of interstate transmission lines. I then suggest areas of focus for regulators, beginning with Load Pockets. Additionally, renewable energy presents both opportunities and challenges, and I use its entrance into the transmission grid in the Western United States as an example of

^{1.} Memorandum of Understanding Among the U.S. Dep't of Agric., Dep't of Commerce, Dep't of Def., Dep't of Energy, Envtl. Prot. Agency, the Council on Envtl. Quality, the Fed. Energy Regulatory Comm'n, the Advisory Council on Historic Preservation, & Dep't of the Interior, Regarding Coordination in Fed. Agency Review of Elec. Transmission Facilities on Fed. Land 2 (Oct. 23, 2009) [hereinafter Memorandum of Understanding], *available at* http://www.ferc.gov/legal/maj-ord-reg/mou/mou-transmission-siting.pdf.
the information asymmetry problem in transmission citing, planning, and regulatory approval. After laying this uncertain framework, I discuss overall investment in transmission and distribution, negative pressures on transmission investment, and federal stimulus for transmission and distribution investment. Finally, I conclude by suggesting that policymakers must focus on load pockets and congested areas while accommodating the peculiar demands of newly-added renewable energy sources. To do this, regulators must move away from control-driven transmission regulation to proactive and at times creative decision-making, whereby policymakers may overcome even the most difficult barriers to transmission and distribution optimization.

III. TRANSMISSION AND RELIABILITY

Electric power transmission is the transfer of large blocks of power over high voltage (138 to 765 kV) long-distance power lines.² High voltage lines have superior conductivity powers as compared to other electric lines, thereby minimizing energy lost through heat and resistance or "line loss."³

From the high-voltage transmission line, the electricity flows through a transformer which steps down its voltage for distribution on lower voltage distribution networks.⁴ Because electricity cannot be stored in great quantities, electricity flows through this entire process at about the speed of light.⁵

The Energy Information Administration defines reliability as "adequacy of supply and security of operations."⁶ According to the EIA, "customers have power when they want it more tha[n] 99 percent of the time. When they do not, weather (ice

^{2.} The U.S. Electric Power Industry Infrastructure: Functions and Components, in U.S. ENERGY INFORMATION ADMINISTRATION, THE CHANGING STRUCTURE OF THE ELECTRIC POWER INDUSTRY 2000: AN UPDATE [hereinafter EIA Independent Statistics], http://www.eia.doe.gov/cneaf/electricity/chg_stru_update/chapter3.html (last visited May 9, 2011).

^{3.} *Id.* Some studies have suggested that over 7% of electric power is lost in transmission, and of that loss, 60% is over lines and 40% is over transformers. U.S. CLIMATE CHANGE TECH. PROGRAM, TECHNOLOGY OPTIONS FOR THE NEAR AND LONG TERM 34 (2003), *available at* http://climatetechnology.gov/library/2003/tech-options/tech-options-1-3-2.pdf. *See also Jim* Rossi, The Trojan Horse of Electric Power Transmission Line Siting Authority, 39 ENVTL. LAW 1015, 1019 n.13 (2009), *available at* http://ssrn.com/abstract=1472102.

^{4.} EIA Independent Statistics, supra note 2.

^{5.} Electricity Transmission Fact Sheet, U.S. ENERGY INFO. ADMIN. INDEP. STATISTICS & ANALYSIS, http://www.eia.doe.gov/cneaf/electricity/page/fact_sheets/transmission.html (last visited May 9, 2011).

storms, lightning, and natural disasters like floods) is the primary factor for 70 percent of those outages, followed by animals damaging equipment."⁷

Broader electricity reliability problems due to insufficient transmission capacity are rarely felt yet pose a serious and imminent problem for transmission regulators. Additionally, the stability of the electric power transmission grid and the cascading effect of small-scale power transmission failure has long been a source of national security concern.⁸ The blackout of 1965 cut power to New York, Boston, and Toronto.⁹ The August 2003 blackout affected New York; Cleveland, Ohio; Detroit, Michigan; and Toronto and Ottawa, Canada.¹⁰ Some experts warn that the next blackout could be even more catastrophic.¹¹ Clearly, reliability is a major concern for transmission regulators and ratepayers.

IV. NEW TRANSMISSION PROJECTS AFFECTING FLORIDA

Several electric power transmission projects are currently under construction in Florida. Recently the Edison Electric Institute ("EEI") compiled data on transmission investments of its member companies to be completed by or after 2009.¹² EEI reported transmission and non-transmission line investment projects costing at least \$50 million and Smart Grid and renewable-energy supporting projects of at least \$20 million.¹³

A. Progress Energy

The Dundee–Intercession City project proposes to build twenty miles of 230 kV line from Dundee to Intercession City in central Florida and adds a second circuit 230 kV line using

^{7.} *Id*.

^{8.} John Markoff & David Barboza, *Academic Paper in China Sets Off Alarms in U.S.*, N.Y. TIMES, Mar. 20, 2010, at A10, *available at* http://www.nytimes.com/2010/03/21/world/asia/21grid.html.

^{9.} Lori A. Burkhart, *Blackouts? Never Again! (But? . . .)*, PUB. UTIL. FORTNIGHTLY, Oct. 1, 2003, at 29, 31.

^{10.} Major Power Outage Hits New York, Other Large Cities, CNN.COM (Aug. 14, 2003), http://www.cnn.com/2003/US/08/14/power.outage.

^{11.} Burkhart, *supra* note 9, at 31.

^{12.} EDISON ELECTRIC INSTITUTE, TRANSMISSION PROJECTS: AT A GLANCE v (2010), available at http://www.eei.org/ourissues/ElectricityTransmission/Pages/ TransmissionProjectsAt.aspx.

^{13.} Id. at vii.

existing right of way.¹⁴ The cost of the project is estimated at around \$50 million.¹⁵

The Morgan Road–Zephyrhills North project, expected to be in service by December 2013, will build twenty-three miles of new 230 kV line from Zephyrhills North Substation to the new Morgan Road Substation in the greater Tampa Bay area.¹⁶ This project is estimated to cost approximately \$74 million.¹⁷

B. The Southern Company

Smart Grid technology investments of \$140 million by the Southern Company will benefit customers in the panhandle region of Florida.¹⁸

The Holmes Creek–Miller's Ferry project, scheduled to be in service by the summer of 2015, will build forty-five miles of new 230 kV line between Holmes Creek and a new Miller's Ferry 230 kV Switching Station.¹⁹ The project, estimated to cost \$82 million, is expected to benefit the central Panhandle, Panama City, and Destin areas of Florida.²⁰

The Shoal River–Santa Rosa project, scheduled to be in service the summer of 2015, will construct seventy-three miles of 230 kV line between Shoal River and Santa Rosa and construct a new Santa Rosa 230 kV substation with two 400 MVA transformer banks.²¹ The project will cost an estimated \$126 million and will benefit Panama City and Destin.²²

Each of these projects was initiated by the line-owning utility and will eventually be funded by ratepayers.²³ Florida's utilitydriven transmission investment approval process provides a useful framework for analyzing regulatory inefficiencies in electric transmission and generation.

14. Id. at 73.

^{15.} *Id*.

^{16.} *Id.* at 74.

^{17.} *Id.*

Id. at 82.
Id. at 85.

^{20.} *Id*.

^{21.} Id. at 87.

^{22.} Id.

^{23.} Id. at v.

V. FLORIDA'S TRANSMISSION REGULATORS

According to Edison Electric Institute's State Generation & Siting Directory, there are three regulatory processes governing transmission line siting within Florida: Lines built in conjunction with new generating facilities, lines of 230 kV or higher which cross county lines and are greater than fifteen miles long, and all other lines.²⁴ Under the Florida Electrical Power Siting Act, all lines built in conjunction with new or modified generation facilities must be approved by the Governor and Cabinet, which act as the Siting Board.²⁵ The utility must "prepare a comprehensive application document."²⁶ The Department of Environmental Protection acts as a lead coordinator of an extensive multi-agency review process, including electric and magnetic field reviews.²⁷

The process is similar yet separate for 230 kV or higher lines spanning multiple counties and which are longer than fifteen miles.²⁸ New lines on existing right of ways are exempt from the review process.²⁹ All other lines are reviewed for environmental impact.³⁰ For this reason and because of the many wetlands and other protected natural habitats within Florida, additional investment on existing right of ways presents fewer regulatory hurdles as compared to new overland transmission pathways.³¹

Although projects in existing right of ways may be attractive because no permitting is required, investing in additional transmission along existing right of ways may not always be practical or beneficial. Additionally, regulators require that the utility be able to demonstrate the benefit of additional transmission investment to the ratepayers who will ultimately bear the cost of the investment.³² Any transmission project which duplicates existing "ade-

^{24.} EDISON ELECTRIC INSTITUTE, STATE GENERATION & TRANSMISSION SITING DIREC-TORY: AGENCIES, CONTACTS, AND REGULATIONS 22 (2004) [hereinafter EDISON INSTITUTE SITING DIRECTORY], available at http://www.eei.org/ourissues/ElectricityTransmission/ Documents/State_Generation_Transmission_Siting_Directory.pdf.

^{25.} FLA. STAT. §§ 403.501 – 403.539 (2010). See also Edison Institute Siting Directory, supra note 24, at 22.

^{26.} EDISON INSTITUTE SITING DIRECTORY, *supra* note 24, at 22.

^{27.} Id.

^{28.} Id.

^{29.} Id.

^{30.} Id. at 23.

^{31.} See id.

^{32.} See Phillip S. Cross, Florida Halts Competitive Electric Transmission Project, PUB. UTIL. FORTNIGHTLY, Aug. 1, 1994, at 44.

quate and reliable" service to a market area is susceptible to rejection by the Florida Public Service Commission.³³

In order to streamline siting of new transmission lines, one proposal utilizes federal lands to accommodate new renewable energy facilities. On October 23, 2009, the Obama Administration issued a memorandum of understanding among federal transmission regulating authorities regarding review of electric transmission facilities on federal land.³⁴ The memorandum allows for coordination between agencies and establishment of a lead agency for high voltage transmission projects on federal lands which affect more than one agency.³⁵ The stated purpose of the memorandum is to coordinate the various regulatory and licensing authorities for such projects and to provide "a single federal point-of-contact."³⁶

Over 6,000 miles of transmission line routes called the "West-Wide Energy Corridors" were established over federal lands by the second Bush administration.³⁷ The corridors have been criticized by environmental groups because of alleged environmental impact to protected lands and because the transmission lines serve mostly coal fired power plants and non-renewable energy sources.³⁸ Because federal lands may not always be convenient to renewable energy sources such as off-shore wind and biomass, federal land transmission siting provides only a partial solution to the transmission challenge.³⁹

Economists tend to agree that regulated markets produce suboptimal service levels.⁴⁰ While regulation is inherently costly to tax payers, price control itself raises notable barriers to efficiency and reliability. In order to protect ratepayers from drastic price swings, regulators often freeze rates or enforce price caps. Price caps on regulated utilities create strong incentives for regulated utility firms to cut costs. However, price caps may also create incentives

^{33.} Id.

^{34.} Memorandum of Understanding, *supra* note 1.

^{35.} Id. at 3.

^{36.} Id. at 2.

^{37.} Kate Galbraith, Environmentalists Sue Over Energy Transmission Across Federal Lands, N.Y. TIMES GREEN: BLOG ABOUT ENERGY & ENV'T (July 8, 2009, 2:22 PM), http://green.blogs.nytimes.com/2009/07/08/environmentalists-sue-over-energy-transmission-across-federal-lands/?scp=1&sq=%22federal%20lands%22%20transmission&st=cse.

^{38.} Id.

^{39.} See Corina Rivera, ISO New England Study Finds Transmission Must Be Expanded to Integrate Wind, SNL FINANCIAL (Mar. 9, 2010), http://www.capewind.org/modules.php?op=modload&name=News&file=article&sid=1082.

^{40.} See Kevin M. Currier, Quality-Adjusted Laspeyres Price Caps: A Graphical Analysis, 34 ATLANTIC ECON. J. 481, 481 (2006).

for such firms to reduce service quality levels to customers.⁴¹ Thus, the utility seeking to optimize profits invests just enough in transmission to support its case for a sufficient return on investment but constantly leverages its position by cutting service levels to customers. Regulators attempt to overcome this tendency by imposing reliability requirements on transmission providers.

VI. MODERN REGULATORY FRAMEWORK

The federal government has passed many regulations aimed at increasing efficiency of electricity delivery to consumers. The recent regulatory strategy has been to separate the elements of the electricity generation and delivery process which may be organized in a free market—such as electricity generation—from the elements of the process which are naturally monopolistic such as transmission.⁴² The goal of this strategy is to use free market competition as much as possible to lower prices and increase service quality.⁴³

As a major step in this direction, Congress passed the Energy Policy Act in 1992, giving the Federal Energy Regulatory Commission ("FERC") the power to force a utility owning transmission lines to "wheel" a competing generator's power across or into the utility's grid.⁴⁴ This legislation forced transmission grid owners to allow their competitors access to energy grids and allowed generators to compete for wholesale customers.⁴⁵ The grid-owning utility was required to sell transmission at a rate which did not unduly discriminate against the competing electricity supplier.⁴⁶

In transmission, electricity flows from its source to a distribution center at approximately the speed of light.⁴⁷ The distribution network then transports the electricity to the end consumer.⁴⁸ Because electricity flows freely along available pathways and cannot easily be stored or directed, marshalling supply and demand

^{41.} *Id*

^{42.} Electricity Transmission Fact Sheet, supra note 5.

^{43.} Id.

^{44.} Energy Policy Act of 1992, Pub. L. No. 102-486, §§ 721-722, 106 Stat. 2776 (amending Pub. L. No. 101-218) (codified at 42 U.S.C. §§ 12001-12007 and §§ 13201-13556 (1992)).

^{45.} Id.

^{46.} Id.

^{47.} Electricity Transmission Fact Sheet, supra note 5.

^{48.} Id.

is a complex and highly coordinated process.⁴⁹ Ten Energy Reliability Counsels manage the three separate electric power grids in the United States.⁵⁰

In order to distinguish generation and transmission functions more clearly and allow for competition in generation, in 1996, through Order No. 888, the FERC required utilities to separate generation and transmission functions without formal divesture or company spinoffs, a move called "functional unbundling."⁵¹ Order No. 888 required utilities with interstate transmission lines to allow competitors access to transmission under nondiscriminatory terms and conditions.⁵² The order allowed transmission companies to charge fees that recovered "legitimate, prudent and verifiable stranded costs associated with providing open access[.]"⁵³ The FERC found that Independent System Operators (ISOs) could potentially "remedy undue discrimination and mitigate market power[.]"54 Following the promulgation of Order 888, several ISOs were established. However, the FERC recognized that vertically integrated utilities could still wield significant market power.⁵⁵ In Order 2000, the Commission sought to remedy discriminatory behavior by encouraging the voluntary creation of Regional Transmission Organizations (RTOs).⁵⁶ The RTOs are commissioned with providing one region-wide transmission rate and a cohesive tariff.⁵⁷

An RTO is a Regional Transmission Organization with the purpose of opening up regional "tight power pools" to allow access for nondiscriminatory transmission.⁵⁸ Tampa Electric, Florida Power Corporation, and Florida Power & Light sponsored the application for an intrastate (or single-state) RTO called Grid-

52. Promoting Wholesale Competition, 61 Fed. Reg. at 21,540.

55. Long-Term Firm Transmission Rights in Organized Electricity Markets, 71 Fed. Reg. 43,564, 43,565 (Aug. 1, 2006) (codified at 18 C.F.R. pt. 42).

^{49.} Id. See also About NERC: Understanding the Grid, N. AM. ELECTRIC RELIABILITY CORP., http://www.nerc.com/page.php?cid=1|15 (last visited May 9, 2011).

^{50.} Electricity Transmission Fact Sheet, supra note 47.

^{51.} Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, 61 Fed. Reg. 21,540, 21,551 (May 10, 1996) (codified at 18 C.F.R. pts. 35 & 385) [hereinafter Promoting Wholesale Competition]. See also Preventing Undue Discrimination and Preference in Transmission Service, 73 Fed. Reg. 39,092 (July 8, 2008) (codified at 18 C.F.R. pt. 37); Ray S. Bolze, Utility Restructuring Drawing Back the Regulatory Curtain: Antitrust Issues and Hypothetical Problems, 1274 PRAC-TISING L. INST. CORP. 23 (2001).

^{53.} Id.

^{54.} Id. at 21,552.

^{56.} *Id*.

^{57.} Id.

^{58.} Regional Transmission Organizations (RTO)/Independent Systems Operators (ISO), FED. ENERGY REG. COMMISSION, http://www.ferc.gov/industries/electric/indusact/rto.asp (last visited May 9, 2011).

Florida.⁵⁹ Some critics of GridFlorida saw its development as an intra-state organization as a power grab by the Florida Public Service Commission.⁶⁰ GridFlorida was never recognized as an RTO by FERC.⁶¹

Some stabilizing projects are too small to fall within the typical ambit of RTO regulation. Such projects are now only initiated by line owners, not RTOs. However, while RTOs do not *recommend* projects to utilities, RTOs typically *approve* these projects.⁶² This raises the question of whether RTOs really provide adequate oversight for reliability in a world where transmission improvement and expansion is necessary at multiple levels.⁶³ It is worth considering whether RTOs should assume the role of proactive planners and advisers with the authority to recommend large and small transmission projects to line owners.⁶⁴ Since Florida is not organized as an RTO, Florida has a unique opportunity to establish proactive transmission planning and oversight beyond the typical passive governance of the RTO model.

At the FERC, three offices—the Office of Energy Market Regulation, the Office of Electric Reliability, and Office of Energy Policy and Innovation—oversee transmission and reliability issues.⁶⁵ The Director of the Office of Energy Projects approves new line transmission licenses.⁶⁶ The Director of the Office of Enforcement manages the various reports transmission utilities must make to the FERC.⁶⁷

63. Id. at 47.

^{59.} Bruce W. Radford, *GridFlorida: The "Island" Transco*, PUB. UTIL. FORTNIGHTLY, Jan. 15, 2001, at 21, *available at* http://www.pur.com/pubs/3646.cfm.

^{60.} Id.

^{61.} For a map of the seven RTOs currently in existence or proposed in the United States see *RTO/ISO Map*, FED. ENERGY REG. COMMISSION, http://www.ferc.gov/industries/electric/indus-act/rto/rto-map.asp (last visited May 9, 2011).

^{62.} See Camden L. Collins, Transmission Expansion: Risk and Reward in an RTO World, PUB. UTIL. FORTNIGHTLY, Aug. 2002, at 46, 48 available at http://www.fortnightly.com/result.cfm?i=/3996.cfm.

^{64.} *Id.* at 47-48 ("For example, an RTO finds an automated switch would improve ATC (available transmission capacity) and reduce congestion during enough hours to be cost effective. . . . Should FERC encourage such investments? How would their benefits be measured? Will such investments continue to take place, or will they simply have to wait until the RTO's planning staff and the organization are more mature, and more pressing facilities all have been built?").

^{65.} See FED. ENERGY REGULATORY COMM'N, FY 2010 PERFORMANCE AND ACCOUNTA-BILITY REPORT 4 (2010), available at http://www.ferc.gov/about/strat-docs/2010-audit.pdf.

^{66.} See id. at 4-6.

^{67.} What FERC Does, FEDERAL ENERGY REGULATORY COM'N, http://www.ferc.gov/ about/ferc-does.asp (last updated Dec. 3, 2010); see also FY 2010 REPORT, supra note 65, at 5. For example, FERC reviews Reports of Transmission Investment Activity, FERC-730. FERC Order 730 is available at http://www.ferc.gov/whats-new/comm-meet/2009/121709/E-6.pdf.

The Electricity Modernization Act of 2005 was enacted August 8, 2005, as Title XII, Subtitle A, of the Energy Policy Act of 2005 (EPAct 2005).⁶⁸ This section empowered an Electric Reliability Organization, certified by FERC, to "develop mandatory and enforceable Reliability Standards" in order to "facilitate the reliable operation of the Bulk-Power System[,]" "subject to Commission review and approval."⁶⁹ The FERC certified the North American Electric Reliability Council (NERC) as the ERO.⁷⁰ Although the NERC was in existence since 1965,⁷¹ this certification gave it additional authority to establish specific standards of transmission reliability. The FERC was commissioned to approve reliability standards developed by NERC which are "just, reasonable, not unduly discriminatory or preferential, and in the public interest."⁷² Once approved, either the NERC or the Commission may directly enforce such provisions.⁷³

VII. REGULATORY BARRIERS TO OPTIMIZATION

As a result of legislation requiring utilities to allow access to competitors, transmission lines have become goods in public service. Under the Takings Clause of the Constitution, transmission–line–owning utilities are entitled to earn a reasonable rate of return on assets surrendered to public service.⁷⁴ Utilities often assert that a regulatory taking has occurred where state regulators set rates which the utility claims are unreasonably low. The Fifth Amendment, as applied to states through the Fourteenth Amendment, bars such a taking without due process of law.⁷⁵ Thus, rate-

^{68.} Electricity Modernization Act of 2005, Pub. L. No. 109-58, § 215, 119 Stat. 941 (2005). EPAct 2005 amended the Federal Power Act to include section 215.

^{69.} Revised Mandatory Reliability Standards for Interchange Scheduling and Coordination, 74 Fed. Reg. 68,372, 68,372 (Dec. 24, 2009) (codified at 18 C.F.R. pt. 40).

^{70.} *Id.* (citing Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval and Enforcement of Electric Reliability Standards, Order No. 672, FERC Stats. & Regs. ¶ 31,204, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006)).

^{71.} See infra text accompanying note 85.

^{72.} Revised Mandatory Reliability Standards for Interchange Scheduling and Coordination, 74 Fed. Reg. at 68,372 (citing 16 U.S.C. 8240(d)(2)).

^{73.} Id. (citing 16 U.S.C. 824o(e)(3)).

^{74.} James M. Van Nostrand, Constitutional Limitations on the Ability of States to Rehabilitate Their Failed Electric Utility Restructuring Plans, 31 SEATTLE U. L. REV. 593, 594 (2008) (citing Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n, 262 U.S. 679, 692-93 (1923)).

^{75.} *Id.* (citing Duquesne Light Co. v. Barasch, 488 U.S. 299, 307-08 (1989), Mich. Bell Tel. Co. v. Engler, No. 00-73207, 2000 U.S. Dist. LEXIS 20875, at *5 (E.D. Mich. Sept. 14, 2000)).

setting involves a hearing process whereby regulated utilities are given the opportunity to present evidence and the opportunity to be heard before the regulatory body. This right is present even if the regulatory body is merely extending a rate freeze.⁷⁶ Although the hearing process is designed to protect ratepayers while allowing a reasonable rate of return for utilities, the constant necessity for such hearings is a costly barrier to optimization.

The tension between state and federal regulation poses an additional barrier to transmission optimization. Historically, siting and permitting of electric transmission facilities has been discretely under the jurisdiction of state government.⁷⁷ For that reason, the national transmission networks are a "patchwork" of individual, state-approved facilities.⁷⁸ However, transmission lines which span states are subject to federal regulations. In 1997, regulatory authority over such systems was given to the FERC.⁷⁹ FERC's authority covers approximately 73% of all power transmission in the United States.⁸⁰ FERC has jurisdiction over interstate transmission of electricity by investor-owned private utilities.⁸¹ It also has jurisdiction over marketers, pools, exchanges of power, as well as independent system operators (ISOs).⁸² FERC approves wholesale electricity rates and reviews Federal Power Marketing Administrations (PMAs) rates.⁸³

The North American Electric Reliability Council (NERC) is not a direct arm of the federal government. It was instead established as a not-for-profit private corporation dedicated to enhancing reliability of the power supply.⁸⁴ A severe blackout in 1965 originally prompted the creation of the NERC.⁸⁵ As a corporation, NERC is comprised of, and owned by, ten regional councils, who collectively are responsible for the coordination, planning, and provision of the North American electricity supply.⁸⁶ The Florida Reliability Coor-

^{76.} Id. at 595 (citing Mich. Bell Tel. Co., 2000 U.S. Dist. LEXIS 20875, at *47-48).

^{77.} Piedmont Envtl. Council v. Fed. Energy Regulatory Comm'n, 558 F.3d 304, 310 (4th Cir. 2009).

^{78.} Id.

^{79.} See EIA Independent Statistics, supra note 2.

^{80.} See id. The EIA notes that the remaining 27% of power transmission is "[f]ederally owned, municipally owned, or owned by cooperative utilities, and is [therefore] not under FERC's jurisdiction." Id.

^{81.} *Id*.

^{82.} Id.

^{83.} *Id.* 84. *Id.*

^{85.} Id.

^{86.} *Id. See also* NORTH AMERICAN ELECTRIC RELIABILITY COMMISSION, http://www.nerc.com/ (last visited May 9, 2011) ("[NERC's] mission is to ensure the reliability of the North American bulk power system. NERC is the electric reliability organization

dinating Council covers "peninsular Florida"—the part of the state east of the Apalachicola River.⁸⁷

Although states are chiefly responsible for intrastate transmission projects, the Federal government has the power to intervene when states fail to act in the public interest. The Federal Power Act (FPA) § 216(b) gives FERC authority to permit transmission facilities in national interest electric transmission corridors if a state has failed to do so for more than a year after the filing of an application.⁸⁸ National interest electric transmission corridors are designated by the Secretary of Energy, as authorized by FPA § 216, as having transmission constraints which affect consumers.⁸⁹ However, federal permitting under FPA § 216 is still in response to action initiated by a utility and is only triggered if the state fails to issue a permit.⁹⁰ Thus, the Federal government has no power under FPA § 216 or otherwise, to initiate transmission investment.⁹¹ Florida does not have any transmission areas currently classified as National Interest Corridors.⁹²

The FERC passed Order No. 681, Long-Term Firm Transmission Rights in Organized Electricity Markets in 2006.⁹³ This order allows transmission-operating utilities to enter into long-term transmission purchase agreements with energy suppliers.⁹⁴ On the one hand, this move could be said to encourage transmission

⁽ERO) certified by the Federal Energy Regulatory Commission to establish and enforce reliability standards for the bulk-power system. NERC develops and enforces reliability standards; assesses adequacy annually via a 10-year forecast, and summer and winter forecasts; monitors the bulk power system; and educates, trains and certifies industry personnel. ERO activities in Canada related to the reliability of the bulk-power system are recognized and overseen by the appropriate governmental authorities in that country.").

^{87.} FLORIDA RELIABILITY COORDINATING COUNCIL, https://www.frcc.com/default.aspx (last visited May 9, 2011).

^{88.} Piedmont Envtl. Counsel v. Fed. Energy Regulatory Comm'n, 558 F.3d 304, 310 (4th Cir. 2009) (citing Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (2005)). This section of the FPA was enacted by, and is also referred in this paper as, the Energy Policy Act of 2005 (EPAct 2005).

^{89.} Id. See also U.S. DEP'T ENERGY, NATIONAL ELECTRIC TRANSMISSION CORRIDOR REPORT AND THE ORDERED CORRIDOR DESIGNATIONS [hereinafter NATIONAL ELECTRIC TRANSMISSION CORRIDOR REPORT], available at http://nietc.anl.gov/nationalcorridor/ index.cfm (last visited May 9, 2011).

^{90.} U.S. DEP'T OF ENERGY, NATIONAL ELECTRIC TRANSMISSION CONGESTION REPORT AND FINAL NATIONAL CORRIDOR DESIGNATIONS: FREQUENTLY ASKED QUESTIONS 1 (2007), *available at* http://nietc.anl.gov/documents/docs/FAQs_re_National_Corridors_10_02_07.pdf.

^{91.} Id.

^{92.} NATIONAL ELECTRIC TRANSMISSION CORRIDOR REPORT, *supra* note 89.

^{93.} Long-Term Firm Transmission Rights in Organized Electricity Markets, 71 Fed. Reg. 43,564, (Aug. 1, 2006).

^{94.} Fed. Energy Regulatory Comm'n, *FERC Acts on Long-Term Transmission Rights in Midwest ISO and PJM Territories*, TRANSMISSION & DISTRIB. WORLD (May 18, 2007, 2:33 PM), http://tdworld.com/overhead_transmission/ferc-miso-pjm-transmission-rights/.

investment. That is, longer contracts mean more stability and less risk for transmission line owners considering whether to invest in shoring up transmission lines or invest in other lessrisky, state-regulated endeavors such as distribution.⁹⁵ On the other hand, the move may not be influential at all, since FERC has already historically favored lengthy transmission contracts⁹⁶ and longer-term transmission rights imply barriers to entry and less competition in the market.

VIII. RECENT FEDERAL LEGISLATION

Senate Bill 1462, the American Clean Energy Leadership Act, would further increase FERC's authority over transmission lines by expanding upon EPAct 2005.97 This proposed legislation would give the FERC authority over any proposed transmission project which is part of an interconnection-wide transmission plan and is 345 kV or higher.⁹⁸ As part of its new authority, FERC would "condition applications for certificates, right of eminent domain, judicial review, and [would establish] a lead agency role for FERC in conducting environmental reviews under applicable Federal laws."99 The bill would also give FERC planning and costallocation authority.¹⁰⁰ According to the current draft of the bill, FERC will designate Regional Planning Entities (RPEs), which upon designation have one year to submit an Interconnection-wide Transmission Plan.¹⁰¹ If the RPE fails to submit a plan, FERC would assume the role of planning coordinator, and will accept state or sub-region plans for consideration.¹⁰² The bill would give FERC authority to impose a surcharge (notably not termed a tax) for the activities of the RPEs.¹⁰³

^{95.} Id.

^{96.} See Richard R. Bradley, Over the River and (Around) the Woods to Grandma's House We Go: Long-Term Firm Transmission Rights, Transmission Market Power, & Gaming Strategies in a Deregulated Energy Market—An International Comparison, 30 HOUS. J. INT'L L. 327, 330 n.6 (2008) (noting that FERC has approved contracts spanning twenty to forty years); Joseph T. Kelliher, Pushing the Envelope: Development of Federal Electric Transmission Access Policy, 42 AM. U. L. REV. 543, 582 (1993).

^{97.} S. 1462, 111th Cong. § 216(c) (2009).

^{98.} Id. § 216(b)(1)(A)(i)(I).

^{99.} Press Release, U.S. Senate Comm. On Energy & Natural Res., Majority Draft on Transmission Siting, (Mar. 10, 2009), *available at* http://energy.senate.gov/public/ index.cfm?FuseAction=PressReleases.Detail&PressRelease_id=3a67a5ff-4186-4cc0-a636-31528249f746&Month=3&Year=2009&Party=0.

^{100.} Id.

^{101.} *Id*.

^{102.} Id.

^{103.} *Id*.

Also under the bill, RPEs may file cost-allocation plans (or costrecovery rates) with FERC, and approval of these rates would be based on a new analysis.¹⁰⁴ The bill seems to include the "just and reasonable" concept, often called the *Mobile-Sierra* presumption, used in prior rate-setting legislation and FERC orders,¹⁰⁵ but adds a provision for renewable energy concerns.¹⁰⁶ Rates will not be approved if they are "not just and reasonable and unduly discriminatory or preferential, *would unduly inhibit the development of renewable generation projects*, would not allow the transmission provider the opportunity to recover prudently incurred costs, including a reasonable return on investment."¹⁰⁷

Critics of the bill argue that it would result in FERC passing transmission expansion costs to citizens who do not benefit from the new transmission lines.¹⁰⁸ The Coalition for Fair Transmission Policy (CFTP), an organization formed by ten large energy companies¹⁰⁹ in response to the legislation, "supports language in S. 1462 that precludes the allocation of transmission expansion costs to electric consumers unless there are measurable economic or relia*bility* benefits for those consumers."¹¹⁰ A provision for societal benefit-allocation from reduced greenhouse gas emissions and energy independence is missing from this standard. Additionally, the proposed legislation would only impact interstate transmission currently under FERC jurisdiction. For projects such as Cape Wind, this bill gives FERC the ability to engage in cost-allocation for any new or proposed interstate transmission facilities.¹¹¹ However, intrastate transmission for such projects, for example intrastate transmission of Cape Wind power in Massachusetts, is governed

^{104.} *Id*.

^{105.} See generally Maine Pub. Util. Comm'n v. Fed. Energy Regulatory Comm'n, 520 F.3d 464, 477 (D.C. Cir. 2008) (citing United Gas Pipe Line Co. v. Mobile Gas Serv. Corp., 350 U.S. 332 (1956); FPC v. Sierra Pac. Power Co., 350 U.S. 348 (1956)).

^{106.} Press Release, U.S. Senate Comm. On Energy & Natural Res., *supra* note 99. 107. *Id.* (emphasis added).

^{108.} Jeff St. John, Utilities Push Back on FERC's Transmission Authority, EARTH2TECH (Mar. 1, 2010, 11:00 AM), http://earth2tech.com/2010/03/01/utilities-push-

back-on-ferc%E2%80%99s-transmission-authority/.

^{109.} Membership, COALITION FOR FAIR TRANSMISSION POLICY, http://thecftp.org/Membership.html (last visited May 9, 2011) (listing among its members: CMS Energy Corporation, Consolidated Edison, Inc., DTE Energy Company, Northeast Utilities, PPL Corporation, Progress Energy, Inc., Public Service Enterprise Group, SCANA Company, Southern Company, and the United Illuminating Company).

^{110.} COALITION FOR FAIR TRANSMISSION POLICY, http://thecftp.org/Home_Page.html (last visited May 9, 2011) (emphasis added).

^{111.} See Rivera, supra note 39.

by state transmission authorities and any relevant regional transmission organization.¹¹²

IX. RECENT FLORIDA LEGISLATION

The 2008 Energy and Economic Development Legislation was recently enacted with the stated goals of: "Consolidating state energy policy within the Florida Energy and Climate Commission . . . [and] [c]reating a Renewable Portfolio Standard for utilities"¹¹³ This legislation, if effective, should impact Florida's electricity transmission grid so as to provide access to renewable electricity generation as mandated by the proposed renewable energy portfolio.

Regulatory strategies typically incentivize or penalize to achieve desired results. Incentives are currently in place for renewable energy generation at new or expanded Florida energy production facilities.¹¹⁴ However, it is unclear how this will impact existing transmission facilities or reliability of the transmission grid. In the current economic environment, it is likely the state will be forced to penalize failure to provide reliability as opposed to providing grants or other incentives to sponsor reliability.

Proposed Florida Senate Bill 1104 would have required the Florida Public Service Commission to adopt rules implementing service standards that utilities must follow in providing reasonable and reliable service.¹¹⁵ These proposed standards governing investor-owned utilities would be enforced through the Public Service Commission via investigatory and penalty-fee-excising powers.¹¹⁶ The bill was unsuccessful and eventually died in the Florida Senate Committee on General Government Appropriations on April 30, 2010.¹¹⁷

^{112. &}quot;Cape Wind Associates spokesman Mark Rodgers said March 8 that Cape Wind will pay all of the transmission costs for its proposed Cape Wind Offshore energy project in Massachusetts." Id.

^{113. 2008} Energy and Economic Development Legislation, DEP'T OF MGMT. SERVICES [hereinafter 2008 Energy and Economic Development Legislation], http://www.myfloridaclimate.com/climate_quick_links/florida_energy_climate_commission/p olicy_and_resources/2008_energy_and_economic_development_legislation (last visited May 9, 2011).

^{114.} Id. See also Renewable Energy Tax Incentives, DEPARTMENT MGMT. SERVICES, http://www.myfloridaclimate.com/climate_quick_links/florida_energy_climate_commission/s tate_energy_initiatives/renewable_energy_tax_incentives (last visited May 9, 2011).

^{115.} Fla. SB 1104 (2010).

^{116.} Id.

^{117.} Senate 1104: Relating to Investor-owned Utilities/Service Reliability, FLA. SEN-ATE, http://archive.flsenate.gov/Session/index.cfm?Mode=Bills&Submenu=1&Tab=session

Although Senate Bill 1104 was unsuccessful, regulators must continue to pursue the aim of increased utility accountability for energy transmission reliability. Although incentive-based programs may be untenable in the current budgetary environment, the state should establish a proactive as opposed to reactionary transmission policy. In order to achieve the best results, policymakers must move toward recommending transmission projects to utilities which are targeted to address congestion, as opposed to retroactively punishing utilities for costly lapses in reliability.

X. TARGET LOAD POCKETS

Typically, many different electricity generators compete to serve one market area. Free-market competition among generators depends upon adequate transmission capacity so that all relevant competitors have access to the market. It is the obligation of regulators to minimize the types of inefficiencies which unnecessarily drive up consumer prices and lower reliability. When transmission capacity to an area is insufficient to meet demand, the free market equilibrium among providers of energy to that area is disrupted, and a "load pocket" is created.¹¹⁸ A load pocket market maxing out its transmission capacity must rely on local generators to supply electricity during load pocket conditions.¹¹⁹ These local generators or "must-run" plants have market power during load pocket conditions and therefore often behave monopolistically. ¹²⁰

For load pocket markets, an investment in transmission capacity would reduce reliance on must-run local generators and allow distant energy generators or generators locked out by lack of capacity to compete at peak market times. Additional transmission investment with the goal of optimization should focus first on eliminating load pockets and then on improving power quality and accommodating renewable energy. However, new transmission investment is utility-driven; federal regulators do not recommend investments to utilities and are limited to approval power over transmission investment only when states fail to timely exercise their approval power. Because utilities are profit-driven and be-

⁽select "2010" as year, then select "1100-1198" in the "jump to" menu on the side, and finally select "1104.") (last visited May 9, 2011).

^{118.} Michael Schmidt, Some Thoughts About Load Pockets: Thinking Locally, Acting Hopefully, PUB. UTIL. FORTNIGHTLY, Mar. 1, 1998, at 22, 22.

^{119.} Id.

^{120.} Id. See also Robert F. Cope III et al., Modeling Regional Electric Power Markets and Market Power, 22 MANAGERIAL & DECISION ECON. 411 (2001).

cause utilities seeking rate increases must demonstrate the reasonableness of requiring a higher return on investment, the driving force behind transmission investment is the utility's need to demonstrate reliability. Therefore, if load pockets and other congestion problems driving up consumer prices are to be addressed, regulators must require utilities to invest the most transmission efforts in areas of congestion.

XI. ACCOMMODATING RENEWABLE ENERGY AND THE CHALLENGE OF ESTIMATING TRANSMISSION CONSTRUCTION COSTS

An additional major challenge facing transmission operators and regulators is the trend toward reliance upon renewable energy. Unlike traditional generation facilities, renewable energy generation facilities are necessarily located near the renewable resource.¹²¹ Existing transmission grids are often inconvenient to these facilities or unable to accommodate the additional capacity.¹²²

The addition of transmission lines to alternating current networks generally poses integration costs when, as is oftentimes the case, the existing network must be updated to accommodate additional flow.¹²³ Lines integrating certain renewable energy sources in particular pose integration problems because some renewable sources provide only intermittent or cyclical electricity flow. For example, photovoltaic and wind power are only generating electricity when the wind is blowing or the sun is shining. To accommodate these unpredictable electricity flows, existing transmission lines must be updated and modified. It is difficult enough to predict the weather—the most complex supercomputers are still unable to predict, let alone explain, seasonal occurrences.¹²⁴ Predicting the impact of weather-driven electricity flows

^{121.} EDISON ELECTRIC INSTITUTE, supra note 12, at v.

^{122.} Matthew L. Wald, *Wind Energy Bumps into Power Grid's Limits*, N.Y. TIMES, Aug. 27, 2008, at 1.

^{123.} CHRISTENSEN ASSOCIATES ENERGY CONSULTING, ASSESSMENT OF NATIONAL EHV TRANSMISSION GRID OVERLAY PROPOSALS: COST-BENEFIT METHODOLOGIES AND CLAIMS 36 (2010) [hereinafter ASSESSMENT], available at http://thecftp.org/uploads/christensen-report-3-2010.pdf.

^{124.} Cheryl Dybas, *Predicting Seasonal Weather*, NAT'L SCI. FOUND., http://www.nsf.gov/news/special_reports/autumnwinter/intro.jsp (last visited May 9, 2011) ("Reliable and accurate weather prediction is vitally important in numerous areas of society, particularly agriculture and water management and weather risks are evaluated by a wide range of businesses, including power distributors who make fewer sales during cool sum-

necessarily requires complex engineering analysis which is still oftentimes unreliable.¹²⁵

XII. THE TRANSMISSION COST ESTIMATE PROBLEM

The problem of accommodating renewable energy is not only an additional pressure on efficient transmission; it also illustrates the problem of information asymmetry in the transmission investment approval and cost estimation process. Utilities exhibit wide variations in per-mile estimated and actual transmission costs even within individual projects. Additionally, transmission-owning utilities and cost estimators disagree about the relevant estimation method, including who should bear the cost of transmission and how benefits should be allocated to ratepayers. Because the regulatory process requires utilities to submit cost estimates to the relevant regulatory agency and for regulators to rely on the accuracy of this information, regulators are faced with an information asymmetry problem. All transmission projects, not just those accommodating renewable energy, are affected by this costestimation debate and the resulting information asymmetry problem. Thus, the transmission investment cost estimation debate is worth considering in some detail.

To transport electricity from proposed wind power plants in the sparsely populated west to densely populated cities far away, some parties have proposed a new 765 kV high-voltage transmission line overlay.¹²⁶ The costs and benefits of the proposed project have been hotly contested by transmission experts. Because these, like all ordinary distribution and transmission costs, would be passed on to ratepayers, the additional cost of the overlay would have a direct impact on efficiency in power transmission and distribution. American Electric Power extrapolated upon a study by Charles River Associates (CRA) to estimate that the proposed project would cost approximately \$1.7 to \$2.1 million per mile.¹²⁷ The CRA study

mers and more sales during cold winters. The portion of the U.S. economy sensitive to weather conditions is estimated to be at least \$3 trillion.").

^{125.} ASSESSMENT, *supra* note 123, at 36 (Necessary integration investments "include new substations (in other parts of the network), capacitor banks, static var compensators ('SVCs'), or static synchronous compensators ('STATCOMs') to maintain voltage . . . , phase shifters to control power flows, or even added lines to satisfy reliability standards. It is not possible to estimate these kinds of integration costs without detailed engineering studies of the effects of specific projects on the existing grid.").

^{126.} See id. at 1.

^{127.} Id. at 33.

was for a regional two-loop project with Southwest Power Pool.¹²⁸ This was a smaller area than is proposed under the national overlay and it had an estimated total transmission cost of between \$2.7 and \$3.4 billion.¹²⁹ AEP used these figures to extrapolate per-mile costs of the proposed nation-wide overlay.¹³⁰

Policymakers disagree about how to properly estimate costs and benefits of a national high voltage overlay. As one study noted, "[m]ethods for evaluating the benefits of a proposed transmission expansion project, especially the high voltage 765 kV overlay type, are considered to be at the heart of the debate about federal policies regarding energy, climate change and infrastructure investment."¹³¹ This debate highlights the information asymmetry problem in transmission line investment. For example, while engineers typically include order of magnitude cost factors in their capital cost forecasts, governmental studies generally fail to employ these factors.¹³² Before a transmission construction project begins, an engineer's estimate of the cost of the project typically provides a contingency cost factor of between 50% below the cost estimate to 200% above the cost estimate¹³³ to account for various factors, including the potential of hold-outs, unforeseen events, and unusually high contracting prices. As the project progresses, as bids are finalized, and as more factors become known, the expected range of values narrows.¹³⁴

A. Per-mile Variations in Cost Estimates

There are huge variations, even within individual line siting utilities, as to expected costs per mile of 765 kV transmission lines. For example, according to the Christensen Associates report, an AEP/Allegheny Energy PATH Project running 290 miles of 765 kV transmission lines through West Virginia, Virginia, and Maryland demonstrated significant increases in cost estimates over as little

^{128.} Id. at 5.

^{129.} Id. at 8; CRA INTERNATIONAL, FIRST TWO LOOPS OF SPP EHV OVERLAY TRANSMISSION EXPANSION: ANALYSIS OF BENEFITS AND COSTS 18 (2008), http://www.spp.org/publications/Analysis_of_Benefits_Two_Loop_SPPFinal.pdf.

^{130.} ASSESSMENT, *supra* note 123, at 8.

^{131.} Id. at 24.

^{132.} Id. at 31-32

^{133.} Id. at 32.

^{134.} For example, the Electric Power Research Institute "recommends a 30% to 50% contingency adder which goes down to 5% to 10% as construction bids are received and contracts finalized." Id. (citation omitted).

as one to two years.¹³⁵ PATH had filed its cost estimates with three states; West Virginia's ranged from \$4.4 million to \$5.7 million per mile, which is a nearly 70% increase over early-stage order of magnitude estimates of \$2.6 million per mile.¹³⁶ Indeed, as largescale projects move from initial planning through permitting and eventual construction, actual costs tend to vary greatly from initial estimates. The tendency to drastically underestimate costs and later revise cost estimates by such high percentages illustrates the information asymmetry problem in the utility-driven transmission investment process. Because regulators are forced to rely on utility-generated cost estimates, which as discussed are prone to vast variation, the utility-driven transmission investment approval process is somewhat suspect. Whether cost estimates are ultimately to be performed by utilities or independently by regulators, it is clear that regulators and utilities should agree upon a standardized cost estimation method.

B. Debating Interconnection Costs

Additionally, cost estimators disagree about what factors the cost estimation matrix should include. The Christensen study noted that various firms' estimates for the overlay project ranged from \$2.1 million to \$4.8 million per mile.¹³⁷ Utilities note that variations in per-mile costs are attributable to various factors including terrain and population density.¹³⁸ These studies also fail to include "(1) the costs of interconnecting the high voltage lines into the grid; (2) other integration costs associated with variable generation; (3) planning, regulatory and siting costs; (4) contingency costs; and (5) the costs of improvements needed to the existing grid to maintain reliability or resolve congestion issues."¹³⁹

By one estimate, substation or interconnection costs accounted for a 25% increase in total transmission costs.¹⁴⁰ However, the Christensen study noted that, according to the limited information available, interconnection costs of 25% are probably the lower limit, and such increased costs may actually be as high as 40%.¹⁴¹ Thus, estimates which exclude interconnectivity costs

^{135.} Id. at 34.

^{136.} *Id*. 137. *Id*. at 3.

^{138.} *Id.* at 8.

^{139.} *Id.* at 10.

^{140.} Id. at 35.

^{141.} Id.

do not provide apples-to-apples comparison with studies including such costs. Cost estimates should be standardized to require all estimates to account for interconnection costs. As opposed to stating this cost as part of per-mile construction, it could be stated as a separate cost, but either way, it should be included in all estimates.

C. Benefit and Cost Allocation

Cost estimators further disagree as to whether Production Tax Credits should be included as a societal benefit, since the effect of such credits must be borne by all taxpayers.¹⁴² However, this criticism—espoused by the Christensen study—is inconsistent with the parallel criticism that costs should follow benefits.¹⁴³ In other words, if the costs are being calculated to the parties directly benefited by the project, then the assessment of benefits should be limited to the same parameters. Thus, it is logical that cost estimators must include tax savings passed on to ratepayers in the costsavoided calculation.

In determining how to charge back for these costs, utilities are bound by the mandate that costs follow benefits. That is, transmission costs may only be charged to the ratepayers who the utility can illustrate are benefited by the transmission investment. The current debate regarding the national grid overlay centers upon how this analysis is framed.¹⁴⁴ The American Electric Power estimate employed a simplified approach whereby costs were allocated as a flat charge per meter, while the Christensen Associates estimate argued costs should be allocated based on benefits.¹⁴⁵ Basically, if the benefits are socialized, costs may be spread over a broader market, but if the benefits are measured in economic savings per household or households served, then the costs must be borne by a relatively small group. In the same vein, the AEP report notes that its purpose is not to advocate a particular cost allocation methodology, but rather to illustrate rather simply that if costs are spread among a wide service area, benefits of the project outweigh capital

^{142.} *Id.* at 3.

^{143.} Id. at 3-4.

^{144.} Analysis of Benefits and Costs for a U.S. Interstate EHV System, AEP TRANSMIS-SION 1 (May 2009) [hereinafter AEP Analysis], http://www.aep.com/about/transmission/docs/ AEPBenefit-CostforEHVInterstateFINAL.pdf.

^{145.} ASSESSMENT, supra note 123, at 3; AEP Analysis, supra note 144, at 1.

costs.¹⁴⁶ Of course, it is necessarily true that if the rate-paying base can be broadened, per-capita costs will decline.

D. Environmental Costs and Benefits

A final discrepancy among estimators is whether cost calculations of new transmission lines should account for environmental benefits of the renewable energy sources that the new lines serve. In order to account for environmental impacts of energy choices, the Charles River Associates study applied an \$18 per-ton cost of CO₂ emissions.¹⁴⁷ The effect of the proposed wind power generator's reduction in CO₂ emissions translated into an estimated \$538 million savings through emission reduction.¹⁴⁸ Thus, investment in transmission lines to accommodate renewable power could be said to allow for greater societal savings in terms of CO₂ emissions avoided. When the problem is framed this broadly, an imposition of costs on a wider market seems more reasonable. Regardless of the particular methodology employed, it is clear that the cost-benefit analysis of transmission to accommodate renewable power must include a financial factor illustrating positive environmental impacts.

After accounting for all of the differences between the two estimates, the AEP estimate resulted in a total cost of \$60 to \$100 billion for the national EHV overlay,¹⁴⁹ while the Christensen Associates estimate forecasted costs within a range of \$150 to \$250 billion.¹⁵⁰ Given such a wide range of estimated costs, it is no surprise that regulators, planners, and producers find transmission planning a challenging task.

Variability of expected outcomes through regulatory uncertainty necessarily drives up the risk and cost of capital associated with transmission projects. Regulators are faced with the problem of engaging in a cost accounting debate while attempting sound financial decision-making. The first task of regulators should be to establish standards for cost accounting in-line transmission projects, including a factor for positive environmental impacts of renewable energy. Because renewable energy demands costly integration and transmission investment, accommodating renewable energy will likely not be economically superior to traditional exist-

^{146.} AEP Analysis, supra note 144, at 1.

^{147.} Assessment, *supra* note 123, at 7.

^{148.} CRA INTERNATIONAL, supra note 129, at 12; ASSESSMENT, supra note 123, at 7.

^{149.} Assessment, *supra* note 123, at 9.

^{150.} Id. at 11.

ing power sources in the short-term, however it may still improve overall optimization from a societal standpoint.¹⁵¹ However, for regulatory and policy-making purposes, it is imperative that the debate regarding renewable energy be clearly framed in terms of societal choice and energy policy as opposed to hidden behind confusing and conflicting opinions regarding proper cost accounting.

XIII. INVESTMENT IN TRANSMISSION AND DISTRIBUTION

Investment in transmission by investor-owned and public utilities, and municipal and rural cooperatives from 1988 to 2002 averaged \$3.6 billion annually.¹⁵² From 2003 to 2004, investment increased to \$5 billion annually.¹⁵³ The NERC tracks planned investment in transmission and reports outcomes in its Electric Supply and Demand database.¹⁵⁴ According to the NERC, investment levels in 2004 were \$500 million to \$2 billion.¹⁵⁵

A 2004 study conducted by Energy Security Analysis, Inc. and commissioned by EEI estimated that investment in transmission would average \$10 billion per year.¹⁵⁶ The researchers noted that prior to the Public Utilities Regulatory Policy Act of 1978, utilities built generating facilities in tandem with transmission facilities.¹⁵⁷ However, since the enactment of PURPA and the restructuring that followed, generation facilities have been built in areas inconvenient to the transmission utility.¹⁵⁸ This has resulted in generation surpluses "most notably in the Southeast."¹⁵⁹ Energy surpluses are essentially an opposite of load pockets; however transmission investment provides a solution to energy surpluses in much

^{151.} Some economists have broadened the institutional change model beyond the traditional outcomes of either encouraging rent-seeking behavior or producing economically efficient results. For a discussion of redistribution of economic advantage through regulation, see Daniel W. Bromley, *Institutional Change and Economic Efficiency*, 23 J. ECON. ISSUES 735, 735-737 (1989).

^{152.} ENERGY SEC. ANALYSIS, INC., MEETING U.S. TRANSMISSION NEEDS vi-vii (2005), available at http://www.eei.org/ourissues/ElectricityTransmission/Documents/ meeting_trans_needs.pdf.

^{153.} *Id*. at vi.

^{154.} Id.

^{155.} *Id.* However, NERC investment data presents only a partial picture, as it fails to include transmission investment below the 230 kV level, and relies on voluntary self-reporting by regional reliability councils regarding the investments planned by the council's respective regional suppliers. *Id.* at vi nn.2-3. NERC also fails to account for upgrades along existing lines because it tracks only new line construction. *Id.* at vii.

^{156.} *Id.* at vii.

^{157.} *Id*. at 3.

^{158.} Id.

^{159.} *Id*.

the same way as it mitigates load pockets. Additional transmission lines servicing new generation facilities would transmit surplus power from high production areas to high demand areas.

For this reason, in the future, independent transmission projects will tend to share certain characteristics, including an orientation toward load pockets, where energy and capacity prices are high enough to warrant the cost of dedicated transmission lines.¹⁶⁰ Over the recent past, regulators, policymakers, and energy planners have operated under the assumption that excess capacity from the previous generation is sufficient to absorb growth in demand.¹⁶¹ However, this excess capacity has been gradually depleted.¹⁶² The effects of the outer transmission limits are more hidden from consumers and planners but are felt in market environments.¹⁶³ Industry leaders agree that transmission investment is needed even if renewable energy generation were not a factor.¹⁶⁴

Because Florida is an area not organized as an RTO, "the transmission planning process tends to be owned by the incumbent utilities, rather than subjected to the extensive discussions and public disclosure that tends to occur in RTO areas."¹⁶⁵ Although public disclosure and review creates transparency and accountability, the fact that Florida is not organized as an RTO could be an opportunity for Florida transmission projects to respond more quickly to changing market circumstances.

XIV. NEGATIVE PRESSURE ON TRANSMISSION AND DISTRIBUTION INVESTMENT

A. The Poor Economy

A June 2009 Newton-Evans CAPEX study indicated that transmission and distribution investment was negatively impacted by the most recent economic downturn.¹⁶⁶ According to Federal figures, electric generation is growing four times faster than

^{160.} *Id.* at 8. Additionally, future projects will favor the more easily controlled DC current and will favor underwater routes as compared to overland routes where possible. *Id.*

^{161.} Mark A. Jamison & Paul Sotkiewicz, *Defining the New Policy Conflicts*, PUB. UTIL. FORTNIGHTLY, July 2006, at 36, 39.

^{162.} Id.

^{163.} *Id*.

^{164.} *Id*.

^{165.} ENERGY SEC. ANALYSIS, *supra* note 152, at 27.

^{166.} Report: 2009 Transmission and Distribution Investment Adversely Affected by Economic Downturn, TRANSMISSION & DISTRIBUTION WORLD, Oct. 21, 2009 [hereinafter Report: 2009], http://tdworld.com/business/newton-evans-td-investment-1009/.

transmission.¹⁶⁷ Transmission and distribution grid infrastructure spending was down by between 15% and 25% for the first nine months of 2009, due in part to an overall 4.4% decline in U.S. electricity consumption, falling retail electricity prices, and lowered industrial consumption.¹⁶⁸ Affected categories included "distribution transformers, capacitors, industrial switchgear and even several protection and control categories."¹⁶⁹

The Newton-Evans researchers noted that firms were likely holding out investment in infrastructure in anticipation of federal grant money aimed at improving and implementing Smart Grid technology.¹⁷⁰ At the time of the report, Newton-Evans forecasted that, in 2009, transmission and distribution investment in the United States would be between \$16 and \$17 billion.¹⁷¹

B. Return on Investment

Utilities deciding between transmission and distribution projects often favor higher-return distribution projects.¹⁷² This is because distribution—often an intrastate activity—is under the jurisdiction of state regulators, while transmission is typically regulated at the federal level by the Federal Energy Regulatory Commission.¹⁷³ Because local regulators tend to approve higher rates of return on invested capital, distribution projects tend to be more advantageous investments for utilities than transmission projects.¹⁷⁴

XV. FEDERAL STIMULUS FOR TRANSMISSION INVESTMENT

Under the American Recovery and Reinvestment Act (ARRA), the federal government is stimulating investment in Smart Grid technology.¹⁷⁵ In October 2009, the Department of Energy awarded \$3.4 billion in Smart Grid Investment Grants (SGIGs) to 100 energy projects throughout 49 states.¹⁷⁶ Ten of these grants were transmission related and most of this subset relates to the instal-

176. Id.

^{167.} Wald, *supra* note 122.

^{168.} *Report: 2009, supra* note 166.

^{169.} Id.

^{170.} Id.

^{171.} Id.

^{172.} ENERGY SEC. ANALYSIS, *supra* note 152, at v.

^{173.} Id.

^{174.} Id.

^{175.} EDISON ELECTRIC INSTITUTE, *supra* note 12, at v.

lation of phasor measurement units (PMUs), devices used to simultaneously monitor electricity flow in various parts of the grid.¹⁷⁷ PMUs can be used to improve power *reliability*—prevent and quickly respond to power outages—and improve power *quality*—for example, measure flickering or surging of power.¹⁷⁸ This is one example of Federal action to proactively improve the transmission grid outside of FERC's traditional regulatory approval powers. Additionally, such technology may help transmission planners better identify and alleviate transmission congestion.

Although currently the state of Florida is likely unable to financially stimulate transmission investment, the state's regulatory tools of enforcing reliability standards, combined with federal stimulus funds, may provide adequate mechanisms for a proactive Florida transmission policy. Former Florida Governor Charlie Crist suggested a potential source of creative decision-making, a new consortium of state universities, who may collaborate with policymakers to "bolster and share research and scientific discoverenergy technologies."¹⁷⁹ By adopting standardized ies in cost-allocation methods and utilizing federal grants to update realtime monitoring of the transmission grid, regulators may be able to focus transmission efforts in the areas they are needed most. Regulators must move toward proactive transmission decisionmaking, suggesting necessary transmission projects to alleviate congestion, optimize free market conditions, and achieve Florida's renewable energy goals.

XVI. CONCLUSION

Electricity transmission and distribution policymakers face the difficult task of decision-making in a rapidly changing environment. In order to facilitate decision-making, regulation must focus first on standardizing cost accounting for new transmission lines so that regulators may accurately evaluate costs and benefits of new transmission projects. Regulators with the authority to recommend transmission projects should focus on load pockets and

^{177.} Id. See also Juancarlo Depablos et al., Comparative Testing of Synchronized Phasor Measurement Units, IEEE 1 (2004), http://www.arbiter.com/ftp/datasheets/1133_VirginiaTech_PESGM2004-001296.pdf; Krish Narendra et al., Calibration and Testing of Tesla Phasor Measurement Unit (PMU) Using Doble F6150 Test Instrument 1 (on file with author).

^{178.} Power Quality, TAMPA ELEC. Co., http://www.tampaelectric.com/surgeprotection/ residential/powerquality/ (last visited May 9, 2011).

^{179. 2008} Energy and Economic Development Legislation, supra note 113.

congested areas while accommodating the peculiar demands of newly-added renewable energy sources. Because it is not organized as an RTO, Florida has a unique opportunity to provide a local proactive solution to transmission reliability challenges as opposed to the typical reactionary approval-only model of the RTO. Although somewhat streamlined, building transmission lines in existing right of ways or on federal lands will not always provide a transmission solution, especially to accommodate renewable energy.

Florida regulators may indeed follow the lofty initiative of former Governor Crist's 2008 Energy and Economic Development legislation to "creat[e] a new consortium of state universities to bolster and share research and scientific discoveries in energy technologies."180 Universities are an excellent source of informed and proactive electricity transmission problem-solving, especially in the current cash-strapped state budgetary climate. Creative problem solving is not new to the transmission approval process; as discussed in this Comment, federal regulation has attempted to streamline approval of transmission projects in the past, with some success. In any event, if Florida regulators and transmission regulators in general are to adapt to increasing demands on the transmission grid and establish a proactive system of recommending transmission projects to utilities while improving reliability and quality, it is clear that the old model of reactive regulatory enforcement will be inadequate.