Strategies for Making Sea-Level Rise Adaptation Tools 'Takings-Proof'

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STRATEGIES FOR MAKING SEA-LEVEL RISE
ADAPTATION TOOLS “TAKINGS-PROOF”

MICHAEL ALLAN WOLF*

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I. INTRODUCTION

Sea level rise in this century is a scientifically documented fact. Our shoreline is suffering from its effects today. Moreover, a recent study conducted by the U.S. Environmental Protection Agency (EPA, 1983) predicts a possible one foot rise in sea level over the next thirty to forty years and approximately three feet over the next hundred years. It must be accepted that regardless of attempts to forestall the process, the Atlantic Ocean, as a result of sea level rise and periodic storms, is ultimately going to force those who have built too near the beach front to retreat.

South Carolina Blue Ribbon Commission on Beachfront Management (1987) 1

(a) The General Assembly does not intend to mandate the development of sea-level policy or the definition of rates of sea-level change for regulatory purposes.

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* Richard E. Nelson Chair in Local Government Law, University of Florida Levin College of Law. The author thanks Tom Ankersen and Thomas Ruppert for sharing information and insights from their capacious knowledge base concerning the practical and legal implications of sea-level rise, Donna Christie and her colleagues for hosting the 25th Anniversary Symposium of the Distinguished Lecture Series, Megan Herzog of the UCLA School of Law for her insightful suggestions, and the exemplary students in my Advanced Taking class for keeping their professor (me) on his toes and helping me hone many of the concepts that I present here. I am also grateful for generous summer research support from the Levin College of Law.

(b) No rule, policy, or planning guideline that defines a rate of sea-level change for regulatory purposes shall be adopted except as provided by this section.
(c) Nothing in this section shall be construed to prohibit a county, municipality, or other local government entity from defining rates of sea-level change for regulatory purposes.

(e) The [North Carolina Coastal Resources] Commission shall be the only State agency authorized to define rates of sea-level change for regulatory purposes. If the Commission defines rates of sea-level change for regulatory purposes, it shall do so in conjunction with the Division of Coastal Management of the Department. The Commission and Division may collaborate with other State agencies, boards, and commissions; other public entities; and other institutions when defining rates of sea-level change.


Sea-level rise (SLR) resulting from climate change is a reality, notwithstanding the protestations emanating from certain politicians who would like to ban references to SLR altogether or to fiddle with overwhelming scientific evidence and nearly universally approved methodology. Rather than waiting for Rome to burn, or rather to sink, it makes much more sense for policy- and law-makers to join the ranks of experts in science, engineering,

2. See also Patrick Gannon, Sea-level Rise Bill Becomes Law, STARNEWS, Aug. 1, 2012, at 1B:

"Gov. Beverly Perdue on Wednesday declined to sign or veto a controversial bill on sea-level rise, allowing it to become law. Instead, the Democratic governor urged the Republican-dominated legislature to reconsider its stand on the issue.

"North Carolina should not ignore science when making public policy decisions," Perdue said in a statement. "House Bill 819 will become law because it allows local governments to use their own scientific studies to define rates of sea-level change. I urge the General Assembly to revisit this issue and develop an approach that gives state agencies the flexibility to take appropriate action in response to sea-level change within the next four years."

An early version of the proposal would have prohibited the state from using projections of accelerated sea rise—which many scientists believe is coming because of global warming and the melting of polar ice caps—when forming coastal development policies and rules. Instead, under the earlier proposal, the state could have determined sea-level rise rates using historical data alone, which would have allowed the state only to plan for about 8 inches of rise this century.

construction, real estate, law, and many other fields who are seriously considering a range of strategies for adapting to the historic, ongoing, and anticipated rise in sea levels.

While the costs of some of these adaptation strategies are undeniably daunting, the American legal system poses an additional, potentially budget-busting impediment—the Takings Clause of the Fifth Amendment to the United States Constitution. The Clause, which somewhat innocuously reads, "nor shall private property be taken for public use, without just compensation," has since the late twentieth century been interpreted by zealous protectors of private property rights to reach not only the affirmative power of eminent domain (or condemnation) but also, and most problematically, statutes, ordinance, and other regulations by federal, state, and local governments that arguably effect the functional equivalence of an eminent domain taking. Moreover, just over the decisional horizon looms a novel variation that departs even farther from the language and original understanding of the Fifth Amendment—judicial takings.

Officials at all governmental strata—federal, state, and local—and from all three branches should keep the demands made by the Takings Clause, as interpreted by the judiciary, in mind as they choose tools from the diverse SLR-adaptation toolbox, as they justify their choices to the electorate and other constituencies, as they put those tools to use, and as they defend that use from litigants claiming abuse. This article sets out to achieve four tasks, and the remainder of the text is divided accordingly. First, the article locates the heart of the Takings Clause in a single sentence from a 1960 decision—Armstrong v. United States. Second, the article reviews six taking varieties, ranging from the most concrete common—the affirmative exercise of eminent domain—to the most fanciful (at least to date)—judicial takings. Each variety in turn is matched with one representative Supreme Court decision and with operative language drawn from that opinion. Third, with Armstrong as a guiding principle, the article identifies which of the most common SLR tools already being deployed pose "no," "minimal," "moderate," and "serious" takings implications. Fourth, the article suggests methods that government officials can use to address the takings risk posed by tools with the highest takings risk.

4. U.S. CONST. amend. V.
II. **ARMSTRONG AND THE HEART OF THE TAKINGS CLAUSE**

The regrettable morass known as regulatory takings has puzzled courts, litigators, and commentators for decades; controversies still rage over the extent and even legitimacy of this method for invalidating statutes, ordinances, and other regulations governing the use of land and other forms of private property. Nevertheless, after a quarter century of intermittent Supreme Court jurisprudence on the subject, dating from the decision in *Penn Central Transportation Company v. City of New York*, it is possible to locate the heart—the quintessence—of the dozen words that bring the multifarious Fifth Amendment to a close.

The heart of Takings Clause jurisprudence does not reside in the Holmesian conundrum of *Pennsylvania Coal Co. v. Mahon*, the seminal Supreme Court case in which the Yankee from Olympus offered up this memorable, though eminently unhelpful, sentence: "The general rule at least is that while property may be regulated to a certain extent, if regulation goes too far it will be recognized as a taking." At this late date we can only mourn the forests of trees that have been sacrificed by the many writers (too many, present company not excepted) who have done their damndest to discern just what exactly the Swami of the Hub meant by "too far."

To boil the dozen words down to their essence we should turn instead to the pen of Justice Hugo Black in 1960's *Armstrong v. United States*. Near the close of the Court's opinion holding that the federal government's "total destruction" of the value of material liens "has every possible element of a Fifth Amendment 'taking' and is not a mere 'consequential incidence' of a valid regulatory measure," Justice Black offered the following sentence, which constitutes an apt lodestar for the judiciary to follow in all takings cases: "The Fifth Amendment's guarantee that private property shall not be taken for a public use without just compensation was designed to bar Government from forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole."
In this simple, but by no means simplistic manner, Justice Black anticipated the notion of functional equivalence that the Court employed most recently in *Lingle v. Chevron U.S.A. Inc.* Writing for a unanimous Court in that 2005 decision, Justice Sandra Day O'Connor explained that which the various tests employed in key regulatory takings have in common: "Each aims to identify regulatory actions that are functionally equivalent to the classic taking in which government directly appropriates private property or ousts the owner from his domain." So, as we proceed to the remaining sections of this article, we should keep in mind two critical ideas: (1) that government, as Justice Black so eloquently explained, has an obligation to act justly and fairly by not imposing public burdens on one or a few private owners; and (2) that the Takings Clause (and the Due Process and Equal Protection Clauses, too, for that matter) are protections against the privations to property owners caused by government actors, not by the forces of nature. The italics in the previous sentence are intentional, for it is crucial to remember that the public coffers should be subject to a takings claim only when the burden carried by the private property owner is public in nature and the harm suffered by the private property owner was caused by the state (intentionally or otherwise).

533 U.S. 606, 633 (2001) (O'Connor, J., concurring); Pennell v. San Jose, 485 U.S. 1, 9 (1988); First English Evangelical Lutheran Church of Glendale v. County of L.A., 482 U.S. 304, 318-19 (1987); Webb's Fabulous Pharmacies, Inc. v. Beckwith, 449 U.S. 155, 163 (1980); and Penn Cent. Transp. Co., 438 U.S. at 123. See also William Michael Treanor, *The Armstrong Principle, The Narratives of Takings, and Compensation Statutes*, 38 WM. & MARY L. REV. 1151 (1997). The Bert J. Harris, Jr., Private Property Rights Protection Act includes the following as one of the meanings of the terms “inordinate burden” and “inordinately burdened” found in the statute: “that the property owner is left with existing or vested uses that are unreasonable such that the property owner bears permanently a disproportionate share of a burden imposed for the good of the public, which in fairness should be borne by the public at large." FLA. STAT. ANN § 70.001(3)(e)(1) (West 2012).

Prior to Justice Holmes's exposition in *Pennsylvania Coal Co. v. Mahon*, it was generally thought that the Takings Clause reached only a "direct appropriation" of property, or the functional equivalent of a "practical ouster of [the owner's] possession," Justice Holmes recognized in *Mahon*, however, that if the protection against physical appropriations of private property was to be meaningfully enforced, the government's power to redefine the range of interests included in the ownership of property was necessarily constrained by constitutional limits. If, instead, the uses of private property were subject to unbridled, uncompensated qualification under the police power, "the natural tendency of human nature [would be] to extend the qualification more and more until at last private property disappear[ed]." These considerations gave birth in that case to the oft-cited maxim that, "while property may be regulated to a certain extent, if regulation goes too far it will be recognized as a taking."
Justice O'Connor, in her opinion for a unanimous Supreme Court in *Lingle*, did a commendable job of reviewing the justices' tangled takings web. The context for the Court's exploration of the takings taxonomy was the application by lower federal courts of the "'substantially advances' formula [from *Agins v. City of Tiburon*]" to strike down a Hawaii statute that limits the rent that oil companies may charge to dealers who lease service stations owned by the companies." The high court reversed, concluding "that the 'substantially advances' formula announced in *Agins* is not a valid method of identifying regulatory takings for which the Fifth Amendment requires just compensation." Because the formula had appeared in several takings cases decided by the Court since its first appearance in 1980, Justice O'Connor and her colleagues took the opportunity to examine the Court's takings jurisprudence and to explain how dropping the "substantially advances" dictum would have no real impact on existing law. Table 1 presents a taxonomy of takings cases that, with the exception of the final category, roughly tracks with the *Lingle* opinion's review, identifying operative language from a representative case that illustrates how each "variety" of taking differs from the others.

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>WHAT EXACTLY IS A FIFTH AMENDMENT TAKING?</th>
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</thead>
<tbody>
<tr>
<td>TYPE OF TAKING</td>
<td>REPRESENTATIVE DECISION</td>
</tr>
<tr>
<td>Affirmative exercise of the sovereign power of eminent domain (ED)</td>
<td><em>Kelo v. City of New London</em></td>
</tr>
</tbody>
</table>

15. 447 U.S. 255, 260 (1980) (holding that "[t]he application of a general zoning law to particular property effects a taking if the ordinance does not substantially advance legitimate state interests . . .").
17. *Id.* at 545.
19. *Id.* at 477.
| Government- | Loretto v. Teleprompt- | "We conclude that a |
| required, perma- | er Manhattan CATV | permanent physical |
| nent, physical occu- | Corp.\(^{20}\) | occupation authorized |
| pation (PO) | | by government is a |
| | | taking without regard |
| | | to the public interests |
| | | that it may serve."\(^{21}\) |
| Total deprivation of | Lucas v. S.C. Coastal | "[W]hen the owner of |
| use and/or value | Council\(^{22}\) | real property has been |
| (TD) | | called upon to sacrifice |
| | | all economically ben-
| | | eficial uses in the name |
| | | of the common good, |
| | | that is, to leave his |
| | | property economically |
| | | idle, he has suffered a |
| | | taking."\(^{23}\) |
| Partial taking that | Penn Cent. Transp. | "The economic impact |
| falls short of a total | Co. v. City of New | of the regulation on the |
| deprivation (PT) | York \(^{24}\) | claimant and, particu-
| | | larly, the extent to |
| | | which the regulation |
| | | has interfered with |
| | | distinct investment-
| | | backed expectations |
| | | are, of course, relevant |
| | | considerations. So, too, |
| | | is the character of the |
| | | governmental action. A |
| | | 'taking' may more |
| | | readily be found when |
| | | the interference with |
| | | property can be char-
| | | acterized as a physical |
| | | invasion by govern-
| | | ment, than when inter-
| | | ference arises from |
| | | some public program |
| | | adjusting the benefits |
| | | and burdens of eco-
| | | nomic life to promote |
| | | the common good."\(^{25}\) |

\(^{20}\) 458 U.S. 419 (1982).
\(^{21}\) Id. at 426.
\(^{23}\) Id. at 1019.
\(^{25}\) Id. at 124 (citations omitted).
| Exaction of a property interest even if the value of the subject property would be enhanced by grant of the conditional permit (EX) | Dolan v. City of Tigard\textsuperscript{26} | “Under the well-settled doctrine of ‘unconstitutional conditions,’ the government may not require a person to give up a constitutional right—here the right to receive just compensation when property is taken for a public use—in exchange for a discretionary benefit conferred by the government where the benefit sought has little or no relationship to the property.”\textsuperscript{27} |
| Judicial taking (JT) | Stop the Beach Renourishment, Inc. v. Fla. Dep’t of Envtl. Prot.\textsuperscript{28} | “If a legislature or a court declares that what was once an established right of private property no longer exists, it has taken that property, no less than if the State had physically appropriated it or destroyed its value by regulation.”\textsuperscript{29} |

The first takings category—the affirmative exercise of the sovereign power of eminent domain (delineated in this article by the abbreviation ED)—while very straightforward, is not without controversy, as illustrated by the uber controversy that followed the Court’s announcement of its 2005 decision in *Kelo v. City of New London*\textsuperscript{30} over the meaning of “public use.”\textsuperscript{31} In the last several years, state legislatures and voters have narrowed the definition of public use and provided additional procedural protections for landowners whose property is targeted for eminent domain.\textsuperscript{32}

\textsuperscript{26} 512 U.S. 374 (1994).
\textsuperscript{27} Id. at 385.
\textsuperscript{28} 130 S. Ct. 2592 (2010) (plurality opinion) [hereinafter STBR].
\textsuperscript{29} Id. at 2602.
\textsuperscript{30} 545 U.S. 469 (2005).
\textsuperscript{32} See, e.g., POWELL ON REAL PROPERTY § 79F.03[3][b][iv] (Michael Allan Wolf ed. 2013) [hereinafter POWELL] (detailing state legislative and constitutional changes in response to *Kelo*).
Nevertheless, local, state, and federal officials continue to possess broad powers to take title to a wide variety of private property interests, as long as just compensation—typically equated with fair market value—is rendered.

The second taking type—a permanent physical occupation required by the government (PO)—is the first of what Justice O'Connor called the "two categories of regulatory action that generally will be deemed per se takings for Fifth Amendment purposes." 33 The representative decision, Loretto v. Teleprompter Manhattan CATV Corp., 34 involved the owner of an apartment building who objected to a state law requiring her to permit the company to install cable television equipment on her property, and the Lingle Court acknowledged that this and the second per se category were "relatively narrow" in scope. 35

The third type of taking (and second per se variety) involves government regulations that, in the words of Justice Scalia in Lucas v. South Carolina Coastal Council, 36 deprive the owner of "all economically beneficial uses" of his or her property. 37 Coincidentally, and not without importance to our current concerns, the state legislation that resulted in the landowner losing all value in his coastal parcels—the South Carolina Beachfront Management Act—grew out of the efforts of the Blue Ribbon Committee on Beachfront Management whose report contained the first epigraph to this article (concerning the reality of SLR), language that today would attract the negative attention of skeptical politicians and ideologues. 38

The term per se is a bit misleading, as even a total deprivation (TD) would be legal if the government restriction responsible for the deprivation inhere[s] 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

34. 458 U.S. 419 (1982).
35. Lingle, 544 U.S. at 538. For failed efforts to expand the reach of Loretto, see Yee v. City of Escondido, 503 U.S. 519, 539 (1992) (holding that "[b]ecause the Escondido rent control ordinance does not compel a landowner to suffer the physical occupation of his property, it does not effect a per se taking under Loretto").
37. Id. at 1019.
38. See supra note 2 and accompanying text; see also sources cited supra note 4.
State under its complementary power to abate nuisances that affect the public generally, or otherwise.\textsuperscript{39}

While, as we will see, the prevention of private and public nuisances is very compatible with the goals of several SLR adaptation strategies, the most intriguing possibility for making such strategies takings-proof lies in the example that Justice Scalia provides as an illustration of the last word in the paragraph quoted above:

The 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.\textsuperscript{40}

The first case cited for this proposition by the Lucas majority—Bowditch v. Boston\textsuperscript{41}—involved the demolition of a building to stop the spread of a fire and thus involved the Court's consideration of the so-called "conflagration rule." As Professors David Dana and Thomas Merrill have explained, one possible explanation for this rule "is based on causation. If the claimant's property would have been engulfed by fire in any event, then the government's intervention should not be regarded as the cause of its demise."\textsuperscript{42}

Or, as Professor Ernst Freund conceded more than a century ago in his classic exploration of the police power, "Of course there can be no constitutional or moral duty of compensation, where the property destroyed could not have been saved in any event."\textsuperscript{43}

This is yet another example of the Armstrong principle in operation, as the burden was placed on the landowner most immediately by the flames and only secondarily by public officials. Similarly,

\textsuperscript{39} Lucas, 505 U.S. at 1029.
\textsuperscript{40} Id. at 1029 n.16 (citing Bowditch v. Boston 101 U.S. 16, 18-19 (1880).
\textsuperscript{41} 101 U.S. 16.
\textsuperscript{42} DAVID A. DANA & THOMAS W. MERRILL, PROPERTY: TAKINGS 119 (2002). In the sentence following Justice Holmes's articulation of his perplexing "general rule," he noted: "It may be doubted how far exceptional cases, like the blowing up of a house to stop a conflagration, go—and if they go beyond the general rule, whether they do not stand as much upon tradition as upon principle." Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 415-16 (1922) (citing Bowditch, 101 U.S. 16).
those landowners who lose their land and their structures to rising seas should not be able to recover compensation for a taking occasioned primarily by the forces of nature and not by public officials who craft programs designed to prevent more widespread harm. After all, houses, condominium, and apartment buildings, as well as offices and businesses that lie on ecologically fragile barrier islands, can be envisioned as mere flotsam waiting to happen, not to mention the originating point for harmful fecal coliforms and other pollutants.

The fourth type of taking is a deprivation occasioned by the government that falls short of the total loss envisioned in *Lucas*. The first version of the multi-factor test that the Court applies to so-called “partial takings” (PT) appeared in 1978’s *Penn Central Transportation Co. v. City of New York*, an unsuccessful challenge to the city’s landmark preservation ordinance. The “economic impact” of the challenged regulation is one of “several factors” that “the Court’s decisions have identified” as having “particular significance” in the justices’ attempts to “determin[e] when ‘justice and fairness’ require that economic injuries caused by public action be compensated by the government, rather than remain disproportionately concentrated on a few persons.” Analogizing the preservation ordinance to other regulatory schemes such as zoning, the *Penn Central* majority observed 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.”

The *Penn Central* test has become the default in regulatory takings challenges that do not fit comfortably into the other categories, and, while it is not impossible to find a case in which property owners have prevailed, government counsel and their clients typically have reason to celebrate when a court opts for ad hoc balancing over the other takings alternatives. There are two

45. Id. at 124.
46. Id. at 125.
47. See, e.g., City of Monterey v. Del Monte Dunes at Monterey, Ltd., 526 U.S. 687, 694 (1999):

   After protracted litigation, the case was submitted to the jury on Del Monte Dunes’ theory that the city effected a regulatory taking or otherwise injured the property by unlawful acts, without paying compensation or providing an adequate postdeprivation remedy for the loss. The jury found for Del Monte Dunes, and the Court of Appeals affirmed.
important reasons why *Penn Central* provides minimal solace for property owners who feel overburdened by government regulation, coastal and otherwise. First, the Court pointed out that the government’s chances for victory were enhanced “when interference arises from some public program adjusting the benefits and burdens of economic life to promote the common good.” \(^{49}\) Second, the Court identified “the extent to which the regulation has interfered with distinct investment-backed expectations” as a “relevant consideration[,]” \(^{50}\) seriously hindering cases brought by landowners who acquired their property with knowledge of preexisting government regulations or even of reasonably foreseeable extensions of existing law. As the United States Court of Appeals for the Federal Circuit explained in a 2001 decision: “The reasonable expectations test does not require that the law existing at the time . . . would impose liability, or that liability would be imposed only with minor changes in then-existing law. The critical question is whether extension of existing law could be foreseen as reasonably possible.” \(^{51}\) Once government regimes have begun the process of sharply curtailing development in coastal regions, all existing and potential landowners should be on notice that further refinements are quite likely in the offing.

The fifth taking category involves government exactions (EX) of property interests in exchange for the grant of development permission to the landowner. Most private landowners are happy to offer this quid pro quo voluntarily, knowing that the enhanced value of their real property will more than make up for the value of the fee or easement granted to the public. Indeed, it seems silly even to refer to this exercise as a “taking,” at least when considering the financial aspects of the entire transaction. However, the justices comprising the majorities in the Court’s first two exaction

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50. *Id.*

51. Commonwealth Edison Co. v. United States, 271 F.3d 1327, 1357 (Fed. Cir. 2001). See also Thomas Ruppert, *Reasonable Investment-Backed Expectations: Should Notice of Rising Seas Lead to Falling Expectations for Coastal Property Purchasers?*, 26 J. LAND USE & ENVTL. L. 239, 275 (2011) (“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.”).
cases—*Nollan v. California Coastal Commission*\(^\text{52}\) and *Dolan v. City of Tigard*\(^\text{53}\)—focused their attention solely on what the landowner lost, not on what he or she gained from the entire development permission process.

The majority opinions in *Nollan* and *Dolan* contributed a two-step inquiry to the already terribly confusing takings canon. First, Justice Scalia in *Nollan* explained that when government regulators opt for conditional approval rather than outright denial of development permission, an "essential nexus" would be missing "if the condition substituted for the prohibition utterly fails to further the end advanced as the justification for the prohibition."\(^{54}\) Second, Chief Justice William Rehnquist in *Dolan* clarified that if the essential nexus between "the legitimate state interest and the permit condition exacted"\(^{55}\) by government is present, the government would prevail only if "the degree of the exactions demanded by the city's permit conditions bears the required relationship to the projected impact of petitioner's proposed development."\(^{56}\) The *Dolan* Court labeled that relationship "rough proportionality," noting that, while "[n]o precise mathematical calculation is required," government officials "must make some sort of individualized determination that the required dedication is related both in nature and extent to the impact of the proposed development."\(^{57}\)

There are three possible explanations for the Court's characterization of an exaction as a taking. The first is that a poorly crafted exaction—one that asks a landowner to concede a property interest totally unrelated to the protection of the public interest or grossly out of proportion to any negative impact of the proposed development—would appear to violate the following takings test from a 1980 Supreme Court decision, *Agins v. City of Tiburon*\(^\text{58}\):

> "The application of a general zoning law to particular property effects a taking if the ordinance does not substantially advance legitimate state interests."\(^{59}\) That was a possible rationale, at least until the unanimous Court decided a quarter-century later in *Lingle* "that the 'substantially advances' formula announced in

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\(^{52}\) 483 U.S. 825 (1987).


\(^{54}\) 483 U.S. at 837.

\(^{55}\) 512 U.S. at 386.

\(^{56}\) Id. at 388.

\(^{57}\) Id. at 391.

\(^{58}\) 447 U.S. 255 (1980).

\(^{59}\) Id. at 260. The key language from *Agins* makes an appearance in both *Nollan*, 483 U.S. at 834 n.3 (1987), and *Dolan*, 512 U.S. at 386 (1994).
Agins is not a valid method of identifying regulatory takings for which the Fifth Amendment requires just compensation."\(^\text{60}\)

A second possible explanation for equating exactions of real property interests with takings is that what the government often obtains is a right for the public to use the easement or fee simple interest acquired from the private landowner. In her Lingle opinion, Justice O'Connor explained that "[a]lthough Nollan and Dolan quoted Agins' language, the rule those decisions established is entirely distinct from the 'substantially advances' test we address today,"\(^\text{61}\) noting instead that the two earlier cases "involved dedications of property so onerous that, outside the exactions context, they would be deemed per se physical takings."\(^\text{62}\) However, because those property dedications did occur in the exactions context, they lacked the element of government compulsion that characterizes unconstitutional, Loretto-like, physical occupation takings.

The third and, to the high court in Lingle, ultimately satisfactory explanation lies in what is known as the "unconstitutional conditions" doctrine. According to Chief Justice Rehnquist in Dolan, this controversial doctrine\(^\text{63}\) provides that "the government may not require a person to give up a constitutional right—here the right to receive just compensation when property is taken for a public use—in exchange for a discretionary benefit conferred by the government where the benefit sought has little or no rela-

\(\text{60. Lingle v. Chevron U.S.A. Inc., 544 U.S. 528, 545 (2005).}\)
\(\text{61. Id. at 547 (citations omitted).}\)
\(\text{62. Id.}\)
\(\text{63. See, e.g., Vicki Been, "Exit as a Constraint on Land Use Exactions: Rethinking the Unconstitutional Conditions Doctrine, 91 COLUM. L. REV. 473, 543 (1991) ("Indeed, the unconstitutional conditions doctrine, in the form of the Nollan nexus test or the similar forms of heightened judicial scrutiny that Professors Epstein, Sullivan, and others propose, is quite costly."); Mitchell N. Berman, Coercion Without Baselines: Unconstitutional Conditions in Three Dimensions, 90 GEO. L.J. 1, 3 (2001) ("The persistent challenge, consequently, has been to articulate some coherent or at least intelligible principles or tests by which to determine which offers fall into which category—to explicate, in other words, a theory to support the doctrine. Regrettably, more than a century of judicial and scholarly attention to the problem has produced few settled understandings."); Richard A. Epstein, Foreword: Unconstitutional Conditions, State Power, and the Limits of Consent, 102 HARV. L. REV. 4, 11 (1988) (footnote omitted) ("The importance of the unconstitutional conditions doctrine has brought forth an extensive array of academic literature to explain and justify it. The received writing sensibly recognizes the essential place that the doctrine occupies in modern constitutional law, but it makes far less sense when it attempts to explain how the doctrine arises or what it does."); Kathleen M. Sullivan, Unconstitutional Conditions, 102 HARV. L. REV. 1413, 1415-16 (1989) ([R]ecent Supreme Court decisions on challenges to unconstitutional conditions seem a minefield to be traversed gingerly. Just when the doctrine appears secure, new decisions arise to explode it."); Cass R. Sunstein, Why the Unconstitutional Conditions Doctrine is an Anachronism (with Particular Reference to Religion, Speech, and Abortion), 70 B.U. L. REV. 593, 594 (1990) ("The various puzzles produced by the doctrine have created considerable doctrinal confusion and provoked a wide range of commentary.").}\)
tionship to the property." In such cases, Justice O'Connor explained in *Lingle*, "the issue was whether the exactions substantially advanced the same interests that land-use authorities asserted would allow them to deny the permit altogether." Technically, the exaction itself does not really effect a taking, as a case such as *Dolan* in reality involves an action that in other contexts would be an uncompensated taking that is "wrapped inside" an illegal condition.

The sixth variety—judicial takings (JT)—is at this point one vote shy of realizing Justice William Brennan's "rule of five." That is, only four current justices have gone on record in support of the notion that members of the judiciary, like their counterparts in the legislative and executive branches, can effect a taking of private property without compensation. In a 2010 decision inextricably tied to the realities of climate change in the coastal zone—*Stop the Beach Renourishment, Inc. v. Florida Department of Environmental Protection*—four justices (Justice Scalia writing, joined by Justices Samuel Alito and Clarence Thomas and Chief Justice John Roberts) held out the possibility that judges on a state high

64. *Dolan*, 512 U.S. at 385.
65. *Lingle*, 544 U.S. at 547. Justice O'Connor then seeks to distinguish this kind of substantial advancement from the first prong of *Agins* that the Court has just deemed to be a due process test:

That is worlds apart from a rule that says a regulation affecting property constitutes a taking on its face solely because it does not substantially advance a legitimate government interest. In short, *Nollan* and *Dolan* cannot be characterized as applying the "substantially advances" test we address today, and our decision should not be read to disturb these precedents.

Id. at 547-48. In this way, *Nollan* and *Dolan* maintained their jurisprudential vigor, as demonstrated by the Court's decision to hear an exactions takings challenge during the October 2012 Term. *See Koontz v. St. Johns River Water Mgmt. Dist.*., No. 11-1447 (June 25, 2013). In *Koontz*, a five-member majority reiterated Justice O'Connor's point in *Lingle*:

So long as the building permit is more valuable than any just compensation the owner could hope to receive for the right-of-way, the owner is likely to accede to the government's demand, no matter how unreasonable. Extortionate demands of this sort frustrate the Fifth Amendment right to just compensation, and the unconstitutional conditions doctrine prohibits them.

Id. at 7.


[Brennan's] law clerks report an annual event: At some point early in their clerkships, Brennan asked his clerks to name the most important rule in constitutional law. Typically they fumbled, offering *Marbury v. Madison* or *Brown v. Board of Education* as their answers. Brennan would reject each answer, in the end providing his own by holding up his hand with the fingers wide apart. This, he would say, is the most important rule in constitutional law. Some clerks understood Brennan to mean that it takes five votes to do anything, others that with five votes you could do anything. In either version, though, Brennan's "rule of five"—or, as the narrative of activism and restraint would have it, rule by five—was about the meaning of five votes on the Court. It was not a substantive rule of constitutional law.

67. 130 S.Ct. 2592 (2010).
court could take property simply by "declar[ing] that what was once an established right of private property no longer exists, . . . no less than if the State had physically appropriated it or destroyed its value by regulation." While the four remaining justices participating in the case expressed their doubts, some Court observers have been intrigued by this embryonic takings theory, a theory that, if it reaches maturity, could well have a chilling effect on the adaptation of ancient common-law concepts such as accretion, reliction, and avulsion to twenty-first century climatic and hydrologic realities.

IV. THE RICH AND DIVERSE ADAPTATION TOOLKIT

Having set the jurisprudential table, it is now time to review some of the major strategies that government at all strata are and will be taking to adapt to dramatic and potentially devastating sea level rise. Several helpful compendia of SLR adaptation tools are available in hard copy and on the Internet, obviating the need to reinvent the wheel in this increasingly important field. Table 2 includes more than twenty such tools, and Tables 2A through 2D groups these tools together by the degree of risk that takings law, as applied by judges who have a competent understanding of the current state of this evolving jurisprudence, poses to their use.

68. Id. at 2602 (plurality).
69. See id. at 2617 (Kennedy, J., concurring in part and concurring in the judgment) ("These difficult issues are some of the reasons why the Court should not reach beyond the necessities of the case to recognize a judicial takings doctrine."); id. at 2618 (Breyer, J., concurring in part and concurring in the judgment) ("I agree that no unconstitutional taking of property occurred in this case, and I therefore join Parts I, IV, and V of today's opinion. I cannot join Parts II and III, however, for in those Parts the plurality unnecessarily addresses questions of constitutional law that are better left for another day.").
70. See id. at 2598; Powell, supra note 32, at § 66.01.
72. The Supreme Court heard two takings cases during the October 2012 Term. See Ark. Game & Fish Comm'n v. United States, 133 S. Ct. 511, 515 (2012) ("[R]ecurrent flooding, even if of finite duration, are not categorically exempt from Takings Clause liability."); St. Johns River Water Mgmt. Dist. v. Koontz, No. 11-1447, slip op. at 22 (June 25, 2013) ("We hold that the government's demand for property from a land-use permit applicant must satisfy the requirements of Nollan and Dolan even when the government denies the
The risks run from nonexistent and minimal (Tables 2A and 2B) to moderate (Table 2C), and up to serious (Table 2D).

| TABLE 2 |
| SLR ADAPTATION TOOLS |
| A REPRESENTATIVE LIST |

- Notice to landowners of impending SLR
- Comprehensive plan SLR element
- Building code changes to accommodate SLR
- Government purchase of fee in properties vulnerable to SLR
- Government purchase of (or truly voluntary donation of) conservation easements on properties vulnerable to SLR
- SLR overlay zoning and downzoning (affecting height, area, and use of undeveloped or underdeveloped parcels)
- Restrictions on existing, nonconforming buildings/uses in SLR overlay zone
- Enhanced floodplain restrictions in SLR areas
- Permits for soft-armoring in SLR areas (e.g., beach nourishment)
- Requiring living shorelines in place of hard-armoring structures
- Transferable development rights exchange with owners in SLR zone
- Special assessments for beach nourishment and other soft-armoring in SLR zones
- Increased buffers and setbacks for landowners directly affected by SLR
- Prohibition of hard-engineered structures (armoring) in designated SLR zones
- Massive public land acquisition in SLR areas and areas nearby financed by new taxes and bond issues followed by resale with restrictions to private owners
- Land banking in upland areas for future private use
- Exaction of coastal impact fees on all permitted development in the SLR
- Development exactions of conservation easements or of fee title interests, and imposition of coastal impact fees on all permitted development in the SLR
- Prohibition of new, permanent structures in designated SLR zones, declaring them to be public nuisances
- Ban on hard- and soft-armoring financed by owners of developed parcels
- New judicial decisions that impose rolling easement ambulatory boundaries and expand public property interests in the coastal zone

permit and even when its demand is for money.”). The tables in this article identify the takings claims that plaintiffs are most likely to make in litigation. Of course, litigants on all sides and the courts may choose to resolve these issues outside the takings context.
Identifying the takings risk of SLR adaptation strategies serves two distinct but related purposes. First, government officials can use this information to anticipate when serious legal challenges may be mounted in anticipation, or in response to the implementation, of specific tools. Armed with this information, these officials can then seek legal counsel regarding the best ways of mitigating the takings risks, such as modulating the intensity of a regulation or mitigating the impact of a regulation on specific private property owners who carry the heaviest burden.

Second, by measuring SLR adaption tools by their takings risks, we can keep in the forefront of our policymaking the heart and spirit of the takings clause as embodied in the Armstrong principle: avoiding those regulations and other governmental activities that place a special burden on the few that, in the name of justice and fairness, should be borne by the many. In other words, adhering to the demands of takings jurisprudence should not be an exercise in legal brinkmanship, but rather an attempt to achieve an effective, forward-looking strategy without causing needless harm.

| TABLE 2A                                                                 |
| SLR ADAPTATION TOOLS                                                      |
| LEVEL 1, NO TAKINGS RISK                                                  |
| - Notice to landowners of impending SLR                                   |
| - Comprehensive plan SLR element                                          |
| - Building code changes to accommodate SLR                                |
| - Government purchase of fee in properties vulnerable to SLR              |
| - Government purchase of (or truly voluntary donation of) conservation easements on properties vulnerable to SLR |

The tools that pose no takings risks (Table 2A) are those that have no current financial impact on current owners (such as informing coastal owners of impending SLR,73 modifying comprehensive plan elements to reflect SLR concerns,74 and using public funds to purchase conservation easements75 and fee title) or that involve the exercise of the state’s traditional police power

73. See Ruppert, supra note 51, at 262-66 (discussing a few state disclosure requirements referring specifically to coastal property).
74. See, e.g., ADAPTATION TOOL KIT, supra note 71, at 16-18; MOTE, supra note 71, at 8-9.
(such as modifications of building codes\textsuperscript{76}). Unfortunately, but not surprisingly, the most effective of these tools—public acquisition of title to private lands on barrier islands and in other highly vulnerable locations—is cost-prohibitive given current and anticipated budget restraints at all levels of government.\textsuperscript{77} Because of this hard economic reality, governments have resorted to alternative regulatory tools in hopes of accomplishing the same goals, much the same way that some early experimentation with eminent domain to impose land use restrictions gave way to the nearly ubiquitous reality of zoning without compensation.\textsuperscript{78}

\begin{table}[h]
\centering
\caption{SLR Adaptation Tools: Level 2, Minimal Takings Risk}
\begin{tabular}{|l|}
\hline
- SLR overlay zoning and traditional downzoning (affecting height, area, and use of undeveloped or underdeveloped parcels) (PT)
- Restrictions on existing, nonconforming buildings/uses in SLR overlay zone (PT)
- Enhanced floodplain restrictions in SLR areas (PT)
- Permits for soft-armoring in SLR areas (e.g., beach nourishment) (PT)
- Requiring living shorelines in place of hard-armoring structures (PT, EX)
- Transferable development rights exchange with owners in SLR zone (ED)
\hline
\end{tabular}
\end{table}

\textbf{KEY:}

\textit{ED=Emminent Domain (Kelo), PT=Partial Taking (Penn Central), EX=Exaction (Dolan)}

\textsuperscript{76} See, e.g., Sean Reilly, \textit{Finding Silver Linings}, 68 LA. L. REV. 331, 334 (2008) (footnote omitted) ("The LRA [Louisiana Recovery Authority] was active in the first Special Session of the Legislature called by Governor Blanco in the fall of 2005. One early victory was the enactment of the first uniform statewide residential building code in our state's history. Modeled after the code enacted by Florida after its series of hurricanes, this code will serve the state well when future disasters visit Louisiana's shores and its structures survive."); Thomas Kaplan, \textit{Experts Advise Cuomo on Disaster Measures}, N.Y. TIMES, Jan. 3, 2013, at 18 ("Two panels of experts charged with studying how New York can better prepare for disasters like Hurricane Sandy said Thursday that the state should create a strategic fuel reserve, require some gas stations to install generators and update its building codes.").

\textsuperscript{77} Patricia E. Salkin & Charles Gottlieb, \textit{Engaging Deliberative Democracy at the Grassroots: Prioritizing the Effects of the Fiscal Crisis in New York at the Local Government Level}, 39 FORDHAM URB. L.J. 727, 728-29 (2012) ("Local governments are facing unprecedented fiscal challenges across the country. These challenges have forced many municipalities to examine insolvency and have subjected others to state-initiated fiscal control boards. In March 2011, The New York Times reported that states across the nation were planning severe budget cuts in aid to cities and other local governments. These cuts were expected to lead to more lay-offs, cuts in services, and increases in local taxes.").

\textsuperscript{78} See CHARLES M. HAAR & MICHAEL ALLAN WOLF, \textit{LAND USE PLANNING AND THE ENVIRONMENT: A CASEBOOK} 262-64 (2012) [hereinafter \textit{LAND USE PLANNING}] (discussing "early attempts to zone entirely by eminent domain").
As Table 2B indicates, several regulatory tools involve only minimal takings risks, largely because of a long, relatively uncontroversial record of the use of these same or highly analogous strategies for the past several decades. The use of overlay zoning\(^79\) to impose greater restrictions on environmentally sensitive properties (floodplains, wetlands, critical habitat for protected species, and the like) has become routine in American cities and counties, and the Takings Clause has not posed a significant barrier for governments who pursue this strategy. Neither does the typical downzoning of a group of undeveloped parcels—that is, the imposition of more intense use (and perhaps height and area) restrictions by changing the zoning classification—warrant serious consideration by courts in which landowners cry “taking.”\(^80\) Ever since the United States Supreme Court established in its 1926 decision in *Village of Euclid v. Ambler Realty Co.*\(^81\) “that there is no fundamental constitutional right to the speculative value of a piece of property,”\(^82\) landowners seeking to maximize their investment in real estate have for the most part been frustrated in their attempts to use the Due Process, Equal Protection, and Takings Clauses to reverse zoning and other comprehensive, expert-based, state and local land use restrictions.\(^83\)

Landowners challenging new restrictions imposed on their nonconforming uses and buildings—occasioned by the imposition of zoning controls for the first time or by zoning changes—have also been frustrated when they turn to the courts. Local zoning ordinances commonly feature provisions that prescribe the expan-

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Overlay zones are those that are specifically tailored to protect the environmental area at issue, whether it be a reservoir, aquifer, forest, or beach area. An outgrowth of Euclidean zoning, overlay zones in effect circumscribe an environmental area that is already subject to Euclidean regulation, and impose additional requirements thereon. Overlay zones are more effective than other land use controls in environmental protection because of their flexibility, their concentrated focus on specific environmental areas, and their use of performance standards.

80. *See, e.g.*, Intermountain W., Inc. v. Boise City, 728 P.2d 767, 769 (Idaho 1986) (“A zoning ordinance which downgrades the economic value of property does not constitute a taking of property without compensation at least where some residual value remains in the property.”).

81. 272 U.S. 365 (1926).


83. *See, e.g.*, Steven J. Eagle, *Regulatory Takings § 1-6* (5th ed. 2012) (“Since the late 1930s the Supreme Court has viewed property interests as economic rather than personal. With the exception of cases in which ‘property’ has been closely linked to protected rights, such as free speech and preservation of the family, regulations arguably depriving landowners of their property rights have been reviewed under the relaxed scrutiny of the rational basis test”).
sion, enlargement, or alteration of nonconformities, with the courts' blessings. There is no reason to believe that judges would be any less accommodating of new restrictions placed on existing structures and uses in an SLR overlay zone. Similarly, requiring permits for landowner-funded, soft-armoring projects such as beach nourishment and enhancing floodplain protections would basically involve intensifying what are already widely accepted forms of land use control, thus minimizing the chances that a court would find a violation of the Takings Clause. Standing in the way of success for landowners making regulatory takings arguments in opposition to any of the Table 2B tools discussed to this point is the Penn Central ad hoc balancing test that courts employ in partial, as opposed to total, deprivation situations. While it is theoretically possible for government officials to flunk the Penn Central balancing test, the goal of the lawyers in the front lines of private property rights movement has been to avoid or even eliminate what they perceive to be a losing legal paradigm. Despite their best efforts, justice and judges seem comfortable with the dual framework of Penn Central, which seeks to balance the Holmesian concern over severe diminution in value attributable to government action with the Brandeisian caveat that the state has the power, indeed the obligation, to act in order to protect overall health, safety, and general welfare. Or, stated in Armstrongian terms, courts are comfortable with saddling private owners with some burdens that should not fairly and justly be carried by the public.

84. See, e.g., DANIEL R. MANDELMER, LAND USE LAW §§ 5.79-5.80 (5th ed. 2003); LAND USE PLANNING, supra note 78, at 252.
86. See, e.g., POWELL, supra note 32, at §§ 79C.16[2] (on building permits), 79A.02 (on floodplain regulation).
88. See, e.g., Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l Planning Agency, 535 U.S. 302, 333 n.28 (2002) (noting that the "primary argument" of the Institute for Justice in its amicus brief is that Penn Central should be overruled: "All partial takings by way of land use restriction should be subject to the same prima facie rules for compensation as a physical occupation for a limited period of time").
89. See Pa. Coal Co. v. Mahon, 260 U.S. 393, 413 (1922) ("One fact for consideration in determining such limits is the extent of the diminution. When it reaches a certain magnitude, in most if not in all cases there must be an exercise of eminent domain and compensation to sustain the act.").
90. See id. at 417 (Brandeis, J., dissenting) ("Every restriction upon the use of property imposed in the exercise of the police power deprives the owner of some right theretofore enjoyed, and is, in that sense, an abridgment by the state of rights in property without making compensation. But restriction imposed to protect the public health, safety or morals from dangers threatened is not a taking.").
While almost certainly safe under *Penn Central*, the strategy of requiring coastal landowners to install a living shoreline—"utiliz[ing] a variety of structural and organic materials, such as wetland plants, submerged aquatic vegetation, oyster reefs, coir fiber logs, sand fill, and stone" as a "more natural bank stabilization technique" than "hardened structures, such as bulkheads, revetment[s], and concrete seawalls"—could pose an additional, though still minimal, takings risk. If government officials establish such a requirement as a condition for securing permission by a property owner to initiate or intensify development, *Nollan/Dolan* analysis would be triggered. There is a strong likelihood that the government would prevail, however, (1) given the many legitimate state interests in protecting the fragile coast, interests that would be furthered either by an outright development ban or by the installation of a living shoreline as a development condition, and (2) so long as the requirement to employ the living shoreline technique bears a roughly proportional relationship to the impact the development would have on the coastal environment.

The final tool listed in Table 2B—transferable development rights (TDR)—has a track record dating back several decades, as a way of protecting not only environmentally sensitive properties but also historically and architecturally significant structures and diminishing farm acreage. Because the essence of TDR is to make the landowner, who is informed that the right to develop Greenacre (the protected parcel) may be shifted to Blueacre (the developable parcel), financially whole, the key takings concern is the "justness" of the compensation, as would be true of any affirmative use of the power of eminent domain. So long as the government restores the fair market value of the development rights lost, the demands of the Takings Clause will be met.

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92. See, e.g., MANDELKER, supra note 84, at §§ 11.38, 12.16.
Some SLR-adaptation strategies pose a more significant, though still moderate, risk, as shown in Table 2C. No fewer than four out of the six varieties of takings (all but a Lucas-type total deprivation and a still-theoretical judicial taking) are applicable to one or more of the tools listed in this table. Nevertheless, if government regulators take special care to adhere to the letter and spirit of takings law, they should ultimately avoid negative court rulings.

The first three strategies—special assessments, increased buffers and setbacks, and prohibition of potentially harmful structures—all have regulatory pedigrees stretching back several decades. Judges have consistently rejected landowner claims that the out-of-pocket expenditures involved in special assessments are unfair or unduly burdensome under the Due Process and Equal Protection Clauses.93 Indeed, near the close of the 2011-2012 Term, the Supreme Court majority in Armour v. City of Indianapolis94 found a rational basis for the city’s adoption of a new assessment and payment plan, despite the fact that landowners who had already made a lump sum payment under the prior plan did not receive a refund, while the city forgave any unpaid installments by other landowners who had opted to make partial payments.95

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93. See, e.g., Fire Dist. No. 1 v. Jenkins, 221 So. 2d 740, 742 (Fla. 1969) (“The basis of apportionment upon the property subject to special assessment in this case is without unjust discrimination among those specially assessed, nor are the assessments burdensome and oppressive in their operation upon the lands affected.”); Powell, supra note 32, at § 39.03.
95. Id. at 2078-90.
Property owners faced with initial or expanded setback and buffer requirements under zoning and other traditional land use regulations have also been frustrated in mounting legal challenges.\textsuperscript{96} While it is undisputed that the inability to utilize the entire developable area of a parcel quite often reduces the speculative value of that parcel, in the spirit of \textit{Euclid} and other early zoning cases, state and federal courts have consistently upheld reasonable bulk, area, and height restrictions as well within the state’s police power.\textsuperscript{97} Given the severe risks posed to coastal regions by SLR, there is every reason to believe that the police power justification will shield new and additional coastal buffers and setbacks as well. One caveat is in order at this point, however. Should government officials seek to couple these setbacks with permission to the public to use the land unavailable for private development, this could trigger a physical occupation takings challenge. There is Supreme Court precedent for the notion that depriving a private property owner of the “essential” right to exclude others (particularly the public) could trigger a successful takings challenge.\textsuperscript{98}

Government regulators may opt to prohibit hard-engineered structures on- or offshore such as bulkheads, sea walls, groins, and dikes,\textsuperscript{99} as a way of eliminating potential harms to the coastal environment and to neighboring properties and residents: “Armoring can increase flooding and erosion on neighboring property and destroy beaches and wetlands that provide natural flood protections and other ecological services. They also encourage development in vulnerable areas and can increase risks to people and property in the event of catastrophic failure.”\textsuperscript{100}

Modern building, fire, and electrical codes—creatures of the police power—contain ample examples of devices and improvements favored by landowners that are prohibited owing to serious

\textsuperscript{96} See generally \textsc{Mandelker}, supra note 84, at § 5.71; \textsc{Powell}, supra note 32, at § 79C.05[4][a].

\textsuperscript{97} See generally \textsc{Mandelker}, supra note 84, at § 5.74; \textsc{Powell}, supra note 32, at § 79C.05[2].

\textsuperscript{98} See \textsc{Ruckelshaus} v. \textsc{Monsanto Co.}, 467 U.S. 986, 1011 (1984) (“With respect to a trade secret, the right to exclude others is central to the very definition of the property interest. Once the data that constitute a trade secret are disclosed to others, or others are allowed to use those data, the holder of the trade secret has lost his property interest in the data.”); \textsc{Kaiser Aetna} v. \textsc{United States}, 444 U.S. 164, 179-80 (1979) (footnote omitted) (“In this case, we hold that the 'right to exclude,' so universally held to be a fundamental element of the property right, falls within this category of interests that the Government cannot take without compensation.”). \textit{But see} \textsc{Andrus} v. \textsc{Allard}, 444 U.S. 51, 65-66 (1979) (“But the denial of one traditional property right does not always amount to a taking. At least where an owner possesses a full 'bundle' of property rights, the destruction of one 'strand' of the bundle is not a taking, because the aggregate must be viewed in its entirety.”).

\textsuperscript{99} \textsc{Adaptation Tool Kit}, supra note 71, at 36.

\textsuperscript{100} Id. at 37 (footnote omitted).
negative externalities. Government-mandated, often-costly, drainage and stormwater improvements are ubiquitous in American cities and suburbs. Landowners who are prohibited from using one form of protection from SLR would almost certainly be unable to prove a total deprivation taking, which would mean their counsel would be consigned to the government-friendly partial taking framework in which judges could easily deem this SLR tool, like so many others, a "public program adjusting the benefits and burdens of economic life to promote the common good."  

The next two tools possibly, though not necessarily, involve moderate takings risks of the eminent domain variety. First, government agencies could orchestrate the purchase of undeveloped coastal properties that are currently in private hands and then resell those parcels to other private owners subject to severe restrictions (setbacks, use and development controls, agreements not to rebuild after coastal storms, and the like). If these potentially massive purchases are funded by new taxes, bond issues, or other traditional forms of public revenue-raising, they should be free from takings problems. Should government officials instead choose to employ the power of eminent domain to achieve the same goal, changes in some states' constitutional and statutory takings rules adopted after the Supreme Court's controversial decision in *Kelo v. City of New London* 102 may pose a problem. After the furor over *Kelo*, 103 many states clarified that it would be inappropriate and illegal to use eminent domain solely for economic development or revenue-enhancing purposes. 104 Therefore, officials in those states who plan to use eminent domain to effect this strategy must clarify that the properties are being taken and resold to further environmental protection purposes, not as a money-making scheme. Some states have added additional procedural and substantive hurdles to the taking of land from one private owner

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104. See, e.g., KY. REV. STAT. ANN. § 416.675(3) (West 2012):

No provision in the law of the Commonwealth shall be construed to authorize the condemnation of private property for transfer to a private owner for the purpose of economic development that benefits the general public only indirectly, such as by increasing the tax base, tax revenues, or employment, or by promoting the general economic health of the community.

See also NEB. REV. STAT. § 76-710.04(1)-(2) (2012):

A condemnor may not take property through the use of eminent domain under sections 76-704 to 76-724 if the taking is primarily for an economic development purpose. . . . For purposes of this section, economic development purpose means taking property for subsequent use by a commercial for-profit enterprise or to increase tax revenue, tax base, employment, or general economic conditions.

For a chronological review of post-*Kelo* changes, with details from each state, see Powell, supra note 32, at § 79P.03(3)[b][iv].
followed by the transfer to another. In Florida, for example, voters in 2006 approved a constitutional amendment specifying that "[p]rivate property taken by eminent domain . . . may not be conveyed to a natural person or private entity except as provided by general law passed by a three-fifths vote of the membership of each house of the Legislature." This would not be the first nor the last time that politicians, eager to please constituents who were stirred up by alarmist accounts of judicial developments, implemented short-sighted changes that will result in long-range problems.

As with the purchase and resale of undeveloped coastal properties, the next strategy—creating a land bank in upland areas for future use by private owners displaced by SLR—would require very large expenditures during a period of fiscal austerity on the state and local levels. Unfortunately, the depressed real estate market, greatly influenced by extremely high foreclosure rates, makes it an opportune time for governments to buy low today in order to sell high later. If state and local officials can overcome the admittedly significant financial obstacles, the post-\textit{Kelo} eminent domain law changes discussed in the previous paragraph would again pose a moderate threat to this scheme. Indeed, should those officials choose to take rather than purchase title to the upland tracts, another feature of the new breed of eminent domain law would come into effect: a "use it or lose it" requirement that government use the condemned lands for a public purpose, and if not offer the properties to the previous owners at the condemnation price. Even if government officials can find ways to comply with the letter of these new takings statutes and constitutional provisions, the message lawmakers and voters conveyed after \textit{Kelo} was strong displeasure with the notion of the state’s taking from Peter and selling to Paul (or Mary). This is reason enough for public officials to think purchase first and eminent domain only as a last resort.

105. FLA. CONST. art. X, § 6(c).
Land banks are governmental entities that specialize in the conversion of vacant, abandoned and foreclosed properties into productive use. The primary thrust of all land banks and land banking initiatives is to acquire and maintain properties that have been rejected by the open market and left as growing liabilities for neighborhoods and communities. The first task is the acquisition of title to such properties; the second task is the elimination of the liabilities; the third task is the transfer of the properties to new owners in a manner most supportive of local needs and priorities.
107. See, \textit{e.g.}, TEX. CONST. art. III, § 52j; CONN. GEN. STAT. § 8-193(c) (2012).
### TABLE 2D

**SLR ADAPTATION TOOLS**

**LEVEL 4, SERIOUS TAKINGS RISK**

- Development exactions of conservation easements or of fee title interests, and imposition of coastal impact fees on all permitted development in the SLR (EX)
- Prohibition of new, permanent structures in designated SLR zones, declaring them to be public nuisances (PT, TD)
- Ban on hard- and soft-armoring financed by owners of developed parcels (PT, TD)
- New judicial decisions that impose rolling easement ambulatory boundaries and expand public property interests in the coastal zone (PT, PO, JT)

**KEY:**

- PO = Physical Occupation (Loretto)
- TD = Total Deprivation (Lucas)
- PT = Partial Taking (Penn Central)
- EX = Exaction (Dolan)
- JT = Judicial Taking (STBR)

The four tools listed in Table 2D pose serious takings risks of one variety or another; therefore, government officials opting for these strategies should proceed with caution and with the understanding that they run the risk of violating both the letter and spirit of the Takings Clause. We can be certain that if government officials make the acquisition of fee title or other property interests a condition for permitting development, the *Nollan-Dolan* requirements will be applicable to this textbook exactions takings case, while the status of non-real-property exactions (including impact fees) is in a state of flux in the wake of the Supreme Court’s June, 2013, decision in *Koontz v. St. Johns River Water Mgmt. Dist.*

Similarly, should public officials opt for the second tool in Table 2D—banning any new, permanent structures in protected coastal zones—we can be pretty sure that affected landowners will cry “Lucas!,” especially since this was the very tool that the Supreme Court deemed a *per se* taking.

There is not the same kind of crystal clear, all-fours precedent for the third and fourth tools listed in Table 2D: government prohibitions on the use of private funds by landowners to provide hard- and soft-armoring and new judicial decisions that redefine and impose new ambulatory boundaries or that expand public ownership in the coastal zone at the expense of private land-

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108. No. 11-1447 (June 25, 2013).

109. See Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1007 (1992) (“In 1988, however, the South Carolina Legislature enacted the Beachfront Management Act, which had the direct effect of barring petitioner from erecting any permanent habitable structures on his [Lucas’s] two parcels.”).
owners. Nevertheless, it is not difficult to anticipate that judges sympathetic to the plights of affected private owners would be tempted to invoke one or more takings theories to redress this perceived public wrong.

V. A ROADMAP FOR DEFENDING THE DEPLOYMENT OF HIGH-RISK ADAPTATION TOOLS

Before throwing in the towel on the effort to defend the four tools with takings implications that reach the serious level, we need to recall that, contrary to the wishes of Richard Epstein and the private property rights movement he inspired, not all public regulations negatively affecting property values and rights amount to takings. With apologies to William Thackeray and others, there is many a slip between the onerous regulation cup and the unconstitutional takings lip. Table 3 provides a roadmap that governments can follow in their efforts to avoid negative takings rulings for those tools most at risk. Once again, it is important to emphasize that the measures recommended here are offered not as legal technicalities that will provide a safe haven for bad regulatory behavior, but rather as guideposts designed to achieve the delicate balance between private rights and public protection that is embodied in the Armstrong principle.

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111. See, e.g., WILLIAM MAKEPEACE THACKERAY, II THE HISTORY OF PENDENNIS 745 (1858) (“There’s many a slip between the cup and the lip! Who knows what may happen.”).
States and local governments have long possessed the power to place limits on development, in the coastal zone or any other location. When property owners seek to avoid those limits by, for example, securing a zoning amendment or variance, public officials can respond with a "yes," a "no," or a "yes, but" (otherwise known as conditional permitting). Government officials who exact from private landowners seeking development permission the donation of conservation easements either to the public or to a land trust need to be prepared to pass the *Nollan* (essential nexus) and *Dolan* (rough proportionality) tests. To satisfy the first, they will merely have to demonstrate that the purpose of the exaction condition (such as the protection of the fragile and shifting coastal environment) matches what would be the justification for an outright prohibition of the proposed development. To meet the second, slightly more demanding, test, they will have to show that the nature and extent of the real property interest being exacted is roughly proportional to the impact that the proposed development would have on the coastal environment. Conservation easements that place limits on developable area, height, nature and intensity of use, non-permeable surfaces created, proximity to
the mean high water mark or shoreline vegetation, and the like are much less problematic than the public access easements that troubled the Court in *Dolan*. Still, government regulators must be careful to calibrate each individual exaction so that a skeptical judge does not conclude that the public would reap an undeserved windfall at the landowner's expense.

Before the *Koontz* decision, the imposition of coastal impact fees for all permitted development located in the SLR would have been situated comfortably at the moderate risk level. However, if state and lower federal courts ambitiously apply the Supreme Court's ruling such fees could prove problematic for coastal regulators.

States and localities throughout the nation have for decades imposed impact fees on developers of residential and commercial property in order to offset the costs of additional and enhanced public amenities such as roads, schools, water and sewer systems, and recreational facilities attributable to new development.\(^1\) Several courts have refused to wield the Takings Clause in order to invalidate these programs, despite what can be significant impacts on property owners and developers.\(^2\)

Although the Supreme Court had indicated in repeated dicta that the *Nollan-Dolan* tests would apply only to exactions of real property interests such as fees or easements rather than money or other forms of personal property,\(^3\) and while several (though not all) state and lower federal courts ruled in a similar fashion when considering the question directly,\(^4\) the *Koontz* Court shifted

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114. See **Lingle v. Chevron U.S.A. Inc.**, 544 U.S. 528, 547 (2005) ("*Nollan and Dolan* both involved dedications of property so onerous that, outside the exactions context, they would be deemed *per se* physical takings."); **City of Monterey v. Del Monte Dunes at Monterey, Ltd.**, 526 U.S. 687, 702 (1999) ("[W]e have not extended the rough-proportionality test of *Dolan* beyond the special context of exactions—land-use decisions conditioning approval of development on the dedication of property to public use.").


One line of cases holds that the *Nollan/Dolan* standard applies solely to exactions cases involving land-use dedications. See, e.g., **McClung v. City of Sumner**, 548 F.3d 1219, 1228 (9th Cir. 2008) (distinguishing monetary conditions from conditions on the land); **Clajon Prod. Corp. v. Petera**, 70 F.3d 1566, 1578 (10th Cir. 1995); **Sea Cabins on the Ocean IV Homeowners Ass'n v. City of N. Myrtle Beach**, 345 S.C. 418, 548 S.E.2d 595, 603 n.5 (2001) (holding that *Del Monte Dunes* clarified that *Nollan* and *Dolan* only apply to physical conditions imposed upon land).

The other line of cases holds that the *Nollan/Dolan* test extends beyond the context of the imposition of real property conditions on real property. For example, the California Supreme Court has held that non-real property conditions can constitute a taking where the condition is imposed on a discretionary, individualized
course. Writing for a five-member majority, Justice Anthony Kennedy explained that “so-called ‘monetary exactions’ must satisfy the nexus and rough proportionality requirements of Nollan and Dolan,”116 thereby overruling the Supreme Court of Florida, which had concluded that the “doctrine of exactions” does not apply “to an alleged exaction that does not involve the dedication of an interest in or over real property” and to a situation in which “an exaction does not occur and no permit is issued by the regulatory entity.”117

The ultimate impact of Koontz on impact fees and exactions of money will depend on the willingness of government regulators to risk judicial challenges by continuing to employ these tools and on the outcomes of subsequent judicial decisions. Even though state and local government officials can find some solace in Justice Kennedy’s assurance that the Court’s ruling “does not affect the ability of governments to impose property taxes, user fees, and similar laws and regulations that may impose financial burdens on property owners,”118 not all fees will receive the same judicial indulgence:

Because the government need only provide a permit applicant with one alternative that satisfies the nexus and rough proportionality standards, a permitting authority wishing to exact an easement could simply give the owner a choice of either surrendering an easement or making a payment equal to the easement’s value. Such so-called “in lieu of” fees are utterly commonplace, and they are functionally equivalent to other types of land use exactions.119

Justice Elena Kagan, writing for the four dissenters, painted an even bleaker picture:

The majority turns a broad array of local land-use regulations into federal constitutional questions. It deprives state and local governments of the flexibility they need to enhance their communities—to ensure environmentally sound

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basis. See Ehrlich v. City of Culver City, 12 Cal. 4th 854, 50 Cal. Rptr. 2d 242, 911 P.2d 429, 444 (1996). However, in Town of Flower Mound v. Stafford Estates Ltd. Partnership, 135 S.W.3d 620, 640-41 (Tex. 2004), the Texas Supreme Court expanded application of the test further, holding that Nollan and Dolan can apply to certain non-real property conditions that arise from generally applicable regulations.
116. Koontz, No. 11-1447, slip op. at 15.
117. Koontz, 77 So. 3d, at 1222.
118. Koontz, No. 11-1447, slip op. at 18.
and economically productive development. It places courts smack in the middle of the most everyday local government activity.\(^{120}\)

Until we have more judicial gloss on the \textit{Koontz} ruling, government officials who choose to exact coastal impact fees should play it safe and make sure that they can satisfy the \textit{Nollan} essential nexus and the \textit{Dolan} rough proportionality requirements.\(^{121}\)

Even a total prohibition of permanent structures could survive judicial scrutiny, despite the result in \textit{Lucas} after remand to the state court.\(^{122}\) First, drawing inspiration from the justices not part of the \textit{Lucas} majority who expressed doubts concerning the finding that a total deprivation had in fact occurred,\(^{123}\) government counsel could demonstrate that more than token value remained on the targeted parcels even after the challenged regulation went into place. Much like what happened in the \textit{First English} case on remand, in which the California Court of Appeal found that the floodplain ordinance did not deprive the owner of

\(^{120}\) Id. at 18 (Kagan, J., dissenting).

\(^{121}\) The \textit{Koontz} Court also ruled that “[t]he principles that undergird our decisions in \textit{Nollan} and \textit{Dolan} do not change depending on whether the government approves a permit on the condition that the applicant turn over property or denies a permit because the applicant refuses to do so.” Id. at 8. See also Mark Fenster, \textit{Failed Exactions}, 36 VT. L. REV. 623, 644 (2012) (footnotes omitted):

Wary government agencies might simply deny permits and face lower scrutiny under the \textit{Penn Central} test rather than discuss mitigation measures as conditions for approval and face heightened scrutiny under \textit{Nollan} and \textit{Dolan}. By inhibiting a government agency’s willingness to bargain without inhibiting its authority to deny a property owner’s application to develop, applying \textit{Nollan} and \textit{Dolan} to failed exactions would eliminate a valuable right from property owners—or at least an important opportunity to reach a preferred end—while simultaneously removing a key regulatory tool and process for government agencies. This represents the worst possible result: government agencies cannot negotiate adequate, workable mitigation measures with property owners; property owners are more likely to be denied discretionary approvals from wary government agencies; and the entire regulatory process becomes more rigid and mechanical, resulting in a larger proportion of denials and fewer negotiated solutions to pressing environmental and planning conflicts.

\(^{122}\) See \textit{Lucas} v. S.C. Coastal Council, 424 S.E.2d 484, 486 (S.C. 1992) (“Coastal Council has not persuaded us that any common law basis exists by which it could restrain Lucas’s desired use of his land; nor has our research uncovered any such common law principle.”).

\(^{123}\) See \textit{Lucas}, 505 U.S. at 1043-44 (Blackmun, J., dissenting) (footnote omitted) (“The Court creates its new takings jurisprudence based on the trial court's finding that the property had lost all economic value. This finding is almost certainly erroneous.”); id. at 1062 (Stevens, J., dissenting) (“[O]n the present record it is entirely possible that petitioner has suffered no injury in fact even if the state statute was unconstitutional when he filed this lawsuit.”); id. at 1076 (statement of Souter, J.) (citations omitted) (“The petition for review was granted on the assumption that the State by regulation had deprived the owner of his entire economic interest in the subject property. . . . It is apparent now that in light of our prior cases, the trial court’s conclusion is highly questionable.”).
all use (as was alleged in its complaint),\textsuperscript{124} government counsel faced with a total deprivation claim need to take the time and effort to explain that valuable uses remain after building prohibitions are put in place in an SLR zone. Once facts are marshaled that demonstrate that a partial taking has occurred, the governing precedent will shift to the much more public-sector-friendly \textit{Penn Central}.

Should government counsel be unable to find any meaningful use or value once the prohibition goes into effect, there is still a chance, though quite slight, that the total deprivation claim will fail. The government will have to demonstrate to the satisfaction of the court that, under background principles of state public nuisance law, the construction of permanent structures in a fragile and ever-shifting shoreline (such as a barrier island that has been devastated repeatedly by tropical storms and hurricanes) would pose serious harms to the public at large (and not just to one or two neighboring properties). The fact that the framers of the Constitution and the Fifth Amendment were unaware of environmental hazards such as fecal coliforms or may have lived in a pre-SLR era will not prove fatal to the government’s case, for, as Justice Scalia conceded in the \textit{Lucas} opinion itself, “The fact that a particular use has long been engaged in by similarly situated owners ordinarily imports a lack of any common-law prohibition (though \textit{changed circumstances} or \textit{new knowledge} may make what was previously permissible no longer so}).”\textsuperscript{125} Nevertheless, winning this argument will be difficult, as it should be if the landowner’s use and value are truly reduced to zero or to a very negligible amount.

The takings analysis for the next tool—prohibiting landowners from paying for and using hard- and soft-armoring in order to salvage dry, developable land—might at first glance appear to


True, the complaint \textit{alleges} interim ordinance No. 11,855 denies First English “all use” of Lutherglen. But as will be seen shortly, the ordinance \textit{does not} deny First English “all use” of this property. It does not even prevent occupancy and use of any structures which may have survived the flood. It only prohibits the reconstruction of structures which were demolished or damaged by the raging waters and the construction of new structures. In no sense does it prohibit uses of this campground property which can be carried out without the reconstruction of demolished buildings or the erection of new ones. First English’s complaint stated solely a facial challenge to the interim ordinance and \textit{as far as this ordinance itself was concerned}, many camping activities could continue on this property. Meals could be cooked, games played, lessons given, tents pitched.

\textsuperscript{125} Lucas, 505 U.S. at 1031 (emphasis added). Background principles are not limited to public or private nuisance, of course. Some courts have placed public trust in that category. See, e.g., Esplanade Props., LLC v. City of Seattle, 307 F.3d 978 (9th Cir. 2002); McQueen v. S.C. Coastal Council, 580 S.E.2d 116 (S.C. 2003).
be identical to that used for partial (Penn Central) or total (Lucas) deprivations occasioned by the prohibition of permanent structures. There are, however, three key differences. First, a property owner who can demonstrate that without bulkheads, seawalls, revetments, dikes, beach nourishment or other means his or her land will be lost, and that he or she is prepared to pick up what could be a very substantial bill to prevent that (perhaps) total loss, will still have to demonstrate that government is the cause of the Fifth Amendment taking. It is important to recall that the Armstrong principle speaks about “[g]overnment,” not rising seas or coastal storms, “forcing some people to bear public burdens.”

Even Justice Scalia and his colleagues in the Stop the Beach Renourishment plurality, who highlighted the passive voice used in the Takings Clause, speak of “the branch of government effecting the expropriation.”

The second difference is that landowners in this situation, unlike with a Lucas-like building prohibition, would be resting their cases on the violation of some kind of “fundamental right to maintain structures despite the effects of the forces of nature,” which is a stick not found in any of the familiar bundles of property rights. Indeed, the existence of government restrictions on rebuilding after structures are significantly damaged by natural hazards such as coastal flooding and extremely high winds, common-law rules for attaching liability for diffused surface water, and state and local requirements concerning the composition of building and foundational materials indicate strongly that placing even significant burdens on any such proffered right would

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128. Id. (emphasis added).

See [JESSE DUKEMENIER & JAMES KRIER, PROPERTY (3d ed. 1993)], at 86 (the rights to possess, use, exclude, and transfer); [EDWARD H. RABIN ET AL., FUNDAMENTALS OF MODERN PROPERTY LAW (4th ed. 2000)], at 1 (the rights to exclude, possess or occupy, dispose of or alienate, manage, and receive income); [JOHN G. SPRANKLING, UNDERSTANDING PROPERTY LAW (2000)], at 5-6 (the rights to exclude, transfer, possess, and use); Richard A. Epstein, Property and Necessity, 13 HARV. J.L. & PUB. POL’Y 2, 3 (1990) (the rights to possess, use, and dispose of); A. M. Honoré, Ownership, in OXFORD ESSAYS ON JURISPRUDENCE 107, 113-24 (A. G. Guest ed., 1961) (the rights to possess, use, manage, receive income and capital, and maintain security; the incidents of transmissibility and absence of term; the prohibition of harmful use; and the liability to execution); Roscoe Pound, The Law of Property and Recent Juristic Thought, 25 ABA J. 993, 997 (1939) (the rights to possess, exclude, dispose of, use, enjoy the fruits and profits, and destroy or injure).
130. See, e.g., Palazzola v. City of Gulfport, 52 So. 2d 611 (Miss. 1951). See also MANDELKER, supra note 84, at § 5.80.
131. See, e.g., POWELL, supra note 32, at § 65.12(2).
be much less likely to result in a favorable takings ruling than cases involving the much more recognizable and respected (though certainly not absolute) rights to exclude and alienate.

The third way in which a takings challenge to the prohibition of armoring to protect existing structures is weaker than a ban on new, permanent structures is that, even if the court should somehow find that that the government is the cause of a total deprivation, the public and private nuisance exceptions claims will be easier for government counsel to mount. The negative environmental externalities attributable to seawalls, bulkheads, revetments, dikes, and the like are serious and diverse, not just to adjoining properties but to the coastal ecology as a whole. These serious impacts include exacerbated erosion, prevention of landward migration of wetlands, prevention of submerged aquatic vegetation, and trapped marine life.\textsuperscript{132} Beach nourishment, too, is far from benign, despite its obvious aesthetic benefits:

Beach nourishment affects the environment of both the beach being filled and the nearby seafloor "borrow areas" that are dredged to provide the sand. Adding large quantities of sand to a beach is potentially disruptive to turtles and birds that nest on dunes and to the burrowing species that inhabit the beach, though less disruptive in the long term than replacing the beach and dunes with a hard structure. The impact on the borrow areas is a greater concern: the highest quality sand for nourishment is often contained in a variety of shoals which are essential habitat for shellfish and related organisms. . . . As technology improves to recover smaller, thinner deposits of sand offshore, a greater area of ocean floor must be disrupted to provide a given volume of sand. Moreover, as sea level rises, the required volume is likely to increase, further expanding the disruption to the ocean floor.\textsuperscript{133}

Armed with these facts, government counsel should be prepared to identify and defend the nuisance-preventing attributes of regulations banning armoring to protect one or a few improved coastal parcels.

The final tool in Table 2D is a state court decision that imposes ambulatory boundaries on parcels in coastal regions that have been ravaged by increasingly violent storms and subject to the

\textsuperscript{132} See, e.g., JAMES G. TITUS ET AL., U.S. CLIMATE CHANGE SCI. PROGRAM, COASTAL SENSITIVITY TO SEA-LEVEL RISE: A FOCUS ON THE MID-ATLANTIC REGION 99 (2009).
\textsuperscript{133} Id. at 98, 100 (citations omitted).
erosive effects of rising seas. While "rolling easement" is fast becoming an essential term in the SLR-adaptation lexicon, it is important to note that the phrase, according to one authoritative source, encompasses a broad collection of legal options, many of which do not involve easements. Usually, a rolling easement is either (a) a regulation that prohibits shore protection or (b) a property right to ensure that wetlands, beaches, barrier islands, or access along the shore moves [sic] inland with the natural retreat of the shore. Although the regulatory approach is the more common way to prevent shore protection, the non-regulatory approach may sometimes work better. Private land trusts, government agencies, and (for some approaches) even private citizens can buy (or secure donations of) rolling easements from property owners.\footnote{Titus, supra note 72, at 6. See also id. at 5-6: [A] rolling easement is a legally enforceable expectation that the shore or human access along the shore can migrate inland instead of being squeezed between an advancing sea and a fixed property line or physical structure. The "rolling easement holder" could be the government agency whose regulations prohibit shore protection, or the person, land trust, or government agency who obtains the property rights embodied in a rolling easement.}

On the one hand, the voluntary donation of fee title or servitudes such as easements by private owners to public agencies or land trusts involves no takings risks at all. On the other hand, exactions of these types of property interests by government officials in exchange for development permission would involve a serious takings risk, as discussed previously.\footnote{See supra notes 114-121 and accompanying text.}

The most problematic form of rolling easement, at least from the takings perspective, would be a judicial decision recognizing or establishing ambulatory boundaries at the expense of private coastal landowners, not just by the traditional, gradual process known as erosion,\footnote{See, e.g., Powell, supra note 33, at § 66.01 ("The term 'erosion' denotes the process by which land is gradually covered by water.")} but, more controversially, in circumstances involving sudden, avulsive events such as tropical storms and hurricanes.\footnote{See, e.g., STBR v. Fla. Dep't of Envtl. Prot., 130 S. Ct. 2592, 2598-99 (2010) (emphasis added) (citations omitted): When . . . there is a "sudden or perceptible loss of or addition to land by the action of the water or a sudden change in the bed of a lake or the course of a stream," the change is called an avulsion. In Florida, as at common law, the littoral owner automatically takes title to dry land added to his property by accretion; but formerly submerged land that has become dry land by avulsion continues to belong to the owner of the seabed (usually the State). Thus, regardless of whether an avulsive event exposes land previ-
easement to “roll” landward, in some cases even beyond the location of private buildings and other improvements, the private landowner would almost certainly bring a takings challenge based on the public’s physical occupation of the land.\textsuperscript{138} Even a partial takings claim would seem promising, in light of the fact that the public would gain access to the parcel.\textsuperscript{139} However, the controversial concept that judicial branch activity is covered by the Takings Clause is still one vote shy of a Supreme Court majority. Should that fifth vote materialize in a future high court case, there are strategies that government counsel could pursue that might bring success.

Initially, it is important to focus carefully on Justice Scalia’s formulation for the \textit{Stop the Beach Renourishment} plurality: “If a legislature or a court declares that what was once an established right of private property no longer exists, it has taken that property, no less than if the State had physically appropriated it or destroyed its value by regulation.”\textsuperscript{140} The plaintiff would have the heavy burden of demonstrating that all three elements were present: (1) an established property right, (2) the elimination of

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\item\textit{ousely 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.}\textsuperscript{138. See, e.g., Severance v. Patterson, 566 F.3d 490, 492-93 (5th Cir. 2009), certified questions answered in 370 S.W.3d 705 (Tex. 2012):}
\end{itemize}

Severance contends that because the beach boundary of her property migrated landward after Hurricane Rita, taking in land not previously encumbered by a public access easement, the enforcement of the easement on her beachfront properties constitutes a seizure in violation of the Fourth Amendment and a taking without just compensation in violation of the Fifth Amendment. The district court dismissed the action, ruling that Severance failed to state a claim for relief because Texas law recognizes a “rolling” beachfront easement; this type of easement predated Severance’s purchase of her beachfront properties; the State may enforce the easement as natural changes occur in its location; and no constitutional violation results from an uncompensated change in the easement’s location on Severance’s property.

The Supreme Court of Texas provided this clarification of state law in support of private landowners’ claims:

We hold that Texas does not recognize a “rolling” easement. Easements for public use of private dry beach property change size and shape along with the gradual and imperceptible erosion or accretion in the coastal landscape. But, avulsive events such as storms and hurricanes that drastically alter pre-existing littoral boundaries do not have the effect of allowing a public use easement to migrate onto previously unencumbered property. This holding shall not be applied to use the avulsion doctrine to upset the long-standing boundary between public and private ownership at the mean high tide line. The division between public and private ownership remains at the mean high tide line in the wake of naturally occurring changes, and even when boundaries seem to change suddenly.

\textit{Severance, 370 U.S. at 724-25 (footnote omitted).}\textsuperscript{139. See Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104, 124 (1978) (“A ‘taking’ may more readily be found when the interference with property can be characterized as a physical invasion by government, . . .’”).}\textsuperscript{140. STBR, 130 S. Ct. at 2692.}
that right by a court, and (3) the equivalence of that elimination with physical appropriation or destruction of value.

Regarding the first two elements, the plurality opinion conceded that a judicial “decision that clarifies property entitlements (or the lack thereof) that were previously unclear might be difficult to predict, but it does not eliminate established property rights.” Therefore, if the state of the law concerning littoral rights, public trust, accretion, reliction, erosion, avulsion, public access easements, and related matters should be in any substantial way unsettled, as it frequently is in coastal states, the court would be clarifying, not taking. Government counsel should therefore marshal relevant precedents to demonstrate that the law, much like the coastal ecology itself, is in flux.

The existence of state precedent is what proved fatal to the plaintiff landowners’ claims in Stop the Beach Renourishment itself, for as Justice Scalia noted in the opinion for the Court:

Under petitioner’s theory, because no prior Florida decision had said that the State’s filling of submerged tidal lands could have the effect of depriving a littoral owner of contact with the water and denying him future accretions, the Florida Supreme Court’s judgment in the present case abolished those two easements to which littoral property owners had been entitled. This puts the burden on the wrong party.

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141. Id. at 2610 (emphasis added).
142. See, e.g., Feinman v. State, 717 S.W.2d 106, 111 (Tex. App.1986) (“[W]e conclude that the vegetation line is not stationary and that a rolling easement is implicit in the [Texas Open Beaches] Act.”), criticized in Severance, 370 S.W.3d at 728 n.23 (citation omitted) (“Feinman does not consider the legal implications of the difference between avulsive and gradual changes to the coast, concluding the distinction to be immaterial to its decision because it apparently viewed the distinction not relevant to the question of an easement, only title to property. We disagree with the latter conclusion.”).


Historically, public access to beaches was quite limited. Basically, the public was permitted to access only the land between the mean high and low tide lines, i.e., wet-sand areas. The purposes for which the public was permitted to access this land were also limited—only fishing. In recent years some courts have added recreation as one of the purposes for which the public is entitled to use the wet-sand portion of a beach. The more striking expansion of beach access via the public trust doctrine, custom, and other doctrinal headings, however, has been the extension to privately-owned dry-sand portions of the beach. The New Jersey Supreme Court has taken the lead in this expansion of public beach access via the public trust doctrine. In Matthews v. Bay Head Improvement Ass’n, [471 A.2d 355 (N.J. 1984),] the court held a private nonprofit entity which owned or leased most of the beachfront lots in Bay Head did not have an unlimited right to exclude members of the public from the dry-sand portion of its beach.
There is no taking unless petitioner can show that, before the Florida Supreme Court's decision, littoral-property owners had rights to future accretions and contact with the water superior to the State's right to fill in its submerged land. Though some may think the question close, in our view the showing cannot be made.\textsuperscript{143}

Moreover, the eight participating justices did not feel bound to rely only on those precedents cited by the Supreme Court of Florida when they dismissed the petitioner's claims. The state high court decision did not abolish the Members' right to future accretions, but merely held that the right was not implicated by the beach-restoration project, because the doctrine of avulsion applied. The Florida Supreme Court's opinion describes beach restoration as the reclamation by the State of the public's land, just as \textit{Martin [v. Busch}, 93 Fla. 535, 112 So. 274 (1927)] had described the lake drainage in that case. Although the opinion does not cite \textit{Martin} and is not always clear on this point, it suffices that its characterization of the littoral right to accretion is consistent with \textit{Martin} and the other relevant principles of Florida law we have discussed.\textsuperscript{144}

The confusing state of the common law provides an important advantage for attorneys fending off a judicial takings claim. In the unlikely event that the state high court has acted contrary to established precedent in a blatant attempt to make public what was once clearly private, the plaintiff would still need to prove the third element—that the court's decision occasioned the functional equivalence of a physical appropriation or total deprivation taking. Yet, the facts on the ground (or, rather, under the water) belie the assertion that the government, and not the forces of nature, is the primary or major cause of any physical appropriation in a rolling-easement avulsion situation. In addition, unless the Court should employ conceptual severance to segregate the public access easement from the parcel as a whole,\textsuperscript{145}

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  \item 143. \textit{STBR}, 130 S. Ct., at 2610-11.
  \item 144. Id. at 2612 (citation omitted).

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Petitioners seek to bring this case under the rule announced in \textit{Lucas} by arguing that we can effectively sever a 32-month segment from the remainder of each landowner's fee simple estate, and then ask whether that segment has been taken in its entirety by the moratoria. Of course, defining the property interest taken in terms of the very regulation being challenged is circular. With property so divided,
\end{quote}
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which would itself be a departure from precedent,\textsuperscript{146} the odds of a total deprivation, as noted previously,\textsuperscript{147} would run in the highly unpromising slim-to-none range.

VI. ARMSTRONGING, NOT LEGAL STRONG-ARMING

There are good reasons why the Takings Clause should not determine the validity of rolling easements specifically and SLR adaptation generally. Returning to the text and sentiments of \textit{Armstrong}, we are instructed that the Clause's dozen words were "designed to bar Government from forcing" the few to bear "public burdens."\textsuperscript{148} They are not a surefire warranty of landowner protection against all hazards. Neither should they serve as a threat to responsible citizens and their public servants who, relying on the best science available, are finally taking steps to adjust to the new reality of mega-storms, melting glaciers, increased greenhouse gas emissions, and warming oceans.

As many of the victims of Hurricane Sandy have recently learned, along with the aesthetic, recreational, and economic benefits of living close to the sea come heightened risks of destruction to persons and property. For those who are un- or underinsured, or for those for whom government assistance proves inadequate, there are no convenient defendants with deep pockets who are subject to the jurisdiction of the courts. Polar ice caps are not subject to service of process; lawsuits blaming companies that produce and consume coal and other fossil fuels for the damages wrought by powerful storms could not survive summary judgment. How regrettable it would be if, looking back a decade or two from now, the legal landscape were littered with takings lawsuits threatened and brought against state and local governments who chose to act while politicians continued to engage in demagoguery, and the waters continued to rise.

\textsuperscript{146} See Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104, 130-31 (1978) ("In deciding whether a particular governmental action has effected a taking, this Court focuses rather both on the character of the action and on the nature and extent of the interference with rights in the parcel as a whole—here, the city tax block designated as the 'landmark site.' "). For subsequent Court cases invoking this language, see Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470, 497 (1987); \textit{Tahoe-Sierra}, 535 U.S. at 327.

\textsuperscript{147} See supra notes 123-124 and accompanying notes.

\textsuperscript{148} Armstrong v. United States, 364 U.S. 40, 49 (1960).