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AN UNINTENDED CONSEQUENCE OF *ARKANSAS GAME & FISH COMMISSION V. UNITED STATES*: EXPANDING TAKINGS LIABILITY TO WHAT THE GOVERNMENT DOESN'T DO

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*Disaster marks the interface between an extreme physical phenomenon and a vulnerable human population. It is of paramount importance to recognise both of these elements. Without people there is no disaster.*¹

In the past fifty years, sea level rise as a result of global climate change has occurred at a faster rate than adequate protection against destructive waters.² As sea levels rise each year, recurrent floodings and storm surges occur more frequently and with increasingly severe intensity.³ Large storms and hurricanes intensify the force of flooding and create unprecedented destruction.⁴ In the United States, the federal, state, and local governments are typically responsible for flood mitigation.⁵

A recent Supreme Court case, *Arkansas Game & Fish Commission v. United States* (“*Game & Fish Commission*”), expanded the scope of liability for government-induced flooding on the federal level.⁶ The decision ruled that temporary floodings can be considered a constitutional taking.⁷ This Note argues that the *Game & Fish Commission* ruling can be interpreted further than on its face. I argue that not only government actions, but also government omissions that induce flooding can amount to constitutional takings. This interpretation may have far-reaching effects for

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¹ Phil O’Keefe, Ken Westgate & Ben Wisner, *Taking the Naturalness Out of Natural Disasters*, 260 NATURE 566, 566 (1976).

² See SAMUEL D. BRODY, WESLEY E. HIGHFIELD & JUNG EUN KANG, RISING WATERS: THE CAUSES AND CONSEQUENCES OF FLOODING IN THE UNITED STATES 2 (2011).

³ VA. INST. OF MARINE SCI., RECURRENT FLOODING STUDY FOR TIDEWATER VIRGINIA 4 (2013), available at http://ccrm.vims.edu/recurrent_flooding/Recurrent_Flooding_Study_web.pdf.

⁴ See BRODY, HIGHFIELD & KANG, *supra* note 2, at 11.

⁵ See *id.* at 3.

⁶ See generally *Ark. Game & Fish Comm’n v. United States*, 133 S. Ct. 511 (2012).

⁷ *Id.* at 522.

property owners and federal, state, and local governments. Insufficient or improper design or maintenance of flood mitigation infrastructure on behalf of the government can result in government liability for damage created by flooding.⁸

To reach this conclusion:

Part I presents the issue of sea level rise and recurrent flooding in detail, and how the decision in *Game & Fish Commission* allows recurrent, intermittent flooding to be compensable through a takings claim.

Part II describes the distinguishing features of torts and takings, and evaluates the Supreme Court's reasoning in *Game & Fish Commission* to identify the action in the case as a taking.

Part III provides a theoretical background using the property and liability rules of the Calabresi-Melamed framework to discuss how the Supreme Court's protection of the property in *Game & Fish Commission* provides the framework for a regulatory scheme for government omissions amounting to takings.

Part IV argues that the regulatory takings framework explained in Parts II and III amounts to a modified four-factor test in assessing a takings claim when the government may be liable for insufficient or improper design or maintenance of flood mitigation infrastructure.

Part V applies the four-factor test of Part IV to three scenarios:

1. The Fairfax flooding issues in *Livingston v. Virginia Department of Transportation*,
2. The post-Katrina flooding in New Orleans, litigated in *In re Katrina Canal Breaches Consolidated Litigation*, and,
3. Flooding that would result if dunes were not constructed in New Jersey and a Sandy-like storm hit, as shown through *Borough of Harvey Cedars v. Karan*.

⁸ BRODY, HIGHFIELD & KANG, *supra* note 2, at 3. Some of these ideas currently have legal precedent: in Virginia, *Livingston v. Va. Dep't of Transp.*, 726 S.E. 2d 264 (2012) (landowners who lose property to flooding resulting from government failure to maintain or properly design or operate mitigation structures may have a valid claim for compensation under the takings clause), and Arkansas, *Robinson v. City of Ashdown*, 783 S.W. 2d (1990) (requiring the government to pay an aggrieved landowner when the government failed to properly design or maintain a public work). See also DANIEL DOTY & CHRIS OLCOTT, VA. COASTAL POLICY CLINIC, THE VIRGINIA SUPREME COURT'S 2012 LIVINGSTON CASE: LOCALITIES AND THE RISK OF "TAKINGS" CLAIMS FOR FAILURE TO PROPERLY MAINTAIN FLOOD CONTROL STRUCTURES 3 (2013), available at <http://law.wm.edu/academics/programs/jd/electives/clinics/vacoastal/docs/livingstoncase.pdf>.

The Conclusion will review the Note and expand on the importance of *Game & Fish Commission* to property owners in the midst of further, inevitable sea level rise.

I. THE FACTS OF SEA LEVEL RISE AND RECURRENT FLOODING ARE RELEVANT WITH REGARD TO THE GOVERNMENT-INDUCED FLOODING OF *ARKANSAS GAME & FISH COMMISSION*

The sea level has been rising worldwide for over fifty years.⁹ Since the early 1990s, local sea levels have been rising at a rate substantially greater than in past decades.¹⁰ The future extent of sea level rise is projected to rise anywhere from “low” projections of 1.5 feet, to the “highest” projections of 7.5 feet by 2100.¹¹ Some projections predict that a 1.5 foot rise is expected as soon as 2033.¹² It is estimated that a four foot sea level rise would affect 316 American municipalities, which would displace over 3.6 million citizens.¹³

A main effect of sea level rise is recurrent flooding.¹⁴ Recurrent flooding is “flooding that happens repeatedly in the same areas, typically leading to economic losses.”¹⁵ Sea level rise, combined with high tides and storm surges, increases the frequency and intensity of recurrent flooding in tidal areas.¹⁶ Impacts from recurrent flooding “range from temporary road closures to the loss of homes, property and life. . . . [costing] millions to hundreds of millions of dollars per storm.”¹⁷ The destructive impact from floods in the United States each year is greater than that of any other type of natural disaster.¹⁸

⁹ JOHN BOON, HARRY WANG & JIAN SHEN, VA. INST. OF MARINE SCI., PLANNING FOR SEA LEVEL RISE AND COASTAL FLOODING 1 (2008), available at http://www.vims.edu/research/units/programs/icccr/_docs/coastal_sea_level.pdf.

¹⁰ *Id.* (reporting 3.1 mm per year from 1993 to 2003, as opposed to 1.8 mm per year from 1961 to 2003).

¹¹ VA. INST. OF MARINE SCI., *supra* note 3, at 112.

¹² *Id.*

¹³ Wendy Koch, *Study: Sea-Level Rise Threatens 1,400 U.S. Cities*, USA TODAY, July 29, 2013, <http://www.usatoday.com/story/news/nation/2013/07/29/sea-level-rise-cities-towns/2593727/>, archived at <http://perma.cc/WL28-UVZR>.

¹⁴ VA. INST. OF MARINE SCI., *supra* note 3, at 4.

¹⁵ *Id.* at 1.

¹⁶ *Id.* at 4.

¹⁷ *Id.* See also BRODY, HIGHFIELD & KANG, *supra* note 2, at 2 (“[P]rivate property, households, businesses, and the overall economic well-being of coastal communities have become increasingly vulnerable to the risks of repetitive flooding events.”).

¹⁸ BRODY, HIGHFIELD & KANG, *supra* note 2, at 11.

In the United States, the federal, state, and local governments are typically responsible for flood mitigation.¹⁹ The federal government can provide insurance, “disaster relief or large dams and levees.”²⁰ Local governments are best equipped to develop “county and citywide land use plans, development and construction codes, zoning and subdivision ordinances, technical assistance, community-based outreach, and other locally based non-structural programs.”²¹

Government-created flood mitigation infrastructure is frequently successful.²² However, inadequate construction or maintenance of flood mitigation infrastructure designed to prevent damage and destruction from natural floods has led to unprecedented destruction, devastation, and death.²³

The Supreme Court case at the heart of this Note has great potential to bring a change in treatment for residents harmed by temporary, intermittent, or recurring flooding caused by government entities. In *Game & Fish Commission*, the United States Army Corps of Engineers (“Army Corps”) constructed and maintained a dam on the Black River in northeast Arkansas.²⁴ The Army Corps originally followed a Water Control Manual (“Manual”) to determine when and how much water would be released from behind the dam.²⁵ In 1993, the Army Corps deviated from the Manual’s plan and released water at a slower rate, at the request of downstream farmers, to lengthen the harvest season.²⁶ The deviation from the Manual occurred annually: there would be a slow release of water each fall and a longer, larger rate of release in the spring and summer.²⁷

The annual releases impacted the David Donaldson Black River Wildlife Management Area (“Management Area”), owned by the Arkansas Game & Fish Commission (“Commission”).²⁸ The Management Area consists of 23,000 acres, forested with multiple types of hardwood trees,

¹⁹ *See id.* at 3.

²⁰ *Id.*

²¹ *Id.*

²² ASS'N OF STATE FLOOD PLAIN MANAGERS, *Mitigation Success Stories in the United States* iii (2012), available at http://www.floods.org/PDF/MSS_IV_Final.pdf.

²³ JON A. KUSLER, ASS'N OF STATE FLOOD PLAIN MANAGERS, *A COMPARATIVE LOOK AT PUBLIC LIABILITY FOR FLOOD HAZARD MITIGATION 4* (2009), available at http://www.floods.org/PDF/Mitigation/ASFPM_Comparative_look_at_pub_liability_for_flood_haz_mitigation_09.pdf.

²⁴ *Ark. Game & Fish Comm'n*, 133 S. Ct. at 515–16.

²⁵ *Id.* at 516.

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.* at 515–16.

and supports a variety of wildlife habitats.²⁹ It is used as a hunting preserve, a timber source, and a venue for recreation.³⁰ Between 1993 and 1999, the Commission alleged that the Corps' releases of water "resulted in the destruction of timber in the Management Area and a substantial change in the character of the terrain, which necessitated costly reclamation measures."³¹

The United States Court of Federal Claims ruled for the Commission, ruling that the increased annual flooding resulted in an appropriation of the Commission's property and significantly altered the character of the area.³² On appeal, the United States Court of Appeals for the Federal Circuit reversed the decision, ruling that a taking by government-induced flooding must be "permanent or inevitably recurring."³³ The Supreme Court granted certiorari.³⁴

The Supreme Court's ruling in *Game & Fish Commission* reversed the Court of Appeals for the Federal Circuit and overruled the traditional notion of "government actions that cause repeated floodings must be permanent or inevitably recurring to constitute a taking of property."³⁵ The Supreme Court emphasized that takings cases are fact and situation specific.³⁶ The Court ruled that: "government-induced flooding of limited duration may be compensable. No decision of this Court authorizes a blanket temporary-flooding exception to our Takings Clause jurisprudence, and we decline to create such an exception in this case."³⁷

As this Note will describe, the Court characterized the flooding liability of the property in question as a taking—as opposed to a tort, and determined that it reflected an entitlement protected by a liability rule—as opposed to a property rule.

Because of this, I will argue that this ruling opened the floodgates to enable the courts to require the government to compensate victims of temporary government-induced floodings. The Supreme Court left open the question of what will constitute a taking by government-induced flooding.

²⁹ *Id.* at 515.

³⁰ *Ark. Game & Fish Comm'n*, 133 S. Ct. at 516.

³¹ *Id.* at 516–17.

³² *Id.* at 517.

³³ *Id.*; *Ark. Game & Fish Comm'n v. United States*, 637 F.3d 1366, 1378 (Fed Cir. 2011).

³⁴ *Ark. Game & Fish Comm'n*, 133 S. Ct. at 518.

³⁵ *Id.* at 518, 523. See *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 426 (1982) (ruling that "a permanent physical occupation [of property] authorized by government is a taking").

³⁶ *Ark. Game & Fish Comm'n*, 133 S. Ct. at 518. See *Penn Cent. Transp. Co. v. New York City*, 438 U.S. 104, 124 (1978).

³⁷ *Ark. Game & Fish Comm'n*, 133 S. Ct. at 519.

Thus, this Note argues that *Arkansas Game & Fish Commission* holds that government entities can be liable for takings caused by recurrent flooding induced by both their actions and omissions of providing adequate measures and protection from recurrent flooding.

My argument is supported by the legal and theoretical background of the Supreme Court ruling. Legally, a regulatory framework is necessary to create institutional mechanisms. To develop a regulatory framework for government-induced temporary floodings, the floodings must be characterized as a taking rather than a tort.

Additionally, within a regulatory framework, the entity damaged by the flooding must be protected by a liability rule, as opposed to a property rule. While a property rule encourages settlement between parties, it discourages government intervention and regulation. The regulatory framework desired requires flooded property to be protected through a liability rule. This is the only way to assure the possibility of compensation for property owners harmed by government flooding. This will help prevent the more powerful entity (the government) from avoiding liability for its actions.

Although the Supreme Court was correct in ruling that the property damage in *Game & Fish Commission* should be characterized as a taking, it could have used a clearer and more persuasive test to reflect that conclusion and to be used in future cases.

This Note merely reflects the tip of the iceberg on the possibilities opened by the Supreme Court's ruling, how it is consistent with other legal theories, and how it is practical in the world. The interpretation of the *Game & Fish Commission* ruling has consequences extremely beneficial for the public, as coastal jurisdictions will be encouraged to protect citizens from intermittent recurrent floodings and provide better maintenance in flood mitigation projects. Jurisdictions will be incentivized to provide protection to citizens in order not to litigate or settle with countless individual property owners who sue for a temporary taking for recurrent flooding. Jurisdictions can save money by protecting their citizens from harm rather than paying for inevitable, severe, and widespread damage from natural disasters and sea level rise.

II. LEGAL BACKGROUND OF THE TORT-TAKING DISTINCTION AND ITS APPLICATION IN *ARKANSAS GAME & FISH COMMISSION*

Only takings—and not torts—can permit a property owner whose property is damaged through recurrent flooding to be compensated by the government.

The distinction of takings and torts has been scrutinized throughout American jurisprudence.³⁸ Takings are described in the “Takings Clause” of the United States Constitution, which states: “nor shall private property be taken for public use, without just compensation.”³⁹ A tort, broadly, is “conduct that amounts to a legal wrong and that causes harm for which courts will impose civil liability.”⁴⁰ While the right to receive compensation from a taking is constitutional, tort compensation is governed by the common law and by statute.⁴¹

A constitutional taking is derived from the larger concept of eminent domain.⁴² Eminent domain is an inherent sovereign right of the government⁴³ that “does not prohibit the government from taking its citizens’ property; rather, it merely prohibits the government from taking property without paying just compensation. It is designed to secure compensation, not to limit governmental interference with property rights.”⁴⁴

Although many situations can theoretically be remedied through either a tort or a takings analysis, there are factors that distinguish when takings, and sometimes not torts, allow the flooding victim to recover. Torts, or injuries that are only “in [their] nature indirect and consequential,” cannot be takings.⁴⁵ Takings, on the other hand, are not merely property injuries; rather, takings must “constitute an actual, permanent invasion of the land, amounting to an appropriation of . . . the property.”⁴⁶

The Supreme Court in *Game & Fish Commission* has “recognized . . . that no magic formula enables a court to judge, in every case, whether a given government interference with property is a taking.”⁴⁷ The justices analyzed a line of dated cases to conclude that “government-induced flooding can constitute a taking.”⁴⁸ Although the dated cases may be mandatory authority, the Court of Appeals for the Federal Circuit

³⁸ See *Ridge Line, Inc. v. United States*, 346 F.3d 1346, 1355–56 (Fed. Cir. 2003); *Hansen v. United States*, 65 Fed. Cl. 76, 79–80 (2005); 9 PATRICK J. ROHAN & MELVIN A. RESKIN, NICHOLS ON EMINENT DOMAIN § G34.03[1] (3d ed. 1980 & Supp. 2002).

³⁹ U.S. CONST., amend. V.

⁴⁰ DAN B. DOBBS, PAUL T. HAYDEN & ELLEN M. BUBLICK, THE LAW OF TORTS § 1 (2d ed. 2013).

⁴¹ *Id.*

⁴² 26 AM. JUR. 2D *Eminent Domain* § 3 (2013).

⁴³ *Id.*

⁴⁴ *Id.* (citation omitted).

⁴⁵ *Sanguinetti v. United States*, 264 U.S. 146, 150 (1924).

⁴⁶ *Id.* at 149. In the context of flooding, see 2A-6 NICHOLS ON EMINENT DOMAIN § 6.01, 13.

⁴⁷ *Ark. Game & Fish Comm’n v. United States*, 133 S. Ct. 511, 518 (2012).

⁴⁸ *Id.* (citing *Pumpelly v. Green Bay Co.*, 80 U.S. 116 (1872), *United States v. Cress*, 243 U.S. 316, 328 (1917)). The Supreme Court did note *Ridge Line* towards the end of its opinion as dicta. *Ark. Game & Fish Comm’n*, 133 S. Ct. at 522.

formulated a test to determine whether a case can be analyzed under a takings analysis in *Ridge Line, Inc. v. United States*.⁴⁹ *Ridge Line*, as persuasive authority, having arisen from the Federal Court of Claims, and as a significantly more recent decision than the cases cited by the Supreme Court, should be used to affirm the Court's determination that the flooding in *Arkansas Game & Fish Commission* is a taking.⁵⁰

Ridge Line involved property in a large West Virginia shopping center and mixed-use area, downhill from a United States Postal Service facility (the "Postal Service facility").⁵¹ Storm water runoff from the shopping center and the Postal Service facility drained into an area between the two properties known as South Hollow, which *Ridge Line* partially owned.⁵² The completion of the Postal Service facility increased storm water runoff into South Hollow significantly, resulting in downstream flooding.⁵³ "Ridge Line built a storm water detention pond in South Hollow," to alleviate the flooding; however, the Postal Service facility failed to contribute to the project.⁵⁴ *Ridge Line* sued the government on the basis of a taking, claiming that the increased flooding from the Postal Service facility required *Ridge Line* to incur additional costs presently and in the future to maintain the flooding.⁵⁵ The trial court ruled in favor of the government,⁵⁶ and *Ridge Line* appealed to the Court of Appeals for the Federal Circuit.⁵⁷

Ridge Line uses a two-prong test to distinguish a taking.⁵⁸ The first prong considers whether the effects of the government conduct was predictable ("foreseeability prong"),⁵⁹ and the second prong is whether the

⁴⁹ *Ridge Line, Inc. v. United States*, 346 F.3d 1346, 1355 (Fed. Cir. 2003). See Magdalene Carter, Note, *Flooding the Possibility of Recovery Under a Temporary Takings Analysis: The Drowning Effects of Arkansas Game & Fish Commission v. United States*, 23 VILL. ENVTL. L.J. 211, 225 (2012); Jennifer Helgeson-Albertson, Note, *Setting Moden Straight: Hansen v. United States and the Model Application of the Tort-Taking Distinction Test*, 11 GREAT PLAINS NAT. RESOURCES J. 105, 109–10 (2006/2007).

⁵⁰ Because of this reasoning, I will use the *Ridge Line* test as a foundation for the test I later compose to determine the compensability of a temporary flooding. See *infra* Part IV.

⁵¹ *Ridge Line*, 346 F.3d at 1350–51.

⁵² *Id.* at 1351.

⁵³ *Id.* The Postal Service facility did construct drainage structures and a dam to control water, but was ineffective. *Id.*

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *Ridge Line*, 346 F.3d at 1352. See also *Ridge Line, Inc. v. United States*, No. 98-CV-929 (Fed. Cl. 2002).

⁵⁷ *Ridge Line*, 346 F.3d at 1352.

⁵⁸ *Id.* at 1355.

⁵⁹ *Id.* at 1355. See Carter, *supra* note 49, at 225.

conduct was sufficiently substantial to justify a takings remedy (“substantiality prong”).⁶⁰

To satisfy the foreseeability prong, one of two requirements must be met.⁶¹ The government must intend to “invade a protected property interest,”⁶² or the invasion of property must be the “direct, natural, or probable result of an authorized activity and not the incidental or consequential injury inflicted by the action.”⁶³

The plaintiffs in *Ridge Line* did “not allege that the government intentionally appropriated its property,” and instead, needed to prove that the flooding was the “direct, natural, or probable result” of the erection of the Postal Service facility.⁶⁴ The court noted that “incidental or consequential injury” would involve “improvident conduct on the part of the government in managing its property.”⁶⁵ Rather, the flooding must be a “predicable result of government action.”⁶⁶

The substantiality prong of the *Ridge Line* test considers the “nature and magnitude” of the government conduct.⁶⁷ The conduct must “appropriate a benefit to the government at the expense of the property owner, or at least preempt the owner’s right to enjoy his property for an extended period of time, rather than merely inflict an injury that reduces its value.”⁶⁸

With regard to flooding, the court noted that, “isolated invasions, such as one or two floodings . . . , do not make a taking . . . , but *repeated invasions* of the same type have often been held to result in an involuntary servitude.”⁶⁹

The court cited *Eyherabide v. United States* to support its claim.⁷⁰ In *Eyherabide*, the United States Navy’s disregard of formal boundaries

⁶⁰ *Ridge Line*, 346 F.3d at 1357.

⁶¹ *Id.* at 1355.

⁶² *Id.*

⁶³ *Id.* (quoting *Columbia Basin Orchard v. United States*, 132 F. Supp. 707, 709 (Ct. Cl. 1955)).

⁶⁴ *Ridge Line*, 346 F.3d at 1356.

⁶⁵ *Id.*

⁶⁶ *Id.* (citation omitted). *Compare* *Cotton Land Co. v. United States*, 75 F. Supp. 232, 233–34 (1948) (ruling that there was a taking after “a succession of events . . . all occur[ing] in their natural order” resulted in flooding of the plaintiff’s land) *with* *John Horstmann Co. v. United States*, 257 U.S. 138, 146 (1921) (ruling that the movement of the percolating underground waters was hidden, and did not result in a taking).

⁶⁷ *Ridge Line*, 346 F.3d at 1356.

⁶⁸ *Id.* *See, e.g.*, *Southern Pac. Co. v. United States*, 58 Ct. Cl. 428, 431–32 (1923).

⁶⁹ *Ridge Line*, 346 F.3d at 1357 (quoting *Eyherabide v. United States*, 345 F.2d 565, 569 (Ct. Cl. 1965)) (emphasis added).

⁷⁰ *See Eyherabide*, 345 F.2d at 569.

on a gunnery range created a takings issue.⁷¹ The owners of the ranch outside of the boundaries were unable to find caretakers to the ranch, owing to warning signs regarding the dangers of the gunnery range,⁷² airplane droppings near the ranch house, bullet casings on the property, bullet holes in the house and barn, and airplane landings south of the ranch yet outside of the gunnery boundary.⁷³ Later, the ranch would be found to be destroyed by explosives, likely by naval ordinance.⁷⁴ The court concluded that the accumulation of these activities accounted for a taking by “the near-total deprivation” of benefit of the land.⁷⁵

Traditionally, in the context of flooding, courts have ruled that constitutional takings are permanent invasions of property by inundation.⁷⁶ The alleged government-induced flooding in *Game & Fish Commission* was a result of intermittent releases of water behind the dam.⁷⁷ There is binding case law that the *Game & Fish Commission* Court relied on to expand the designation of takings when the flooding is intermittent yet inevitably recurring, which supports both prongs of the *Ridge Line* test.⁷⁸ The Supreme Court in *United States v. Cress* stated that, “[t]here is no difference of kind, but only of degree, between a permanent condition . . . and a permanent liability to intermittent but inevitably recurring overflows.”⁷⁹ Similarly, in *United States v. Dickinson*, the Court found that even an area of land that the plaintiff reclaimed, that was formerly permanently flooded by intermittent overflows, still constituted a taking.⁸⁰ In applying the facts of the *Eyherabide* case as an analogy to flooding, any substantiation

⁷¹ *Id.* at 566–69.

⁷² The signs warned travelers about old boundaries of the gunnery range. They were maintained for the new boundary of the gunnery range, and not the plaintiff's ranch. However, the reasonable reaction would be to regard them as approaching the plaintiff's property. *Id.* at 568.

⁷³ *Id.*

⁷⁴ *Id.* at 568–69.

⁷⁵ *Id.* at 567.

⁷⁶ See *Barnes v. United States*, 538 F.2d 865, 870 (Ct. Cl. 1976). See also *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 426 (1982) (ruling that a taking occurs “when the physical intrusion reaches the extreme form of a permanent physical occupation.”); *Penn. Cent. Transp. Co. v. New York City*, 438 U.S. 104, 127 (1978) (A permanent use restriction constituted a taking.).

⁷⁷ *Ark. Game & Fish Comm'n v. United States*, 133 S. Ct. 511, 516 (2012).

⁷⁸ *Id.* at 519–21. See *United States v. Cress*, 243 U.S. 316, 328 (1917); *Helgeson-Albertson*, *supra* note 49, at 105. See also *Barnes*, 538 F.2d at 870.

⁷⁹ *Cress*, 243 U.S. at 328.

⁸⁰ *United States v. Dickinson*, 331 U.S. 745, 746–47, 751 (1947).

making an area of land unusable or depriving reasonable benefit to the land constitutes a taking.⁸¹

Game & Fish Commission would be ruled the same way through the lens of the *Ridge Line* test.⁸² The Commission in *Game & Fish Commission* satisfied the foreseeability prong, as the Commission alerted the Army Corps on multiple occasions to the detrimental effects of the deviation from the plan.⁸³ The government had no reason not to foresee at least the continued consequences of its actions.

As for the substantiality prong, the Supreme Court in *Game & Fish Commission* recognized that the intermittent flooding occurred over a period of six years.⁸⁴ While the flooding may not have necessarily invaded all effected parts of the Management Area, the Supreme Court identified that the land was substantially changed in character, including the destruction of trees, which led “to the invasion of undesirable plant species, making natural regeneration of the forests improbable in the absence of reclamation efforts.”⁸⁵ In applying the *Eyherabide* standard, the flooding deprived the land of its benefit to its owners.⁸⁶ This establishes the grounds for a takings claim.

Additionally, when the federal government is alleged to have created the government-induced flooding, the government is immune to tort liability by federal statute: “No liability of any kind shall attach to or rest upon the United States for any damage from or by floods or flood waters at any place.”⁸⁷ However, this statute does not apply to the Fifth Amendment takings clause, as the Constitution supersedes federal statutes.⁸⁸ Therefore, since there are federal statutes that provide sovereign immunity to the government in tort,⁸⁹ the federal government can compensate property damage it causes through flooding as a constitutional taking.

⁸¹ This is further explored in Part V.

⁸² See *Ark. Game & Fish Comm'n*, 133 S. Ct. at 522–23.

⁸³ *Id.* at 517, 522–23.

⁸⁴ *Id.* at 516.

⁸⁵ *Id.* at 517, 522–23.

⁸⁶ See *Eyherabide v. United States*, 345 F.2d 565, 569 (Ct. Cl. 1965).

⁸⁷ 33 U.S.C. § 702c (2014). This will be further explained in Part V.

⁸⁸ “It has long been established that when Congress exercises powers conferred upon it by the Constitution, as it did when enacting § 702c, ‘it must proceed subject to the limitations imposed by th[e] Fifth Amendment, and can take [property] only on payment of just compensation.’” *Turner v. United States*, 17 Cl. Ct. 832, 834 (1989) (quoting in part *Monogahela Navigation Co. v. United States*, 148 U.S. 312, 336 (1893)).

⁸⁹ *Turner*, 17 Cl. Ct. at 834–35.

This guides us with a legal framework toward the goal of a regulatory framework for property owner recovery for flooding damage caused by the government.

III. THEORETICAL FRAMEWORK: THE CALABRESI-MELAMED TAXONOMY

To create a functional regulatory framework for takings cases, the property owner must be entitled in these cases to avoid the government prevailing by other means. A theoretical framework of remedies must be considered.

To analyze the issues of remedies that fall in property and tort law, Guido Calabresi and A. Douglas Melamed constructed a theoretical framework using entitlements.⁹⁰ An "entitlement" is whom an institution chooses to entitle in a conflict.⁹¹ Calabresi and Melamed's rationale is that the choice of entitlements must be enforced by society in order to avoid allowing the larger or more powerful entity to ultimately prevail in a conflict, thereby preserving justice.⁹²

Calabresi and Melamed offer three reasons why an institution would choose to entitle one entity over the other: economic efficiency, distributional preferences, and other justice considerations.⁹³

To entitle an entity because it is economically efficient means to:

Choose the set of entitlements which would lead to that allocation of resources which could not be improved in the sense that a further change would not so improve the condition of those who gained by it that they could compensate those who lost from it and still be better off than before.⁹⁴

This analysis takes social costs and benefits into consideration.⁹⁵ Through economic efficiency, the cost should be given to the entity that is best

⁹⁰ Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972).

⁹¹ *Id.* at 1090.

⁹² *Id.* at 1090–91.

⁹³ *Id.* at 1093.

⁹⁴ *Id.* at 1093–94. A true economic efficiency analysis would involve no transaction costs. *Id.* at 1096.

⁹⁵ Calabresi & Melamed, *supra* note 90, at 1096–97.

located to make a cost-benefit analysis of the risks involved in the action, and also who can avoid the risk with the least cost.⁹⁶ In a takings case, the cost should be placed on the larger party with deeper pockets—the government. The government will typically be able to avoid the risk by adding preventative measures to not foreseeably flood other properties.⁹⁷

Calabresi and Melamed describe two different distributional goals that could affect which entity in a conflict receives entitlement: the distribution of wealth and the distribution of specific goods.⁹⁸ Distribution of wealth preferences involve the tendency of a society to entitle entities, while favoring equality or efficiency.⁹⁹ Similarly, a distribution of merit goods preference provides an entitlement to an entity without an endowment the society views as essential.¹⁰⁰ By deeming an entitlement as essential, the society makes the entitlement inalienable.¹⁰¹

In government-induced flooding cases, a distribution of wealth favors protecting property owners as opposed to the government, as it would be an inefficient system for property owners to provide self-remedies for recurring or permanent government damage. The government could inevitably flood with no consequences otherwise. The parties are made more equal when the government compensates the property owner it harms. With regards to a distribution of merit goods, society views the right to exclude as essential.¹⁰² By protecting the property owners, their inalienable right to exclude unwanted flooding becomes paramount as opposed to other government interests.

Lastly, an entity can be entitled to protection based on considerations involving justice.¹⁰³ Calabresi and Melamed use a hypothetical scenario to explain this idea:

⁹⁶ *Id.* at 1097. Additionally, this theoretical analysis assumes no transaction costs. *Id.* at 1094–95. In practice, transaction costs would be considered. However, Calabresi and Melamed suggest that assessing an issue through this framework without transaction costs is valuable to strictly view economic efficiency through the lens of a distribution of wealth. *Id.* at 1096.

⁹⁷ This is acknowledged in my four-factor test considering takings, *see infra* Part IV.

⁹⁸ Calabresi & Melamed, *supra* note 90, at 1098. Calabresi and Melamed also refer to the distribution of merit goods as “specific goods.” *Id.*

⁹⁹ *Id.* at 1098.

¹⁰⁰ *Id.* at 1100.

¹⁰¹ *Id.*

¹⁰² *See* Thomas W. Merrill, *Essay: Property and the Right to Exclude*, 77 NEB. L. REV. 730, 730 (1998).

¹⁰³ *See* Calabresi & Melamed, *supra* note 90, at 1102.

Taney likes noise; Marshall likes silence. They are, let us assume, inevitably neighbors. Let us also assume there are no transaction costs which may impede negotiations between them. Let us assume finally that we do not know Taney's and Marshall's wealth or, indeed, anything else about them. Under these circumstances we know that Pareto optimality—economic efficiency—will be reached whether we choose an entitlement to make noise or to have silence. We also are indifferent, from a general wealth distribution point of view, as to what the initial entitlement is because we do not know whether it will lead to greater equality or inequality. This leaves us with only two reasons on which to base our choice of entitlement. The first is the relative worthiness of silence lovers and noise lovers. The second is the consistency of the choice, or its apparent consistency, with other entitlements in the society.¹⁰⁴

The authors describe the one appeal to justice considering efficiency and distributional notions.¹⁰⁵ However, Calabresi and Melamed dismiss this option as the effects of the entitlement would be too general and diverse to analyze external effects, and thus give no true guidance to justice.¹⁰⁶

A second reason for entitling consistent choices is based on other entitlements in the society.¹⁰⁷ This is appealing as the choice provides predictability and encourages obedience in a society.¹⁰⁸ However, this reason falls into the same dilemma as the first choice: the consistency choice requires an analysis of efficiency and distributional notions.¹⁰⁹

To show these concepts through Calabresi and Melamed's hypothetical, we can choose to entitle Taney, the noise-lover, over Marshall, the silence-lover, because we want to improve the wealth of Taney or provide Taney with the essential right society considers creating noise.¹¹⁰ By entitling Taney on the basis of efficiency and distributional goals, within

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* at 1103.

¹⁰⁶ *See id.* at 1104.

¹⁰⁷ *See id.* at 1103.

¹⁰⁸ *See id.*

¹⁰⁹ Calabresi & Melamed, *supra* note 90, at 1103. It is not clear what the authors actually meant by "other justice reasons." *Id.* at 1105; SURI RATNAPALA, JURISPRUDENCE 281 (2d ed. 2013). However, they are relevant and worth exploring in this topic within a future paper.

¹¹⁰ *See* Calabresi & Melamed, *supra* note 90, at 1102–03.

the context of Taney and Marshall, we cannot sufficiently analyze effects on other people and the rest of society.¹¹¹ If the second line of reasoning of consistency is followed, the same issues are still encountered,¹¹² and there is still a lack of confidence in serving justice, compared to goals of efficiency and distribution.¹¹³

Once the institution chooses which entity to entitle, the institution must determine how to protect the entitlement.¹¹⁴ The two entitlement protections relevant to recurrent flooding are entitlements protected by property rules and entitlements protected by liability rules.¹¹⁵ Each of these rules creates a different framework to remedy situations of conflict.¹¹⁶

An entitlement protected by a property rule “gives rise to the least amount of state intervention.”¹¹⁷ Rather, the sale of this form of entitlement is negotiated through a voluntary transaction through the collective action of the conflicted parties.¹¹⁸ Typically, the transaction is based on the market value of the activity in question.¹¹⁹ Conversely, the sale of an entitlement protected by a liability rule is determined by an objective, collective valuation set by the institution.¹²⁰

It can be argued that if there is less institutional interference by entitling an entity through a voluntary negotiation, society should not use more costly liability rules.¹²¹ However, entitlements protected by property rules are only efficient when transaction costs are low, and this is not always plausible.¹²² Additionally, property rules are prone to hold-outs and freeloaders, depending on the non-entitled party’s willingness to pay for its violations.¹²³

In a government flooding takings case, the transactional costs may be quite high. The government likely will have complex and detailed procedures with high costs to manage. Resolution of the issues may take

¹¹¹ *See id.* at 1103.

¹¹² *Id.* at 1104.

¹¹³ *See id.* at 1105.

¹¹⁴ *Id.* at 1105–06.

¹¹⁵ *Id.*

¹¹⁶ Calabresi & Melamed, *supra* note 90, at 1105–06.

¹¹⁷ *Id.* at 1092.

¹¹⁸ *Id.* at 1107.

¹¹⁹ *See id.*

¹²⁰ *See id.*

¹²¹ *See id.*

¹²² Calabresi & Melamed, *supra* note 90, at 1096.

¹²³ *Id.* at 1107.

years. The government can freeload from these long and costly procedures and may be able to wait until the property owner must give up out of costs or frustration.

Conversely, liability rules are preferable when the “market valuation of the entitlement is deemed inefficient, that is, it is either unavailable or too expensive compared to a collective valuation.”¹²⁴ A regulatory scheme through collective valuation can be formed when negotiating between individual parties is eliminated and the scheme is set by the institution.¹²⁵ However, as with considering which entity to entitle, justice may not be satisfied by moving from a property rule to a liability rule, considering efficiency and distributional goals.¹²⁶

In the context of *Game & Fish Commission*, the Supreme Court chose to entitle the Management Area owned by the Commission.¹²⁷ From an economic efficiency perspective, placing the cost on the Army Corps logically follows from the Calabresi-Melamed perspective, as it is the entity that is best situated to make a cost-benefit analysis of the risks of deviating from the plan, and can avoid the risk at least cost.¹²⁸ It would be extremely costly for the Commission to protect the Management Area from the flooding altering the character of the land.¹²⁹ To be protected from the flooding, the Commission would have to add large enough and heavily vegetated buffer zones,¹³⁰ or a system of dams and dikes, or some other erosion-preventing protective technique. The Army Corps, conversely, can evaluate the risk of releasing the water according to the plan.¹³¹

Within the context of distributional goals, the Army Corps, as a federal entity, had vastly more wealth and resources than the Commission, a state entity. Calabresi and Melamed would suggest that this society prefers to entitle the less wealthy party to move towards a more egalitarian society.¹³² Lastly, the court sought to provide entitlement through consistency—when a repeated, temporary flooding affects property in

¹²⁴ *Id.* at 1110.

¹²⁵ *See id.* at 1106–10.

¹²⁶ *See id.* at 1110.

¹²⁷ *See Ark. Game & Fish Comm'n v. United States*, 133 S. Ct. 511, 522 (2012).

¹²⁸ *See Calabresi & Melamed, supra* note 90, at 1094.

¹²⁹ *See Ark. Game & Fish Comm'n*, 133 S. Ct. At 517.

¹³⁰ U.S. ENVTL. PROT. AGENCY, STORM WATER MANAGEMENT FOR CONSTRUCTION ACTIVITIES: SEDIMENT AND EROSION CONTROL 3–22 (1992), available at <http://www.epa.gov/region6/Gen/w/sw/sediment.pdf>.

¹³¹ *See Ark. Game & Fish Comm'n*, 133 S. Ct. at 516.

¹³² *See Calabresi & Melamed, supra* note 90, at 1098–99.

such a designated manner, the source of the flooding, the government, will be responsible for providing compensation for the invasion of property by a taking.¹³³

The Supreme Court chose to protect the Management Area's entitlement with a liability right. Like Taney, the noise-lover, and Marshall, the silence-lover, in Calabresi and Melamed's hypothetical situation, the actions of the Army Corps harmed the Commission.¹³⁴ However, unlike Taney and Marshall, the Commission and the Army Corps were not in a position to negotiate how the irregular floodings that diverged from the plan affected the Management Area.¹³⁵ Providing an entitlement to the Management Area through a property rule would not be efficient, as the transaction costs of negotiations between the Commission and the Army Corps would be high and ineffective, shown by the Commission's repeated and failed complaints to the Army Corps.¹³⁶

Additionally, the Army Corps must maintain the dam.¹³⁷ The Supreme Court could have enjoined the Army Corps to release the water at regular intervals as the plan prescribes.¹³⁸ This would be a property rule remedy,¹³⁹ as it would push the negotiating back to the parties, forcing the Army Corps, as well as the farmer who requested the deviation from the plan, to bargain with the Commission to lift the injunction. By allowing the Army Corps to compensate the Commission by designating a taking, the Corps can assess the risk of other possible takings they would be responsible for at other points on the river and determine what action to take—removing the Commission from any bargaining.

The Melamed-Calabresi taxonomy shows how a regulatory scheme must use a liability rule protecting the property owner in the context of temporary floodings caused by the government.

IV. REFORMULATION OF THE TAKINGS RULE FOR ALLEGED GOVERNMENT-CAUSED TEMPORARY FLOODING CLAIMS

This Note has explained the legal and theoretical background used by the Supreme Court to construct a regulatory framework for temporary

¹³³ See *Ark. Game & Fish Comm'n*, 133 S. Ct. at 522.

¹³⁴ See *id.* at 516–17.

¹³⁵ See *id.*

¹³⁶ See *id.*

¹³⁷ See *id.*

¹³⁸ See *id.*

¹³⁹ See Calabresi & Melamed, *supra* note 90, at 1116.

floodings induced by the government. I will argue that the government is liable for some of their omissions, and not only actions, that would prevent damage from temporary flooding. This creates a new set of factors for determining a taking.

Omissions add a new dimension to the criteria for a taking, as discussed earlier in this paper.¹⁴⁰ This restricts takings in such a way that the factors constituting a taking are¹⁴¹:

1. Causation—Did a government action or omission cause the flooding?
2. Foreseeability—Could the government reasonably foresee repeated flooding?¹⁴²
3. Responsibility—Did the government have a responsibility to act and prevent the flooding? and
4. Substantiality—Was the flooding substantial and did it invade rights of the landowner?

Each of these criteria will be discussed and reviewed, in brief.

A. Causation

The language of *Game & Fish Commission* leaves open the possibility that the government can be liable for omissions that induce floodings.¹⁴³ However, the largest issue that opposes the expansion of *Game & Fish Commission* to omissions is causation.¹⁴⁴ It could be asked: how can the government be responsible for inaction, or something it did not do? Additionally, courts may not see government omissions as a sufficient causal

¹⁴⁰ See *supra* Part II.

¹⁴¹ The Supreme Court in *Arkansas Game & Fish Commission* noted causation, foreseeability, and substantiality as factors of temporary takings by government induced floodings; however, the Court did not add clear detail as to what these factors entail. See *Ark. Game & Fish Comm'n*, 133 S. Ct. At 523.

¹⁴² See generally Jan G. Laitos & Teresa Helms Abel, *The Role of Causation When Determining the Proper Defendant in a Takings Lawsuit*, 20 WM. BILL OF RTS. J. 1181, 1233–41 (2012) (providing a framework in which foreseeability is a factor of causation). I disagree with this as there can be scenarios where the government is the cause of flooding, yet the flooding was unforeseeable, and should be considered separately. See *infra* Parts V.A–B.

¹⁴³ The decision mentions government action but does not provide any dicta concerning government inaction. See generally *Ark. Game & Fish Comm'n*, 133 S. Ct. at 513–22.

¹⁴⁴ See Laitos & Abel, *supra* note 142, at 1241.

link for takings cases.¹⁴⁵ Yet, some legal theorists believe that an act/omission distinction is arbitrary, since both kinds of conduct can result in the same liability and result.¹⁴⁶

There are two possibilities to this causation factor: first, did the government “act,” and, second, was the government a proximate cause of the flooding?

1. Action

To determine whether the government acts, it is important to recognize an act/omission distinction, as it is important to articulate a theory of freedom.¹⁴⁷ Thus, one solution to avoid this issue is to evaluate an omission through a free will theory.¹⁴⁸ Free will allows omissions to be interpreted as a choice between alternatives—acting on one alternative and actively not choosing another determined by characteristics of the situation.¹⁴⁹ If the government considers an action to deter flooding, yet chooses an alternative path which creates flooding, the action factor of the causation requirement is satisfied.

2. Proximate Cause

A broad, overarching explanation of proximate cause is that proximate cause “depends essentially on whether the policy of the law will extend the responsibility . . . to the consequences which have in fact occurred.”¹⁵⁰ More clearly, the owner must show that the property was taken because of the government’s action.¹⁵¹ The case law in this area greatly varies and is often very unclear.¹⁵² Additionally, it may be difficult, if not impossible, to sort out various forces that contribute to causing

¹⁴⁵ See *id.* at 1182.

¹⁴⁶ George P. Fletcher, *Truth in Codification*, 31 U.C. DAVIS L. REV. 745, 761 (1998).

¹⁴⁷ See *id.* at 760.

¹⁴⁸ See generally Timothy O’Connor, *Free Will*, THE STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta ed. 2013), <http://plato.stanford.edu/archives/spr2013/entries/freewill>, archived at <http://perma.cc/J7U6-EEM3>.

¹⁴⁹ See *id.* at 3.1.

¹⁵⁰ 57A AM. JUR. 2D *Negligence* § 412 (2013).

¹⁵¹ Laitos & Abel, *supra* note 142, at 1195.

¹⁵² See *id.* See also Robert Meltz, *Takings Law Today: A Primer for the Perplexed*, 34 ECOLOGY L.Q. 307, 322–23 (2007) (describing multiple iterations of proximate cause).

the flooding: nature, market, third parties, the plaintiff's contributory actions, etc.¹⁵³

*B. Foreseeability*¹⁵⁴

A logical chain supports foreseeability in recurrent flooding. Recurrent flooding is, by definition, foreseeable.¹⁵⁵ The case is sufficiently stronger regarding foreseeability if the governmental body is aware of the repeated floodings. This can be accomplished through the injured property owner notifying the government body of the recurrent flooding, or if the government body explicitly recognizes the area as prone to recurrent floodings.

*C. Responsibility*¹⁵⁶

Responsibilities of the government are enumerated and restricted by the Constitution.¹⁵⁷ Omissions, interpreted through the act/omission distinction within the context of the Constitution, can be interpreted as a failure to act completely when one has the responsibility to act.¹⁵⁸ As mentioned, the Takings Clause of the Constitution provides a responsibility for the government, stating that "private property [shall not] be taken for public use, without just compensation."¹⁵⁹ Additionally, the Constitution ensures a safeguard from the taking of property without due process.¹⁶⁰

¹⁵³ Laitos & Abel, *supra* note 142, at 1195, 1999 (noting that judicial decisions turn to policy considerations when sifting through multiple actors in causation issues).

¹⁵⁴ For previous discussion of legal factors involved in foreseeability, *see supra* text accompanying notes 62–67.

¹⁵⁵ *See* VA. INST. OF MARINE SCI., *supra* note 3, at vi ("flooding that happens repeatedly in the same areas, typically leading to economic losses.").

¹⁵⁶ "Responsibility" is defined as responsibility in a moral sense, as a duty that deserves blame or praise, and as opposed to causal responsibility. *See* Andrew Eshleman, *Moral Responsibility*, THE STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta ed. 2009), <http://plato.stanford.edu/archives/win2009/entries/moral-responsibility/>, archived at <http://perma.cc/MA2P-686D>.

¹⁵⁷ U.S. CONST. art. I, § 8.

¹⁵⁸ *See* *DeShaney v. Winnebago Cnty. Dep't of Soc. Servs.*, 489 U.S. 189, 202 (1989) (holding that failure to protect minor from violent father does not violate minor's rights under Due Process Clause).

¹⁵⁹ U.S. CONST. amend. V.

¹⁶⁰ U.S. CONST. amend. V, XIV.

D. *Substantiality*¹⁶¹

The Supreme Court expressed that a taking can be found in a temporary flooding situation where the damage is substantial.¹⁶² The Supreme Court, however, did not rule on whether there was substantial flooding in *Arkansas Game & Fish Commission*, and thus the Court did not describe a substantial flooding for a successful takings claim.¹⁶³

The test that should be used in *Arkansas Game & Fish Commission* to determine a substantial flooding amounting to a government taking can be found in *Ridge Line*.¹⁶⁴ While even that court was not overtly descriptive in determining “whether the government’s interference with any property rights of Ridge Line was substantial and frequent enough to rise to the level of a taking,”¹⁶⁵ the case is precedential for the Court of Federal Claims, and should be followed as a matter of *stare decisis*.

One way to determine substantiality can be drawn from *Eyherabide v. United States*, which the court in *Ridge Line* cited in its opinion.¹⁶⁶ This Court of Claims case involved the government restricting beneficial use of a property by deterring access through the use of warning signs approaching the property, and through creating an unsafe condition by way of the airplane droppings, gunshots, and explosives on and around the property in question.¹⁶⁷ By analogy, government-induced flooding, or flooding by government omission, can also deter access to property or create an unsafe condition—both depriving a landowner of beneficial use of property.¹⁶⁸

Additionally, another line of cases provides guidance when the land is flooded. In *Pumpelly v. Green Bay Co.*, the Supreme Court ruled that, “where real estate is actually invaded by superinduced additions of water . . . so as to effectually destroy or impair its usefulness, it is a taking.”¹⁶⁹ In *United States v. Cress*, permanent destruction of the land could be established by intermittent floodings.¹⁷⁰ In *Game & Fish Commission*,

¹⁶¹ The basis for this factor comes from the *Ridge Line* test, *see supra* accompanying text at notes 68–83.

¹⁶² *See Ark. Game & Fish Comm’n v. United States*, 133 S. Ct. 511, 521 (2012).

¹⁶³ *See id.* at 521–22.

¹⁶⁴ *See Ridge Line Inc. v. United States*, 346 F.3d 1346, 1357 (Fed. Cir. 2003).

¹⁶⁵ *Id.*

¹⁶⁶ *Eyherabide v. United States* is discussed in detail, *supra* accompanying text at notes 69–81.

¹⁶⁷ *See Eyherabide v. United States*, 345 F.2d 565, 568 (Ct. Cl. 1965).

¹⁶⁸ This will be applied in Part V.

¹⁶⁹ *Pumpelly v. Green Bay Co.*, 80 U.S. 166, 181 (1872).

¹⁷⁰ *United States v. Cress*, 243 U.S. 316, 318 (1917). The Court has also characterized the temporary interference of the enjoyment of property as compensable by a Fifth Amendment

the Court of Federal Claims found that the interference was severe, depriving the beneficial use from the Commission.¹⁷¹ The land was transformed by the government flooding from being suitable for a forest and wildlife preserve to a headwater swamp.¹⁷² From these cases, a rule can be established for grounds for the substantiality of an interference in a takings case, that the government is liable for flooding interferences with the usefulness or enjoyment of a land.

All four factors must be satisfied to constitute a successful takings claim. Since takings are subject to permanent damage by temporary floodings,¹⁷³ civil damages can be determined through substantiality of the destruction.¹⁷⁴

V. RELEVANT APPLICATIONS: VIRGINIA, NEW ORLEANS, AND NEW JERSEY

As omissions of the government which induce flooding fit into a regulatory and theoretical framework, the *Ridge Line* test in accordance with the *Game & Fish Commission* opinion has been adapted to create a four-factor test for takings regarding government-caused flooding. In this section, the four factors will be applied to three major and recent flooding controversies: flooding in Fairfax, Virginia, flooding in New Orleans after Hurricane Katrina, and the flooding of the Jersey Shore after Hurricane Sandy. In these cases, the government failed to take proper precautions against recurrent flooding and storm surges, which were likely intensified by global warming and sea level rise.

A. *Flooding in Fairfax, Virginia*

In 2006, a severe storm hit Northern Virginia, causing a local stream's flow depth to rise from two to nearly fourteen feet.¹⁷⁵ A combination of the Beltway and sediment accumulation in the flood channel blocked the flood waters from dispersing, and instead, the water rushed

taking. See *United States v. Causby*, 328 U.S. 256, 259, 266–67 (1946) (Overhead flights from a nearby airport interfered with the owner's customary use of his property as a chicken farm).

¹⁷¹ *Ark. Game & Fish Comm'n v. United States*, 87 Fed. Cl. 594, 644, 647 (2009).

¹⁷² *Id.* at 610.

¹⁷³ See *Ark. Game & Fish Comm'n v. United States*, 133 S. Ct. 511, 522 (2012).

¹⁷⁴ Causation, foreseeability, and responsibility would also be factors in accounting for punitive damages, which occur in tort situations.

¹⁷⁵ *Livingston v. Va. Dep't. of Transp.*, 726 S.E. 2d 264, 267 (Va. 2012); DOTY & OLCOTT, *supra* note 8, at 3.

into the neighborhood of Huntington in Fairfax, Virginia.¹⁷⁶ The flood waters mixed with sewage, and flooded the property of 135 owners and renters.¹⁷⁷ The property owners brought suit against Fairfax County and the Virginia Department of Transportation (“VDOT”), arguing that the flood was a state constitutional taking.¹⁷⁸

The Virginia Supreme Court ruled that the government’s failure to properly design a flooding control structure created standing for a takings claim.¹⁷⁹ The damage caused by the flooding in this case, through “affirmative and purposeful” acts, required compensation.¹⁸⁰

While the *Livingston* case only sets the groundwork for constitutional standing for takings in Virginia flooding cases,¹⁸¹ the decision greatly reflects the four-factor test set out above.¹⁸² The opinion simplified causation to damage caused by a public use.¹⁸³ While this is a different version of the causation factor I argued for,¹⁸⁴ it is applicable in practical matters of far-reaching importance, such as the flooding that occurred in New Orleans after Hurricane Katrina.¹⁸⁵

The court noted the following regarding foreseeability in the *Livingston* case:

The storm that led to the June 2006 flood was no doubt severe, but it was not unprecedented—Hurricane Agnes in 1972 produced a greater water flow in the relocated Cameron Run. That the channel would at times be subjected to heavy water flows, then, was not unforeseeable. More importantly, however, the Plaintiffs allege that the June 2006 flood was the result not of natural causes but of human agency: Had VDOT not allowed several feet of sediment to accumulate in the relocated Cameron Run, they claim, “the vast majority of [their] homes would not have been flooded at all, and those few that did would have suffered only minor flooding.”¹⁸⁶

¹⁷⁶ *Livingston*, 726 S.E. 2d at 267; DOTY & OLCOTT, *supra* note 8, at 3.

¹⁷⁷ *Livingston*, 726 S.E. 2d at 267; DOTY & OLCOTT, *supra* note 8, at 3.

¹⁷⁸ *Livingston*, 726 S.E. 2d at 267; DOTY & OLCOTT, *supra* note 8, at 3–4.

¹⁷⁹ *Livingston*, 726 S.E. 2d at 272; DOTY & OLCOTT, *supra* note 8, at 4.

¹⁸⁰ *Livingston*, 726 S.E. 2d at 274; DOTY & OLCOTT, *supra* note 8, at 5.

¹⁸¹ See DOTY & OLCOTT, *supra* note 8, at 5.

¹⁸² See *supra* Part IV.

¹⁸³ See *Livingston*, 726 S.E. 2d at 278.

¹⁸⁴ Action and proximate cause would be satisfied.

¹⁸⁵ See *infra* Part V.B.

¹⁸⁶ *Livingston*, 726 S.E. 2d at 271–72.

This is on point with the foreseeability requirement of the four-factor test. Once the government recognizes, or should reasonably recognize an inadequate flooding concern, the government should take measures to account for future floods. While the government body may not have an affirmative duty to protect property against damage, they will be encouraged to protect property against flooding to avoid a successful takings claim.¹⁸⁷

The court was explicit in displaying the responsibility factor, stating that the government's failure to act is a compensable damage under the Virginia Constitution as long as the government's conduct is "affirmative and purposeful."¹⁸⁸ This reasoning amounts to an omission.¹⁸⁹

For the substantiality factor, the court did not seem to require substantial damage for a taking, rather, it established a compensable taking for a flooding that occurred only once.¹⁹⁰ It also seems that the amount or severity of damage is not at issue as long as the property is physically damaged.¹⁹¹ Doty and Olcott keenly note that residents affected by a flooding, "may be awarded a variable amount of compensation or none at all."¹⁹²

The framework provided by *Livingston v. Virginia Department of Transportation* is rarely found in other states.¹⁹³

B. *Flooding in New Orleans: Hurricane Katrina and the Levee Failure*

A notable example of the failure of a government flood mitigation effort occurred in 2005. In late September, Hurricane Katrina made landfall near New Orleans as a Category Four hurricane.¹⁹⁴ Levees and pump systems in the city—meant as a last line of defense to protect the city from flooding—were breached by the increased height of the flood

¹⁸⁷ DOTY & OLCOTT, *supra* note 8, at 6.

¹⁸⁸ *Livingston*, 726 S.E. 2d at 274; DOTY & OLCOTT, *supra* note 8, at 4–5.

¹⁸⁹ *See* DOTY & OLCOTT, *supra* note 8, at 4–5.

¹⁹⁰ *Livingston*, 726 S.E. 2d at 271.

¹⁹¹ *See id.* at 273–74.

¹⁹² DOTY & OLCOTT, *supra* note 8, at 6.

¹⁹³ Arkansas has a rule that is stronger than the rule outlined in *Livingston*. *See Robinson v. City of Ashdown*, 783 S.W. 2d 53 (Ark. 1990) (requiring the government to pay an aggrieved landowner when the government failed to properly design or maintain a public work). Other states have failed to follow the lead of Virginia and Arkansas. DOTY & OLCOTT, *supra* note 8, at 5.

¹⁹⁴ Jonathan Corum & Ben Werschkul, *Draining New Orleans*, N.Y. TIMES, http://www.nytimes.com/packages/html/national/2005_HURRICANEKATRINA_GRAPHIC/index_02.html, archived at <http://perma.cc/3YB4-7WUF>.

waters caused by the storm.¹⁹⁵ The levee failures flooded 80 percent of the city, with flood depths from one to ten feet.¹⁹⁶ Nine hundred eighty-six Louisiana residents died as a result of the storm.¹⁹⁷ The floods displaced more than 600,000 households, one month after the storm.¹⁹⁸ In New Orleans, 70 percent of housing units, or 134,000 units, were damaged.¹⁹⁹ The estimated cost of damage in New Orleans from the flooding may be as much as \$250 billion.²⁰⁰

The Army Corps of Engineers is frequently cited as being responsible for the flooding of portions of the Lower 9th Ward and St. Bernard Parish because of its failure to maintain the Mississippi River–Gulf Outlet.²⁰¹ Over 400 suits were brought against the government Army Corps.²⁰²

The suits were brought through tort causes of action.²⁰³ The cases were consolidated in *Robinson v. United States*, or *In re Katrina Canal Breaches Litigation*.²⁰⁴ The decision was trumped by the conclusion that the government is immune to tort liability in flooding.²⁰⁵ This immunity is established by the Flood Control Act of 1928 (“FCA”).²⁰⁶ The statute states that, “No liability of any kind shall attach to or rest upon the United States for any damage from or by floods or flood waters at any place.”²⁰⁷ While the Fifth Circuit initially said otherwise, upon second review, the

¹⁹⁵ *Id.*

¹⁹⁶ Allison Plyer, *Facts for Features: Hurricane Katrina Impact*, GREATER NEW ORLEANS CMTY. DATA CTR. (Aug. 28, 2014), <http://www.gnocdc.org/Factsforfeatures/HurricaneKatrinaImpact/>, archived at <http://perma.cc/A29C-9MZC>.

¹⁹⁷ *Id.*

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

²⁰⁰ Kimberly Amadeo, *How Much Did Hurricane Katrina Damage the U.S. Economy?*, ABOUT.COM, http://useconomy.about.com/od/grossdomesticproduct/f/katrina_damage.htm (last updated Aug. 29, 2014), archived at <http://perma.cc/93GP-7NW3>.

²⁰¹ Mark Schleifstein, *Hurricane Katrina Flooding in Lower 9th Ward, St. Bernard Parish Heading to Court*, NOLA.COM (Sept. 10, 2012, 7:11 AM), http://impact.nola.com/katrina/print.html?entry=/2012/09/hurricane_katrina_flooding_in.html, archived at <http://perma.cc/8J4R-GZ8L>.

²⁰² See *In re Katrina Canal Breaches Litig.*, 696 F.3d 436, 443 (5th Cir. 2012).

²⁰³ *Id.* See also 2012 *Emerging Issues 6608*, *Hurricane Katrina Litigation, Hurricane Katrina Litigation Against The United States: The Fifth Circuit Closes A Briefly-Opened Window For Recovery*, MATTHEW BENDER & CO., Dec. 20, 2012 [hereinafter 2012 *Emerging Issues 6608*].

²⁰⁴ See generally *In re Katrina* 696 F.3d 436.

²⁰⁵ *Id.* at 441, 448.

²⁰⁶ 33 U.S.C. § 702c (2012).

²⁰⁷ *Id.* State and local jurisdictions may not have this same statutory protection.

court affirmed the plaintiffs' appeals, barring them from recovering from the federal government.²⁰⁸

However, this provision applies only to the Mississippi River and its flood control activity,²⁰⁹ and only to tort liability, as it cannot overstep a constitutional taking.²¹⁰

We can characterize the flooding caused by levee system failure as a temporary taking as opposed to a tort. By applying the four-factor test, it is easy to establish that the flooding was caused by the government, the government was responsible for the flooding by improper or incomplete action, and the damage caused was substantial. The issue in the Katrina flooding litigation as a takings case would be determined by whether the Army Corps had sufficient knowledge of the inadequacy of the levees to know that substantial flooding would occur given intense conditions, as in Hurricane Katrina, to rise to be considered foreseeable flooding. There is evidence supporting both foreseeable²¹¹ and unforeseeable²¹² arguments.

C. *Flooding at the Jersey Shore: Hurricane Sandy and the Sand Dunes Dispute*

Hurricane Sandy made landfall near Atlantic City, New Jersey, on October 29, 2012.²¹³ In New Jersey, twelve people died as a result of the storm, millions of homes did not have electricity for days, and billions of dollars in property damage occurred.²¹⁴ A full moon amplified the storm surge, which rose to tides of nearly nine feet—almost twice that of

²⁰⁸ *In re Katrina*, 696 F.3d at 441. See also *2012 Emerging Issues 6608*, *supra* note 203.

²⁰⁹ 33 U.S.C. § 702 (2012).

²¹⁰ See Vasan Kesavan, *The Three Tiers of Federal Law*, 100 NW. U. L. REV. 1479, 1500 (2006) (outlining the hierarchy of authorities in the United States, including the subordinate position held by Federal statutes to the Constitution).

²¹¹ See, e.g., Joby Warrick & Peter Whoriskey, *Army Corps Is Faulted on New Orleans Levees*, WASH. POST (Mar. 25, 2006), <http://www.washingtonpost.com/wp-dyn/content/article/2006/03/24/AR2006032401819.html>, archived at <http://perma.cc/Y7DF-D2J5>.

²¹² See, e.g., Robert G. Bea, *Failure of the New Orleans 17th Street Canal Levee & Floodwall During Hurricane Katrina*, GEOCONGRESS 08 (2008), <http://www.urbanflood.eu/Documents/Failure%20of%20the%20New%20Orleans%2017th%20street%20canal%20levee%20and%20floodwall.pdf>.

²¹³ Tim Sharp, *Superstorm Sandy: Facts About the Frankenstorm*, LIVESCIENCE (Nov. 27, 2012, 10:50 AM), <http://www.livescience.com/24380-hurricane-sandy-status-data.html>, archived at <http://perma.cc/9LWN-4BLR>.

²¹⁴ *Id.*

most historic surges.²¹⁵ Massive damage from the storm surge occurred on the Jersey Shore, with many communities still struggling to recover a year later.²¹⁶

In response to the disaster, the federal government, in conjunction with New Jersey, sought to upgrade—and in some areas, build—a sand dune system that has been proven to protect towns on the Jersey Shore in Sandy and prior storms.²¹⁷ Opponents to the dunes brought suit in *Borough of Harvey Cedars v. Karan*.²¹⁸ The plaintiffs argued that the detriment received from the construction of the dune (to both the property and the lack of view) entitled them to just compensation as a government taking.²¹⁹ This was undisputed.²²⁰ However, the plaintiffs contended that the general benefit of the protection the dunes give to the public did not detract compensation from the just compensation calculation.²²¹ The New Jersey Supreme Court ruled that:

[W]hen a public project requires the partial taking of property, “just compensation” to the owner must be based on a consideration of all relevant, reasonably calculable, and non-conjectural factors that either decrease or increase the value of the remaining property. In a partial-takings case, homeowners are entitled to the fair market value of their loss, not to a windfall, not to a pay out that disregards the home’s enhanced value resulting from a public project. To calculate that loss, we must look to the

²¹⁵ *Id.*; Bob Henson, *Dissecting Sandy’s Surge*, ATMOSNEWS (Dec. 31, 2012), <https://www2.ucar.edu/atmosnews/opinion/8585/dissecting-sandys-surge>, archived at <http://perma.cc/86W5-4D8D>.

²¹⁶ Scott Gurian, *The List: Ten NJ Communities Still Struggling to Recover from Sandy*, NJSPOTLIGHT (Dec. 9, 2013), <http://www.njspotlight.com/stories/13/12/08/the-list-ten-nj-communities-still-struggling-to-recover-from-sandy/>, archived at <http://perma.cc/E2GZ-XNLN> (All ten communities cited are coastal municipalities).

²¹⁷ Kate Zernike, *Trying to Shame Dune Holdouts at Jersey Shore*, N.Y. TIMES (Sept. 5, 2013), http://www.nytimes.com/2013/09/05/nyregion/dunes-fight-sets-neighbor-against-neighbor-in-new-jersey.html?pagewanted=all&_r=0&pagewanted=print, archived at <http://perma.cc/ND4C-47ZR>. But see Joanna M. Foster, *Can Artificial Sand Dunes Save the Jersey Shore?*, CLIMATEPROGRESS (Nov. 1, 2013, 8:35 AM), <http://thinkprogress.org/climate/2013/11/01/2855451/jersey-beach-battles/>, archived at <http://perma.cc/9RME-8HFX>.

²¹⁸ See *Borough of Harvey Cedars v. Karan*, 70 A.3d 524 (N.J. 2013).

²¹⁹ *Id.* at 526.

²²⁰ *Id.*

²²¹ *Id.* at 534.

difference between the fair market value of the property before the partial taking and after the taking.²²²

Soon after the settlement of the case, Governor Chris Christie signed an Executive Order directing the New Jersey Attorney General to “immediately coordinate legal action to acquire the necessary easements to build dunes.”²²³ Many towns have maintained a strong effort to persuade property owners to permit the government to obtain easements to build the dunes.²²⁴

Although the New Jersey dunes project has been met with favor from the New Jersey Supreme Court and the Governor, we can imagine a New Jersey where this was not the case. We can imagine a coastal municipality, X-Town, unrestricted by law, that may disregard the science of sea level rise,²²⁵ and the disastrous effects from Sandy. All along the Jersey Shore, every other town has permitted the federal government to construct the dune system. X-Town refuses to settle. Many years in the future, conditions of flood mitigation protection in X-Town remain unchanged from the present. During this time, Sandy II hits, as powerful and with as much destructive force as Sandy I in 2012. X-Town receives massive amounts of damage from the flood waters, while the rest of the Jersey Shore municipalities remain minimally damaged—the dunes serving their purpose.

Under the four-factor test, we can determine whether a taking occurred by omission of X-Town in constructing the dunes for its residents. The government caused the damage as it consciously omitted building dunes, causing substantial and foreseeable damage. The local government of X-Town would be responsible for compensating the residents

²²² *Id.* at 526–27. After the court’s decision, the Karans settled the dispute for \$1. Martin Bricketto, *NJ Pushes Dune Construction As Landmark Case Settles*, LAW360, (Sept. 25, 2013, 6:31 PM), <http://www.law360.com/articles/475651/nj-pushes-dune-construction-as-landmark-case-settles>, archived at <http://perma.cc/BZ7X-TKLQ>.

²²³ Press Release, State of New Jersey, Governor Christie Signs Executive Order To Move Forward With Dune Construction And Other Flood Hazard Risk Reduction Measures (Sept. 25, 2013) (on file with author), available at <http://www.state.nj.us/governor/news/news/552013/approved/20130925b.html>, archived at <http://perma.cc/3PPW-QT6N>; *Exec. Order No. 140*, THE OFFICIAL WEBSITE FOR THE STATE OF NEW JERSEY (Sept. 25, 2013), available at <http://nj.gov/infobank/circular/eocc140.pdf>.

²²⁴ See Evan Lehmann, *One Year After Sandy, N.J. Towns Accelerate Dune Building, Despite Holdouts*, E&E PUBLISHING, LLC (Oct. 25, 2013), <http://www.eenews.net/stories/1059989390>, archived at <http://perma.cc/4BGF-2SLQ>.

²²⁵ See *supra* accompanying text at notes 9–18.

of X-Town (likely all of them in some way) for the damage to their property by way of taking liability.

CONCLUSION

This Note argued that *Arkansas Game & Fish Commission v. United States* permits more than the plain ruling that property damage caused by temporary or intermittent floodings is compensable as a constitutional taking. The language of the ruling permits omissions or failures of the government regarding flood mitigation works to be considered takings. Since the Supreme Court ruled that the flooding created a takings claim as opposed to a tort claim, and the property in question was protected by a liability rule as opposed to a property rule, a regulatory framework can be created. Precedent from the *Ridge Line* case suggests that a revised test is applicable to consider omissions or failures to act by the government. The four-factor test was applied to three scenarios to prove its relevancy.

This Note, while surveying many different issues and concerns, fails to discuss some relevant matters. This Note focuses on the rights of the landowners, and does not cover other matters of justice, alluded to by Calabresi and Melamed, concerning the rights of the government or rights of other property owners and the public. This Note does not focus on a deep legal analysis on all precedent the Supreme Court considered, or could consider, with regard to the *Game & Fish Commission* decision.²²⁶ This Note merely reflects the tip of the iceberg on the practicalities and possibilities opened by the Supreme Court's ruling, how it is consistent with other legal theories, and how it is practical in the world.

With the realities and dangers of recurring flooding and impending sea level rise in the present and all-too-near future, the *Game & Fish Commission* decision may provide an extreme benefit for the public, as coastal jurisdictions will be encouraged to protect citizens from intermittent recurrent floodings and provide better maintenance in flood mitigation projects. To avoid takings claims, jurisdictions should be incentivized to provide protection to citizens in order not to litigate or settle with countless individual property owners who sue for a temporary taking for recurrent flooding. Jurisdictions can save money by protecting their citizens

²²⁶ For a relevant discussion tangential to this Note on the legal distinction of "temporary" and "permanent" takings in precedent cases, see Brian T. Hodges, *Will Arkansas Game & Fish Commission v. United States Provide a Permanent Fix for Temporary Takings?*, 41 B.C. ENVTL. AFF. L. REV. 365 (2014).

from harm, rather than paying for inevitable, severe, and widespread damage from natural disasters and sea level rise.

As damage and destruction from sea level rise is becoming more and more frequent,²²⁷ litigation should return to the Supreme Court within the next few years. The merits of this paper and the protection of property owners will have the spotlight in the most distinguished court in the United States. For the safety of coastal residents throughout the United States, let us hope the property owners prevail.

²²⁷ Erika Spanger-Siegfried, *Sea Level Rise and Tidal Flooding: Forthcoming Report on Encroaching Tides Signals a New Chapter for Many Coastal Communities*, THE EQUATION (Oct. 2, 2014), <http://blog.ucusa.org/sea-level-rise-and-tidal-flooding-encroaching-tides-signal-a-new-chapter-for-many-coastal-communities-673>, archived at <http://perma.cc/F9JF-SMGK>.