

## IS THE “ACT OF GOD” DEAD?

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### I. INTRODUCTION

*There will be great earthquakes, and in various places famines and pestilences. And there will be terrors and great signs from heaven. Luke 21:11.*

From time immemorial, we have looked up to the stars and looked out upon our horizons, and we witnessed the hand of God in all manner of natural phenomena and disasters, including famines, fires, floods, tempests, and earthquakes. These connections between nature and the supernatural could not be escaped even by more scientific observers, including Benjamin Franklin in 1737:

The Earthquake which surpriz'd us here on Wednesday Night the 7th Inst. was not felt at Annapolis in Maryland, but the Accounts we have from New-Castle on Delaware, represent the Shake to be nearly as violent there. . . . Three or four Evenings successively after the Earthquake an unusual Redness appeared in the Western Sky and southwards, continuing about an hour after Sunset, gradually declining.<sup>1</sup>

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For his part, Founding Father Thomas Jefferson, an inveterate observer of scientific phenomena, recorded an earthquake at his estate in Monticello at precisely 2:11 PM on February, 10, 1774. As Jefferson observed, “It shook the houses so sensibly that every body run [sic] out of the doors . . . .”<sup>2</sup> While Jefferson and the rest of the Founding Fathers were eminently familiar with natural disasters, they evidently did not believe that such phenomena merited any special powers of government in the U.S. Constitution nor exceptions to the Bill of Rights. The Framers created some exceptions to our constitutional rights for circumstances including “time of war”<sup>3</sup> and “[c]ases of [r]ebellion or [i]nvasion.”<sup>4</sup> They also included special provisions to address such circumstances as insurrections and invasions<sup>5</sup> and “[t]reason, [b]ribery, and other high [c]rimes and [m]isdemeanors.”<sup>6</sup> However, the Framers saw no need to create exceptions or special provisions for natural phenomena such as the earthquakes observed by both Franklin and Jefferson.<sup>7</sup> Nevertheless, such exceptions did soon find their way into American jurisprudence through vehicles including the act of God defense to contract and tort liability recognized by common law,<sup>8</sup> as well as the act of God

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1. Benjamin Franklin, *The Papers of Benjamin Franklin: Causes of Earthquakes*, THE PA. GAZETTE (Dec. 15, 1737), <http://franklinpapers.org/franklin/framedVolumes.jsp?vol=2&page=190a>.

2. THOMAS JEFFERSON, JEFFERSON’S MEMORANDUM BOOKS: ACCOUNTS, WITH LEGAL RECORDS AND MISCELLANY, 1767–1826 370 (James A. Bear, Jr. & Lucia C. Stanton eds., 1997).

3. See U.S. CONST. amend. III (“No Soldier shall, in time of peace be quartered in any house, without the consent of the Owner, nor in time of war, but in a manner to be prescribed by law.”).

4. See *id.* art. I, § 9 (“The Privilege of the Writ of Habeas Corpus shall not be suspended, unless when in Cases of Rebellion or Invasion the public Safety may require it.”).

5. See *id.* art. I, § 8 (authorizing Congress “[t]o provide for calling forth the Militia to execute the Laws of the Union, suppress Insurrections and repel Invasions . . .”).

6. See *id.* art. II, § 4 (authorizing removal of executive officers upon “Impeachment for, and Conviction of, Treason, Bribery, or other high Crimes and Misdemeanors.”).

7. Reflecting this observation, constitutional law scholars have emphasized that we have “one constitution for normal times and crisis times alike . . . .” See Kathleen M. Sullivan, *Do We Have an Emergency Constitution?*, BULL. OF THE AM. ACAD. OF ARTS & SCL., Winter 2006, at 30.

8. For an introduction and overview of the act of God defense to tort liability, see generally Denis Binder, *Act of God? Or Act of Man?: A Reappraisal of the Act of God*

defense codified in a number of U.S. environmental laws.<sup>9</sup>

In more than twenty years with the U.S. Environmental Protection Agency (EPA) before joining the legal academy, I saw many communities affected by fires, floods, hurricanes, earthquakes, and other natural disasters. However, I never saw a case where the act of God defense prevailed against environmental liability. Confirming this personal experience, I later learned that the number of reported cases where the act of God defense had prevailed against environmental liability, under all statutes and all federal circuits, was also exactly zero.<sup>10</sup>

This raises two obvious questions: (1) why does the act of God defense so often fail? and (2) if the act of God defense has never succeeded in court, does the act of God defense really mean anything today? This essay will attempt to answer both questions. For many good reasons, many legal scholars have suggested that the act of God defense should be effectively retired as it is no longer relevant to our modern world where the hand of Man may be seen behind every “natural” disaster.<sup>11</sup> As submitted by Professor Denis Binder more than

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*Defense in Tort Law*, 15 THE REV. OF LITIG. 1 (1996).

9. Briefly, these statutes include: the Clean Water Act, 33 U.S.C. § 1321(f)(1) (2012), the Oil Pollution Act, 33 U.S.C. §§ 2702(d)(1)(A), 2703(a)(1) (2012), and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9607(b)(1) (2012). The Resource Conservation and Recovery Act of 1976 (RCRA) provides no Act of God defense to liability. 42 U.S.C. §§ 6901–6908 (2012). The Clean Air Act (CAA) provides no Act of God defense to liability, but recognizes Act of God only in the context of authorizing EPA to temporarily waive standards for fuels or fuel additives “where such extreme and unusual fuel and fuel additive supply circumstances are the result of a natural disaster, an Act of God, a pipeline or refinery equipment failure, or another event that could not reasonably have been foreseen or prevented . . .” 42 U.S.C. § 7545(c)(4)(C)(ii)(II) (2012).

10. Memorandum from Ernesto A. Long, Prof. of Law Librarianship, Univ. N.M. School of Law, to Clifford Villa, Assistant Prof. of Law, Univ. N.M. School of Law (Dec. 16, 2016) (on file with author). This conclusion was reached independently by other researchers as well. *See, e.g.*, Frank Leone & Mark A. Miller, *Acts of God, War, and Third Parties: The Previously Overlooked CERCLA Defenses*, 45 ENVTL. L. REP. NEWS & ANALYSIS 10129, 10132 (Feb. 2015) (finding “no reported opinions have rejected liability based on an act of God defense.”); Kenneth T. Kristl, *Diminishing the Divine: Climate Change and the Act of God Defense*, 15 WIDENER L. REV. 325, 344 (2010) (“In fact, there appears to be no reported cases actually finding the Act of God defense successful under these federal environmental laws.”).

11. *See, e.g.*, Myanna Dellinger, *An “Act of God”? Rethinking Contractual Impracticability in an Era of Anthropogenic Climate Change*, 67 HASTINGS L.J. 1551 (2016); Jill M. Fraley, *Re-examining Acts of God*, 27 PACE ENVTL. L. REV. 669 (2010); Kristl, *supra* note 10, at 351 (succinctly suggesting that the act of God defense “stands

twenty years ago, “[t]he time has come to recognize the act of God defense for what it is: anachronistic . . . .”<sup>12</sup> Without rejecting these scholarly criticisms, this essay endeavors to find some life and value remaining within the act of God defense. In particular, the act of God defense, as currently provided within federal environmental law, may provide a viable incentive for industry and other actors to take reasonable precautions in order to save lives, protect the environment, and otherwise avoid or mitigate the impacts of natural disasters.

## II. WHY THE ACT OF GOD DEFENSE FAILS

To understand why the act of God defense has never succeeded in a reported environmental court case, we will naturally examine the plain language of the act of God provisions in the current statutes. First though, it may help us to consider how the act of God defense developed in American common law.

The history of the act of God defense has been well-researched and articulated by legal scholars, including Professor Binder.<sup>13</sup> In brief, like much of U.S. common law, the act of God defense was imported from the common law of England. In 1581, while establishing the famous Rule in Shelley’s Case,<sup>14</sup> the English court observed that performance of obligations could be excused through the death of one of the parties. Generalizing, the court declared “it would be unreasonable that those things which are inevitable by the

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on shaky grounds that will only become shakier as the full effects of climate change take hold”).

12. Binder, *supra* note 8, at 4.

13. See generally, Binder, *supra* note 8, at Part II: “History of the Act of God Defense.”

14. Shelley’s Case, 76 Eng. Rep. 206, 1 Co. Rep. 93b (1581). The Rule in Shelley’s Case generally worked to vest complete ownership of a real property in a named receiver of a gift or conveyance, notwithstanding the expressed intent by the conveying party to create some remainder in the receiver’s heirs. Like the act of God defense, the Rule in Shelley’s Case was imported from English law to American law, but it was later abolished by statute in most states. Echoing the modern critique of the act of God defense, at least one modern commentator has declared the Rule in Shelley’s Case “a troublesome anachronism.” CORNELIUS J. MOYNIHAN & SHELDON F. KURTZ, INTRODUCTION TO THE LAW OF REAL PROPERTY: AN HISTORICAL BACKGROUND OF THE COMMON LAW OF REAL PROPERTY AND ITS MODERN APPLICATION 181, 190 (3d ed. 2002).

[a]ct of God, which no industry can avoid, nor policy prevent, should be construed to the prejudice of any person in whom there was no laches.”<sup>15</sup> From this 16th century formulation, we derive two principal elements for the act of God defense: (1) the cause of the breach in performance was an “act of God”—however that may be defined—and (2) even given the act of God, the consequences flowing from this “act” could not be avoided by some affirmative efforts. Thus, while a sudden deluge may be seen as an act of God by some understandings, liability remains for the damages that result from flooding when a constructed culvert that replaces a natural channel becomes overwhelmed with runoff. The English court in *Greenock Corporation v. Caledonian Railway Company* observed:

[F]loods of extraordinary violence must be anticipated as likely to take place from time to time. It is the duty of any one who interferes with the course of a stream to see that the works which he substitutes for the channel provided by nature are adequate to carry off the water brought down even by extraordinary rainfall . . . .<sup>16</sup>

This limitation on the act of God defense, including the affirmative obligation to anticipate significant hazards and avoid related damages, naturally found its way from English to American jurisprudence. Almost a century and a half ago, the Supreme Court of California, citing English precedents, declared—rather dramatically—that for an act of God defense to succeed:

[T]he earth must be convulsed, the lightning must kindle the fire, the air must blow in tempests or tornadoes, and the water must come in waterspouts or sudden irruptions [sic] of the sea . . . by the forces of nature, uncontrolled and unaided by the hand of man . . . .”<sup>17</sup>

The natural forces must be “entirely independent of human

15. *Shelley's Case*, 76 Eng. Rep. at 219. As a contemporary of Shakespeare, the English judge of *Shelley's Case*, Lord Chancellor Sir Thomas Bromley, might readily have approved the act of God defense to release the Ship-Master from liability for losses incurred in *The Tempest*. WILLIAM SHAKESPEARE, *THE RIVERSIDE SHAKESPEARE* 1606: *THE TEMPEST* (1974) (reporting the first recorded performance of *The Tempest* in 1611).

16. *Greenock Corp. v. Caledonian Ry. Co.* [1917] S.L.T 67, 71 (Eng).

17. *Polack v. Pioche*, 35 Cal. 416, 417 (1868).

agency” and must be of a character that is “inevitable” and “irresistible.”<sup>18</sup>

The U.S. Congress eventually codified the act of God defense in modern environmental statutes. One early version of the act of God defense appeared in the Clean Water Act of 1972, Section 311, which continues to provide that the “owner or operator of any vessel from which oil or a hazardous substances is discharged” may escape liability for such release where such owner or operator “can prove that a discharge was caused solely by (A) an act of God . . . .”<sup>19</sup> For this purpose, the Clean Water Act defined act of God to mean simply “an act occasioned by an unanticipated grave natural disaster.”<sup>20</sup> Building upon this simple definition, in 1980, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA),<sup>21</sup> known popularly as Superfund, provided a definition for act of God that appropriated the vocabulary of the common law more directly. At the very beginning of the statute, Congress provided as follows:

For purpose of this subchapter—

- (1) The term “act of God” means an unanticipated grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character, the effects of which could not have been prevented or avoided by the exercise of due care or foresight.<sup>22</sup>

Ten years later, Congress adopted this more detailed definition verbatim in the Oil Pollution Act (OPA) of 1990.<sup>23</sup> Thus, considering the expansive jurisdictions of CERCLA plus OPA, any discharge or threatened discharge of “oil” to waters subject to OPA,<sup>24</sup> and any release or threatened release of

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18. *Id.* at 417–18.

19. Clean Water Act, Pub. L. No. 92-500, sec. 2, § 311(f)(1), 86 Stat. 816, 866 (1972) (codified as amended at 33 U.S.C. § 1321(f)(1) (2012)).

20. *Id.* § 311(a)(12), 86 Stat. at 863.

21. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767 (1980) (codified at 42 U.S.C. §§ 9601–9675 (2012)).

22. CERCLA § 101(1), 42 U.S.C. § 9601(1) (2012).

23. OPA § 1001, 33 U.S.C. § 2701(1) (2012) (defining “act of God”).

24. *See* OPA § 1002(a), 33 U.S.C. § 2702(a) (2012) (OPA jurisdiction). As defined by OPA, “oil” includes “oil of any kind or in any form, including petroleum, fuel oil, sludge, oil refuse, and oil mixed with waste other than dredged spoil,” but for purposes of avoiding regulatory overlap, it specifically excludes “hazardous substances” subject to CERCLA. OPA § 1001(23), 33 U.S.C. § 2701(23).

“hazardous substances” to any land or water subject to CERCLA,<sup>25</sup> could conceivably be subject to an act of God defense. Moreover, under the expanded definition of act of God in CERCLA and OPA, the triggering event need not be a natural “disaster,” but could be simply a natural “phenomenon” such as a flood, fire, tremor, or landslide where no human casualties are suffered but property damages occur.

Given this potentially broad scope, it may be surprising that courts have not broadly embraced the act of God defense to environmental liability. But that rejection may be explained by a more complete consideration of the definition of act of God. For example, both the Clean Water Act definition and CERCLA/OPA definition require that the triggering event be “unanticipated.” What kind of “grave natural disaster” or “natural phenomenon” is unanticipated? The legislative history of CERCLA provides some interesting insight on this question. In describing the “act of God” as CERCLA would ultimately define it, a House report observed that while the act of God defense under common law may be “more nebulous,” many occurrences asserted as act of God would not qualify as such under the statutory definition.<sup>26</sup> The House report continued, “[f]or example, a major hurricane may be an ‘act of God,’ but in an area (and at a time), where a hurricane should not be unexpected, it would not qualify” under the CERCLA definition of act of God.<sup>27</sup>

Consistent with this legislative understanding, Hurricane Katrina, the most devastating natural disaster in U.S. history, occurred in an area (and at a time) where it could hardly be unexpected. Before Katrina, the threat of hurricanes to the Gulf Coast had been known for centuries, as demonstrated by the Galveston Hurricane in 1900 that killed over 8,000 people.<sup>28</sup> More than a quarter-century ago, scientists began

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25. See CERCLA § 104(a)(1), 42 U.S.C. § 9604(a) (2012) (CERCLA jurisdiction). As defined by CERCLA, “hazardous substance” extends very broadly to include all “toxic pollutants” under the Clean Water Act, all “hazardous air pollutants” under the Clean Air Act, all “hazardous wastes” under the Resource Conservation and Recovery Act, as well as a long list of substances specifically identified by regulation. CERCLA § 101(14), 42 U.S.C. § 9601(14).

26. H.R. REP. NO. 99-253, pt. 1, at 22-23 (1977).

27. *Id.*

28. See generally TED STEINBERG, ACTS OF GOD: THE UNNATURAL HISTORY OF NATURAL DISASTERS IN AMERICA (2000) (observing the foreseeability of a hurricane threat to New Orleans).

warning of the connection between hurricanes and man-made climate change.<sup>29</sup> With increasing specificity, climate scientists provided warnings that climate change might cause an “increase in the wind speed and peak rate of precipitation of major tropical cyclones (i.e., hurricanes and typhoons)” which, when combined with sea-level rise and the loss of Louisiana wetlands, could pose devastating damages on the Gulf Coast, particularly to New Orleans.<sup>30</sup> Even more specific warnings of the hurricane threat to New Orleans came the very year before Hurricane Katrina, when federal, state, and local officials participated in a planning exercise in 2004, dubbed “Hurricane Pam,” that specifically anticipated massive flooding in New Orleans.<sup>31</sup> Of course, Hurricane Katrina itself was seen coming from a thousand miles away, forming as a tropical depression on August 23, 2005, and tracked closely until making landfall in the early morning of August 29, 2005.<sup>32</sup> Whatever else might be said about the devastation wrought by Hurricane Katrina and the anemic government response that followed,<sup>33</sup> it could not be said that Hurricane Katrina was “unanticipated” for purposes of the act of God defense.

In addition to “unanticipated,” the modern CERCLA/OPA definition of act of God requires that the natural phenomenon be “of an exceptional, inevitable, and irresistible character,” with effects “which could not have been prevented or avoided by the exercise of due care or foresight.”<sup>34</sup> In the legislative history of CERCLA, one critic, Senator Harrison Schmitt of New Mexico, found these conditions on the act of God defense to be “[o]f particular concern” and “unduly burdensome.”<sup>35</sup> In the view of Senator Schmitt, “[s]uch unclear and additive limitations would make the ‘act of God’ defense almost legally

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29. See BILL MCKIBBEN, *THE END OF NATURE* 95, 126 (1989).

30. See *Massachusetts v. EPA*, 549 U.S. 497, 521–22 n.18 (2007) (quoting affidavit of climate scientist Michael MacCracken, noting that “MacCracken’s 2004 affidavit—drafted more than a year in advance of Hurricane Katrina—was eerily prescient.”).

31. HURRICANE KATRINA: A NATION STILL UNPREPARED, S. REP. NO. 109–322, at 4 (2d Sess. 2006).

32. *Id.* at 22–24.

33. For a summary and analysis of the infamously weak response by federal and state governments to Hurricane Katrina, see Clifford J. Villa, *Law and Lawyers in the Incident Command System*, 36 SEATTLE U. L. REV. 1855, 1882–88 (2013).

34. CERCLA § 101(1), 42 U.S.C. § 9601(1) (2012); OPA § 1001(1), 33 U.S.C. § 2701(1) (2012).

35. 126 CONG. REC. S13,633 (daily ed. Sept. 26, 1980) (statement of Sen. Schmitt).



unassertable . . . .”<sup>36</sup> Several decades later, and still without any reported decisions where the act of God defense prevailed in an environmental case, one might conclude that Senator Schmitt’s critique was prophetic.

The definition of act of God in CERCLA/OPA raises the question of what effects of a natural phenomenon are truly “inevitable” and “irresistible.” Hurricane Sandy, seven years after Katrina, proved that mass casualties from an even much larger storm event are not inevitable with competent planning and deployment of resources.<sup>37</sup> As for environmental impacts, oil tankers coming down from Alaska routinely survive storms at sea, so why not expect the same for oil tanks situated on land along the Gulf Coast?

One of the many overlooked and forgotten side-stories of Hurricane Katrina was the massive release of oil to the environment from barges, pipelines, oil platforms, and storage facilities.<sup>38</sup> For example on September 4, 2005, Murphy Oil USA, Inc. notified the EPA of an oil spill at their Meraux Refinery in St. Bernard Parish, Louisiana.<sup>39</sup> Flood waters from Hurricane Katrina had dislodged, lifted, and damaged a 250,000-barrel above ground storage tank, releasing approximately 1,050,000 gallons of crude oil into the surrounding area. Approximately 1,700 homes in an adjacent residential neighborhood were affected, along with nearby parks, roads, school yards, and several canals.<sup>40</sup> Without any doubt, the proximate cause of this environmental damage was a hurricane that would certainly constitute a “grave natural disaster” within the meaning of act of God. Indeed, if ever there seemed to be a case where the act of God defense in OPA should apply, this seemed to be it. This massive oil spill was not, for example, the result of an allegedly intoxicated sea

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36. *Id.*

37. See Villa, *supra* note 33, at 1898 n.291 (noting that the official estimates of those killed by Hurricane Sandy—more than twice the diameter of Hurricane Katrina—were ten times less than those killed by Hurricane Katrina).

38. By one estimate, the total amount of oil spilled as a consequence of Hurricane Katrina and Hurricane Rita a month later exceeded the volume spilled by the Exxon Valdez in 1989. See Justin Pidot, *Oil and Gas and Floods*, 48 RICHMOND L. REV. 959, 961, n.15 (2014).

39. *Response to 2005 Hurricanes: Murphy Oil Spill*, EPA, <https://archive.epa.gov/katrina/web/html/index-6.html>. (last visited Jan. 10, 2017).

40. *Id.*

captain running an oil tanker into a reef, as with the Exxon Valdez in 1989.<sup>41</sup> This was not the result of gross negligence in the completion of an oil well 5,000 feet below the surface of the Gulf of Mexico, as with the Deepwater Horizon in 2010.<sup>42</sup> This was simply a hurricane, traditionally recognized as a natural phenomenon occurring along the Gulf Coast long before there were people to appreciate and tremble at the powerful force.

But the Murphy Oil spill was not an act of God under OPA, and it seems that Murphy Oil knew it. Perhaps they simply understood the plain language of the important qualifiers in the act of God definition, recognizing that hurricanes on the Gulf Coast are hardly “unanticipated” and the effects of this particular hurricane very much could have been “prevented or avoided by the exercise of due care.” For whatever reason, Murphy Oil chose not to contest its liability under OPA for the Murphy Oil spill and indeed proceeded to carry out the necessary cleanup actions with oversight from the EPA and the U.S. Coast Guard.<sup>43</sup>

Certainly, given our more recent understanding of climate change science, it may be a fair question of whether—or to what extent—Hurricane Katrina or any other individual storm event was truly a natural phenomenon.<sup>44</sup> Despite the extraordinary statistical powers of the world’s best climate scientists,<sup>45</sup> we still cannot answer this question definitively. However, even if we hypothesize a truly “natural” phenomenon—a 9.0 earthquake in the Pacific Northwest, perhaps—the applicability of the act of God defense to environmental liability still would not be assured.

While perhaps not yet carrying the name recognition of the San Andreas Fault, the Cascadia Subduction Zone has recently

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41. See *Hazelwood v. State*, 836 P.2d 943, 944–45 (Alaska Ct. App. 1992).

42. *In re Oil Spill by the Oil Rig “Deepwater Horizon,”* 21 F. Supp. 3d 657, 718–24 (E.D. La. 2014).

43. See *Response to 2005 Hurricanes: Murphy Oil Spill*, *supra* note 39.

44. Of course, in the world that has always been marked by questionable land use choices and industrial activities, and increasingly now in the era of climate change, we see the hand of humankind everywhere, leading some scholars to designate the next epoch of Earth’s history as the “anthropocene.” See, e.g., Dellinger, *supra* note 11.

45. See, e.g., INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2014: SYNTHESIS REPORT 8 (2015), <https://www.ipcc.ch/report/ar5/syr/> (“Impacts from recent climate-related extremes, such as heat waves, droughts, floods, cyclones and wildfires, reveal significant vulnerability and exposure of some ecosystems and many human systems to current climate variability (*very high confidence*).”).

been revealed as an extremely dangerous earthquake threat, potentially producing “the worst natural disaster in the history of North America.”<sup>46</sup> As we observed with Hurricane Katrina and the Murphy Oil spill, one likely consequence of a Cascadia Subduction Zone earthquake would be a massive oil spill to Puget Sound from a number of refineries and fuel storage and distribution facilities.<sup>47</sup> In the event of catastrophic Cascadia earthquake, the massive storage tanks and other industrial equipment, plus miles of pipeline along Puget Sound, would either be immediately compromised by the tremendous shaking or be overwhelmed by the tsunami to follow minutes later. Additional releases of oil and hazardous substances may be expected from all manner of industrial facilities in western Washington, from Bellingham in the north to Longview in the south.

Moreover, the threat of a Cascadia Subduction Zone earthquake is not unlikely, with recent estimates suggesting that the odds of a major quake along this zone in the next fifty years are approximately one in three.<sup>48</sup> If a megaquake along this zone occurs in the next fifty years, it may be difficult to argue successfully that related oil spills or other releases were unanticipated. Because such a catastrophe may indeed be anticipated now, failures to prevent or avoid such releases by the present “exercise of due care or foresight” may eliminate the act of God defense from serious assertion in such circumstances.

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46. For a gripping (and truly terrifying) introduction to the Cascadia Subduction Zone and the possible consequences of a “next full-margin rupture,” see Kathryn Schultz, *The Really Big One*, THE NEW YORKER, Jul. 20, 2015, at 52. In brief, the Cascadia Subduction Zone is a fault line that runs for seven hundred miles off the coast of the Pacific Northwest, from northern California, along the Oregon and Washington coasts, to near Vancouver Island in Canada. The Cascadia Subduction Zone represents the rough line where the oceanic Juan de Fuca tectonic plate meets and slides beneath the North American tectonic plate. *Id.*

47. These would include the petroleum bulk storage and distribution facilities (aka “tank farms”) on Harbor Island, at the mouth of Seattle’s Duwamish River. These facilities, built upon fill material that created Harbor Island, may be immediately inundated due to liquefaction from a major Seattle earthquake. See SEATTLE OFFICE OF EMERGENCY MGMT., SEATTLE HAZARD IDENTIFICATION AND VULNERABILITY ANALYSIS 11 (2014) (noting that Seattle’s Duwamish River area, which includes Harbor Island, “is considered the best site in the nation to study liquefaction”).

48. See Schultz, *supra* note 46, at 54.

### III. NEW LIFE FOR THE ACT OF GOD DEFENSE

If the act of God defense to environmental liability has never prevailed in court in the last several decades, and does not appear likely to prevail in court in future, what good is it? As promised in the Introduction, this Section will provide one answer: despite the absence of reported cases, the act of God defense remains a viable and valuable incentive for the exercise of due care in order to save lives and protect property and the environment from the foreseeable impacts of natural disasters. This Section supports this conclusion with three arguments based upon concepts of (1) enforcement discretion; (2) canons of construction; and (3) legislative history of the act of God defense in environmental law.

#### A. *Enforcement Discretion*

As noted above, for both CERCLA<sup>49</sup> and OPA,<sup>50</sup> the act of God defense is presented within the context of three affirmative defenses. These defenses generally provide that an otherwise responsible party shall not be liable if the defendant can prove, by the preponderance of the evidence, that the release or discharge was caused solely by: (1) an act of God; (2) an act of war; or (3) an act or omission of a third party. While there are no reported cases of the act of God succeeding as an affirmative defense under CERCLA or OPA,<sup>51</sup> this does not mean this defense has always failed. The absence of reported cases may simply reflect the proper exercise of an agency’s inherent authority to decide which violations among many merit some enforcement response. This doctrine of “enforcement discretion” not only allows agencies the discretion to decide where they will take enforcement action, but insulates them from legal actions for failure to bring enforcement actions in other cases.<sup>52</sup>

Without the aid of published cases, it may be difficult—

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49. CERCLA § 107(b), 42 U.S.C. § 9607(b) (2012).

50. OPA § 1003, 33 U.S.C. § 2703(a) (2012).

51. *See supra* note 10 and accompanying text.

52. *See generally* Heckler v. Chaney, 470 U.S. 821 (1985). In the particular context of EPA enforcement, *see* Sierra Club v. Whitman, 268 F.3d 898 (9th Cir. 2001) (finding no affirmative duty of EPA to take enforcement action against Arizona water treatment plant, even where there was evidence of 128 violations of the Clean Water Act).

though not *impossible*—to see the act of God defense succeeding in appropriate cases. This is also true, however, for all three affirmative defenses provided in CERCLA and OPA, as each of these affirmative defenses rarely, if ever, succeed in court in defeating environmental liability.<sup>53</sup> For example, in twenty-two years of CERCLA practice at the EPA, I can recall seeing only one case where the act or omission of a third party—the so-called “innocent landowner” defense—prevailed, in a case involving a farmer in Idaho whose downstream farmland was contaminated by upstream mining activities. As for the act of war defense, I saw it work exactly once, and only for an unusual case involving unexploded munitions left over from combat during World War II on Alaska’s Attu Island.<sup>54</sup> Importantly, in each of these cases, no courts were involved as the EPA simply exercised its enforcement discretion in choosing not to pursue liability. As such, there are no reported decisions to cite for these cases. And yet, agency exercise of enforcement discretion occurs far more often than a case where an agency files a complaint and tries the case to judgment and a reported decision. Students and academics who rely entirely on reported decisions may thus miss a vast area of contemporary legal practice, which may include regular (though unstated) recognition of affirmative defenses including the act of God.

The exercise of enforcement discretion may readily—and perhaps *necessarily*—apply in the context of a major natural disaster such as the catastrophic Cascadia Subduction Zone earthquake. In the aftermath of such an event, by one estimate, “it will take between one and three months . . . to restore electricity, a month to a year to restore drinking water

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53. Among these three affirmative defenses, the act of war defense has perhaps been asserted and rejected most often, with courts making distinctions between an “act of war” and supporting acts of manufacturing, mining, and other industrial activities. *See, e.g.*, *United States v. Shell Oil Co.*, 294 F.3d 1045 (9th Cir. 2002) (private company production of aviation gas for war effort during World War II does not constitute act of war for purposes of CERCLA defense). For a comprehensive review finding that, like the act of God defense, the act of war defense “has never been successfully asserted” in a published decision, *see* Desiree Gargano, *An Act of War: Finding a Meaning for What Congress Has Left Undefined*, 29 *TOURO L. REV.* 147 (2012).

54. Military history buffs may recall Attu Island, in the Aleutian Chain, as one of rare grounds of armed conflict on U.S. soil during World War II. *See, e.g.*, ROBERT J. MITCHELL, *THE CAPTURE OF ATTU: A WORLD WAR II BATTLE AS TOLD BY THE MEN WHO FOUGHT THERE* (2000).

and sewer services, six months to a year to restore major highways, and eighteen months to restore healthcare facilities.” At the same time, “the economy of the Pacific Northwest will collapse. Crippled by a lack of basic services, businesses will fail or move away.”<sup>55</sup>

In the wake of such devastation, assessing penalties for unpermitted discharges of oil may not be EPA’s top priority. Rather, many EPA employees in the regional office would be taking care of themselves and their families.<sup>56</sup> As an agency, the EPA will be focused on emergency response: cleaning up spills of oil and hazardous substances,<sup>57</sup> restoring drinking water and sewer services,<sup>58</sup> and reconstituting agency operations.<sup>59</sup> Once full agency operations resume, perhaps

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55. Schultz, *supra* note 46, at 59.

56. People may tend to forget that EPA is composed of people too. EPA Region 9, for example, is based in San Francisco, California. In 1989, when the Loma Prieta earthquake struck northern California many employees of EPA Region 9 experienced the same impacts and challenges as the neighbors they served and regulated. One former employee of EPA Region 9 who was stuck in a BART train tunnel beneath San Francisco at the moment of the Loma Prieta earthquake described the immediate moments afterwards as follows: “We were sent down the dark tunnel with instructions to always keep our hand on the wall (very dirty) to avoid the third rail in case the power returned. I eventually emerged out of the Civic Center station to a very bright and very different Market Street . . .” Email from Roberta Hedeem, Physical Scientist, Environmental Protection Agency, to Clifford Villa, Assistant Prof. of Law, Univ. N.M. School of Law (April 27, 2017) (on file with author). More infamously, the Loma Prieta earthquake disrupted a World Series baseball game between the San Francisco Giants and Oakland Athletics, and resulted in the destruction of thousands of buildings and the loss of sixty-three lives. See John K. Pierre & Gail S. Stephenson, *After Katrina: A Critical Look at FEMA’s Failure to Provide Housing for Victims of Natural Disasters*, 68 LA. L. REV. 443, 457 (2008).

57. Under the National Response Framework, Emergency Support Function #10, EPA has been assigned the lead role for responding to spills of oil and hazardous substances in the event of a major incident. See DEP’T OF HOMELAND SEC., NATIONAL RESPONSE FRAMEWORK 36 (3d ed. 2016), <https://www.fema.gov/media-library/assets/documents/117791#>.

58. Under the National Response Framework, Emergency Support Function #3, EPA maintains a support role in assisting with the restoration of public infrastructure, including drinking water and wastewater facilities. See DEP’T OF HOMELAND SEC., EMERGENCY SUPPORT FUNCTION ANNEXES (2016), <https://www.fema.gov/media-library/assets/documents/25512>.

59. In the event of a major incident affecting any federal office, the agency should activate its Continuity of Operations Plan (COOP), which each federal agency is directed to prepare and maintain. See DEP’T OF HOMELAND SEC., FEDERAL CONTINUITY DIRECTIVE 1 (Oct. 2012), <https://www.fema.gov/media-library/assets/documents/86284>. Among other requirements, this directive states “the policy of the United States to maintain a comprehensive and effective continuity capability . . . to ensure the preservation of our form of Government under the Constitution . . .” *Id.* at 2.

months or years later, the question of environmental enforcement may finally arise. In such circumstances, if you were an EPA attorney, where would you begin? Between two industrial facilities that appear as likely sources of oil spills, if one facility has a sterling maintenance record and the other has a notorious history of maintenance failures, which facility would you be more likely to pursue? Under the rules of strict liability,<sup>60</sup> good intentions or bad intentions may not matter in a court of law. However, good faith efforts to prevent spills may definitely matter to an agency in deciding where to focus its limited time and resources.

The doctrine of enforcement discretion allows EPA enforcement personnel substantial room for considerations of intent, reason, and mercy.<sup>61</sup> Such considerations may be particularly appropriate in the wake of a grave natural disaster where a party tried to avoid or mitigate the effects of such disaster "by the exercise of due care." In such a case, regulators can conserve their limited enforcement resources by exercising their enforcement discretion and focusing their resources on parties who took little or no measures to avoid the effects of a disaster.

### B. *Canons of Construction*

Like Shakespeare,<sup>62</sup> the act of God defense came to us from the Elizabethan era,<sup>63</sup> but may retain vitality in the modern

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60. While not precisely specified in the environmental statutes, courts have consistently recognized that discharges of pollution subject to the Clean Water Act and releases of hazardous substances subject to CERCLA are held to the standard of strict liability. *See generally* WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW 783-86 (2d ed. 1994).

61. Lest we forget the timeless words of Portia in the courtroom scene of *The Merchant of Venice*:

The quality of mercy is not strain'd,  
It droppeth as the gentle rain from heaven  
Upon the place beneath. It is twice blest:  
It blesseth him that gives and him that takes....  
And earthly power doth then show likest God's  
When mercy seasons justice.

WILLIAM SHAKESPEARE, THE MERCHANT OF VENICE act 4, sc. 1, *in* THE RIVERSIDE SHAKESPEARE 184-97 (G. Blakemore Evans ed., 1974).

62. For one authoritative examination of the influence of Shakespeare on modern civilization, *see generally* HAROLD BLOOM, SHAKESPEARE: THE INVENTION OF THE HUMAN (1998).

63. *See* cases cited *supra* notes 14-15.

world. While the modern act of God defense remains open to interpretation, Congress certainly intended the act of God defense to mean *something* for environmental law. As noted above, Congress devised the defense in the modern Clean Water Act of 1972, expanded upon it with CERCLA in 1980, and embraced it again with OPA in 1990.<sup>64</sup> To understand the act of God defense in environmental law, we must of course begin with the language of the statute. In so doing, we may be aided by the canons for statutory interpretation.

One familiar canon of construction provides that every word or phrase in a statute must be given effect.<sup>65</sup> In the modern statutory definition of “act of God,” this would include giving effect to the word “unanticipated.” As noted above, it is certainly true that one may anticipate future earthquakes along the West Coast or hurricanes on the Gulf Coast. However, it is also true that natural disasters and other natural phenomena always carry an element of the unknown. For example, while a major Cascadia Subduction Zone earthquake may be predicted within the next fifty years, no one can say exactly when it will happen, how strong it will be, or how much damage it may cause. Similarly, even when we can see a tropical storm forming one week in advance and we closely track its progress across the Gulf of Mexico, still no one can say exactly where or when it will make landfall, how the city infrastructure will hold up, or how people will—or will not—respond to the incident. In essence, while we may expect another major earthquake on the West Coast and a major hurricane on the Gulf Coast, there will always be unanticipated factors that may support assertion of the act of God defense.

Another canon of construction we may apply to the act of God definition requires that “provisions of a text should be interpreted in a way that renders them compatible, not contradictory.”<sup>66</sup> In fact, a literal interpretation of the act of God definition could be seen as contradictory, requiring that

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64. *Id.*

65. According to the “Surplusage Canon,” “[I]f possible, every word and every provision is to be given effect,” to avoid the suggestion that any words included in the statute are mere surplusage. ANTONIN SCALIA & BRYAN A. GARNER, *READING LAW: THE INTERPRETATION OF LEGAL TEXTS* 174 (2012).

66. Scalia and Garner refer to this as the “Harmonious-Reading Canon.” See SCALIA & GARNER, *supra* note 65, at 180.



the natural phenomenon be “unanticipated” yet have effects that could be prevented by the exercise of “foresight.”<sup>67</sup> Literally, the definition appears to require a party to foresee the effects of an event they cannot anticipate. This contradictory reading cannot be supported under the canon of construction which calls instead for a “compatible” reading of text. A compatible reading of the act of God definition would support the interpretation that “unanticipated” does not mean complete surprise, but rather an event not anticipated on a certain day, in a certain place, or of a certain degree. Thus, an 8.0 earthquake in Seattle next Tuesday may be “unanticipated,” but to the extent we can foresee the effects of such an earthquake, we can and should exercise due care to prevent or avoid the impacts.

A third canon of construction we might apply to the act of God definition is the interpretive approach known as “fair reading.”<sup>68</sup> Under this approach, the governing text should be applied to the given facts “on the basis of how a reasonable reader . . . would have understood the text at the time it was issued.”<sup>69</sup> Applying a “fair reading” to the act of God defense, it can hardly be imagined that Congress intended, as recently as 1990, that the statutory standard for preventing or avoiding the impacts of natural phenomena would mean taking every conceivable precaution. Were it truly a standard of taking every conceivable precaution, Seattle should be evacuated now, along with San Francisco, Los Angeles, Houston, Joplin, New Orleans, Miami, New York, and every other city, town, and hamlet where natural hazards may be anticipated. As Professor Binder points out, “[t]his thesis is untenable. Three hundred and twenty-three million Americans have to live somewhere as do seven billion people globally.”<sup>70</sup> These seven billion people include the entire island nation of the Philippines, where the act of God defense has also been adopted.<sup>71</sup> Would the duty to “avoid” the impacts of natural

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67. See *supra* note 22 and accompanying text.

68. SCALIA & GARNER, *supra* note 65, at 33.

69. *Id.*

70. Denis Binder, *The Human Risk in the Natural Environment*, 7 WASH. J. ENVTL. L. & POL'Y \_\_ (2017).

71. The act of God defense has been specifically adopted, for example, in the Philippines, where the Supreme Court defined “act of God” to mean “an accident, due directly and exclusively to natural causes without human intervention, which by no

disasters demand the abandonment of the Philippines after the devastation wrought by Typhoon Haiyan in 2013 suggested the potential for future disasters fueled in part by global climate change?<sup>72</sup> Where would the entire nation go?

Fortunately, the act of God itself provides us with some moderating responsibility, requiring not every conceivable precaution, including mass migration to theoretically safer places, but simply the “exercise of due care.” The standard for due care may draw from a number of established standards, such as building construction codes,<sup>73</sup> hazardous waste regulations,<sup>74</sup> standard industry practices,<sup>75</sup> or ordinary principles of negligence.<sup>76</sup> Compliance with such standards should be considered when determining future applicability of the act of God defense, with the continued availability of the act of God defense providing incentives to comply with such standards. To the extent that liability may not be avoided entirely, good faith efforts to comply with established standards may help to mitigate damages, penalties, or other legal consequences.<sup>77</sup>

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amount of foresight, pains or care, reasonably to have been expected, could have been prevented.” *Juan F. Nakpil & Sons v. Court of Appeals*, G.R. No. L-47851, 144 S.C.R.A. 596 (Oct. 3, 1986) (Phil.).

72. See Lorraine Carlos Salazar, *Typhoon Yolanda: The Politics of Disaster Response and Management*, SE. ASIAN AFFAIRS 277, 295 (2015). Typhoon Yolanda in the Philippines was known internationally as Typhoon Haiyan. *Id.* at 277.

73. See, e.g., Washington State Building Code, WASH. ADMIN. CODE § 51-50-003 (2016) (incorporating by reference the 2015 edition of the International Building Code).

74. See, e.g., Washington State Dangerous Waste Regulations, WASH. ADMIN. CODE § 173-303 (2016).

75. See, e.g., HAMMER & HAND, BEST PRACTICES MANUAL (2016),

<http://hammerandhand.com/best-practices/manual/> (compiling standard operating procedures for construction industry in Pacific Northwest).

76. In this regard, the case decided by the Supreme Court of the Philippines is particularly instructive. In 1968, a major earthquake in Manila severely damaged a building constructed for the Philippine Bar Association. Extensive fact-finding by lower courts determined the existence of defects in the plans and specifications, as well as deviations from those plans and specifications in construction. As such, the Supreme Court ultimately dismissed the act of God defense in that case, holding that “it has been held that when the negligence of a person concurs with an act of God in producing a loss, such person is not exempt from liability by showing that the immediate cause of the damage was the act of God.” *Juan F. Nakpil & Sons v. Court of Appeals*, G.R. No. L-47851, 144 S.C.R.A. 596 (Oct. 3, 1986) (Phil.).

77. See, e.g., Clean Water Act § 309(d), 33 U.S.C. § 1319(d) (2012) (providing, “In determining the amount of a civil penalty the court shall consider the seriousness of the violation or violations, the economic benefit (if any) resulting from the violation,

### C. *Legislative History*

The legislative history of the act of God defense in federal environmental law is thin but consistent with the idea that the defense may help encourage precautions against the effects of natural disasters. According to one Senate report in the CERCLA legislative history, the limited affirmative defenses to CERCLA liability, including the act of God defense, were explicitly intended to “provide[] incentives to all involved with hazardous substances to assure that such substances are handled with the utmost of care.”<sup>78</sup> In particular, the defenses were “intended to induce potentially liable persons to voluntarily mitigate damages rather than simply rely on the government to abate hazards.”<sup>79</sup> Thus, for example, a potentially liable party under OPA might be induced to upgrade spill containment equipment rather than rely on the government to conduct a cleanup after a spill occurred as a result of an earthquake or other natural disaster.

In addition to equipment upgrades and other capital investments, the availability of the act of God defense may also encourage more cautionary behaviors to avoid the impacts of natural threats. Emphasizing this point, the legislative history of CERCLA offers, “[f]or instance, major storms might generally be pleaded as acts of God, but would not fit [the statutory definition] if, for example, the storm were predicted and expected and a vessel, knowing of its probability, proceeded into its path despite the weather prediction.”<sup>80</sup> The legislative history thus confirms the design of the statutory act of God defense to encourage prudent actions and affirmative preparations in order to prevent environmental contamination that might otherwise result from natural disasters. In the modern age of global climate change, this salutary purpose is at least as relevant now as it was when the English courts devised the common law act of God defense centuries ago.

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any history of such violations, any good-faith efforts to comply with the applicable requirements, . . . and such other matters as justice may require.”).

78. Environmental Emergency Response Act, S. Rep. No. 96-848, at 31 (1980).

79. *Id.*

80. H.R. REP. NO. 94-1489, at 16-17 (1976).

## IV. CONCLUSION

In 1882, German philosopher Friedrich Nietzsche infamously postulated that “God is dead.” Less famously, Nietzsche continued, “God remains dead. And we have killed him. . . . What was the holiest and mightiest of all that the world has yet owned has bled to death under our knives: who will wipe this blood off us? What water is there for us to clean ourselves?”<sup>81</sup> In 1962, Rachel Carson expanded on this idea of the human hand in the destruction of the holy with her watershed book *Silent Spring*, which, among other things, revealed the devastating impacts of synthetic pesticides on the natural world.<sup>82</sup> In 1989, writer Bill McKibben furthered this lament in his prophetic book, *The End of Nature*, observing how the human hand had seemingly touched every remote corner of our planet and tainted all His holy creation.<sup>83</sup>

And so, if God is dead, can the act of God defense survive?

Gone may be the times as in Luke 21:11 when we instinctively look up to the heavens for an explanation of “great earthquakes, and . . . famines and pestilences.” And yet, wonder and mystery remain in our modern world. If and when we admit that we still cannot fully anticipate every natural phenomenon, much less avoid every effect, perhaps then we will begin to see the “act of God” defense as Mark Twain once dryly observed of himself, “[t]he report of my death was an exaggeration.”<sup>84</sup>

And within the living and breathing act of God defense, one may hope the regulated community may find incentive to exercise due care against the threats of fire, floods, earthquakes, and other natural phenomena—and thereby protect the people and places we love.

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81. FRIEDRICH NIETZSCHE, *THE GAY SCIENCE* § 125 (Walter Kaufmann, trans., Vintage Books 1974) (1882).

82. RACHEL CARSON, *SILENT SPRING* (1962).

83. MCKIBBEN, *supra* note 29, at 32–33 (noting ecological injuries among red spruce trees in Vermont, lakes in the American West, all bodies of fresh water in Sweden, rainfall in southern China, and forests in central Europe).

84. MARK TWAIN, *MARK TWAIN’S NOTEBOOK* 328 (Albert Bigelow Paine ed., 1935).