Maryland Law Review

Volume 75 | Issue 3 Article 3

Natural Baselines for Wildfire Takings Claims

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NATURAL BASELINES FOR WILDFIRE TAKINGS CLAIMS

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INTRODUCTION

Imagine a forest that burns every ten years like clockwork. Someone acquires a ten acre parcel within the forest, and, three years after the last fire, builds a small cabin. Imagine also that there is a chemical that can be sprayed on the forest that will prevent it from burning for three years, but that after three years, the chemical will itself ignite, causing a wildfire. In year nine, the government sprays the forest with the chemical. No fire occurs in year ten, but, as expected, the chemical deployed by the government ignites in year twelve, burning the forest and the small cabin.

This stylized story reveals the puzzle of wildfire takings claims, and to a degree, takings claims that arise out of other natural disasters like flooding. In one sense, the government action—spraying the chemical—destroyed the cabin. After all, the government deployed the chemical and the chemical directly caused the fire; in legal terms, the spraying of the chemical appears to be the "but for" cause of the damage suffered by the property owner. At the same time, in the absence of the government's action, the cabin would have been destroyed anyway—indeed, it would have been destroyed sooner. The government is, thus, both the cause of the fire that destroyed the cabin and simultaneously the cause of the landowner's reprieve.

Reality mirrors this story of sprayed chemicals and burnt cabins because most of the wildlands across the country in which development occurs burn in their natural state with reasonable frequency and predictability. While no chemical exists with the properties I have described, the government has long taken steps to ameliorate the risk that wildfires will start, and to extinguish and manage wildfires when they burn. Such efforts may delay the inevitable, but wildfire always returns, and in many circumstances the delayed blaze may burn with greater intensity and more destructive force.[1]

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1. *See* Robert B. Keiter, *The Law of Fire: Reshaping Public Land Policy in an Era of Ecology and Litigation*, 36 ENVTL. L. 301, 314–15 (2006).

The dynamics at play are important ones, because people increasingly live and work in locations subject to the risk that wildfire will destroy buildings, ravage landscapes, and, in extreme cases, claim lives.[2] Development in fire-prone regions of the United States, often referred to as the Wildland-Urban Interface ("WUI"), is explosive.[3] People flock to these areas because they are beautiful, are located near natural amenities, and land prices may be less expensive than those available in urban cores.[4]

Development also occurs, at least in part, because private property owners do not bear many of the economic costs associated with wildfire risk. The government—and in particular the federal government—consistently subsidizes development in locations facing natural disaster risk, and wildfire is no exception.[5] Federal taxpayers invest heavily in managing natural ecosystems to reduce fire risk, and, when wildfires ignite, federal taxpayers (and to some extent state and local taxpayers) fund efforts to control and quench wildfires.[6] Public and private disaster relief also ameliorates the direct economic consequences property owners experience from wildfires.[7]

The hefty price tag associated with wildfire prevention, response, and recovery activities—to the tune of billions of dollars per year[8]—directly

2. *See* U.S. GOV'T ACCOUNTABILITY OFF., GAO-07-427T, WILDLAND FIRE MANAGEMENT: LACK OF A COHESIVE STRATEGY HINDERS AGENCIES' COST-CONTAINMENT EFFORTS 4 (2007) ("Experts estimate that between 1990 and 2000, 60 percent of all new housing units in the United States were built in the wildland-urban interface."); *Wildland Fire Fatalities by Year*, NAT'L INTERAGENCY FIRE CTR., https://www.nifc.gov/safety/safety_documents/Fatalities-by-Year.pdf (last visited Oct. 19, 2015).

3. *See* SEBASTIÁN MARTINUZZI ET AL., U.S. DEP'T OF AGRIC., THE 2010 WILDLAND-URBAN INTERFACE OF THE CONTERMINOUS UNITED STATES 8 (2015); U.S. DEP'T OF AGRIC., OFF. OF INSPECTOR GEN., USDA/OIG-A 08601-44SF WESTERN REGION, AUDIT REPORT: FOREST SERVICE LARGE FIRE SUPPRESSION COSTS 6 (2006) [hereinafter U.S. DEP'T OF AGRIC., AUDIT REPORT].

4. MARTINUZZI ET AL., *supra* note 3, at 12.

5. *See, e.g.*, Justin Pidot, *Deconstructing Disaster*, 2013 B.Y.U. L. REV. 213, 251 (2013).

6. *See, e.g.*, GOV'T ACCOUNTABILITY OFF., WILDLAND FIRE MANAGEMENT: FEDERAL AGENCIES HAVE TAKEN IMPORTANT STEPS FORWARD, BUT ADDITIONAL, STRATEGIC ACTION IS NEEDED TO CAPITALIZE ON THOSE STEPS 5 (2009) [hereinafter GAO, IMPORTANT STEPS] (noting that Congress appropriated an average of $3.1 billion for wildland fire expenditures by the U.S. Forest Service and agencies within the Department of Interior between 2001 and 2007); *see also* Benjamin Reilly, Note, *Free Riders on the Firestorm: How Shifting the Costs of Wildfire Management to Residents of the Wildland-Urban Interface Will Benefit Our Public Forests*, 42 B.C. J. ENVTL. AFF. L. REV. 541 (2015); Garrett D. Trego, Note, *We Didn't Start the Fire . . . and We Won't Pay to Stop It: Financing Wildfire Management in America's Wildland-Urban Interface*, 36 WM. & MARY ENVTL. L. & POL'Y REV. 595, 596 (2012).

7. *See, e.g.*, Press Release, Fed. Emergency Mgmt. Agency, Federal Disaster Assistance Tops $6 Million: California Wildfire Recovery Is Underway (Oct. 8, 2015), https://www.fema.gov/news-release/2015/10/08/federal-disaster-assistance-tops-6-million-california-wildfire-recovery; *Southern California Wildfire Relief Fund*, CALIFORNIA CMTY. FOUND., http://calfund.org/wildfire-relief-fund/ (last visited Dec. 19, 2015); *cf.* Pidot, *supra* note 5, at 248–49 (discussing private disaster relief).

8. Keiter, *supra* note 1, at 311.

benefits private property owners. Therefore, investments in the built environment appear economically rational from the perspective of a private landowner, because the costs imposed by wildfire risk are significantly displaced onto the general public.[9] While such subsidies do not avoid the genuine and often acute feelings of personal loss experienced by those whose homes are destroyed by wildfire—money from the government does not make an individual who has lost their home and all it contains feel whole—they may mute the effect that wildfire risk has on property value.[10] Cognitive biases also affect perceptions of wildfire risk and these biases may further suppress the effect of risk on the market price of property.[11]

Individuals whose property has suffered damage from wildfires predictably sue the government, seeking compensation under the Takings Clause of the Fifth Amendment,[12] although the doctrine of wildfire takings is much less mature than that related to other disasters such as flooding because there have been relatively fewer lawsuits. Following the Supreme Court's lead in other areas of takings law, recent lower court decisions have, however, resisted a categorical approach to addressing wildfire takings claims.[13] In so doing, these courts have adopted what I will refer to as an "incident-centric approach" to wildfire takings claims. Under this approach, analysis of the takings claim centers on the specifics of the wildfire incident that caused harm to the property.[14] The incident-centric approach, at its extreme, would mean that the owner of the cabin in my opening story could recover compensation from the government because the chemical deployed by the government caused the fire. This approach is in contrast to what I will refer to as a "baseline-centric" approach to wildfire takings claims in which analysis of the takings claim centers on

9. Carolyn Kousky & Sheila M. Olmstead, Induced Development in Risky Locations: Fire Suppression and Land Use in the American West 4 (unpublished manuscript) (June 22, 2012) (cited with permission; on file with author).

10. *Id.* at 239. The personal nature of natural disasters, and the losses they threaten, is underscored by estimates that thousands of people refused to evacuate New Orleans prior to Hurricane Katrina because they did not have a means of also evacuating their pets. *See* William Brangham, *How Did Katrina Change How We Evacuate Pets from Disaster?*, PBS NEWSHOUR BLOG (Aug. 28, 2015), http://www.pbs.org/newshour/rundown/hurricane-katrina-change-way-evacuate-pets-devastation/.

11. *See* Pidot, *supra* note 5, at 235–43.

12. U.S. CONST. amend. V. For a discussion of the evolution of takings doctrine, see Justin R. Pidot, *Fees, Expenditures, and the Takings Clause*, 41 ECOL. L.Q. 131, 139–42 (2014) and William Michael Treanor, *The Original Understanding of the Takings Clause and the Political Process*, 95 COLUM. L. REV. 782 (1995).

13. *See, e.g.*, Ark. Game & Fish Comm'n v. United States, 133 S. Ct. 511, 521–22 (2012) ("We rule today, simply and only, that government-induced flooding temporary in duration gains no automatic exemption from Takings Clause inspection."); TrinCo Inv. Co. v. United States, 722 F.3d 1375, 1378–80 (Fed. Cir. 2013).

14. *See, e.g.*, *TrinCo Inv. Co.*, 722 F.3d at 1377–80; Cary v. United States, 552 F.3d 1373, 1376–81 (Fed. Cir. 2009); Teegarden v. United States, 42 Fed. Cl. 252, 256–58 (1998).

baseline risk of wildfire to which a parcel of property is subject.[15] Under this approach, the cabin owner could not recover because under natural conditions the cabin would inevitably burn.

As this Essay will explain, one consequence of the incident-centric approach currently popular with courts is that cases may not be subject to early disposition, requiring courts and government agencies to expend substantial resources on factually intensive inquiries into exactly what occurred during the course of a wildfire. Moreover, these inquiries are themselves often fraught because wildfire response can be chaotic and rapidly evolving.

The stylized story at the beginning of this Essay perhaps also reveals my own perspective on how such claims should be treated. When people build within wildlands that naturally burn, they act (or at least, should act) in full knowledge of the inevitability of wildfire. The government, then, does not unsettle those expectations when a wildfire occurs, regardless of whether a governmental act was the immediate cause of that wildfire. Nor should the government be viewed as the legal cause of the damage to the property. The damage was bound to happen—the government at most influenced the timing, and, as a general matter, the government's efforts have provided the property owner with more time to enjoy and make use of their property than that owner would have experienced had the forest been left unmanaged.[16]

Viewed in this light, the prospect of requiring the government to compensate a landowner when wildfire management efforts result in damage to private property is both doctrinally indefensible and bad policy. Such a compensation award is nothing short of a direct subsidy for building in fire-prone locations, increasing development and the attendant losses suffered when wildfires occur.

This Essay advocates for rejecting the incident-centric approach in favor of a baseline-centric approach. It does so in three Parts. Part I provides an overview of naturally occurring wildfire risk and development activities in risky locations. Part II provides an overview of wildfire takings claims, identifying avenues for conceptualizing these claims and discussing three cases in the United States Court of Appeals for the Federal Circuit or

15. *Cf. Ark. Game & Fish Comm'n*, 133 S. Ct. at 522 (identifying as relevant to takings inquiry flooded lands that "had not been exposed to flooding comparable" to that which served as the basis of the claim for compensation). While the Supreme Court's *Arkansas Game* decision does not entirely adopt a baseline-centric approach to the takings question, it did consider the environmental baseline a relevant factor.

16. Philip E. Higuera et al., *Fire-Regime Complacency and Sensitivity to Centennial—Through Millennial—Scale Climate Change in Rocky Mountain Subalpine Forests, Colorado, USA*, 102 J. ECOL. 1429, 1429–30 (2014); Feng Zhao et al., *Comparing Historical and Current Wildfire Regimes in the Northern Rocky Mountains Using a Landscape Succession Model*, 343 FOREST ECOL. & MGMT. 9, 19 (2015). While forest management efforts typically reduce the frequency of wildfire, they may result in great intensity when a fire occurs. *Id.*

the United States Court of Federal Claims that have resolved such claims. Part II also reveals that courts have, to date, adopted an incident-centric approach to wildfire takings cases. Part III identifies problems with the current approach and then provides a doctrinal and policy justification for shifting to a baseline-centric approach.

Taking baseline risks seriously, as this Essay suggests courts should do, will have salutary effects both on government wildfire response and on development practices. While those owning property damaged in wildfires may prove sympathetic plaintiffs in some cases, creating a system that further encourages development in wildfire-prone locations will only expand the vulnerability of people and the built environment to this natural risk and simultaneously tax federal coffers.

I. THE CONTEXT OF WILDFIRE TAKINGS CLAIMS

Wildfire is a ubiquitous feature of natural landscapes. Prior to significant human development, ecosystems across the United States routinely combusted, with lightning strikes providing the spark to cause ignition.[17] As Stephen Pyne wrote: "[e]lectrical fire operated on the earth's surface as soon as an atmosphere evolved and vegetation appeared."[18]

While wildfire is inevitable in nature, its frequency and severity differs across ecosystems.[19] Historically, some ecosystems, such as most of the forest types in the southeastern United States and ponderosa pine forests in the southwestern United States, experienced high frequency wildfires that would return every few years; such fires were generally of a low intensity and only cleared forest understory, rarely proving fatal to mature trees.[20] Other forest ecosystems experienced more intense wildfires on the order of every few decades, and such fires were more likely to constitute stand clearing events.[21]

Even in the absence of human development and forest management, climate change likely affects the natural baseline frequency of wildfires. In general, climate change increases wildfire risk, making wildfires more frequent by lengthening fire seasons, rendering forests more susceptible to disease infestation, and generally increasing moisture loss.[22] As average

17. STEPHEN J. PYNE, FIRE IN AMERICA: A CULTURAL HISTORY OF WILDLAND AND RURAL FIRE 8 (1982).

18. *Id.*

19. *Id.* at 35, 38; *see* Keiter, *supra* note 1, at 314.

20. *See* Richard P. Guyette, *Predicting Fire Frequency with Chemistry and Climate*, 15 ECOSYSTEMS 322, 330 (2012) (mapping fire frequency from 1650–1850); *see also* Reilly, *supra* note 6, at 546.

21. *See* Guyette, *supra* note 20.

22. *See* JAMES FUNK ET AL., ROCKY MOUNTAIN FORESTS AT RISK: CONFRONTING CLIMATE-DRIVEN IMPACTS FROM INSECTS, WILDFIRES, HEAT AND DROUGHT 3–4 (2014); *see*

temperatures rise, historic baseline conditions will generally underestimate the frequency of wildfires in the absence of any human intervention.

With only a few exceptions, most ecosystems experience a natural fire cycle of sufficient frequency so as to be of consequence to human development.[23] In other words, the natural baseline wildfire regime within natural landscapes is such that improvements on property would be damaged by wildfire, irrespective of human intervention, within the life expectancy of those improvements. This state of intermittent wildfire in the absence of human intervention serves as a baseline against which the effects of human activities—and of particular import for this Essay, government activities—should be assessed.

Over the last century, government agencies, particularly land management agencies of the federal government, have been heavily involved in managing forests and responding to wildfires. For decades, the Federal Government adopted an aggressive fire suppression policy designed to squelch wildfires as soon as they arose.[24] This policy was effective; between 1946 and 1978, wildfires burned less than half the number of acres as had burned in earlier years.[25] While scientists and policymakers now agree that this robust wildfire suppression policy had negative ecological consequences and allowed fuel loads of dry timber and brush to build, increasing fire risk over time,[26] it is difficult to dispute that this policy allowed those owning private property within wildlands to enjoy a longer fire-free period than they would have enjoyed in the absence of government intervention.

As we now know, efforts at containment and suppression cannot postpone wildfire indefinitely.[27] Developing property within wildlands is therefore a risky business. Houses, businesses, and other built infrastructure face an ongoing risk of wildfire and the inevitable reality of that risk materializing. Nonetheless, an increasing number of people choose to live and work in these locations.[28] In 2010, about ten percent of

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also Karen M. Bradshaw, *A Modern Overview of Wildfire Law*, 21 FORDHAM ENVTL. L. REV. 445, 450 (2010).

23. *See* Guyette, *supra* note 20, at 328–29. Some desert ecosystems, for example, may have a natural wildfire frequency so low that it is essentially irrelevant for purposes of evaluating human endeavors. *Id.*

24. *See, e.g.*, Keiter, *supra* note 1, at 306–08.

25. *Id.* at 307; *see also* GAO, IMPORTANT STEPS, *supra* note 6, at 3; Jamison Colburn, *The Fire Next Time: Land Use Planning in the Wildland/Urban Interface*, 28 J. LAND RESOURCES & ENVTL. L. 223, 225–26 (2008).

26. Keiter, *supra* note 1, at 308–11.

27. Michael P. Dombeck et al., *Wildfire Policy and Public Lands: Integrating Scientific Understanding with Social Concerns Across Landscapes*, 18 CONSERVATION BIOLOGY 883, 885 (2004).

28. *See* Colburn, *supra* note 25, at 240 (noting that development in the WUI "is actually the fastest growing category of real estate in America").

the territory of the United States fell within the WUI, defined as "the area where structures and other human development meet or intermingle with undeveloped wildland."[29] At that time, the WUI was estimated to contain approximately one-third of residential houses in the country,[30] and the Department of Agriculture estimates that the number of houses within the WUI of the Rocky Mountains will increase forty percent between 2006 and 2030.[31]

Humans have extensively settled areas with a significant baseline risk of wildfire and continue to do so. Part of the reason for this is, of course, that living in wildlands confers many benefits, and for some people the opportunity to live in a beautiful location with easy access to outdoor recreation may outweigh the risk of losing personal possessions to wildfire.[32] As the price of housing in urban cores has increased, more rural locations have also become increasingly attractive to prospective homebuyers.[33]

The market incentive for developers to build homes and other infrastructure in wildlands, and for individuals to live and work in these regions, is heightened by government policies that subsidize development in hazardous areas and cognitive biases that cause individuals to discount disaster risk in making decisions, thereby depressing the market signal that disaster risk would otherwise send.[34] Such government subsidies are perverse because they not only place people and infrastructure in harm's way, but also create incentives for development that displaces open space and accompanying environmental, recreational, and aesthetic public benefits.[35] This is a lose-lose proposition: more development is placed at

29. MARTINUZZI ET AL., *supra* note 3, at 7, 12; *see also* V.C. Radeloff et al., *The Wildland-Urban Interface in the United States*, 15 ECOLOGICAL APPLICATIONS 799 (2005). Buildings within the WUI are at risk of harm from wildfire, and the Departments of Agriculture and Interior defines a community within the WUI as one that "exists where humans and their development meet or intermix with wildland fuel." Department of Agriculture & Department of the Interior, Urban Wildland Interface Communities Within the Vicinity of Federal Lands That Are at High Risk from Wildfire, 66 Fed. Reg. 751, 752–53 (Jan. 4, 2001). By definition, the WUI does not capture all development at risk from wildfire because building density must exceed one structure per forty acres to qualify. *See* MARTINUZZI ET AL., *supra* note 3, at 9.

30. *See* MARTINUZZI ET AL., *supra* note 3, at 14.

31. U.S. DEP'T OF AGRIC., AUDIT REPORT, *supra* note 3. This trend is not new. Between 1990 and 2000, the population within Colorado's "'forest fringe'— land within 1 kilometer of forested land cover—grew at a whopping 4.6 percent annually." Federico Cheever, *The Phantom Menace and the Real Cause: Lessons from Colorado's Hayman Fire 2002*, 18 PENN ST. ENVTL. L. REV. 185, 193 (2010).

32. *See, e.g.*, MARTINUZZI ET AL., *supra* note 3, at 12; Colburn, *supra* note 25, at 241 ("There is a commonly expressed preference for residences proximate to landscapes which look and feel like nature in a 'wild' state.").

33. MARTINUZZI ET AL., *supra* note 3, at 12.

34. *See, e.g.*, Bradshaw, *supra* note 22, at 463–65.

35. *See, e.g.*, Steverson O. Moffat & John L. Greene, *Economic and Tax Issues*, *in* HUMAN INFLUENCES ON FOREST ECOSYSTEMS: THE SOUTHERN WILDLAND-URBAN INTERFACE

greater risk resulting in ever-increasing economic losses all while consuming irreplaceable natural amenities. As will be discussed below, recognizing a robust takings remedy for those whose private property is damaged or destroyed by wildfire creates yet another subsidy for this risk-seeking behavior. To understand the risks adherent in such a takings subsidy, consider the ill effects created by subsidies that already exist.

Subsidies for development in areas subject to fire risks take several forms. First, managers of publicly owned forests expend substantial resources in an effort (not always successful) to mitigate and reduce wildfire risks.[36] Second, the government invests heavily in wildfire response. In 2015, the United States Forest Service spent more than $1 billion on programs related to wildfires, which was more than half of its budget for that year.[37] By 2025, the agency expects the cost of wildfire programs to exceed $1.8 billion.[38] Third, disaster assistance programs provide significant funding for those whose businesses or property are harmed by wildfires.[39] Unlike with other natural disasters, few wildfires are declared major disasters by the federal government, which means that relatively little assistance under the Stafford Act is available to those who lose homes and businesses due to wildfire.[40] Wild-fire related disaster declarations do, however, occur. For example, the Federal Emergency Management Agency ("FEMA") provided nearly $1.3 million in federal disaster assistance to Montana following a wildfire that occurred during the

ASSESSMENT 37, 40 (Edward A. Macie & L. Annie Hermansen eds., 2002) (identifying the rate of open space converted to development in the southern United States); R. Bruce Hull & Susan I. Stewart, *Social Consequences of Change*, *in* HUMAN INFLUENCES ON FOREST ECOSYSTEMS: THE SOUTHERN WILDLAND-URBAN INTERFACE ASSESSMENT 115, 123 ("The once unbroken forested horizon is now dotted with houses and street lights."); *see also* Colburn, *supra* note 25, at 223.

36. For a history of federal wildfire management program, see Keiter, *supra* note 1, at 304–13.

37. U.S. DEP'T OF AGRIC., FOREST SERV., THE RISING COST OF WILDFIRE OPERATIONS: EFFECTS ON THE FOREST SERVICE'S NON-FIRE WORK 5 (2015), http://www.fs.fed.us/sites/default/files/2015-Fire-Budget-Report.pdf [hereinafter U.S. FOREST SERV. REPORT].

38. *Id.*

39. *See* CAROLYN V. TORSELL & JARED C. NAGEL, FEDERAL DISASTER ASSISTANCE RESPONSE AND RECOVERY PROGRAMS: BRIEF SUMMARIES 2, 4, 10–12 (2015) (identifying federal disaster assistance programs for individuals, families, and small businesses).

40. According to the website of the Federal Emergency Management Agency ("FEMA"), which is charged with managing disaster declarations, see *About the Agency*, FED. EMERGENCY MGMT. AGENCY, https://www.fema.gov/about-agency (last visited Jan. 18, 2016), wildfires have resulted in six major disaster declarations and four emergency declarations since 2000. *Disaster Declarations*, FED. EMERGENCY MGMT. AGENCY, https://www.fema.gov/disasters (select disaster type "Fire" and declaration type "Major Disaster Declaration" and "Emergency Declaration") (last visited Jan. 18, 2016). FEMA also manages a grant program to aid in fire management, but that program provides funding for "mitigation, management, and control of fires," instead of disaster assistance. *Fire Management Assistance Grant Program*, FED. EMERGENCY MGMT. AGENCY, https://www.fema.gov/fire-management-assistance-grant-program (last visited Jan. 18, 2016).

summer of 2012.[41] Both state and philanthropic programs also provide substantial disaster relief.[42]

Financial subsidies conceal the true economic cost of developing within fire-prone forests.[43] By artificially reducing the cost of development, subsidies make it economically rational to build more homes and businesses. Non-economic factors also skew perceptions of fire risk. Researchers have identified an array of cognitive biases that can lead to a systematic underappreciation of natural disaster risks.[44] The human brain tends to do a poor job accurately comprehending low likelihood, high severity risks.[45] Additionally, because of the so-called "affect heuristic," our brains also tend to view things that we like as relatively safe.[46] This means that a prospective buyer who falls in love with a home nestled in the woods will likely discount the risk that those woods may burn. People also fall prey to the gambler's fallacy, which suggests once an unlikely event occurs, it is less likely to occur a second time.[47] The availability heuristic may also skew risk perception: this mental shortcut leads people to estimate risks based on the ease with which they can think of examples of that risk manifesting, a poor means of conceptualizing the likelihood of relatively rare events.[48] Thus, inherent characteristics of human cognition can cause individuals to undervalue the risks associated with wildfire, thereby cloaking economically irrational decisions to invest in infrastructure in fire-prone locations in an illusion of rationality.

The operation of these cognitive errors and shortcuts on development is not just theoretical. Studies of the effect of wildfires on housing prices confirm that cognitive biases play a significant role in risk perceptions and concomitant property valuation. Property values suffer in areas immediately adjacent to recent wildfires, but otherwise remain stable in the region, demonstrating what researchers have referred to as an "'out of sight, out of mind' mentality."[49] The effect suggests that the availability heuristic,

41. *See Montana Wildfires, (DR-4074)* FED. EMERGENCY MGMT. AGENCY, https://www.fema.gov/disaster/4074 (select "Financial Assistance") (last visited Jan. 18, 2016).

42. *See, e.g.*, CALIFORNIA CMTY. FOUND., *supra* note 7.

43. *See* Bradshaw, *supra* note 22, at 464–65.

44. *See* Pidot, *supra* note 5, at 235–43.

45. *See, e.g.*, Howard Kunreauther et al., *Making Low Probabilities Useful*, 23 J. RISK & UNCERTAINTY 103 (2001).

46. *See* Melissa L. Finucane et al., *The Affect Heuristic in Judgments of Risks and Benefits*, 13 J. BEHAV. DECISION MAKING 2 (2000).

47. *See* Stephen P. Stich & Richard E. Nisbett, *Justification and the Psychology of Human Reasoning*, 47 PHIL. SCI. 199, 192–93 (1980); *see* Pidot, *supra* note 5, at 238–39.

48. *See* Timur Kuran & Cass R. Sunstein, *Availability Cascades and Risk Regulation*, 51 STAN. L. REV. 683, 711–12 (1999); *see also* Pidot, *supra* note 5, at 239–40.

49. *See* Winslow D. Hansen et al., *Wildfire in Hedonic Property Value Studies*, 13 WESTERN ECON. F. 23, 27–28 (2014) (citing K.M. Stetler et al., *The Effects of Wildfire and Environmental Amenities on Property Values in Northwest Montana, USA*, 69 ECOLOGICAL ECON. 2233, 2241–

and particularly the salience of wildfire to prospective homebuyers, skews risk perceptions, despite the fact that areas proximate to recent wildfires may be no more at risk (and potentially at less risk) than areas in similar ecological settings further from recent fire activity.[50]

The various mechanisms that distort incentives to develop in the WUI provide a backdrop for the consideration of wildfire takings claims. Wildfires are a natural and ubiquitous element of natural ecosystems; nonetheless, development of such ecosystems occurs at a dramatic pace, increasing the vulnerability of the built infrastructure to wildfires, and property values and development decisions do not adequately reflect wildfire risk because of government subsidies and cognitive biases. These dynamics reinforce one another. As more construction occurs within the WUI, the economic value of the built environment threatened by wildfire will increase, as will the demand for governmental activities to minimize fire risk and suppress wildfires once ignited.

II. DIMENSIONS OF WILDFIRE TAKINGS

An increasing number of people owning increasingly valuable property in wildfire-prone locales will predictably lead to an increasing amount of litigation in the wake of wildfires. Some of this litigation will involve private property owners seeking compensation from the government under the Fifth Amendment's Takings Clause.[51] This class of cases—wildfire takings claims—has yet to achieve the maturity of other areas of takings law. Relatively few cases have been brought and, until recently, the government has been successful in defeating claims at an early stage.[52] But a recent preliminary victory for a property owner in a wildfire takings case,[53] along with related successes in the context of takings claims related to flooding,[54] suggests that this is likely to be a burgeoning field.

This Section begins by considering two approaches that courts could take to wildfire takings claims: the incident-centric approach and the

42 (2010)). Winslow Hansen and his collaborators identify studies in a number of states finding that property values decline if property is in proximity to recent wildfire events. *Id.*

50. A wildfire will diminish the risk of a second wildfire in the area to the extent that it consumes excess fuels that contributed to wildfire risk.

51. U.S. CONST. amend. V. The Takings Clause provides "nor shall private property be taken for public use, without just compensation." *Id.* While the Takings Clause was originally understood only to require compensation in circumstances where government directly appropriated private property, see Pidot, *supra* note 12, at 140, the Supreme Court has recognized that government activities that do not constitute direct appropriations can also trigger an obligation to pay compensation. *See, e.g.*, Pa. Coal Co. v. Mahon, 260 U.S. 393, 415 (1922).

52. *See, e.g.*, Cary v. United States, 552 F.3d 1373 (Fed. Cir. 2009); Teegarden v. United States, 42 Fed. Cl. 252 (1998). In both *Cary* and *Teegarden*, the government filed a successful motion to dismiss.

53. TrinCo Inv. Co. v. United States, 722 F.3d 1375 (Fed. Cir. 2013).

54. *See, e.g.*, St. Bernard Parish Gov't v. United States, 121 Fed. Cl. 687 (2015).

baseline-centric approach. It then examines three cases decided by either the Federal Circuit or the Court of Federal Claims, each of which adopted an incident-centric approach to the wildfire takings claims at issue.

A. Theoretical Approaches

In general terms, courts could frame wildfire takings claims in one of two ways. First, the court could consider the natural setting involved, taking particular account of a property's baseline wildfire risk, and whether, as a result of that naturally occurring risk, wildfire is an expected hazard in the ecosystem. Second, the court could consider the particular wildfire that caused damage, the governmental action alleged to have caused or contributed to that wildfire, and any potential justification for that action.

As I have already explained, the vast majority of ecosystems experience naturally occurring wildfires of reasonable frequency—on the order of years or decades.[55] In these wildlands—let us call them fire-prone wildlands—it may be impossible to predict precisely *when* a fire will occur, but we can predict with virtual assurance *that* a fire will occur eventually. A few ecosystems—such as certain desert ecosystems—experience extremely infrequent wildfires. The floor of Death Valley, for example, is predicted to experience wildfire only once in a several millennia.[56] While these ecosystems—let us call them fire-poor wildlands—are rare, the difference in natural baseline risk would feature prominently in the analysis of a takings claim under a baseline-centric approach.[57] A court might distinguish between baseline conditions under which that owner should reasonably foresee wildfire damaging her property—where property lies within a fire-prone wildland—and baseline conditions that indicate that an owner should not reasonably foresee such damage—where property lies within a fire-poor wildland.

A court considering baseline wildfire frequency would need to understand the natural setting of a plaintiff's private property. Such an assessment would only require inquiry into background biological facts and would not involve consideration of the cause of the precise fire that harmed a plaintiff's property or the nature of the governmental response.[58] In other words, this potential framing of a wildfire takings claim focuses on risk of wildfire rather than the events surrounding any singular wildfire that occurs. While there are numerous reasons to believe that baseline wildfire risk

55. *See supra* notes 15–21 & accompanying text.

56. *See* Guyette, *supra* note 20, at 328–29.

57. *C.f.* Ark. Game & Fish Comm'n v. United States, 133 S. Ct. 511, 522 (2012) (noting that plaintiffs' property "had not been exposed to [comparable] flooding" prior to the government action alleged to have caused a compensable taking).

58. See *supra* notes 19–23 & accompanying text for a discussion of baseline biological facts related to wildfire frequency.

should be relevant, or even dispositive, of a takings claim—as will be discussed below—courts have not yet placed analytic weight on this facet of a wildfire takings claim.

Instead of utilizing this baseline-centric approach, a court could utilize the incident-centric approach and analyze the specifics of the particular wildfire that caused harm to a plaintiff's property, and this is the approach that courts have tended to adopt. While there are myriad activities that the government could undertake related to a wildfire, let me identify four rough categories of government action that could be implicated in a wildfire takings claim. Category One: the government manages a public wildlands and a plaintiff alleges that management (or alleged mismanagement) increased the risk of fire. Category Two: the government ignites a controlled burn to reduce fire risk and that controlled burn—either inadvertently or intentionally—spreads to private land. Category Three: the government actively responds to a wildfire but its response does not protect the plaintiff's property. Category Four: the government actively responds to a wildfire, and as part of its response ignites a backfire to consume fuel in the wildfire's path, intentionally burning the plaintiff's property.[59]

A focus on the specifics of a particular wildfire may also require a court to consider the government's justification for its action. The government could, for example, justify its action as a necessary response to an exigent circumstance, invoking the so-called "public necessity" defense, which is a longstanding hallmark of property law.[60] Government could also assert that a particular government action was necessary to mitigate a significant risk.[61]

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59. The U.S. Forest Service defines a backfire as "[a] fire set along the inner edge of a fireline to consume the fuel in the path of a wildfire and/or change the direction of force of the fire's convection column." *Fire Terminology*, USDA FOREST SERV., http://www.fs.fed.us/nwacfire/home/terminology.html (last visited Nov. 4, 2015).

60. *See, e.g.*, TrinCo Inv. Co. v. United States, 722 F.3d 1375, 1380 (Fed. Cir. 2013); Daniel H. Owsley, Note, TrinCo *and Actual Necessity: Has the Federal Circuit Provided the Tinder to Burn Down the Public Necessity Defense in Wildfire Takings Cases?*, 48 COLUM. J.L. & SOC. PROBS. 373 (2014–2015). The Supreme Court recognized the common law defense of public necessity in *Bowditch v. City of Boston*, 101 U.S. 16, 18–19 (1879), a case that involved the destruction of a building to contain a fire in Boston. *See* Lucas v. S.C. Coastal Comm'n, 505 U.S. 1003, 1029 n.16 (1992) (identifying as a background principle of law the rule that "absolv[es] the State (or private parties) of liability for the destruction of 'real and personal property, in cases of actual necessity, to prevent the spreading of a fire'").

61. The government could, in other words, argue that it took action to abate a public nuisance. *See* RESTATEMENT (SECOND) OF TORTS § 202 (1965) ("A public officer who by virtue of his office or by statute is authorized to abate a public nuisance, is privileged, at a reasonable time and in a reasonable manner, to enter land in the possession of another for the purpose of abating such a nuisance."). The Supreme Court has suggested that the common law of nuisance, which authorizes abatement actions, constitutes a background principle of state law that, if properly invoked, can immunize the government from the obligation to pay compensation. *See Lucas*, 505 U.S. at 1029 (noting that a "confiscatory regulation[]" would not require compensation

Courts have taken this latter course and focused on the specific incident attendant to a wildfire and the government's justification for any response it undertook, both issues which may require a searching inquiry into the specific facts of a particular wildfire and wildfire response. That does not mean that a plaintiff will prevail and secure compensation, but such an inquiry imposes significant litigation expense on the government and may create incentives for settlement. The baseline-centric approach, on the other hand, requires much less factual development and, if viewed as dispositive, could allow for early resolution of cases in the government's favor. As I will discuss below, as a matter of doctrine and policy, takings claims should not be permitted for those owning land in fire-prone wildlands, and such a shift in focus would have the side benefit of reducing the judicial and litigation resources needed to resolve these claims.

B. Wildfire Takings Cases

The Court of Federal Claims and the Federal Circuit have handled three wildfire takings claims worthy of consideration.[62] The first two cases—*Cary v. United States*[63] and *Teegarden v. United States*[64]—represent what may be an old paradigm for wildfire takings cases: one in which the government prevails with relative ease and without significant factual development of the record. The third case—*TrinCo Investment Co. v. United States*[65]—represents what may be a new paradigm that permits plaintiffs to force discovery related to government decisionmaking processes. These three cases not only demonstrate disparate approaches to takings claims, but they also cut across the categories of government action identified above, falling within Category One—forest management activities, Category Three—failure to protect property during active wildfire response, and Category Four—engaging in backburning that damages private property as part of active wildfire response.[66] In both the

if it coincides with "the restrictions that background principles of the State's law of property and nuisance already place upon land ownership").

62. These two courts have exclusive jurisdiction over takings claims brought against the United States. *See* 28 U.S.C. § 1491(a)(1) (2012) (waiving sovereign immunity of the United States for monetary claims seeking damages in excess of $10,000 so long as the complaint is brought in the Court of Federal Claims); 28 U.S.C. § 1295(a)(3) (2012) (providing the U.S. Court of Appeals for the Federal Circuit with exclusive jurisdiction over appeals taken from U.S. Court of Federal Claims); Justin R. Pidot, *Eroding the Parcel*, 39 VT. L. REV. 647, 655 n.39 (2015). Claims against the United States seeking monetary damages less than $10,000 may be brought in any federal district court, 28 U.S.C. § 1346(a)(2) (2012), but takings claims in that amount are rarely brought.

63. 552 F.3d 1373 (Fed. Cir. 2009).

64. 42 Fed. Cl. 252 (1998).

65. 722 F.3d 1375.

66. The Federal Circuit has not heard a takings claim related to Category Two—property damage resulting from a controlled burn set to mitigate fire risk. Tort claims have been brought against the United States in such circumstances alleging that the government negligently carried

old paradigm cases and the new paradigm case, the courts focused on the particulars of the government action at issue, rather than the general nature of the wildland subject to the fire.

In *Cary v. United States*,[67] the Federal Circuit addressed a Category One case. The plaintiffs' land was burned after a lost hunter deployed a signal flare that ignited a wildfire.[68] The plaintiffs alleged that Forest Service management practices had increased the risk of a high-intensity fire like the one that damaged the plaintiffs' property, and therefore the plaintiffs should receive compensation from the federal government.[69] The Federal Circuit affirmed dismissal of the case holding that the plaintiffs had failed to properly allege that the fire that burned their property was the "direct, natural, or probable" result of the Forest Service's management activities, but instead had only alleged that those management activities increased the risk of a fire within the forest.[70] As the court explained, no single management decision had set the fire in motion, but rather the Forest Service had engaged in "a long sequence of decisions, some risk-increasing but others risk-decreasing, spread out over decades."[71] The court also concluded that the plaintiffs' claim failed because the wildfire that damaged their property appropriated no benefit to the government, and, in fact, the government's interests were also harmed by the fire.[72]

In *Teegarden v. United States*,[73] the Court of Federal Claims addressed a Category Three case. The Uinta Flat Fire ignited on July 15, 1989, and rapidly grew in size.[74] In fighting the fire, the Forest Service issued a directive to firefighting personnel prioritizing the protection of "life and property," including "summer home[s]," and areas of "high commercial timber values."[75] The plaintiffs owned properties that fell into neither category, and the fire spread to their property.[76] The court entered summary judgment for the United States, explaining that while the Forest Service's prioritization may have resulted in the fire spreading to plaintiffs'

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out a controlled burn. *See, e.g.*, Anderson v. United States, 55 F.3d 1379 (9th Cir. 1995). Surprisingly, the Ninth Circuit's decision in *Anderson* did not address the discretionary function exception to the Federal Tort Claims Act's ("FTCA") waiver of sovereign immunity, 28 U.S.C. § 2680(a) (2012). In *Green v. United States*, however, the Ninth Circuit concluded that the discretionary function exception did not apply in certain circumstances involving controlled burns. 630 F.3d 1245 (9th Cir. 2011).

67. 552 F.3d 1373.
68. *Id.* at 1375.
69. *Id.*
70. *Id.* at 1378.
71. *Id.* at 1379.
72. *Id.* at 1380.
73. 42 Fed. Cl. 252 (1998).
74. *Id.* at 253.
75. *Id.* at 254.
76. *Id.*

land, the Forest Service did not intend to take the plaintiff's property.[77] Instead, the Forest Service utilized the limited resources it had to protect as much property as possible.[78] The court further concluded that the Forest Service's actions were not the legal cause of any property damage because the "plaintiffs cannot escape the incontrovertible fact that the Uinta Flat Fire, not the Forest Service, caused the destruction of their property."[79] Unlike in *Cary*, the court here disposed of the case at summary judgment, although the court's causation analysis would seem to lend itself to a relatively easy and early resolution of the case in the government's favor.

In *TrinCo Investment Co. v. United States*,[80] the Federal Circuit addressed a case falling into Category Four and reversed a district court order granting a motion to dismiss in favor of the government. As part of an effort to fight the Iron Complex fire, the Forest Service lit backfires adjacent to and on the plaintiffs' property.[81] The Court of Federal Claims dismissed the case finding that the Forest Service's action was justified under the doctrine of public necessity because the action was part of the Forest Service's efforts to fight the Iron Complex fire.[82] The Federal Circuit explained that the doctrine of public necessity could insulate the government from liability.[83] It held, however, that Court of Federal Claims erred in resolving the issue at the motion to dismiss stage because the government could only properly invoke the public necessity defense if igniting the backfire in such a way as to damage the plaintiffs' properties was necessary to address an actual emergency.[84] Making that determination required facts outside the complaint.[85] As the court explained: "It is certainly plausible that the Iron Complex fire did not pose an imminent danger or actual emergency necessitating the destruction of such a sizable portion of TrinCo's property."[86] As a result, the court believed that there were "legitimate questions as to imminence, necessity, and emergency,"

77. *Id.* at 257.

78. *Id.*

79. *Id.*

80. 722 F.3d 1375 (Fed. Cir. 2013).

81. *Id.* at 1377.

82. *Id.* at 1377–78; *see* RESTATEMENT OF TORTS (SECOND) § 196 (1965) ("One is privileged to enter land in the possession of another if it is, or if the actor reasonably believes it to be, necessary for the purpose of averting an imminent public disaster.").

83. *TrinCo Inv. Co.*, 722 F.3d at 1378.

84. *Id.* at 1380.

85. *Id.*

86. *Id.* The Alaska Supreme Court addressed a similar situation in *Brewer v. State*, 341 P.3d 1107 (Alaska 2014) (reversing a lower court's decision that the doctrine of necessity required dismissing a complaint brought by a property owner whose property had been damaged by a back burn).

each of which required factual development before the Court of Federal Claims.[87]

TrinCo can be viewed as a paradigm shift, replacing an approach to wildfire takings claims that had allowed the government to successfully prevail early in the life of a case with one that requires substantial factual development. The new approach envisions a searching inquiry into the government action, both in terms of precisely what steps the government took, and also what knowledge government officials possessed in establishing a course of action for fighting the wildfire. *TrinCo* also appears to place the burden of proof on the government, requiring it to prove that the precise action undertaken was necessary to respond to an emergency,[88] while in both *Cary* and *Teegarden* the courts held that the plaintiffs had failed to carry their burden of establishing that the governmental action constituted a taking in the first place. Alternatively, *TrinCo*, despite its enhanced skepticism about governmental fire management activities,[89] can be read in harmony with *Cary* and *Teegarden*. As Category One and Category Two cases, *Cary* and *Teegarden* addressed situations where the government did not directly ignite the fire that harmed private property. In other words, the government may still be able to prevail with relative ease, so long as it can disclaim responsibility for lighting the wildfire that burns private property.

III. RECONSIDERING WILDFIRE TAKINGS

Wildfire takings cases are likely to become increasingly frequent. The (few) existing cases suggest that the Federal Circuit and Court of Federal Claims are likely to take an incident-centric approach to such claims—meaning that the courts will focus their analysis on the specific incident that resulted in harm to private property, rather than the background wildfire risk inherent in ownership of that property. In my view, this approach is wrongheaded. This Section explains the problems with the incident-centric approach and justifies the alternative, baseline-centric approach in terms of both doctrine and practical consequence.

87. *TrinCo Inv. Co.*, 722 F.3d at 1380.

88. *Id.* at 1380 ("The necessity defense is just what it says it is: a defense.").

89. In the closing line of the opinion, the court states: "It would be a remarkable thing if the Government is allowed to take a private citizen's property without compensation if it could just as easily solve the problem by taking its own." *Id.* at 1380. While this statement may have a certain common-sense appeal, it is entirely unclear how the government would go about demonstrating that emergency response efforts fully considered actions that avoided harm to private property in the face of a rapidly evolving situation.

A. Problems with the Incident-Centric Approach

There are a number of problems with the current approach by which courts focus their attention on the particular incident that caused damage to private property, rather than the property's baseline wildfire risk.

First, the incident-centric approach arbitrarily distinguishes between owners that have suffered identical harms, preferencing the claims of those whose property is coincidentally damaged by a fire ignited by the government, rather than those whose property is damaged by a fire ignited either naturally or by non-governmental actors.[90] On one hand, the plaintiffs in *TrinCo* may be able to recover compensation from the government, and will likely force the government to expend significant resources in discovery, because the Forest Service ignited backfires on their land before an existing wildfire could reach them. The plaintiffs in *Cary*, on the other hand, may not be able to recover because a wayward hunter, and not the government, ignited the blaze. In cases like *Cary*, a court could conceivably conclude that the government involvement on the wildland had been the direct cause of the wildfire, even if the government itself had not caused the ignition. In both cases, private property was damaged when publicly owned forests burned, but the former plaintiff has a much greater likelihood of securing compensation.

Second, the current approach—in particular the current approach to the necessity doctrine—appears to improperly import notions of fault into takings jurisprudence. Takings doctrine should identify those circumstances where governmental action is "functionally equivalent to the classic taking in which government directly appropriates private property or ousts the owner from his domain."[91] Such inquiry presupposes the legitimacy of governmental action and focuses on the burden experienced by the landowner, rather than the carelessness of the government. A claim that the government has acted carelessly should sound in tort, not in takings, and the Federal Circuit's approach to the public necessity doctrine would stand this proposition on its head.[92]

Third, the current approach creates disincentives for sensible forest management practices to reduce wildfire risk. More than one billion acres

90. In other contexts, takings law does draw arbitrary lines between those who may secure compensation from the government and those that may not. *See* Pidot, *supra* note 12, at 157. In the context of wildfire takings claims, however, the experience of the owner whose land is burned by a naturally occurring fire and the owner whose land is burned by a government-ignited fire is virtually identical and courts should hesitate before developing rules that treat the two parties differently without adequate justification.

91. Lingle v. Chevron U.S.A., Inc., 544 U.S. 528, 539 (2005).

92. Courts should be particularly wary of incorporating analysis of the appropriateness of governmental action into takings doctrine. Through the so-called substantially advanced test in *Agins v. City of Tiburon*, 447 U.S. 255, 260 (1980) the Supreme Court attempted to adopt this approach, which the Court had unanimously repudiated in *Lingle*, 544 U.S. at 540–41.

of wildlands are subject to enhanced wildfire risk because of excessive fuel.[93] Appropriate use of prescribed burns can mitigate this risk by reducing fuel loads, and commentators have called upon government agencies to substantially increase the use of prescribed burns.[94] Agencies already face substantial obstacles in implementing prescribed burns on a large scale, in no small part because land management agency budgets are already committed to funding firefighting activities, leaving little funding available for wildfire mitigation.[95] In addition, the existing environmental law regulatory regime creates obstacles to prescribed burns. For example, Kirsten Engel has persuasively argued that the Clean Air Act, as currently implemented, creates perverse incentives that discourage prescribed burns, despite the health effects of prescribed burns being better than those associated with uncontrolled, cataclysmic wildfire.[96] The possibility of a compensation remedy under the Takings Clause could further discourage such sensible practices that would result in healthier ecosystems, less air pollution, and less economic losses from wildfires. Despite their best efforts, government agencies will on occasion lose control of prescribed burns, and if courts were to require the government to pay compensation under the Takings Clause in such eventualities, this could substantially reduce the willingness of forest managers to engage in such activities.

Similarly, the liability rule envisioned by *TrinCo* may interfere with wildfire fighting efforts. Governmental officials face formidable challenges in containing wildfires. These efforts cost substantial government funds[97] and rapidly evolving conditions on the ground can jeopardize the lives of firefighting personnel and individuals caught unaware.[98] Emergency personnel should not face the specter that every decision they make will be

93. *See* Kirsten H. Engel, *Perverse Incentives: The Case of Wildfire Smoke Regulation*, 40 ECOL. L.Q. 623, 627 (2013).

94. *Id.* ("An aggressive increase in the use of prescribed fire, together with other fuel treatment methods, could reduce this risk [of wildfires].").

95. *See* U.S. FOREST SERV. REPORT, *supra* note 37, at 3, 5.

96. *See* Engle, *supra* note 93, at 627–28. Engle describes the tension the regulatory climate has created between resource agencies and air agencies, which is a dynamic that has impeded the use of prescribed burns. *Id.* at 669. She also notes that the U.S. Environmental Protection Agency ("EPA") discounts smoke from wildfires when it assesses compliance with ambient air quality standards but not smoke from prescribed burns. *Id*. at 652–53. This occurs because wildfires are deemed natural and prescribed burns human-caused. *Id.* at 651. Engle urges the EPA to repudiate this policy and consider all smoke from wildfires as part of assuring air quality compliance. *Id.* at 664.

97. *See* U.S. FOREST SERV. REPORT, *supra* note 37, at 3, 5; GAO, IMPORTANT STEPS, *supra* note 6.

98. Hailey Branson-Potts & Frank Shyong, *President Obama Declares Major Disaster in Deadly California Wildfire*, L.A. TIMES (Sept. 22, 2015), http://www.latimes.com/local/lanow/la-me-ln-california-wildfires-20150922-story.html; *Three Firefighters Killed, Four Injured Battling Washington State Wildfire*, NEWSWEEK (Aug. 20, 2015), http://www.newsweek.com/three-firefighters-killed-battling-washington-state-wildfire-four-injured-364537.

second-guessed by a judge in a proceeding seeking compensation from the government. In coordinating a wildfire response, government personnel must make rapid strategic decisions to ensure the safety of human life and limit the damage caused by wildfires.[99] They should not also be thinking about ensuring that they have an adequate record to demonstrate that their actions fall within the public necessity defense. Existing case law also suggests that takings liability will generally not exist when the government fails to protect property from wildfire, but affirmative fire response efforts could create liability. In other words, when the government attempts to protect lives and property by actively fighting wildfires, it exposes itself to potential liability that would not exist if the government took no action. This serves as a disincentive for government to take action at all. While other incentives—both political and humanitarian—will likely result in governmental actors continuing to intervene in many circumstances, distorting emergency response in a fashion that encourages inaction (in the absence of demonstrated benefits of such inaction) is counterproductive.[100]

Fourth, and most importantly from my perspective, a compensation rule functions as a subsidy for ownership and development of private property in wildfire-prone ecosystems. This subsidy would augment existing subsidies that encourage unwise and inefficient development and redevelopment, placing increasing numbers of people and amounts of infrastructure in harm's way.[101] Such subsidies are particularly troubling because they reinforce cognitive distortions that cause individuals to undervalue natural disaster risks.

Others have recognized that subsidizing development in areas prone to wildfire is bad policy and increases the vulnerability of people and the built environment. Two student Notes have recently taken up the topic in significant detail. Garrett Trego has suggested creation of programs by

99. My view that firefighters should make decisions without worrying about the potential for triggering governmental liability is at odds with that expressed by Susan Kuo, who favors liability rules as a means of avoiding inefficient wildfire suppression techniques. *See* Susan S. Kuo, *Disaster Tradeoffs: The Doubtful Case for Public Necessity*, 54 B.C. L. REV. 127, 128 (2013). Kuo argues that the government should be liable for losses property owners incur during the government's disaster response activities because otherwise private property owners are being asked to subsidize—by absorbing losses—governmental provision of disaster protection, which she views as a public good. *Id.* at 129–30. In my view, Kuo's argument ignores that private property owners in wildfire-prone ecosystems receive substantial subsidies themselves and providing a compensation remedy merely enhances those subsidies.

100. This is not to say that scholars and government officials should not carefully examine wildfire response efforts for their effectiveness, efficiency, and ecological consequence. *See, e.g.*, Karen M. Bradshaw, *Backfired! Distorted Incentives in Wildfire Suppression Techniques*, 31 UTAH ENVTL. L. REV. 155, 156 (2011). Formulating better policies to shape wildfire response is an important task. But such evaluation should be done retrospectively. Attaching financial penalties to certain wildfire suppression techniques because they require affirmative governmental action would not appear to lead to more ecologically or economically sound practices.

101. *See* Reilly, *supra* note 6, at 554–58; Pidot, *supra* note 5, at 245–50.

federal, state, or local governments to address wildfires that would be funded by special assessments imposed on property owners within the WUI.[102] Benjamin Reilly has suggested that the federal government should attempt to shift the costs of wildfires to property owners through a federal insurance scheme.[103] Whatever the appropriate response to dealing with the perverse incentives created by existing subsidies, we should avoid expanding those subsidies and thereby further increasing vulnerability, something which would result in robust wildfire takings claims.

B. An Alternative Path

Another path exists. Rather than focusing on the specific fire that damaged private property, courts could consider the baseline fire risk facing that property. Wildlands naturally burn and infrastructure within their borders will naturally be damaged or destroyed, with or without government intervention. Those who make decisions to purchase and develop property within such wildlands do so knowing of this possibility. In such circumstances, the government should not have to compensate the owners of property damaged by a predictable natural hazard.

I would suggest, then, that courts should recognize a categorical limit to wildfire takings liability, but it should not arise from analysis of a particular governmental action that may have caused or contributed to the damage suffered by a property owner. Rather, compensation should not be awarded under the Takings Clause when wildfires occur in fire-prone wildlands.[104]

Such a categorical approach recognizes that certain natural hazards essentially adhere to property ownership. The Supreme Court has recognized that background legal principles attach to title such that operation of one of those principles can never support a takings claim, even if the property has lost all value.[105] Similarly, background ecological principles—such as wildfire risk—should be viewed as attaching to property, and when property experiences a manifestation of those background ecological principles, takings claims should be barred.

Several aspects of takings doctrine support such a categorical rule. The reasonable expectations of property owners have always been a

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102. Trego, *supra* note 6, at 617–22.

103. *See* Reilly, *supra* note 6, at 543, 560. In light of the failure of the National Flood Insurance Program to achieve actuarially sound insurance rates, *see, e.g.*, Pidot, *supra* note 5, at 255–56, I am pessimistic that a federal insurance program would accurately price risk.

104. Other remedies may be available. If government employees act negligently, for example, property owners could file tort suits. *See* Anderson v. United States, 55 F.3d 1379, 1384 (9th Cir. 1995). Such lawsuits may face challenges due to the limited waiver of sovereign immunity embodied in the FTCA, but concern about the extent to which the government has provided for tort lawsuits should not be a reason to recognize a more expansive takings remedy.

105. *See* Lucas v. S. C. Coastal Council, 505 U.S. 1003, 1029 (1992).

cornerstone of takings liability.[106] Those choosing to develop within wildfire-prone wildlands do not have a reasonable expectation that wildfire will not visit their property, and without such a reasonable expectation, takings claims should fail. The Supreme Court's treatment of the takings claims at issue in *Arkansas Game & Fish Commission v. United States*[107] supports this view that a property owner's reasonable expectations, and therefore their ability to secure compensation from the government, are connected to the naturally occurring risks facing the property.[108] In that case, a property owner—an agency of the state of Arkansas—sought compensation from the United States when the Army Corps of Engineers' management of a dam led to flooding downstream.[109] During oral argument, Justices Kennedy, Alito, and Sotomayor all asked questions related to trying to identify what baseline should be used to determine whether the flooding at issue could be attributed to the government.[110] Toward the end of the argument, Justice Sotomayor posed the question most precisely, asking: "Is the baseline . . . before the dam or after the dam, and why is it one or the other? If flooding was going to occur more unpredictably before the dam, and possibly summer flooding of this kind could have happened, do you lose?"[111]

The Court's ultimate decision in *Arkansas Game & Fish Commission* also addressed in passing the baseline issue. The Court explained that the property at issue "had not been exposed to flooding comparable [to that at issue in the case] in any other time span either prior to or after the construction of the Dam."[112] This statement suggests that had the flooded property been subject to historical floods of the character at issue in the case, the property owner may not have had a reasonable expectation that flooding would not recur, and therefore the takings claim would have failed.

The general concept of reciprocity of advantage also supports the rule I suggest.[113] This concept, which suggests that property owners should not

106. *See* Palazzolo v. Rhode Island, 533 U.S. 606, 617 (2001); Penn Central Transp. Co. v. City of New York, 438 U.S. 104, 124 (1978).

107. 133 S. Ct. 511 (2012).

108. *Id.* at 522.

109. *Id.* at 515–16.

110. For example, Justice Kennedy stated: "[W]hat I want is the definition of the operable baseline that we can use in order to define whether or not there has been a taking," and Justice Alito asked: "Should the baseline be what would have happened if the dam was never built?" Transcript of Oral Argument at 17, Ark. Game & Fish Comm'n v. United States, 133 S. Ct. 511 (2012) (No. 11-597). Later in the argument, Justice Sotomayor returned to the issue, asking, "tell me what the baseline is." *Id.* at 34.

111. *Id.* at 54.

112. *Ark. Game & Fish*, 133 S. Ct. at 522.

113. *See* Pa. Coal Co. v. Mahon, 260 U.S. 393, 415 (1922); *see also* Andrew W. Schwartz, *Reciprocity of Advantage: The Antidote to the Antidemocratic Trend in Regulatory Takings*, 22 UCLA J. ENVTL. L. & POL'Y 1 (2004).

be able to recover compensation from the government where the losses they experience are offset by "the advantage of living and doing business in a civilized community,"[114] is implicit in much of takings law.[115] The concept has significant application to wildfire takings claims. The federal government invests heavily in managing publicly owned wildlands and responding to wildfires when they occur, spending billions of dollars a year to fund these endeavors.[116] These efforts, while not always successful, cost the taxpayer dearly and provide property owners with longer periods of repose between episodes of wildfire than they would experience absent government action, periods during which a property owner can enjoy improvements on her property and recoup her investment. This valuable benefit counterbalances losses suffered when wildfire eventually (and inevitably) burns infrastructure within fire-prone wildlands. At such time, property owners have no legitimate demand for payment from the government because they have already been the recipient of substantial government benefits.

Economic research about the effect of wildfires on property values bolsters the case for reciprocity of advantage in this context.[117] Even if federal policies have resulted in less frequent, more severe wildfires, that may be the type of event that enhances property value on the whole. Evidence suggests that the negative effect of wildfire on property value relates directly to frequency,[118] meaning that prolonged periods without wildfire improve the situation of property owners vis-à-vis the market. While a natural regime that includes frequent, low intensity fires may pose less threat of direct harm to physical infrastructure, frequent fires would appear likely to more significantly depress property values. Less frequent, higher intensity wildfires would, on the other hand, result in greater risk of harm to physical infrastructure, but property values would be less sensitive to this risk except in the immediate aftermath of a wildfire.

Finally, causation principles favor a rule that bars compensation claims. Where wildlands predictably burn as a result of their environmental attributes, no particular fire should be viewed as causing injury. Rather,

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114. *Pa. Coal*, 260 U.S. at 422. As the California Supreme Court explained the concept:

> [T]he necessary reciprocity of advantage lies not in a precise balance of burdens and benefits accruing to property from a single law, or in an exact equality of burdens among all property owners, but in the interlocking system of benefits, economic and noneconomic, that all the participants in a democratic society may expect to receive, each also being called upon from time to time to sacrifice some advantage, economic or noneconomic, for the common good.

San Remo Hotel L.P. v. City & County of San Francisco, 41 P.3d 87, 109 (Cal. 2002).

115. *See* Schwartz, *supra* note 113, at 46–61.

116. *See* U.S. FOREST SERV. REPORT, *supra* note 37, at 3, 5; GAO, IMPORTANT STEPS, *supra* note 6.

117. *See supra* note 46 and accompanying text.

118. *See* Hansen et al., *supra* note 49.

property faces a persistent risk of fire damage, and the decision to build in a risky location should be viewed as the cause of the eventual injury.[119]

There may, of course, be wildfire that occurs in a location that did not experience historical fire cycles. In such circumstances, an examination of the governmental action and its justifications may be warranted. But such circumstances are likely to be rare. While only three cases, it is notable that *Cary*, *Teegarden*, and *TrinCo* all occurred within western wildlands that experienced recurring wildfires in their natural state.

Disallowing takings recovery for property owners that choose to develop in hazard-prone areas also allows market signals to more accurately price risk. This, in turn, facilitates better, more rational, and more socially optimal development decisions. Because development in hazard-prone areas imposes costs on the public and consumes scarce natural resources, the takings rule suggested in this Essay has both a sound doctrinal basis and serves important public policy goals.

IV. CONCLUSION

The destruction caused by wildfires has become a ubiquitous component of the news cycle.[120] More people live in wildfire-prone wildlands, and climate change and a buildup of fuels results in more frequent and more intense wildfires. Each year taxpayers spend more money to fight wildfires. And this trend is likely to continue. At the same time, we can expect to see more lawsuits filed against the federal government (and perhaps state and local governments too) seeking compensation when wildfires damage private property. That likelihood is partially a numbers game—more people experiencing more harm will lead to more lawsuits—and partially a feature of a paradigm shift that may be represented by the Federal Circuit's recent decision in *TrinCo.*

Rather than taking an incident-centric approach to wildfire takings claims, courts would do better to take baseline natural conditions seriously. Where private property is naturally subject to wildfire risk, claims for compensation should be barred when that risk materializes and wildfire damages the property. Such a rule has numerous salutary effects. Perhaps its most significant effect, however, is that categorically barring such claims avoids the creation of another subsidy for developing in wildfire-prone ecosystems.

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119. As Phil O'Keefe and his colleagues explained in a seminal article about natural disasters: "Without people there is no disaster." Phil O'Keefe et al., *Taking the Naturalness out of Natural Disasters*, 260 NATURE 566, 566 (1976). Similarly, when wildfires damage private property, the cause, at least in part, is the decision of the owner to build in a risky location.

120. *See, e.g.*, John Schwartz, *As Fires Grow, a New Landscape Appears in the West*, N.Y. TIMES (Sept. 21, 2015), http://www.nytimes.com/2015/09/22/science/as-fires-grow-a-new-landscape-appears-in-the-west.html?_r=0.

A baseline-centric approach to wildfire takings claims will mean that most property owners will have no claim for compensation against the government. That outcome reflects that those who purchase and develop property within wildfire-prone ecosystems do so despite the wildfire risk facing such property. This does not, of course, mean that no property owner may ever recover under any legal theory. Under the right circumstances, where the government has acted carelessly, a property owner could conceivably bring suit under state tort law. Such lawsuits will be difficult to win because of limitations inherent in bringing tort suits against the government, but that difficulty does not justify distorting the law of takings.