Wildfires cause massive property damage each year in the United States. One means of combating wildfires is by lighting a smaller controlled fire to burn and consume the wildfire's fuel supply and thereby slow or stop its expansion. These intentionally lit fires, called backfires, sometimes spread out of control themselves and destroy private property. The Federal Circuit in TrinCo v. United States recently expanded a common law doctrine to provide a defense for the federal government against a Fifth Amendment just compensation requirement when backfires are lit in circumstances of necessity. This Note contends that the bar the Federal Circuit sets for necessity is too high. It is essential that firefighters maintain the ability to act quickly to fight fires without being excessively restrained by fear of legal liability. Therefore, this Note argues that the public necessity defense should be interpreted as applying a subjective reasonable necessity standard that liberally accounts for the exigent nature of the circumstances facing firefighters. This Note proposes an alternative to the TrinCo public necessity standard, in which the Forest Service would prioritize non-insurable property, such as timber, over property covered by fire insurance, such as houses, and structures. This allows the private insurance market to compensate owners and forces owners to internalize their own costs brought on by their coming-to-the-risk of wildfires.
I. INTRODUCTION

Wildfires are a terrible and costly phenomenon in the United States. In 2012 alone, the federal government appropriated $2.76 billion for fighting wildfires.1 The human cost of wildfires is more significant still.2 In 2013 the United States was dramatically reminded of the dangers wildfires pose to human lives when the Yarnell Hill wildfire rapidly shifted direction and trapped 19 members of the Granite Mountain Hotshots, an elite wildland firefighting unit, away from their safe zone, killing them all.3 Between 1990 and 2013, wildfires claimed an average of 18 lives per year,4 but in 2013 the death toll spiked to 34.5

In order to fight fires and save lives and property, firefighting agencies must make significant decisions in difficult and fast-changing circumstances. The events described in Miller v. United States6 provide a glimpse at the rapid-fire nature of firefighting decision-making. On August 6, 1990, a thunderstorm ignited multiple fires in Oregon’s Ochoco National Forest.7 The local fire management officer became aware of the Bald Butte fire, the fire that threatened the plaintiff’s property, at around 7:00 p.m., and, within fifteen minutes, ordered aerial fire retardants and smokejumpers into action.8 However, partly due to the other fires, neither resource could be quickly mobilized. Thinking quickly, the fire management officer ordered fire engines and bulldozers to the scene.9 But the four fire engines owned by the District were also committed to other fires.10 The fire management officer determined that “direct ground-based attack” would be ineffective at this point, so priority was given to suppress other small fires.
that could flare up and spread.\textsuperscript{11} Soon thereafter, the Bald Butte fire was declared “escaped” and on-ground suppression efforts became too dangerous to continue until the afternoon of August 7, “seventeen to twenty-three hours after the Bald Butte fire was first sited.”\textsuperscript{12} The fire soon joined with two other wildfires and then grew dramatically to rage across 6,000 acres.\textsuperscript{13}

As the Ochoco Forest fires illustrate, wildfires are unpredictable and fighting them involves dealing with a great number of rapidly changing and unforeseen circumstances. Because federal and state governments are the de facto wildland firefighting institutions, they will inevitably be forced to make tough decisions quickly to fight wildland fires, and sometimes, private property will be destroyed in the process. Firefighting agencies should be free to make emergency decisions to fight fires without excessive liability constraints, and property owners, rather than state and local governments, should bear the financial risk of living in an area prone to wildfires.

This Note begins by discussing the backfire technique of combating wildfires. Part II continues by discussing the evolution of the conflagration rule from its early use as a justification for pulling down buildings to stop the spread of urban fires, and the recent expansion of this principle to backfires lit to fight wildfires. Part III examines two cases in the Court of Federal Claims, which first addressed the application of Fifth Amendment takings law to backfires. In Part IV, this Note undertakes an in-depth examination of the Federal Circuit’s decision in \textit{TrinCo Inv. Co. v. United States},\textsuperscript{14} how its application of the public necessity defense to backfire takings circumstances expanded the conflagration rule from urban fires to wildland fires, and its application of a potentially very high standard for the government to meet in order to satisfy the requirements of the defense. Part V examines the negative effects of hindering Forest Service action with liability concerns for firefighting actions, and contends that imposing a high burden on the government will both harm firefighting efforts and unfairly force the public to subsidize those individuals who came to the risk of wildfires. This Note defends the public necessity defense, and posits that the best interpretation of the \textit{TrinCo}

\begin{itemize}
\item \textsuperscript{11} \textit{Id.}
\item \textsuperscript{12} Miller v. United States, 163 F.3d 591, 592 (9th Cir. 1998).
\item \textsuperscript{13} \textit{Id.} at 592–93.
\item \textsuperscript{14} 722 F.3d 1375 (Fed. Cir. 2013).
\end{itemize}
decision would be as a subjective reasonable necessity standard that accommodates the snap decision-making that is required during a wildfire. In the alternative, this Note argues that property owners, not the government, should internalize the costs of wildfire damage. This solution would immunize the federal government from the Fifth Amendment’s compensation requirement where the destructive actions at issue were taken to fight a fire. In order to bring this immunization in line with the concerns of property owners, the Forest Service should alter its property protection hierarchy to prioritize the protection of non-insurable property such as timber, allowing private insurance to compensate property owners for destroyed insurable property, such as houses. This solution would permit property owners to protect themselves through private insurance, and would protect the general public from hefting a burden that more appropriately should fall on a smaller group of property owners.

II. BACKFIRES AND THE CONFLAGRATION RULE

This Part examines the history of the public necessity justification for excusing the government from the Fifth Amendment’s just compensation requirement for takings in certain circumstances. First, it traces the evolution and expansion of the conflagration rule, the earliest form of the necessity defense, from urban fires in England to more modern contexts, as well as the extension of the public necessity rule to non-conflagration scenarios such as military invasions. Next, this section examines the evolution of firefighting tactics through American history and whether the conflagration rule should apply with the same force to wildfires as it does to urban fires.

Backfiring is one of several firefighting methods the Forest Service uses to quell wildfires. A backfire is an intentionally lit fire “set along the inner edge of a fireline” designed to consume the fuel — the brush, trees, and tinder — in the fire’s path, or to “change the direction of force of the fire’s convection column.”15 A backfire provides a “wide defense perimeter,” and allows fire-

fighters to locate control lines at positions where the fires can be fought on the firefighter’s terms.\textsuperscript{16} This enables firefighters to prioritize where the fire is fought and to distinguish between properties or areas they will attempt to save and those they may be forced to sacrifice. Backfires are unpredictable and so must be carefully placed to leave a “deadzone” of burned tinder in the wildfire’s path without adding to the wildfire itself. Backfires are used frequently because they are the least costly of the fire suppression measures.\textsuperscript{17} The issue of ex-post government liability property damage stemming from backfire lighting spans both Fifth Amendment takings law and tort law, but the Federal Circuit, in \textit{TrinCo Inv. Co. v. United States},\textsuperscript{18} illuminated the discussion of takings liability in particular. \textit{TrinCo} could have significant implications for firefighting decisions in the future. It expanded the conflagration rule to wildfire takings cases by requiring the United States to plead an affirmative defense of public necessity when private landowners, whose property was damaged by a backfire, sued for a taking of their timberland.\textsuperscript{19} The conflagration rule could shield the government from liability under a Fifth Amendment takings claim, and thus absolve the government of any compensation requirement for takings of private property, when the destruction of that property meets the public necessity standard.\textsuperscript{20}

\section{A. Fire Cases}

Fire presents enormous risks to those living in close proximity to numerous other buildings. Large urban fires, such as the Great Chicago Fire, are infamous events, and the threat of urban fire has helped shape property law in our country for nearly two centuries. The exigent circumstances of an urban fire and the overwhelming need to stop its spread led to the abridgement of property rights in important ways. One such abridgement upheld in nineteenth century American courts was the ability to “pull down” buildings in the path of the fire without owing any compensation for the destruction or taking of real property to the

\begin{itemize}
\item \textsuperscript{16} National Wildfire Coordinating Group, \textit{supra} note 15.
\item \textsuperscript{17} Bradshaw, \textit{supra} note 15, at 159–60.
\item \textsuperscript{18} 722 F.3d 1375 (Fed. Cir. 2013).
\item \textsuperscript{19} \textit{Id.} at 1380.
\item \textsuperscript{20} \textit{See infra} Part IV.A.
\end{itemize}
building’s owner.\textsuperscript{21} This “conflagration rule,” developed distinctly in the urban fire context, has most recently been expanded to several other contexts including wildfires.\textsuperscript{22}

The development of the conflagration rule can be traced back to specific fires. In fact, the Great Fire of London inspired the original, oft-cited justification for the preclusion of the government’s duty to compensate property owners for destroying their property in order to fight a spreading fire. In 1788, the Supreme Court of Pennsylvania, while discussing “the rights of necessity” in \textit{Respublica v. Sparhawk},\textsuperscript{23} stated that “[h]ouses may be razed to prevent the spreading of fire . . . for the public good.”\textsuperscript{24} The Court found a “memorable instance of folly” where the Lord Mayor of London, during the Great Fire of London in 1666, would not order the tearing down of wooden houses standing in the path of the inferno for fear that he would be liable for trespassing, and consequently half of London burned.\textsuperscript{25} Thus, the \textit{Sparhawk} court addressed the privilege of necessity in general, and identified the perverse incentive that would exist if the government were forced to compensate those whose buildings were pulled down. Other American courts seized on this language to expound the conflagration rule and excusal of trespass in the event of an urban fire.

The New York City Fire of 1835 placed the necessity question on the docket once again. The Mayor of New York City ordered the destruction of several buildings in order to halt the spread of the blaze.\textsuperscript{26} A New York statute required government compensa-

\textsuperscript{21} See, e.g., Russell v. City of New York, 2 Denio 461 (N.Y. 1845) (holding that the pulling down of buildings by the Mayor and others did not require compensation at common law).

\textsuperscript{22} See Thomas W. Merrill, \textit{Property and Fire}, in \textit{Wildfire Policy: Law and Economics Perspectives} 32 (Karen M. Bradshaw & Dean Lueck eds., 2012). Merrill provides an examination of property rights in the urban fire context. He identifies three significant qualifications of property rights that urban fires necessitated: (1) the doctrine of overruling necessity (exception to the law of trespass for those fighting a fire); (2) expansion of the police power (to include “prophylactic measures designed to prevent fires as opposed to undoing presently existing harms’’); (3) the conflagration rule.

\textsuperscript{23} 1 U.S. 357 (Pa. 1788) (holding that no compensation was due for the removal of property from Philadelphia to prevent it from falling into the hands of the advancing British military force).

\textsuperscript{24} \textit{Id.} at 363.

\textsuperscript{25} \textit{Id.} But see Derek T. Muller, “As Much upon Tradition as upon Principle”: A Critique of the Privilege of Necessity Destruction Under the Fifth Amendment, \textit{82 Notre Dame L. Rev.} 481, 489–90 (2006), for an argument that the facts of the Great Fire of 1666 do not comport with the \textit{Sparhawk} court’s retelling.

\textsuperscript{26} See Stone v. City of New York, 25 Wend. 157, 157 (N.Y. 1840).
tion for destroyed real property, but owners sought additional remuneration for the destruction of their personal property — the contents of the destroyed buildings. In *Stone v. City of New York*, the New York Court for the Correction of Errors found that the statute required compensation for destroyed personal property. Likewise, in *Russell v. City of New York*, that same court held that pulling down a building to impede the spread of a fire was not a taking “for public use” compensable according to the New York Constitution because destruction intended to inhibit conflagration benefited only the discrete group of properties at immediate risk of being engulfed by the fire, rather than the general public. In developing the body of law related to urban fires, New York courts interpreted their state statute narrowly and assumed that the common law and New York Constitution provided no further remedy.

The United States Supreme Court concurred when it took up the very same issue in its seminal decision in *Bowditch v. City of Boston*, a case resulting from the Boston fire of 1872. Massachusetts had a statute similar to that at issue in the New York cases, which provided a remedy for the destruction of a building taken down to prevent the spread of a fire when a joint order was given by three or more engineers of the city fire department. The city’s postmaster directed that Bowditch’s building be demolished in order to stop the fire’s progress, and both the building and the personal effects contained therein were destroyed. Just as in the New York decisions, the Supreme Court noted that common law of necessity does not require compensation for

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27. 2 R. L. 368.
29.  *Id.*
30. The Court for the Correction of Errors was the highest New York Court until 1846, when its appellate jurisdiction was transferred to the Court of Appeals.
31. 25 Wend. at 161. New York State Senator Edwards’ opinion in *Stone* quotes Chancellor Kent’s commentaries as follows: “If a common highway be out of repair, a passenger may lawfully go through an adjoining private enclosure; so it is lawful to raze a house to the ground to prevent the spreading of a conflagration.” 2 Kent’s Comm. 339, citing 1 Dall. 357, 363.
32. 2 Denio 461 (N.Y. 1845).
34. *Russell v. City of New York*, 2 Denio 461, 564 (N.Y. 1845)
35. 101 U.S. 16 (1879).
36.  *Id.* at 16.
37.  *Id.* at 16, 21–22.
“plucking down” buildings in the path of a fire, and since the specific statutory conditions had not been met, the City of Boston did not owe any compensation for the pulling down of plaintiff’s building. The Court did not explicitly provide that the Fifth Amendment Takings Clause incorporated the conflagration rule, but the Court did approvingly refer to Sparhawk as representative of the common law defense of actual necessity.

B. MILITARY CASES

The necessity principle was expanded beyond conflagration to other contexts. Such scenarios included the military’s destruction of property when confronting the prospect of an advancing enemy military force. In one early application of the military necessity exception, President Grant elucidated the military necessity principle in a veto message to the United States Senate. Grant’s reasoning was described in United States v. Pacific Railroad Co., which discussed the 1872 case of J. Milton Best before the United States Senate Committee on Claims. Best submitted a claim to Congress for the value of his home and its contents, which had been “destroyed by order of the officer commanding the Union forces in defense of the city of Paducah, Kentucky, in March, 1864.” Confederate forces attacked Paducah and forced Union troops to retreat to Fort Anderson. Confederate sharpshooters then possessed Best’s house and besieged the fort. The federal forces shelled the house and drove the rebel forces back, but when enemy reinforcements arrived in the morning, the federal troops ordered the destruction of all houses within musket range of Fort Anderson.
The Senate committee responded to Best’s claim by passing a bill to reimburse the value of the dwelling house at the time it was burned down to prevent use by the enemy, characterizing its destruction as a government taking for public use.\(^{47}\) However, President Grant vetoed the bill in June of 1872.\(^{48}\) In his message to the Senate, President Grant asserted that takings liability would lead to payment of huge sums by the government for unavoidable destruction of property necessary for the war effort.\(^{49}\)

He further stated,

It is a general principle of both international and municipal law that all property is held subject, not only to be taken by the government for public uses, in which case, under the Constitution of the United States, the owner is entitled to just compensation, but also to be temporarily occupied, or even actually destroyed, in times of great public danger, and when the public safety demands it; and in this latter case governments do not admit a legal obligation on their part to compensate the owner.\(^{50}\)

Later, the Supreme Court expressly weighed in on the military necessity issue in *United States v. Caltex, (Philippines), Inc.*\(^{51}\) Caltex owned facilities in Manila at the time of the Japanese attack on Pearl Harbor.\(^{52}\) During the Japanese offensive that followed, the American military situation in the Philippines worsened. Soon, U.S. forces withdrew from Manila and destroyed various petroleum facilities in the area, including those belonging to Caltex.\(^{53}\) The Court cited *Pacific R.R. Co.* as applying the proper principle for denying compensation and specifically cited the conflagration rule as support for this conclusion.\(^{54}\) The common law “long recognized” that in times of peril, “such as when fire threatened a whole community,” the sovereign could destroy the property of the few to save that of the many, and this princi-

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48. *Id.* at 238.
49. *Id.*
50. *Id.*
51. 344 U.S. 149 (1952).
52. *Id.* at 150.
53. *Id.* at 151.
54. *Id.* at 156.
ple applied just as well to cases of military necessity.\textsuperscript{55} Chief Justice Vinson’s majority opinion in \textit{Caltex} definitively established the military necessity defense.\textsuperscript{56}

C. THE EVOLUTION AND STANDARDIZATION OF FIREFIGHTING OVER TIME

Although the conflagration rule seems to be an accepted principle of law, courts did not apply it to wildfires until very recently. Historically, wildland fires were not as threatening to life or property as they are now, and moreover, wildland firefighting was not always as federalized as it is today. On the surface, the similarities between urban fires and wildfires are apparent: in both scenarios, the government is responding to an emergency with little time for planning or strategic decision-making, and private insurance is available for structures that are destroyed by fire.\textsuperscript{57} And as suburban and urban development encroaches further and further into once-rural, wooded areas, a larger number of homes and lives are put at risk by wildfires, moving wildfires closer to urban fires in terms of location and potential consequences. Between 1990 and 2000, sixty percent of all new home construction was in this expanding wildland-urban interface.\textsuperscript{58} The breaking down of the wildland-urban boundary has ushered in an era of “intermix” fire,\textsuperscript{59} and just like urban fires, these wildfires are very destructive. Since 1960, fires in the United States burned an average of 4.5 million acres annually,\textsuperscript{60} and nearly 1,000 wildland firefighters have been killed in action. More than 1,000 homes are destroyed by wildfire each year.\textsuperscript{61} It should be noted, however, that the nature of the modern firefighting regime

\textsuperscript{55} \textit{Caltex}, 344 U.S. at 153–54.

\textsuperscript{56} Justice Field discussed the common law principle of necessity and its application to military necessity cases in \textit{Pacific Railroad}. 120 U.S. at 234. Referring to that principle, Chief Justice Vinson later asserted, “whether or not the principle laid down by Justice Field was dictum when he enunciated it, we hold that it is law today.” \textit{Caltex}, 344 U.S. at 154.

\textsuperscript{57} \textit{See infra} Part V.D.


\textsuperscript{60} \textit{Id.} at 1011.

\textsuperscript{61} \textit{Wildland Fire Management: Progress and Future Challenges}, supra note 58.
is quite different from that which prevailed when courts first developed the conflagration rule.

Early American settlements set fires to clear land for agriculture and to create firebreaks and buffers against forest fires. The incursion of railroads and coal-fired, flame-sparking locomotives only worsened fire problems. Communities would often band together to fight fires to the extent their limited resources allowed. The nascent Forest Service, which was established in 1876 as the office of the Special Agent in the Department of Agriculture, and which became the Division of Forestry in 1881, represented an advance in united wildland firefighting. The Division was tasked with conserving timber resources and watersheds. To achieve that mission, the Division had to take serious interest in combating the threat of wildfires, as fire directly destroyed timber resources, and burnt and tree-less hillsides led to landslides and erosion, which threatened watersheds.

Today, the United States Forest Service serves as the go-to federal wildland firefighting agency, although state agencies do retain authority in some areas. Appropriations for wildfire management are very high and rising. Large funding allocations allow the Forest Service to employ highly trained wildland firefighters and mechanized firefighting capabilities.

63. Id. at 305 n. 12.
64. Id. at 305.
65. Franklin B. Hough (1822-1885), *Forest History Society*, http://www.foresthistory.org/ASPNET/People/Hough/Hough.aspx (last visited Mar. 8, 2014) (“In 1881, the position of federal forestry agent was elevated to division status, and the U.S. Division of Forestry came into being.”).
67. Id., at 305.
68. Id., at 358–61.
70. Wishnie, supra note 59, at 1009 (“ . . . via an emergency-funding mechanism that allows USFS to spend first and seek reimbursement from Congress later, virtually unlimited funding is available for wildfire suppression.”).
71. For example, the Interagency Hotshot Crews (IHC) program is a professional firefighter program employed by various government agencies including the Forest Ser-
This general growth in the federal government’s expertise and ability to fight wildfires illustrates one of the ways in which the “institutional backdrop has changed from the era of urban fires to the wildfire problem we confront today.” Thomas Merrill points to the growth of government as one of three major changes in the institutional landscape leading to an increased likelihood of compensation being owed to property owners in wildfire takings cases. Because the “fuzzy, if not indistinguishable, line between public and private responses to fires” that characterized nineteenth century urban conflagration scenarios has shifted decidedly toward public action, and because “the growth of government has given rise to the expectation that government will be successful in controlling fires,” it is more likely that government will be held responsible for losses resulting from wildfires. These changed firefighting circumstances were not enough to prevent the Federal Circuit from expanding the conflagration rule to the lighting of backfires to prevent the spread of a wildfire in TrinCo, but they may help predict how strict the federal courts will be with this newly expanded standard going forward.

III. SEEKING A LEGAL STANDARD IN THE COURT OF FEDERAL CLAIMS

In TrinCo Investment Co. v. United States, the expansion of the conflagration rule arrived at the Federal Circuit’s doorstep.
when a private property owner, whose timberlands were destroyed by a backfire lit by the Forest Service, brought a Fifth Amendment takings action against the United States seeking compensation for his scorched property.\textsuperscript{78} Although the Federal Circuit concluded that the Court of Federal Claims (CFC) was mistaken about the law in the \textit{TrinCo} decision,\textsuperscript{79} an analysis of what the CFC believed the law to be before the Federal Circuit’s decision is relevant to a deeper understanding of how the conflagration rule has developed in modern wildfire and takings law.

The CFC decided two cases containing nearly identical facts in 2012 — \textit{TrinCo Inv. Co. v. United States}\textsuperscript{80} and \textit{Chapman v. United States}\textsuperscript{81} — both of which involved the destruction of property while combating forest fires with backfiring. In \textit{Chapman}, the CFC considered whether the destruction of various parcels of real and private property by government-lit backfires constituted a taking requiring compensation. This case concerned the “Poe Cabin fire,”\textsuperscript{82} which began in July 2007 in the Nez Pearce National Forest on land owned by the United States Bureau of Land Management, the State of Idaho, and private land.\textsuperscript{83} In an attempt to combat the wildfire, the Forest Service set a backfire that eventually consumed the plaintiff’s real property and personal property. However, the plaintiffs in \textit{Chapman} only made claims for the taking of their personal property, including timber.\textsuperscript{84}

In searching for the appropriate legal standard, the plaintiffs and defendant agreed that the Federal Circuit opinion in \textit{Ridge Line, Inc. v. United States},\textsuperscript{85} which set out a two-pronged test for stating a compensable takings claim,\textsuperscript{86} should govern. Under the

\begin{quote}
\textsuperscript{78} \textit{Id.} at 1376–77.
\textsuperscript{79} \textit{Id.} at 1378 (“[T]he CFC misapprehended the reach of the doctrine of necessity, impermissibly expanding its scope to absolve the Government of liability for any of its actions so long as they are part of an effort to control or prevent fire.”).
\textsuperscript{80} 106 Fed. Cl. 98 (2012), rev’d, 722 F.3d 1375 (Fed. Cir. 2013).
\textsuperscript{82} \textit{Id.} at 48.
\textsuperscript{83} \textit{Id.}
\textsuperscript{84} \textit{Id.} at 49.
\textsuperscript{85} 346 F.3d 1346 (Fed. Cir. 2003).
\textsuperscript{86} The test is as follows:
First, a property loss compensable as a taking only results when the government intends to invade a protected property interest or the asserted invasion is the direct, natural, or probable result of an authorized activity and not the incidental or consequential injury inflicted by the action.
\end{quote}
The Ridge Line standard, “... the question becomes whether the pleaded facts show that the Government has appropriated a benefit to itself at the expense of the plaintiffs...”87 The court acknowledged the indeterminacy of the legal standard for the plaintiff’s takings claim, and “found no jurisprudence” addressing how destruction of private property to prevent a spread of fire fits into the Ridge Line framework.88 So, reasoning divorced from precedent, the Chapman court held that when the government lights backfires to combat a wildfire, and the backfires destroy private property, the government neither appropriates a benefit to itself — for any potential benefit is burned up — nor preempts the owner’s enjoyment of her property because, upon its destruction, no property remains to be enjoyed.89

Interestingly, the CFC in TrinCo — a case decided less than three months prior to Chapman90 — applied substantially different legal reasoning to similar facts, but ultimately arrived at the same conclusion. The TrinCo court was concerned with plaintiffs’ real property in California, which was surrounded by the Shasta-Trinity National Forest.91 In late June 2008, the “Iron Complex” wildfires92 began to burn in Shasta-Trinity, and in an effort to reduce the amount of unburned timber near the Iron Complex fires, the Forest Service lit a number of backfires “on or adjacent to plaintiffs’ properties,” which ultimately damaged plaintiffs’ real property.93

The TrinCo court cited the familiar Bowditch language94 as representing an important background principle of law that —

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87. Id. at 49.
88. Id. at 50.
89. Id. at 50–51 (“To put it glibly, the Forest Service did not burn plaintiffs’ timber in order to provide heat for the crew.”).
91. TrinCo, 106 Fed. Cl. at 98.
92. Id. at 98–99.
93. Id. at 99.
94. “At common law every one had the right to destroy real and personal property, in cases of actual necessity, to prevent the spreading of a fire, and there was no responsibil-
having been reinforced by the Supreme Court in *Lucas*  
— was binding on the CFC. The court granted the government’s motion to dismiss pursuant to RCFC 12(b)(6), because the plaintiffs failed to plead any facts to show that the government’s backfires were not taken as part of the firefighting efforts against the Iron Complex fires. For the CFC in *TrinCo*, this fact was determinative — if the property was destroyed in order to combat a wildfire, then the government owed no compensation.

Examining the CFC’s rulings in *TrinCo* and *Chapman* together reveals the perceived legal picture as it stood before the Federal Circuit overturned the CFC’s decision in *TrinCo*. The CFC in *TrinCo* applied the previous case law ambitiously. First, the court expanded the conflagration rule from urban fires to wildland fires without mentioning that wildfires had not before been under the umbrella of the conflagration rule. Further, the court bypassed any real examination of the meaning of “actual necessity,” despite its presence in the *Bowditch* language the CFC cited and relied upon. In fact, although the plaintiffs argued that the government pled a defense of “actual necessity,” which required “Purpose, Need, Immediacy, and Protection of Special Value,” the court found that their test for necessity was not binding and then gave no more analysis of the backfires’ necessity whatsoever. Apparently, the court did not recognize necessity as an issue actually in controversy. Perhaps this is because few of the previous urban fire cases actually examined the firefighting action’s necessity aside from stating that necessity was an element of the rule, or perhaps it is because the necessity of lighting backfires to reduce fuel buildup to prevent a forest fire seemed intuitively apparent.

Augmenting the CFC’s relatively cursory *TrinCo* decision is the court’s somewhat more thoughtful *Chapman* decision. Despite taking a different approach, the *Chapman* court’s “independent examination of *TrinCo* confirm[ed] that the Court summarized and applied the law correctly regarding the destruction of private property to prevent the spread of a fire.” But on top
of this, the *Ridge Line* second prong was pulled into the analysis, adding Federal Circuit support to *TrinCo*’s reliance on older Supreme Court decisions.100 Aware of the Federal Circuit’s cautious stance towards granting even summary judgment in just compensation cases,101 the *Chapman* court found support for their 12(b)(6) dismissal by citing *Cary v. United States*,102 another Federal Circuit wildfire takings case, which was “not troubled that the case was presented on a Rule 12(b)(6) motion to dismiss” when ruling for the defendant.103 Finally, the court acknowledged the danger in setting a bright-line rule immunizing government backfires from takings claims, but noted that “the court has not found[] any authority suggesting that the limits of the Government’s authority to destroy personal property to prevent the spread of a fire are found in the magnitude of the destruction.”104 Ultimately, the Court of Federal Claims saw few limits on the government’s ability to destroy private property in the process of combating a wildfire, no matter how many acres were destroyed.

The Court of Federal Claims decisions in *Chapman* and *TrinCo* highlight the uncertainty that abounds on this question of law. The two courts were not sure which standard should apply and neither court required a close inspection of the necessity of the government’s actions beyond satisfying themselves that the backfires were lit to combat a wildfire. The Federal Circuit reversed the CFC’s decision in *TrinCo* and remanded the case for further proceedings to determine whether facts supporting the government’s public necessity defense were present.105 The findings of the CFC favoring government action may color any predictions about how the CFC will interpret the Federal Circuit’s decision, and the very different decisions the courts reached while

100. *Id.* at 50–51 (“In *TrinCo* the court dismissed the plaintiff’s concerns about the natural law origins of the guiding principle regarding destruction of property in the course of firefighting efforts, noting that it had been reiterated in recent Supreme Court opinions. It is clear that the principle also finds a place within the *Ridge Line* test.”) (citations omitted).

101. *Id.* at 51 (“The fact-intensive nature of just compensation jurisprudence to date . . . argues against precipitous grants of summary judgment[,]”) (quoting *Yuba Goldfields, Inc. v. United States*, 723 F.2d 884, 887 (Fed. Cir. 1983)).

102. *Id.* at 51–52.

103. *Id.* at 51 (citing *Cary v. United States*, 552 F.3d 1373 (Fed. Cir. 2009)).

104. *Id.* at 52.

105. *See infra* Part IV.
reading the same cases highlight the degree to which this area of law remains unshaped in this circuit.

IV. THE FEDERAL CIRCUIT CHANGES GEARS IN *TRINCO*

After the Court of Federal Claims grasped for a strong legal foundation on which to set their wildfire takings holdings, the Federal Circuit interpreted the case law in a dramatically different manner, and found that the CFC “misapprehended the reach of the doctrine of necessity.” The Federal Circuit implicitly agreed that the conflagration rule should apply in the wildfire context, but emphasized that the government must make a showing that their actions were actually necessary.

The Federal Circuit found that the CFC erred in applying what amounted to blanket immunity for all backfires lit to combat a wildfire. The Federal Circuit recognized that there is “no case law on point for TrinCo’s case,” but held that three important prerequisites must be satisfied before the “doctrine of necessity” can immunize the government against takings: (1) an imminent danger and (2) an actual emergency giving rise to (3) actual necessity. This Part examines the Federal Circuit’s public necessity argument, its doctrinal support, its implications for 12(b)(6) dismissals, and the potential impact of the decision on Forest Service action.

A. PUBLIC NECESSITY

In order to establish the three requirements of public necessity in *TrinCo*, the Federal Circuit provided multiple examples of how actual necessity had been required in the past. First, the court explained that in *Bowditch*, the Supreme Court applied actual necessity to absolve the City of Boston of liability for destroying not-yet-burned buildings in order to stop the spread of an urban fire. The *Bowditch* court noted that the pulled-down buildings were “at a place of danger in the immediate vicinity [of a fire]” and that destroying the building stopped the fire’s expan-

107. *Id.* at 1378.
sion.109 Bowditch also noted that the natural law principle on which the right of necessity is based “finds the right and the justification in the same imperative necessity.”110 The Federal Circuit thus found an emphasis by the Supreme Court that the need for an imminent danger and an actual emergency necessitating the government taking were essential to the actual necessity calculus.111

Next, the court referred to the Supreme Court’s World War II-era military necessity decision in Caltex as an example emphasizing the prerequisites of imminent danger and actual necessity.112 In Caltex, the United States Supreme Court stated, “the destruction of respondents’ terminals . . . in the face of their impending seizure by the enemy was no different than the destruction of the bridges in the Pacific Railroad case.”113 The TrinCo court seems to have buried its strongest support for its actual necessity argument in an end-of-paragraph parenthetical that cites Mitchell v. Harmony,114 a wartime necessity case. The court cited language stating that the “danger must be immediate and impending” or the “necessity urgent” because “it is the emergency that gives the right [to the government to take private property], and emergency must be shown to exist before the taking can be justified.”115 Further support for the requirement of actual emergency and immediate, impending danger is found in state court decisions.116 In contrast, “no precedent exists to support the assertion that any action taken for the purpose of fire prevention is protected by the necessity doctrine in the absence of actual emergency, imminent danger, and the actual necessity of Government action,” so the CFC’s holding “misconstrue[d] the breadth of the doctrine of necessity.”117

109. Id. (quoting Bowditch v. City of Boston, 101 U.S. 16, 16 (1879)).
110. Bowditch, 101 U.S. at 18 (emphasis added).
111. TrinCo, 722 F.3d at 1378.
112. Id.
113. Caltex, 344 U.S. at 156 (emphasis added).
114. 54 U.S. 115 (1851).
115. TrinCo, 722 F.3d at 1379 (citing Mitchell, 54 U.S. at 135).
B. THE 12(B)(6) QUESTION

The Federal Circuit found that the CFC had improperly granted the United States’ Rule 12(b)(6) motion to dismiss as a result of its misinterpretation of the law. In the underlying case, the CFC found that the plaintiffs failed to provide any facts suggesting that backfires were not lit as part of the effort to combat the Iron Complex fires — as opposed to being more generalized fuel-reduction on federal lands not targeted at any specific fire — and dismissed TrinCo’s complaint.\textsuperscript{118} But the Federal Circuit held that the government had not proven their affirmative defense of necessity. The court indicated that the affirmative defense pled by the government required a showing of imminent danger and actual emergency necessitating the backfire. According to the court, “The facts, as they are pled in TrinCo’s complaint, d[id] not demonstrate that the Iron Complex fire had created an imminent danger and an actual emergency necessitating the burning of 1,782 acres of TrinCo’s timbered acreage,” and certainly did not compare to the imminence or necessity of an urban fire, as in \textit{Bowditch}, or an invading army, as in \textit{Caltex}.\textsuperscript{119} Instead, the court concluded, the government must show why the plaintiff’s land had to be sacrificed and that there was an imminent harm and actual emergency. “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,” the court explained.\textsuperscript{120}

After the \textit{TrinCo} decision, it will be very difficult for any government 12(b)(6)\textsuperscript{121} motion to succeed in backfire takings cases. To survive a motion to dismiss, the complaint must allege “enough facts to state a claim to relief that is plausible on its face” and the pleadings must contain enough detail to move the claims “across the line from conceivable to plausible.”\textsuperscript{122} To move across the line into plausibility the plaintiff must plead “factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged.”\textsuperscript{123} In

\begin{itemize}
\item \textsuperscript{118} See \textit{TrinCo}, 106 Fed. Cl. 98.
\item \textsuperscript{119} \textit{TrinCo}, 722 F.3d at 1380.
\item \textsuperscript{120} \textit{Id.}
\item \textsuperscript{121} \textit{Fed. R. Civ. P. 12(b)(6)}.
\item \textsuperscript{122} \textit{Bell Atl. Corp. v. Twombly}, 550 U.S. 554, 570 (2007).
\item \textsuperscript{123} \textit{Ashcroft v. Iqbal}, 556 U.S. 662, 678 (2009).
\end{itemize}
TrinCo, the court was not satisfied with either the evidence of emergency, or the government’s failure to explain its reasons for burning plaintiff’s land instead of other federal land.\textsuperscript{124} But the Federal Circuit was aware that some backfires were started on National Forest land.\textsuperscript{125} These backfires were lit by the Forest Service “within weeks of the outbreak of the first series of wildfires” in order to control the Iron Complex Fires.\textsuperscript{126} At the time, two percent of the enormous Shasta-Trinity National Forest was burning — 42,000 acres in total.\textsuperscript{127} “[T]wo of the intentionally-lit fires were set when two separate wildfires . . . already ‘adjacent to’ TrinCo’s property” created a growing threat to public safety.\textsuperscript{128} However, none of this information was deemed relevant to the court’s determination, because it was not set out in the plaintiff’s complaint. The court found it “impossible, without further inquiry, to determine whether the requisite imminent danger and actual emergency giving rise to the actual necessity” were present.\textsuperscript{129}

TrinCo signals to the Court of Federal Claims that plaintiffs’ pleadings in backfire takings cases must pass only a low threshold to be deemed plausible. Indeed, the CFC has already seized upon this lax standard in non-backfire cases. In \textit{Davis Wetlands Bank v. United States,}\textsuperscript{130} the CFC cited language in TrinCo stating that “avoid[ing] dismissal under [RCFC] 12(b)(6)” required

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\begin{enumerate}
\item \textsuperscript{124} TrinCo, 722 F.3d at 1380 (“In the case below there are legitimate questions as to imminence, necessity, and emergency. While there is no doubt that there was a fire . . . only approximately 2% of the 2.1 million-acre national forest was in flames. It is clearly relevant to the present case to learn in discovery why the Plaintiff’s property had to be sacrificed, as opposed to other property, including other portions of the National Forest itself.”).
\item \textsuperscript{125} Answering Brief of Defendant-Appellee at 5, TrinCo v. United States, 722 F.3d 1375 (Fed. Cir. 2013) (No. 12-5139), 2013 WL 607106, at 5.
\item \textsuperscript{126} Id. at 5–6 (internal quotations omitted).
\item \textsuperscript{129} TrinCo, 722 F.3d at 1380.
\item \textsuperscript{130} 114 Fed. Cl. 113 (2013). Note that this case does not involve any wildfire or takings claim. Davis Wetlands Bank sued the United States Army Corps of Engineers, alleging breach of an agreement to issue sellable wetlands credits to plaintiff.
\end{enumerate}
\end{flushleft}
only that a party plead “facts sufficient to ‘nudge claims across the line from conceivable to plausible’” as support for the CFC’s holding that “the underlying factual issue of whether the Army Corp [sic] acted reasonably cannot be decided on a motion to dismiss.” If it is the case that reasonableness cannot be evaluated at the motion to dismiss stage, then evaluating whether the Forest Service acted out of actual necessity is likewise a determination that requires discovery, for both questions require evaluation of the action taken in relation to the surrounding circumstances.

C. WHAT DO NECESSITY AND IMMINENCE REQUIRE?

On its face, the Federal Circuit’s decision in TrinCo seems sensible, particularly with respect to the specific facts of the TrinCo case. In laying out the requirements of actual necessity and imminent emergency, however, the Federal Circuit may have read more into the case history than is apparent from the decisions themselves. Even though the Federal Circuit merely reversed a 12(b)(6) dismissal, it is still apparent that TrinCo officially expands the “rule of necessity,” and specifically, the urban conflagration rule, to wildfire takings cases for the first time in the Federal Circuit’s history. In its explication of the rule, the court also may have imposed modified requirements — for actual necessity and imminence — that were not enforced in the rule’s prior applications.

TrinCo cites Bowditch, Ralli, Caltex, and Mitchell v. Harmony as evidence that the Supreme Court “has consistently held that the doctrine of necessity may be applied only when there is an imminent danger and an actual emergency giving rise to actual necessity.” The strongest statement of the need for actual necessity is found in Mitchell. But Mitchell and Caltex

131. Davis Wetlands Bank, 114 Fed.Cl. at 124 (citing TrinCo v. United States, 722 F.3d 1375, 1380 (Fed. Cir. 2013)).
136. TrinCo, 722 F.3d at 1378.
137. Id. at 1379 (citing Mitchell, 54 U.S. at 135) (“stating that for a taking to be justified during wartime the ‘danger must be immediate and impending’ or the ‘necessity urgent . . . such as will not admit delay’ because ‘it is the emergency that gives the right [to


were not urban conflagration cases at all; they were military necessity scenarios. *Bowditch*, which was an actual conflagration case, does not contain nearly such powerful language. *Bowditch* was, however, decided after the full development of the facts and not at the motion to dismiss stage. At issue in *Bowditch* was a Massachusetts state statute that required fire department engineers themselves to determine that pulling down a building to create a fire break was necessary, and it did not require the court to review the necessity on its own. The Supreme Court in *Bowditch* did not in fact, as the Federal Circuit asserted, “appl[y] the doctrine of necessity to absolve the City of Boston of liability.”

Like *Bowditch*, *Ralli* does not — at least in the manner the Federal Circuit suggested — provide definitive support for the proposition that courts may determine necessity based on investigation into the incident. The *TrinCo* court accurately notes that *Ralli* states, “either public officers or private persons may raze houses to prevent the spreading of a conflagration” but that “this right rests on public necessity.” The Federal Circuit did not include the second part of that sentence, however, which reads, “and no one is bound to compensate for or contribute to the loss, unless the town or neighborhood is made liable by express statute.” The Federal Circuit did not include the second part of that sentence, however, which reads, “and no one is bound to compensate for or contribute to the loss, unless the town or neighborhood is made liable by express statute.”

What is more, *Ralli* concerned a fire aboard a ship that prompted the port authorities to take actions to quell the fire, damaging the ship’s cargo in the process. The Supreme Court in *Ralli* made a distinction between the law of average, which is an ancient tenet of maritime law and applies to those following orders of the ship’s master, and municipal law, which applies to the fire department or others under command of the municipal port officers instead of the ship master. The discussion of “imminent peril” was undertaken with respect to the requirements for general average, but the case was ultimately decided on a police-power theory. Thus, imminent peril was not central to the

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138. Bowditch v. City of Boston, 101 U.S. 16, 20 (1879) (“They must all have arrived at the conclusion that it was necessary to destroy it in order to arrest the progress of the flames.”).
139. *TrinCo*, 722 F.3d at 1378 (quoting Ralli v. Troop, 157 U.S. 386, 405 (1895)).
141. *Id.* at 386–392.
142. *Id.* at 393.
143. *Id.* at 393, 414.
holding, and *Ralli* provides only limited support for the role of necessity in wildfire takings cases like *TrinCo*.

After reviewing the above decisions, it is understandable how the CFC did not require a deeper examination of the “necessity” of backfiring. Whether existing precedent specifically calls for it or not, however, the Federal Circuit in *TrinCo* interpreted the public necessity requirement to require a factual determination by the lower court of the existence of imminent danger and actual necessity.

**D. THE UPSHOT OF TRINCO**

Ultimately, we do not yet know how the federal courts will react to *TrinCo*, or indeed whether they appreciate the potential extent of its impact, but three takeaways follow from the newly clarified — or newly imposed — necessity rule. First, the government will bear a heavy burden in attempting to dismiss cases with a 12(b)(6) motion and will be forced to prove ex post that the backfire was necessary and created under conditions of imminent and emergency. This could lead to longer and more costly litigation and compensation payouts for plaintiffs where the requirements are not met. Second, the conflagration rule — referred to as the more general rule of necessity, and applied alike to military necessity cases and urban conflagration cases — has been definitively extended to wildfire cases before the Federal Circuit.144 Beyond acknowledging that “there is no case law on point for *TrinCo*’s case,”145 the Federal Circuit, much like the CFC in its underlying decision, did not seem aware of the significance of applying a compensation-immunizing rule that originated with urban building pull-downs by local or non-municipal fire teams, as opposed to the lighting of backfires by a federal and state-dominated professional firefighting regime (in *TrinCo*, the

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144. Extension in the Federal Circuit is particularly significant with respect to federal takings cases. The Court of Federal Claims, over which the Federal Circuit has appellate jurisdiction, has jurisdiction over federal takings cases, Tucker Act, 28 U.S.C. § 1491(a)(1) (2011), and about ten percent of the CFC’s workload consists of takings cases. *About the Court*, U.S. COURT OF FED. CLAIMS, http://www.uscfc.uscourts.gov/about-court (last visited Feb. 12, 2014). Note that it is “well known” that the CFC and Federal Circuit “have tended to be more sympathetic to takings claims than have most other courts in the United States,” Merrill, supra note 22, at 40, and this may lead one to believe that the necessity standard accompanying the necessity defense will be applied strictly.

United States Forest Service). 146 Third, the defendant must satisfy three requirements to justify its actions under the necessity theory: (1) imminent danger, (2) actual emergency, and (3) necessity of the action taken. 147

There is an interesting dynamic between the second and third takeaways as the court simultaneously expands a government-friendly standard while emphasizing the standard’s limited applicability. By extending the necessity defense to wildfire cases, the Federal Circuit seems to have given a victory to the government at the expense of property owners, because the court recognized that the Forest Service is sometimes legally justified in burning down privately owned timber. This qualified immunization from takings liability is far from a popular stance among legal commentators.148 But the federal government should not celebrate a victory yet because the Federal Circuit, in expanding the conflagration rule, simultaneously seems to have emphasized and intensified the imminence and necessity requirements. What is more, the “actual necessity” requirement is not defined. If the court intends an objective test for necessity that focuses on whether the action was in fact necessary, then actions that seemed necessary at the time they were taken, but did not prove to be necessary when examined ex post, may not meet the TrinCo requirements and thus will open the government up to liability. If this is the case, the government’s ability to act freely to fight wildfires will likely be limited due to hesitation to use backfires, and quick decisions dealing with the evolving dangers of a forest fire emergency will be subject to ex-post review concerned more with the result than the reasoning or judgment. This will lead to greater firefighting expense borne by the government, whether due to the ex-ante decision to steer away from the inexpensive backfiring, or to the ex-post imposition of liability for negative consequences of the firefighting.

V. ECONOMICAL SOLUTIONS

The public necessity rule in general is appropriate in the case of wildfire takings cases for two reasons. First, the emergency nature of the action both reduces the potential for governmental

146. See supra Part II.C.
147. TrinCo, 722 F.3d at 1378.
148. See infra Part V.A.
abuse and calls for a defense that allows the government to have sufficient discretion in its firefighting. Second, government takings payments are akin to mandatory public insurance, but the public as a whole should not have to subsidize, through the payment of takings compensation, those landowners who came to the risk of the very wildfire the government sought to protect them from.

If the public necessity standard is to require a factual determination of actual necessity and imminent harm, then the standard should be a subjective one that clearly accounts for the exigent nature of the circumstances in which the Forest Service acted. In the alternative, this Note proposes a solution that essentially applies the CFC’s government-immunizing public necessity standard coupled with a more economically-conscious firefighting policy by the Forest Service that considers the important role private insurance can serve in allowing landowners to internalize the risk of wildfires themselves. This model considers which property to protect from wildfires in order to achieve the maximum amount of Forest Service freedom-of-action to fight wildfires, while at the same time providing some compensation to property owners through private insurance channels.

A. ADDRESSING ARGUMENTS AGAINST PUBLIC NECESSITY AND THE CONFLAGRATION RULE

Although legal issues surrounding wildfire have traditionally been ignored by legal commentators, there has been a recent increase in interest in the topic. Within this trend, an emerging strain of anti-public necessity literature questions why private landowners should be barred from compensation for their personal losses. Professor Susan Kuo argues that public neces-

149. See Karen M. Bradshaw, A Modern Overview of Wildfire Law, 21 Fordham Envtl. L. Rev. 445, 446 n.4 (2010) ("Wildfire is relatively unstudied in legal literature."); Lauren Wishnie, supra note 59, at 1007 ( Commenting that "[d]espite its significant economic, environmental, and social impacts, the law has surprisingly little to say about wildfire").

150. Bradshaw, supra note 149, at 446 n.5 ("Perhaps because of renewed public attention to wildfire as a result of the recent dramatic growth in the number and severity of burns annually, this area of law is experiencing renewed attention. Recent literature addresses wildfire policies inter-agency dynamics, and state-federal interplay."). Bradshaw lists several recent examinations of various aspects of wildfire management.

sity is an inappropriate doctrine because viewing only those government actions that take place at the time of the disaster is unnecessarily myopic when one considers that “public officials can act to mitigate disaster vulnerability through careful planning, thereby reducing the likelihood that tradeoffs will become necessary.”152 Officials, Kuo asserts, do “need wide latitude to manage a disaster response,” but authority to act should not justify withholding compensation for damages.153

Some commentators apply economic arguments dealing with backfires specifically, as opposed to public necessity on the whole.154 Karen Bradshaw contends that there are distorted incentives governing the wildfire suppression regime, which ultimately lead to excessive use of backfires, particularly in place of other potentially costly methods, and thus the unnecessary destruction of private property.155 To bring these incentives in line, Bradshaw argues that backfire-caused damage to property should require compensation for “straightforward property takings, lost future value, and mitigation/regeneration costs.”156

B. IN DEFENSE OF PUBLIC NECESSITY

The arguments presented against the public necessity defense in its entirety ultimately fall flat. It is true that there may be instances in which the public necessity defense leads to economically inefficient or morally undesirable outcomes. With respect to the economic concern, however, the very nature of the public necessity scenario is inapposite to measured empirical consideration of all possible alternatives and outcomes. Bradshaw asserts that backfires should be used only when their use provides greater utility than the destruction they cause,157 and that because backfires impose costs on landowners but not upon the government agents who set the backfire, compensation should be paid in order

152. Id. at 140.
153. Id. at 183.
154. See generally Bradshaw, supra note 15.
155. Id. at 173.
156. Id. at 174–75.
157. Id. at 159 (“This Article . . . raises the question of whether some tools impose such a great cost on landowners and timberlands that their use should be constrained to situations in which they produce a benefit at least equal to the harm they cause across the dimensions of protecting life, property, and environmental values.”).
to better reflect the societal and environmental costs imposed.\footnote{158} But wildfires and backfires are often unpredictable, and when operating in exigent circumstances the Forest Service must make quick decisions to combat and contain them. It is therefore difficult to determine the precise utility balance of employing a backfire as opposed to another more expensive firefighting technique.\footnote{159} Further, while some contend that “government agencies can use backfire as an alternative to other practices for which they would have to pay,”\footnote{160} it is more often the case that firefighting agencies use backfires as part of a broader firefighting scheme, in conjunction with other techniques for which the agencies must pay.\footnote{161} It is not clear that once a fire has begun there are non-backfire techniques that can independently be effective in all cases, and if backfires are an integral part of broader firefighting schemes, the argument that their use should be reduced in favor of alternative techniques is not especially compelling. In addition, the fact that homeowners choose to live in the wildland-urban interface should weigh against property owners when their location predictably brings a risk of fire damage. Where the federal government is tasked both with intervening with nature to protect the property owners in the wildland-urban interface, and with compensating owners for property damage that results from the government’s firefighting efforts, the landowners who came to the risk enjoy the benefits of federal protection but bear no financial risk. The Armstrong Principle, set out by the Supreme Court in \textit{Armstrong v. United States},\footnote{162} asserts that “[t]he Fifth Amendment’s guarantee that private property shall not be taken for a public use without just compensation was designed to bar Government from forcing some people alone to
bear public burdens which, in all fairness and justice, should be borne by the public as a whole.”163 However, in the case of property owners choosing to settle in areas they know to be at risk of wildfire, which requires federal efforts to control, “fairness and justice” do not dictate that the public as a whole should bear the tax burden of compensating property owners for property lost as a result of the firefighting. These expenses would more appropriately be borne by the smaller group of property owners who came to the risk. In this case, the inverse of the Armstrong Principle seems to apply: the public as a whole should not have to bear a burden which, in all fairness and justice, should be borne by the individuals.

Although the TrinCo Court properly expanded the conflagration rule to wildfires, it may have set the standard for proving actual necessity too high. Because of the procedural posture of TrinCo, we still do not know for certain how the CFC will approach the public necessity standard when making a merits decision after a full factual record has been compiled. But if a wildfire spreading across 42,000 acres of Shasta-Trinity National Forest164 and burning adjacent to privately owned land does not constitute an actual emergency necessitating backfiring, or an imminent threat to that land even considering the unpredictable nature of wildfires and their spread, then these two requirements of the public necessity standard may be difficult for the government to satisfy.165

The TrinCo court is far from clear on how to determine when the Forest Service’s actions were taken under circumstances of “actual necessity.” The decision is opaque as to whether the test is to be an objective one concerned with, literally, the actual necessity of the backfire for combating the wildfire, or a subjective one concerned with whether the backfire reasonably appeared necessary given the circumstances, even if it did not turn out to in fact be necessary.166 If we take the plain meaning of “actual

163. Id. at 49.
164. TrinCo v. United States, 722 F.3d 1375, 1380 (Fed. Cir. 2013) (“The facts, as they are pled in TrinCo’s complaint, do not demonstrate that the Iron Complex fire had created an imminent danger and an actual emergency necessitating the burning of 1,782 acres of TrinCo’s timbered acreage.”).
165. See supra Part IV.
166. The TrinCo court states that “[t]he facts, as they are pled in TrinCo’s complaint, do not demonstrate that the Iron Complex fire had created an imminent danger and an actual emergency necessitating the burning of 1,782 acres of TrinCo’s timbered acreage. The facts certainly do not support the kind of imminent danger and actual emergency
necessity” we are led to presume that the court intends an objective standard, and that actions of the government firefighters will be reviewed ex post to determine whether their actions were in fact necessary. It is immediately apparent that this approach is antithetical to the very nature of the public necessity defense itself, for the defense is raised only in conjunction with exigent circumstances necessitating rapid decision-making. A superior approach, therefore, would be a reasonable necessity standard in which the firefighters’ actions are reviewed ex post to determine whether a reasonable person would have found the backfire necessary under the particular circumstances.

C. A REASONABLE NECESSITY STANDARD

An excellent example of a subjective reasonable necessity standard, and its contrast with an objective actual necessity standard, is found in the English case of *Cope v. Sharpe*.167 The plaintiff landowner sued the defendant, who had hunting rights on plaintiff’s property, for damages resulting from a backfire that defendant’s gamekeeper started.168 After a large fire erupted on plaintiff’s land, the gamekeeper lit a backfire in an attempt to prevent the primary fire from spreading.169 The main fire was extinguished soon afterward, but the backfire spread and caused substantial damage to plaintiff’s land.170 The gamekeeper’s backfire is a clear example of a measure that was not in fact necessary to the prevention of the fire, was perhaps not lit as skillfully as it could have been, and which caused significant damage on its own account. But Lord Buckley, writing for the appellate court, found the gamekeeper’s actions justified because they appeared reasonably necessary at the time they were taken to protect the plaintiff’s property from the greater threat of the main fire.171 Accordingly, Lord Buckley reversed the lower court’s decision, in which the judge applied an objective standard to conclude that, since the gamekeeper’s acts were not in fact necessary to protect plain-

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167. 1 K.B. 496 (1912).
168. *Id.* at 496.
169. *Id.*
170. *Id.*
171. *Id.* at 502.
tiff's property, as the original fire was put out without the help of the backfire, the plaintiff was owed compensation for his destroyed land.\textsuperscript{172} Thus, in \textit{Cope v. Sharpe}, the application of a subjective reasonable necessity test instead of an objective actual necessity test was outcome determinative.

A reasonable necessity standard would accomplish the apparent goals of the public necessity requirement while also allowing for a greater degree of flexibility and comfort for the Forest Service when making firefighting decisions. Reasonable necessity would still constrain the Forest Service's actions and force them to refrain from burning land when they do not judge it necessary, even when they might have perverse incentives to do so. However, a subjective standard would insulate the Forest Service from some unpredictable negative aspects of backfires, such as where a backfire proves to be unnecessary or is ineffective in combating the wildfire, provided the judgment to set the backfire is reasonable. Although reasonable necessity requires a lesser degree of certainty about the potential utility of any Forest Service action, such a standard is more realistic given the inherent unpredictability of a wildfire.

D. SYNERGIZING FIREFIGHTING WITH PRIVATE INSURANCE

While a reasonable necessity standard would help soften the impact of the public necessity standard on firefighting agencies, the standard applied by the CFC in the underlying \textit{TrinCo} decision and in \textit{Chapman} offers a model whereby the agencies would ultimately be freer to act without fears of liability. However, this standard, without any corresponding change in federal policy, would satisfy few parties besides the Forest Service because it would preclude property owners from seeking takings compensation in virtually any wildfire suppression case regardless of actual necessity. By combining existing individually-held fire insurance for structures with a modification to the Forest Service's policies concerning which types of property should be prioritized when fighting a wildfire, it should be possible to find a compromise solution that satisfies property owners while preserving the Forest Service's flexibility in emergency situations. In addition, using private insurance would force property owners who came to

\textsuperscript{172} Id. at 497.
the risk of wildfires to internalize that risk, achieving a fairer outcome for the public as a whole and encouraging wildland-urban property owners to take steps to decrease the risk of fire themselves.

1. *The Applicability of Private Fire Insurance to Backfire Destruction*

Requiring the government to compensate property owners for takings is analogous to mandatory public insurance for property owners.173 Mandatory public insurance is preferable to private insurance in the case of garden-variety, intentional government takings for a several reasons, two of which are particularly relevant here. First, a private insurance regime would be hampered by adverse selection.174 Where the “the probability of loss differ[s] significantly among individuals, who are themselves aware of these differences” to a greater degree than the insurance companies,175 those individuals whose risk of loss is high will be more likely to purchase insurance than those whose risk is low.176 This could drive up premiums and increase the likelihood that those insured individuals whose risk is lower will drop out of the insurance pool, driving up premiums even further until the insurance scheme collapses.177 Second, private insurance could incentivize excessive government takings because the government would not bear the cost of its actions.178

In the case of backfire takings cases, however, the inadequacies of private insurance are not a concern, and mandatory public insurance is therefore neither necessary nor desirable. First, the adverse incentive concern assumes information asymmetry that disfavors the insurance company.179 However, this kind of fire-predicting information is not practically available to individual property owners. Although wildfires are more dangerous in wildland-urban interface areas due to their proximity to wildland, there is no information imbalance when the risk is

173. See, e.g., Merrill, supra note 22, at 44–45.
174. Id. at 44.
176. Id. at 543.
177. Id. at 543–44.
178. Merrill, supra note 22, at 44.
179. Kaplow, supra note 175, at 543–45.
common knowledge. Second, there is less risk of excessive government backfire-setting in emergency circumstances. “Since no one can know in advance when fire will strike, or when it will threaten to become catastrophic, government destruction of property to contain a fire is also an unplanned and uncontrollable event.”180 Because backfires are “unplanned and uncontrollable,” they are not like garden-variety, deliberate government takings, and thus are not subject to the same “strategic manipulation.”181

Mandatory public insurance is not called for in wildfire takings cases, and private homeowners insurance is widely available to insure structures.182 Virtually any homeowner is eligible to obtain fire insurance.183 However, backfires do not only burn structures. In TrinCo, the Forest Service destroyed private timberland in order to create a firebreak. Only a very small number of insurance plans are willing to cover timber, which is extremely valuable, and those willing few are only in small regional markets.184 At this point in time, fire insurance for timberland is simply not a viable component of any far-reaching alternative to takings liability.185 While private insurance may adequately protect homes and other structures, timberland remains unprotected.

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180. Merrill, supra note 22, at 45.
181. Id. at 45–46.
182. Id. at 45.
183. Id.
185. But see Chen et. al., supra note 184, for an analysis of the economic viability of timber insurance, and ultimately a finding that the results of their validation study — undertaken to “simulate the viability of th[e] insurance plan,” id. at 225 — “support the viability of this index insurance scheme.” Id. at 226. Chen et al. seek to establish “accurate quantification of conditional risks and insurance premium rates” in order to “guide public policymakers and private insurance providers” in evaluating and potentially implementing timber insurance schemes. Id. at 229.
2. Coordinating Forest Service Protection Priorities with Insurable Property

The limitations of the private insurance regime do not, however, mean that mandatory public insurance is necessary. Instead, a change in Forest Service policy could help maximize private insurance and minimize uninsurable harms.

When combating wildfires, the Forest Service cannot save all property in the fire’s potential reach. Thus, they must prioritize certain property at the expense of other property. The Forest Service’s hierarchy of protection priorities is (1) life, (2) property, and (3) resources. Timberland falls under “resources” instead of “property,” despite its high commercial value. Accordingly, the Forest Service’s stance that “hundreds of acres of timberland can be allowed to burn to save a single, unoccupied home” produces a very “anomalous result.” Karen Bradshaw indicates that the Forest Service’s priorities produce economically inefficient outcomes from a law and economics standpoint, but the result seems more anomalous still when one considers that households — evacuated in the case of impending wildfires — are easily insurable against this risk, while the high-value timberland sacrificed by the Forest Service is virtually uninsurable.

By changing the Forest Service protection priority hierarchy to (1) life, (2) uninsurable resources (timberland), (3) property (structures), and (4) insurable resources, the Forest Service could prioritize the protection of timberland over that of unoccupied homes or other property, when feasible. This could allow the

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186. “[A]nd ‘property’ is not interpreted as including timbered land, regardless of the value of the timber to its commercial owner. This definition is instead limited to structures, primarily homes.” Bradshaw, supra note 149, at 456 (internal citations omitted). Therefore, “resources” encompasses timbered land, cropland, and other non-structural property types.


188. Id. In another article, Bradshaw makes her implication of economic inefficiency explicit. See Bradshaw supra, note 15, at 173 (“[B]y prioritizing the value of structures above private timberlands, GFAs make economically inefficient choices.”).


190. “Uninsurable resources” and “insurable resources” are subdivided from the general “resources” category, see supra note 184 and discussion, to separate timbered land and other land for which insurance is not practically available from resources for which insurance is available, such as agricultural land covered by the Federal Crop Insurance Corporation.
Forest Service more flexibility in setting backfires and free
wildland firefighters from their hamstringing obligation to pro-
tect unoccupied neighborhoods, especially when that obligation
may detract from efficiently managing the fire overall. More
homes, which should be insured against fire, and less timber,
which is generally uninsurable, would be destroyed.

There would likely be political opposition to a policy change
that allowed for greater destruction of homes. But such a devalu-
ation of homes is not without recent precedent. Recently, Lewis
and Clark County, Montana, passed a resolution that emphasizes
that the location of homes in the county will no longer dictate
how fire crews fight a fire. A county government is far more
directly politically accountable to homeowners than the United
States Forest Service, even if its jurisdiction and firefighting ca-
pability are much more limited. Thus, the Lewis and Clark
County resolution indicates that change in protection policy is not
politically impossible.

Nor is such a change economically impossible. Although this
alteration in the Forest Service’s protection scheme would likely
lead to more home destruction and therefore could increase fire
insurance premiums in wildfire risk areas, it is doubtful that
prices would rise so significantly as to overcome the cost-savings
of protecting timber. In general, as more people have moved into
the wildland-urban interface, fire insurance damage claims have
increased. However, fire claims account for merely three per-
cent of American catastrophic loss claims, so while rates would
rise, any change in the Forest Service’s policies is unlikely to
shake the foundations of the insurance plans. Further, the cur-
cent available insurance scheme “overprotects homeowners in
wildland-urban interface areas.” The increase in wildfire casual-
ity claims might also prompt insurance companies to produce
more incentive programs for homeowners who build with meth-

191. Martin Kidston, Lewis and Clark County Firefighters No Longer Obligated to
lewis-and-clark-county-firefighters-no-longer-obligated-to-save/article_1c5f648a-7117-
11e3-849d-0019bb2963f4.html.
192. See Keiter, supra note 62, at 356.
193. Id. (“Yet even after the catastrophic 1991 Oakland Hills fire and the 2002 southern
California conflagration, wildfire claims constitute less than three percent of the in-
surance industry’s overall natural disaster claims.”).
194. Bradshaw, supra note 149, at 464.
ods and materials that reduce the risk of fire. The reduction in fire damage overall that would result from safer buildings could in turn help lessen the economic impact on the insurance companies of a Forest Service policy that allowed more structures to burn.

Through such a protection priority modification, the Forest Service could achieve an effective compromise that empowers the private insurance system and minimizes economic loss to property owners, while firefighting agencies can maintain their flexibility and freedom without a compensation requirement for firefighting-related destruction. This compromise could satisfy property rights enthusiasts and those who demand a compensation requirement for wildfire takings, and absolve the public from the responsibility of subsidizing property owners who choose to live in the wildland-urban interface. Those owners would internalize their own risk to a greater degree. A positive side effect of this risk internalization would be a greater incentive for those property owners to take preventative measures such as thinning trees and building with fire-retarding materials.

VI. CONCLUSION

The Federal Circuit’s TrinCo decision upends the legal landscape of wildlife takings, but its true impact is still to be determined. Ultimately, providing the Forest Service with the ability to light backfires to combat wildfires is economically and morally justified, and will lead to better firefighting outcomes. Ideally, the Forest Service would be allowed even greater freedom than a subjective standard interpretation of the TrinCo requirements entails, and individual property owners located in the wildland-urban interface would be required to internalize their own wildfire costs rather than shifting that burden to the public. But to the extent that TrinCo establishes the standard for backfire takings suits against the federal government, the Court of Federal

195. Id. ("[T]he role of the insurance sector can also prove important in providing incentives for adaptive measures. For example, there are proven construction methods and materials known to reduce fire risk for homes in areas subject to risks from wildfires. However the availability of federal disaster assistance has reduced the incentives for insurance companies to adjust premiums and condition the availability of coverage for homeowners adopting these measures. The result is that insurers are deterred from requiring that homebuilders in wildland-urban interface areas use fire safe materials.")
Claims and Federal Circuit should take care to allow the Forest Service sufficient freedom to fight wildfires without holding the specter of huge compensation requirements over its head. The *TrinCo* decision expanded public necessity to backfire takings in theory, but its requirements must not be so high that public necessity is destroyed in fact — such requirements might provide the tinder to burn the conflagration rule to the ground should the Federal Circuit toss the match.