



Shaping the Future of the West

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Invited Testimony on “The Impact of Catastrophic Forest Fires and Litigation on People and Endangered Species: Time for Rational Management of our Nation’s Forests”

July 24, 2012

Mr. Chairman and members of the committee:

Thank you for the opportunity to provide my perspective to the House Committee on Natural Resources on this important topic of concern to my hometown of Bozeman, Montana and communities all over the western United States. My name is Alison Berry; I am the Energy and Economics Specialist for the Sonoran Institute, a nonprofit organization that works collaboratively with local people to promote healthy landscapes, vibrant communities and resilient economies in western North America. Our organization has headquarters in Tucson, Arizona and offices throughout the West. I work in our Northern Rockies office in Bozeman and my work focuses on natural resources economics and policy.

Wildfire is a critical issue for landscapes and communities in the West. Fires are part a vital part of the cycle of growth, destruction and renewal that is both natural and beneficial to functioning forest ecosystems.

As housing subdivisions are built in fire-prone areas, however, there is an increasing risk to people and property. This results in higher costs to taxpayers for federal fire prevention and suppression, and greater property losses and risk to life in the event of catastrophic wildfires. Without fundamental changes in the way that we manage both growth and fire, we can expect these issues to be exacerbated by the higher temperatures and widespread droughts that we are experiencing this summer and that are predicted to intensify due to a changing climate.

Ironically, in many parts of the West, expensive efforts during the past century to stamp out wildfires have added fuel for future fires by making forests denser, with more flammable vegetation. By interrupting the natural process of fires, wildfire management practices have created a new cycle - fire suppression and fuel accumulation - that will make future fires more intense, damaging, and costly.

In addition, successful fire suppression often creates a false sense of security in fire-prone areas, effectively encouraging development on the edge of these forests, in the so-called "wildland-urban interface," or WUI. If rapid development in the WUI continues, federal fire suppression expenditures—which currently top \$1 billion each year for the Forest Service alone—will

continue to spiral out of control, and natural fire is unlikely to be restored to forests anytime soon. It is time we got smarter about how development takes place in these high-risk areas.

Here are some facts:

- Between 1970 and 2000, the developed portion of the wildland urban interface grew in area by 52 percent, according to a study from Colorado State University.
- A 2012 study from the University of Massachusetts found that in recent years, about one-third of new construction in the West has been in wildland urban interface areas.
- Data from the National Interagency Fire Center and the National Oceanographic and Atmospheric Administration show that since 2000, there have been at least 114 wildfire fatalities in the United States, and more than 9,000 structures have been destroyed, with damages totaling more than \$8.5 billion.
- The portion of the Forest Service budget dedicated to wildland fire management has grown from 13 percent in 1991 to more than 30 percent in 2012.
- An early study of fire suppression in the wildland urban interface found that when fighting large fires, between 50 and 95 percent of federal spending goes towards protecting private homes.

Focusing on Prevention

To date, most efforts to reduce risks of fire in the WUI have focused on reducing "fuels" - removing small trees and brush, either mechanically or with prescribed burning. Local land use planning efforts generally consist of requiring new subdivisions to incorporate "firewise" characteristics such as fire-resistant building and landscaping materials, adequate water supplies for firefighting, and road access for emergency vehicles. While these measures can help reduce the risk of homes burning, they do little to keep firefighters and civilians out of harm's way. A better solution would be to focus on prevention by guiding development away from high risk areas and encouraging development in safer areas. This approach would not only keep people and property out of danger, but it would also reduce the growing taxpayer burden of protecting homes built in hazardous locations.

While much of the research on this issue has focused on the federal policy changes that are needed to reduce risks in the WUI, guiding development away from high risk areas is primarily a state and local responsibility. We agree that it is absolutely essential to reform federal policy driving wildfire management; however, the role and significant impact that counties, communities and local regulations can play in reducing the risks of wildfire is often overlooked or understated. The Sonoran Institute's report, *In the Line of Fire*, focuses primarily on how local action can reduce the catastrophic effects of wildfire. (Available online:

<http://www.sonoraninstitute.org/mediaroom/stories-stories/329-in-the-line-of-fire-managing-growth-at-the-forests-edge.html>)

Managing the Impacts of Wildfires - Locally

If western counties and communities promoted responsible development patterns in forested areas, it would save millions of taxpayer dollars needed for fire suppression, reduce risks to people and property, and restore forests to healthier conditions.

The National Floodplain Insurance Program provides a model of one way to steer residential

development away from risky locations. A similar program could be applied to control growth in the wildland urban interface.

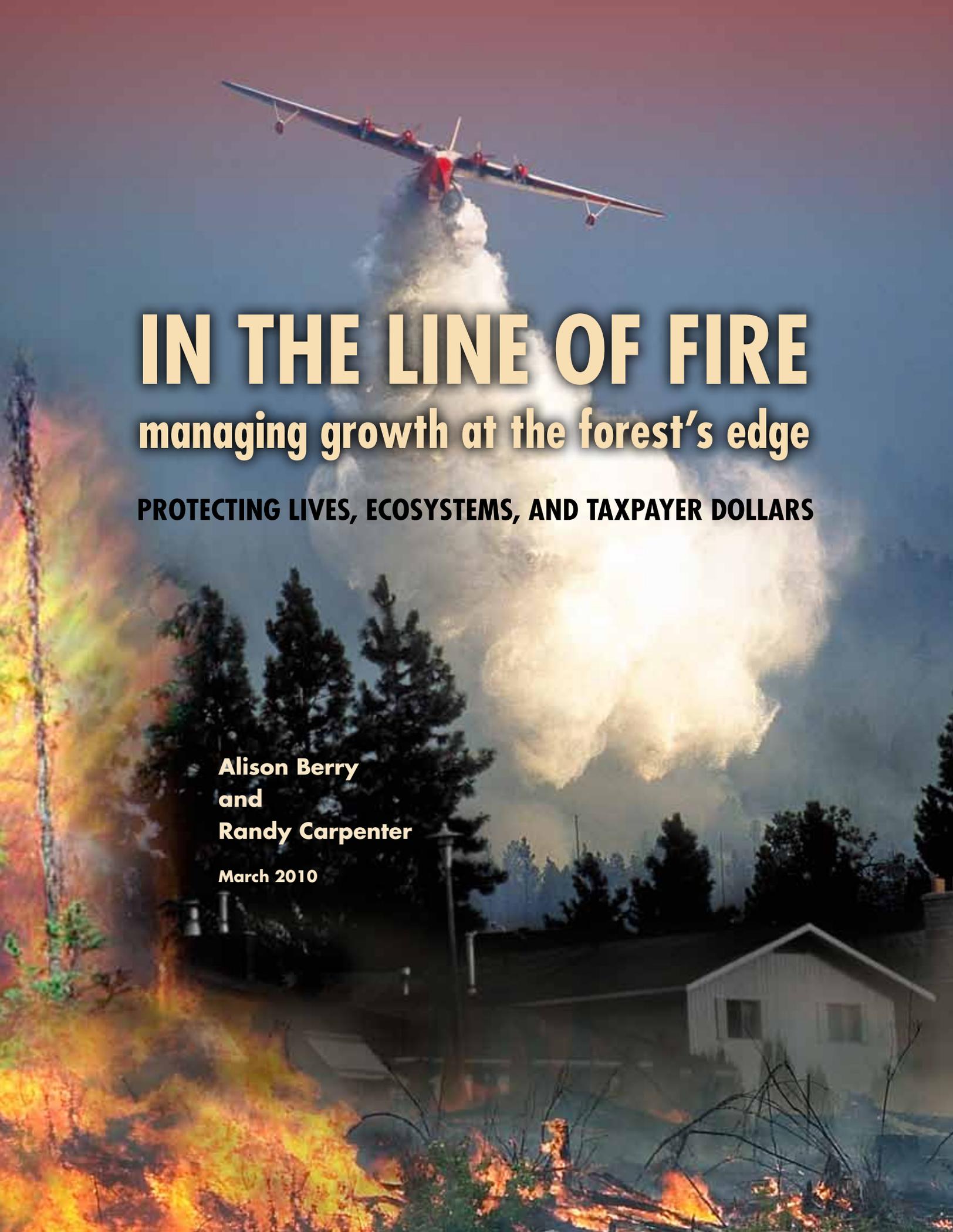
Reform Needed at All Levels

Reform is also needed at the federal level: local jurisdictions have little motivation to reduce risks of wildfire when state and federal agencies – such as the U.S. Forest Service - cover the majority of the costs for fire suppression in the WUI. This amounts to a taxpayer subsidy for development in fire-prone areas, increasing the amount of land converted to residential uses in these areas.

In addition, the federal government could support local mapping efforts that would more accurately identify fire-prone areas. Most existing WUI maps are notoriously vague, making it difficult to implement local growth management efforts in fire-prone areas. Better mapping would allow more effective growth management in these areas; the investment by the federal government would be recouped by reduced federal fire suppression costs.

The insurance industry can also help discourage development in risky locations. As they do in floodplains, insurance companies should require higher premiums in areas of higher fire risk. When people do choose to live in the WUI, higher insurance premiums would oblige them - instead of other insured homeowners - to bear the costs of their decisions.

In conclusion, with the stakes to life and property so high, there are very specific actions the federal government can take to help reduce taxpayer costs associated with wildfires, including partnering with local jurisdictions and the private insurance industry to provide resources and incentives for policy reform. With federal leadership, there is every reason for local governments to use well-established, effective growth management tools to limit or prohibit development in the high risk areas for wildfire. Federal guidance and local planning can help save the lives of firefighters and residents and reduce the cost to taxpayers of protecting homes that were built in places where fire is inevitable.

A firefighting aircraft is shown in flight, dropping a large, billowing cloud of white foam onto a forest fire. The fire is intense, with bright orange and yellow flames rising from the ground. In the foreground, a house is visible, partially obscured by the smoke and fire. The sky is a mix of blue and grey, suggesting a hazy or smoky atmosphere.

IN THE LINE OF FIRE

managing growth at the forest's edge

PROTECTING LIVES, ECOSYSTEMS, AND TAXPAYER DOLLARS

**Alison Berry
and
Randy Carpenter**

March 2010



The Sonoran Institute inspires and enables community decisions and public policies that respect the land and people of western North America. Facing rapid change, communities in the West value their natural and cultural resources, which support resilient environmental and economic systems.

Founded in 1990, the Sonoran Institute helps communities conserve and restore those resources and manage growth and change through collaboration, civil dialogue, sound information, practical solutions and big-picture thinking.

The Sonoran Institute is a nonprofit organization with offices in Tucson and Phoenix, Arizona; Bozeman and Helena, Montana; Glenwood Springs, Colorado; Cheyenne and Sheridan, Wyoming and Mexicali, Baja California, Mexico. For more information, visit www.sonoraninstitute.org.



Shaping the Future of the West

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EXECUTIVE SUMMARY

In many parts of the American West, the risks of wildfire are greatly elevated due to past management practices that excluded the important natural ecological role of fire, resulting in increasingly dense and fire-prone forests. At the same time, more and more people are living in the area where homes border undeveloped wildlands—known as the “wildland-urban interface.” With more people and property at risk, wildfire suppression has become increasingly complicated and costly. If development in the wildland-urban interface continues along the current trend, wildfire suppression costs are likely to spiral out of control, and natural wildfire and its ecological function is unlikely to ever be restored to forests.

To date, most efforts to reduce the risks of wildfire in the wildland-urban interface have been focused on mitigation—for example, creating defensible space around homes and incorporating fire-resistant building and landscaping materials. While these measures can be effective in reducing the risk of home ignition, they are rarely required by local authorities and are poorly enforced. Furthermore, risk mitigation actually encourages development in the wildland-urban interface.

A better solution is to focus on prevention, rather than mitigation of fire damage by guiding development away from the highest risk areas. This approach would keep people and property out of harm’s way, reducing fire suppression spending. In some places, and under controlled conditions, fires may be allowed to burn, restoring forests to historical conditions.

Significant changes in federal policy and local regulations, as well as in homeowner insurance policies, will be needed to adequately manage growth in the wildland-urban interface. Local jurisdictions have little motivation to reduce risks of wildfire when state and federal agencies—like the Forest Service—cover the majority of the costs for fire suppression in the wildland-urban interface. Furthermore, homeowner insurance policies seldom take wildfire risk into account: the risk of building in fire-prone areas is transferred away from the individual property owner and is instead borne by all homeowners who pay insurance premiums.

A shift from mitigation to prevention is the best method for reducing fire risks and restoring forest health in the wildland-urban interface. We recommend solutions based on high-quality fire-risk mapping, restructuring of federal and local policies, and insurance reform. With these tools, we can save millions of taxpayer dollars, allow the process of wildfire to perform its natural ecological function, and keep people out of harm’s way.



A shift from mitigation to prevention is the best method for reducing fire risks and restoring forest health in the wildland-urban-interface.

INTRODUCTION

Forests cover 750 million acres in the United States, providing society with a vast natural bounty, including timber, water, clean air, scenic views, habitat for fish and wildlife, and recreational opportunities. Federal agencies—like the U.S. Forest Service—manage a third of the nation’s forests (see Figure 1), which produce billions of board feet of timber every year, provide drinking water for more than 60 million people, and host more than 200 million recreational visitors annually. In addition, national forests are home to more than 13,000 species, including 422 threatened or endangered species.¹

These forest resources and amenities are increasingly at risk of catastrophic wildfire—particularly in the West. Decades of fire suppression during the past century have resulted in a buildup of fuels, which, if ignited, can set off a fire of much greater intensity than would have historically occurred.

Meanwhile, more people are living and building homes at the edge of forested areas, in the so-called “wildland-urban interface” (WUI). Between 1970 and 2000, developed portions of the WUI grew in area by 52 percent.² Even as the threats of wildfire become well-known, growth continues to infringe upon forests.

The combination of high fuel loads and increasing human populations elevates risks of fatality and property damage due to forest fire. As a result, when fires do occur in the WUI, firefighting costs skyrocket. Since 2000, Forest Service fire suppression costs have averaged over \$1 billion annually. On large fires, between 50 and 95 percent of federal spending goes towards protecting private homes, according to a recent audit.³

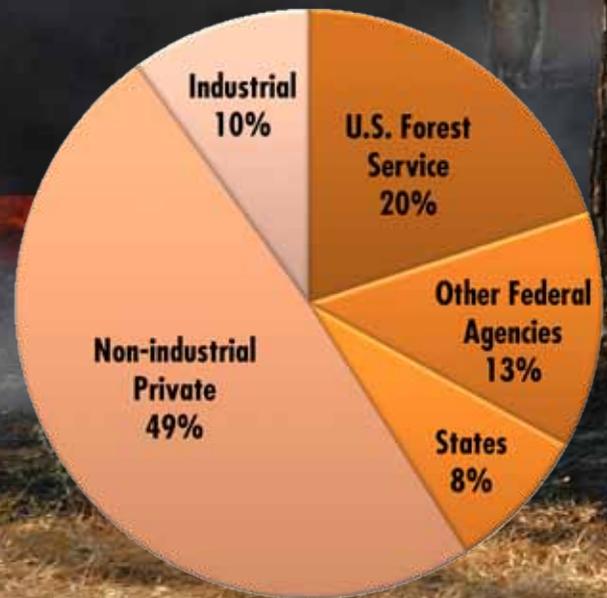
Due in part to risks associated with people and homes in the WUI, federal fire management continues to focus on fire suppression. Since 2000, federal agencies have suppressed more than 99 percent of fires on public lands.⁴ With few fires burning, fuels continue to build up. According to a joint report from the Forest Service and the Department of the Interior, “It is one of the great paradoxes of fire suppression, that the more effective we are at fire suppression, the more fuels accumulate, and the more intense the next fire will be.”⁵

Recognizing the growing problem of fire and the WUI, federal agencies and local planning boards have focused on mitigating risks. On federal lands, agencies have concentrated on fuels reduction—removing small trees and brush—either mechanically or with prescribed burning. Local planning efforts generally require that new subdivisions in the WUI incorporate “firewise” characteristics, including fire-resistant building and landscaping materials, adequate water supplies for firefighting, and road access

Forest Ownership in the United States

TOTAL = 747 MILLION ACRES

Figure 1



for emergency vehicles. While fuels reduction and risk mitigation are important—particularly near existing structures—these efforts do not help to encourage responsible development patterns.

Instead of focusing on mitigation, a more effective method to protect people and property from wildfire is to steer residential development away from areas of high fire risk. This could also help to halt the cycle of suppression and fuels accumulation—minimizing the number of homes in the WUI would reduce the liability of allowing some fires to burn, restoring historical ecological conditions.



Most local governments across the country effectively regulate development in floodplains by categorizing the risk associated with development in these areas, and flood insurance premiums are priced according to this risk. Similar measures should be applied to WUI areas. However, as long as federal and state agencies are picking up the tab for fire suppression, local regulators are unlikely to make any changes. Likewise, insurance policies that transfer wildfire risk to all policy-holders need to be addressed.

In order to keep people and property out of harm's way, save taxpayers millions of dollars, and allow for the natural process of

wildfire, the focus of the WUI wildfire problem must change from mitigation to prevention. The following sections provide insight into the issues concerning the WUI and wildfire management, with respect to human safety, economics and ecology. They will also identify the causes of current problems, and offer solutions for the future.

IMPACTS

The current approach to wildfire management has significant impacts on human safety, taxpayer dollars, and forest ecology. At the root of these problems are economic incentives that favor fire suppression, socialization of firefighting costs across all taxpayers, and a lack of political will to regulate home-building in fire-prone areas.

Human Safety Impacts

Since 2000, there have been at least 99 wildfire fatalities in the United States, and thousands of structures have been destroyed, with damages totaling more than \$6.5 billion.⁶ Without significant changes to development patterns in the WUI, fatalities and damages from wildfire are likely to increase in the future.

Economic Impacts

Forest Service fire suppression is funded through Congressional appropriations, which have steadily increased from \$400 million in 2003 to \$850 million in 2008.⁷ Every year, appropriated funds are exhausted, and the Forest Service borrows from other accounts to cover the costs of firefighting. After the fire season, the US President can allow the Forest Service to draw on an emergency fund to repay itself.⁸ Between 2003 and 2008, emergency supplements have ranged from \$100 million to \$890 million, averaging \$480 million (see Figure 2).

This budgeting structure encourages wasteful emergency spending, because there are no defined limits on supplemental funds. In addition, the annual borrowing of funds for firefighting regularly interrupts other Forest Service programs, including timber management, reforestation, wildlife management, research and recreation.

Even in the absence of borrowing, non-fire funds are dwindling as fire takes up increasingly larger portions of the Forest Service budget. Non-fire budgets have declined 35 percent since 2001. In contrast, the portion of the Forest Service budget dedicated to wildland fire management has grown from 13 percent in 1991 to 48 percent in 2009 (see Figure 3).⁹

Research shows that, without changes in development patterns, firefighting expenditures are likely to escalate. A survey of 11 western states indicates that currently only 14 percent of the available WUI is developed. As more homes are built near forested areas, fire suppression will become more costly. Even if only half of the WUI area is developed in the future, annual firefighting costs could be as much as \$4.3 billion.¹⁰

Ecological Impacts

The forests themselves have not benefitted from management policies that focus on fire suppression. North American forests have evolved with fire for thousands of years. The forests depend on fire to return nutrients to soils, encourage growth of older fire-resistant trees, and promote establishment of new seedlings.

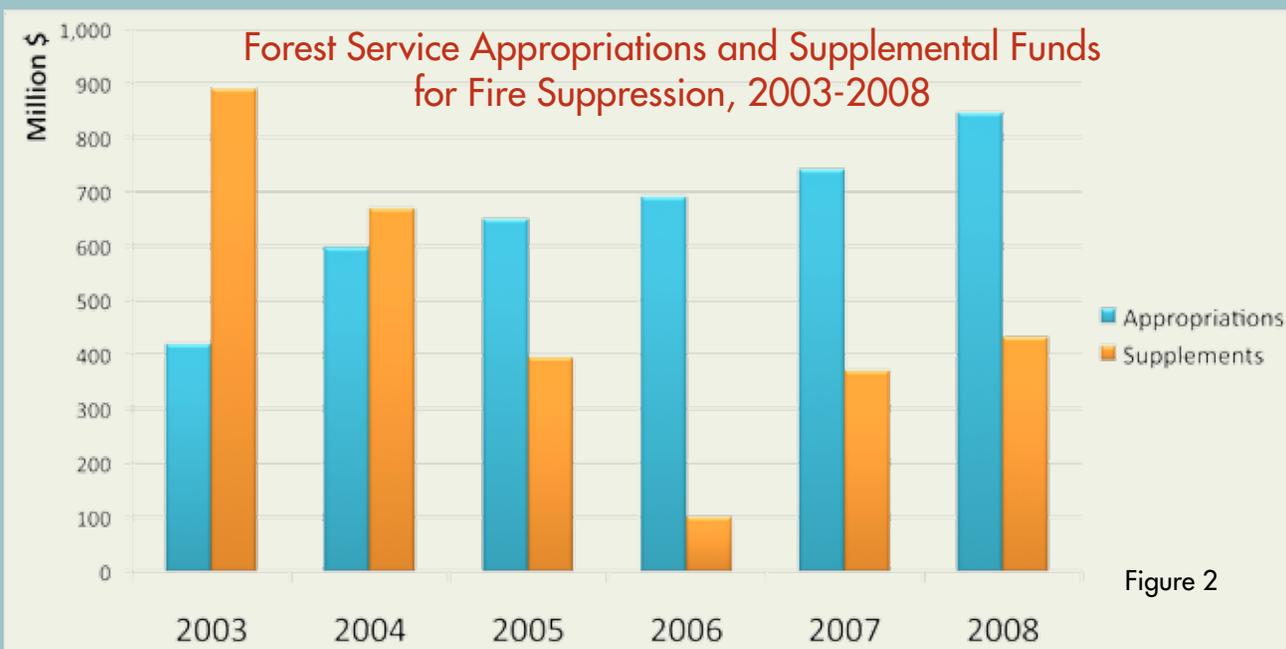


Figure 2

Fire exclusion produces uncharacteristically dense forests—without periodic burning, grasses, shrubs and small trees proliferate in the understory. Under these conditions, stressed trees compete for water, sunlight, and growing space, and are increasingly susceptible to the impacts of drought, insects, and disease. Past fire suppression practices have contributed to the current mountain pine beetle infestation, resulting in 1.5 million acres of dead trees in Wyoming and Colorado alone.¹¹

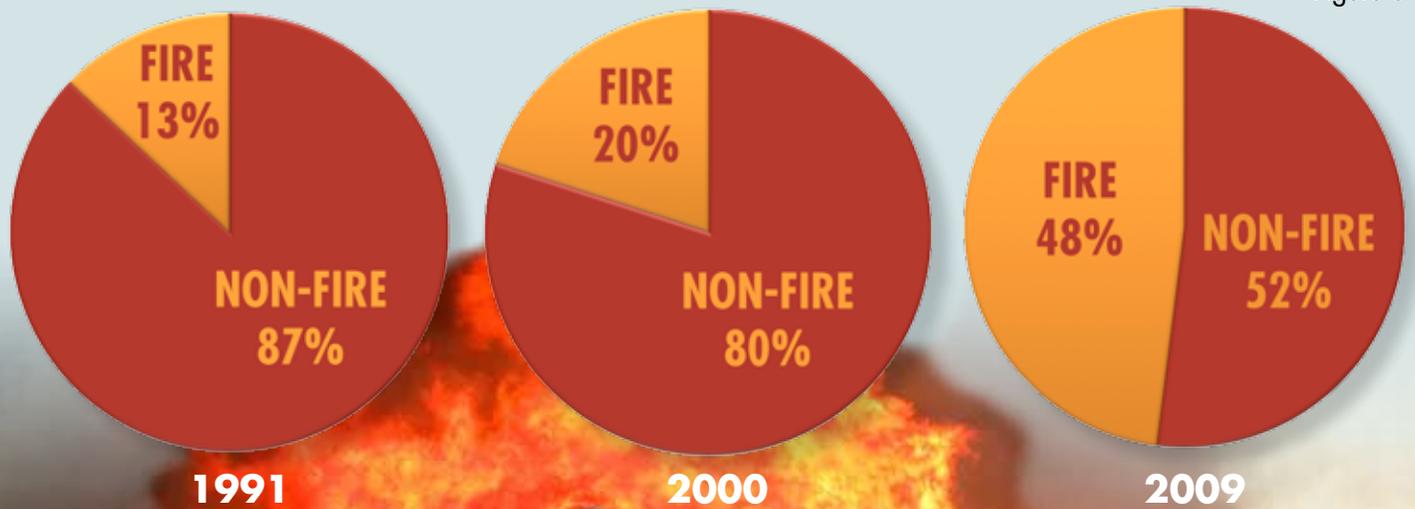
Dense forests are also at greater risk of damage from catastrophic wildfires. Vegetation in the understory can form a fuel ladder, carrying flames to the forest canopy, killing entire forest stands.

For many western states, the largest fires in recorded history have occurred during the last ten years.

In order to better promote functioning forest ecosystems, and to reduce risks of harm to people and property in the WUI, local and federal policies must be restructured. Instead of allowing unfettered land development in forested areas, local policies should make efforts to dramatically reduce the risks of fatality and property damage from fire. Additionally, federal fire managers need better incentives for forest stewardship, focusing on restoration and risk reduction as opposed to fire suppression.

The Percentage of the Forest Service Budget Dedicated to Fire Management has Increased Significantly, 1991 – 2009

Figure 3



Since 2000, there have been at least 99 wildfire fatalities in the United States, and thousands of structures have been destroyed.

A large wildfire is shown with a fire retardant plane flying over it, dropping a large amount of orange fire retardant. The plane is white with a red stripe and is flying from right to left. The fire is a thick, bright orange-red plume that is rising and spreading across a forested area. The background is a hazy, blue-grey sky.

Local governments lack the political will to use zoning to prevent catastrophe in the wildland-urban-interface.

CAUSES

The problems of fire and the WUI are rooted in local, federal and state policies that do little to promote responsible growth patterns. In addition, home insurance policies provide no economic disincentive to build in high-risk areas.

Local Policy

In the United States, private land use is regulated at the local level, primarily through zoning and subdivision review. Counties and cities may, as enabled by their state statutes, direct where various types of land uses occur and in what density and form. For instance, local zoning laws stipulate where residential subdivisions can and cannot be built, how many homes may be built in a development, and where the homes must be placed on the lot; the local subdivision regulation normally determines what sort of infrastructure the subdivision will need, including fire protection requirements, which can become much more complicated for subdivisions in the WUI.

In much of the intermountain West, however, local governments lack the political will to use zoning, the land use tool most effective at preventing catastrophe in the WUI. A strict private

property-rights, anti-government philosophy and a generally erroneous belief that land-use regulations necessarily reduce rural property values¹² combine to discourage local leaders in many communities from implementing common sense land-use policies. In fact, many counties in the intermountain West lack any zoning at all, and rely on a case-by-case review of subdivisions. In some cases, subdivisions are exempt from even the most cursory review.

This situation holds true in the WUI. Despite the fiscal and human risk associated with building in fire-prone areas, local officials rarely restrict development there to a meaningful degree. There are few examples of local governments using their regulatory powers to prohibit development in the highest-risk areas.

In contrast, more than 20,000 local governments across the country have adopted floodplain management ordinances to reduce future flood risks in mapped special flood hazard areas. When communities adopt these ordinances, they are able to take advantage of the federal government's flood insurance program that makes flood insurance available as a financial protection against flood losses. A similar system could help to guide development away from areas of high fire risk.

Federal and State Policy

Federal and state policies that provide seemingly unlimited funds for emergency fire suppression do not help to encourage responsible growth patterns in the WUI. On the contrary, this spending effectively subsidizes personal decisions to live in risky locations. Some researchers claim that the expansion of the WUI can be partly attributed to past fire suppression practices. “Past effective wildfire suppression has encouraged home construction in forested areas, adding to damage if suppression is later unsuccessful.”¹³

The majority of fire protection costs in the WUI are covered by federal agencies like the Forest Service. State agencies can play an important role, as well. In Montana, for example, state agencies cover about 25 percent of the costs of home protection in the WUI.¹⁴ Even at the state-level, however, very little of the costs of home protection are transferred to property owners in the WUI, since taxes are spread across the population of the entire state.

This system also provides little incentive for risk reduction on the part of developers and homeowners in the WUI. Research shows that risks of home ignition in the event of a wildfire can be significantly reduced through the use and maintenance of fire-resistant landscaping and building materials.¹⁵ But when the costs of wildfire protection are covered by state and federal funding, individuals in the WUI have little motivation to protect themselves. A report from the National Academy of Public Administration found that most landowners moving into the WUI make no effort to reduce their home’s vulnerability to damage from wildfire.¹⁶

In some cases, state agencies are starting to recognize their role in regulating growth in the WUI, but regulations remain focused on risk mitigation, rather than prevention. For example, state-level regulations in California and Oregon require homes in risky locations to have and maintain firebreaks. In addition,

homeowners must keep roofs, gutters, decks, and areas under decks and houses free of debris.¹⁷ Yet, local jurisdictions rarely restrict development in the WUI due to fire risks.¹⁸

Insurance

The insurance industry can play a role in managing growth in the WUI by charging higher premiums for homes that are in risky locations, or by requiring fire-safe building near forested areas. As previously noted, a model exists in the form of the National Flood Insurance Program, which requires people living in flood-prone areas to pay for flood insurance. But insurance companies have been slow to recognize risks associated with wildfire. In most cases there are no premiums or specific requirements to insure homes in the WUI.

This is largely due to the fact that insurance payouts from wildfire, though not inconsequential, are much lower than those from other disasters, like hurricanes. The most costly wildfire in U.S. history for the insurance industry amounted to \$2.7 billion in insured losses,¹⁹ while the most damaging hurricanes rack up costs of more than \$10 billion. Hurricane Katrina in 2005 cost the insurance industry \$45 billion in insured losses.²⁰

As more homes (particularly more expensive ones) encroach on forested lands, however, the insurance industry is taking more notice of wildfire risk. Some companies inspect homes and require homeowners to take preventative measures to reduce the risk of home ignition.²¹ Other companies offer wildfire protection services—dispatching fire crews to insured homes when flames threaten.²² But these types of policies are still the exception, rather than the norm. Additionally, like local regulations, insurance policies tend to focus on mitigation rather than prevention of wildfire risks in the WUI. These policies do little to encourage responsible growth patterns in forested areas.



When the costs of wildfire protection are covered by state and federal funding, individuals in the WUI have little motivation to protect themselves.

SOLUTIONS

Federal Policy

Federal policy reform that restricts emergency fire suppression spending can help to ensure that homeowners bear the full costs of living in risky locations in the WUI. With suppression appropriations on the rise—by as much as 23 percent between 2007 and 2008²³—it is possible that supplemental emergency funding could be eliminated. Ample suppression appropriations should also negate the necessity to borrow firefighting funds from other Forest Service programs, encouraging more efficient management throughout the agency.

A reduction in emergency suppression spending might also help to encourage homeowners to take greater responsibility for their own property. A recent study shows that 77 percent of the area at high risk of damage from wildfires is on non-federal lands.²⁴ Yet federal agencies pay the majority of the costs of home protection in the WUI. Because federal agencies bear the burden of home protection, many homeowners are not aware of preventative measures that they can take that are less expensive, and often more effective than fire suppression efforts. Researchers recommend using less flammable building and landscaping materials, cleaning gutters, clearing brush, and maintaining a green lawn within a radius of 30-120 feet from buildings.²⁵ Thinning of forest lands outside of this 120 foot radius has little effect on home ignitions.²⁶

Limiting mitigation efforts to the immediate area around homes could significantly reduce fire risks in the WUI. Out of more than 100 million acres in the WUI²⁷ the Forest Service estimates that only about 1.9 million acres in the WUI are at risk of fire. The majority of this area is private land.²⁸ At current rates and funding levels, and with landowner cooperation, the Forest Service could regularly treat the entire 1.9 million acres within a single year.

(Currently, the Forest Service and BLM treat about 2.5 million acres for fuels reduction annually.²⁹) Even if federal dollars went towards reducing fuel hazards on private lands, it would be a considerable savings in suppression costs later.

A second option for reducing federal fire suppression spending could be to fund fire suppression out of each individual forest's budget. During a Forest Service investigation of expensive fires, managers "said they would have fought fires differently, and at a lower cost, if the money had come from the forest's allocated budget," instead of from federal emergency fire suppression funds.³⁰ This approach would curb suppression costs and better encourage fire management tailored to local conditions.

Limiting emergency suppression funds might be the best way to ensure that natural fire patterns will be restored to forests and that firefighting expenses do not spiral out of control. But in the face of large fires that will inevitably occur, Congress is unlikely to retain a policy that curbs emergency suppression funding. It may be more realistic to first fund fire suppression expenses from individual forests' budgets on a trial basis in some areas. Based on the relative success of this step, policy reform could begin to work towards eliminating unconstrained reimbursements of emergency firefighting expenses.

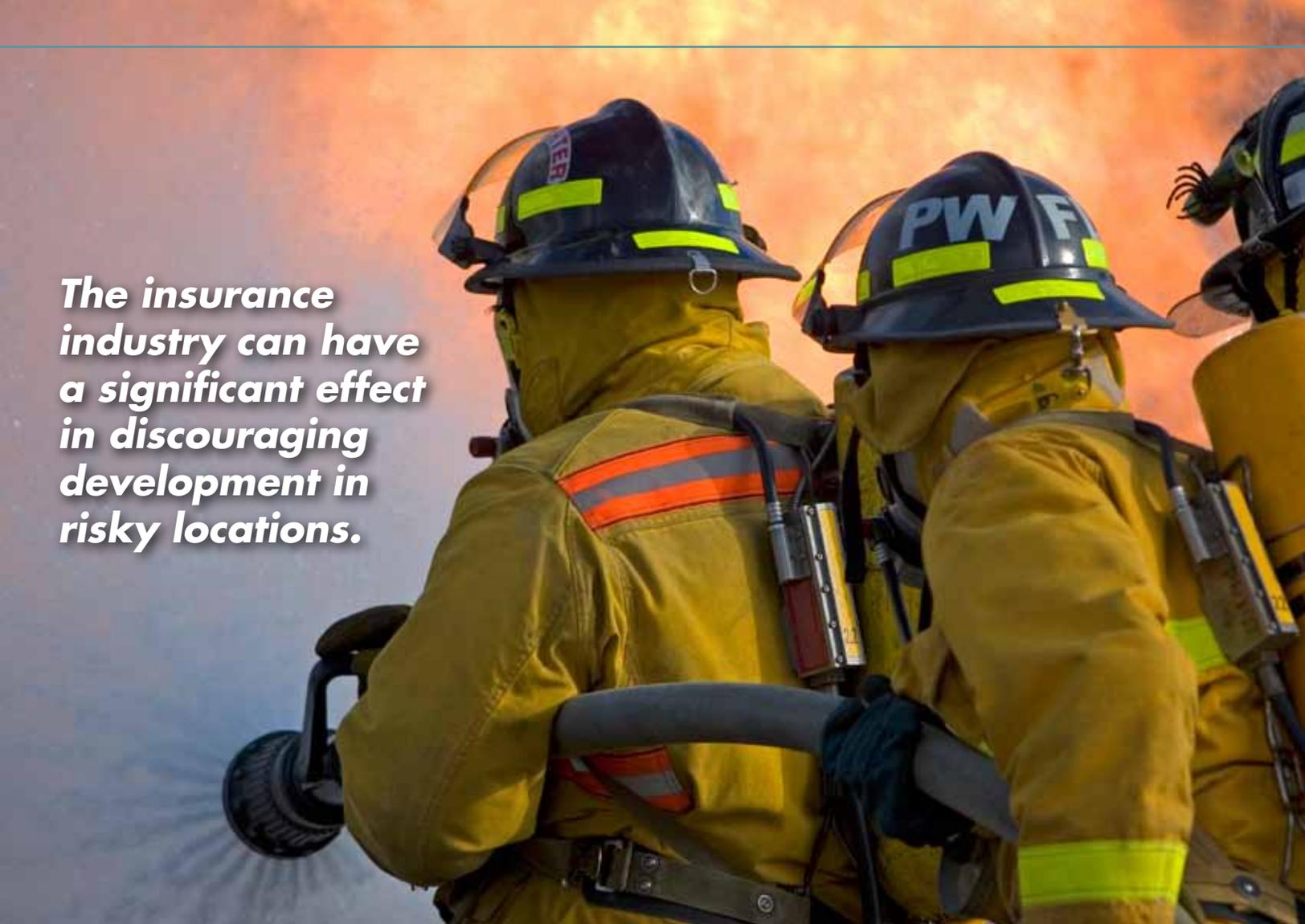
Mapping

If federal agencies cut down on fire spending, local jurisdictions are more likely to pay closer attention to the risks of new developments in the WUI. Local regulators may consider steering growth away from high-risk areas. This would ensure that fewer people and structures are in the path of wildfire, therefore reducing the need for fire suppression by local, state, or federal agencies. With fewer people living near fire-prone areas, some fires may be allowed to burn under appropriate weather conditions—restoring forests to their historical conditions.

The first step in controlling growth in high-risk areas is to identify where the riskiest locations are. In order to guide development in the WUI, local decision makers and insurance agents need high-quality, fine-scale maps identifying various degrees of wildfire risk using standardized methodology. Maps should incorporate information on fuel loads, topography, historical fire and weather patterns, existing structures, and existing infrastructure. Fire-risk maps can be modeled after and used in a similar fashion to floodplain maps, which are required by the National Flood Insurance Program.³¹

Fire-risk maps will help local decision-makers encourage growth in the areas of lowest risk, and restrict growth in the areas of highest risk. In areas of moderate risk, planners may require mitigation measures such as defensible space and fire-resistant building and landscaping materials.





The insurance industry can have a significant effect in discouraging development in risky locations.

Local Policy

Once fire-prone areas are mapped in a way that categorizes risk, local governments can use zoning regulations to limit or prohibit development accordingly. One of the most effective ways to do this is to establish “overlay” zoning districts superimposed on existing zoning districts that add additional requirements for developers. The overlay zoning district can establish standards on the location and number of homes allowed in the subdivision. For instance, overlay districts can prohibit homes in the highest-risk areas, or require home setbacks from high risk areas.

Local governments can also enact zoning policies that provide incentives for building in low risk-areas. Zoning techniques such as “clustering” ordinances allow the developer to build as many—or even more—homes as they normally could by increasing the number of homes allowed in low-risk areas in exchange for not building in high-risk areas. For instance, a proposed 200-acre subdivision in a zoning district that requires a minimum lot size of 40 acres would normally be allotted five 40-acre lots. Under a clustering ordinance, those five lots would be reduced in size, and the homes on them must be located away from the highest-risk areas. In some cases, a “density bonus” may provide an

additional incentive—instead of five lots located away from high-risk areas, the developer might be allowed seven lots, to use the above example.

Insurance

The insurance industry can have a significant effect in discouraging development in risky locations. To begin with, insurance companies can require higher premiums in areas at higher risk of fire. When people do chose to live in the WUI, higher insurance premiums would oblige them to bear the costs of their decisions.

Insurance companies could also be the regulators that enforce ongoing fire-wise maintenance. This can help to ensure that landscaping is maintained, and debris is cleared away regularly. As noted above, some insurance companies require regular inspections to ensure that homes in the WUI are defensible—if homeowners do not maintain their properties, their premiums can go up, or their insurance policies can be dropped.

Insurance mechanisms have made significant impacts in reducing financial losses in flood-prone areas. A similar system would likely be successful in fire-prone areas as well.

CONCLUSION

In order to save millions of taxpayer dollars, keep people out of harm's way, and allow for smarter, less-constrained wildfire policies, the response to fire risk in the WUI must shift from mitigation to prevention. By promoting responsible development patterns in forested areas, local regulators can help to cut fire suppression spending, reduce risks to people and property, and restore forests to historical conditions. Alternatively, if no change is made to growth patterns, we can expect fire suppression spending to escalate, fire fatalities and losses to increase, and forest health to suffer.

The solutions rest in reforms of federal and local government and of the insurance industry. Federal agencies need to limit fire suppression spending so that landowners and developers in the WUI start to better recognize and accept fire risks. Without Uncle Sam to pick up the tab for fire suppression, local regulators are more likely to guide growth away from high-risk areas. Where homes do exist in the WUI, insurance premiums should reflect the risks of wildfire, and transfer the associated costs to those homeowners.





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