

WILL AZ LEARN OR BURN? CAN AZ LEARN TO BURN?:The Flagstaff Experience

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ABSTRACT

Wildfires engender fear and respect, and often burn at great social cost. They can consume much more than acres burned. But the right kind of wildfire is also a necessary component of a healthy forest ecosystem, the very ponderosa pine forests which blanket much of the northern part of our state. How do we reconcile this dichotomy—the good and the bad of wildfire? Fire is no respecter of jurisdictional boundaries or fence-lines. It readily crosses one-to-the-other: it is relentless, persistent, and powerful. Fire is our problem, and our opportunity. The City of Flagstaff provides a model for how local government can engage in and be successful in this challenging environment.

INTRODUCTION

To begin, consider a few major trend lines that many, including those of us in the wildland fire profession, view with alarm:

- ❖ Things are moving in the wrong direction:
 - Fires are bigger and burn longer;¹
 - Climate is hotter and drier;²
 - More homes are built in fire-prone areas without adequate protection;³

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1. *Fire Information*, NAT'L INTERAGENCY FIRE CTR. (Oct. 2, 2015), http://www.nifc.gov/fireInfo/fireInfo_statistics.html.

2. STEPHEN SAUNDERS ET AL., NAT'L RES. DEF. COUNCIL, *HOTTER AND DRIER* iv–v (2008), <http://www.nrdc.org/globalwarming/west/west.pdf>.

3. Brad Plumer, *Why Does the Government Encourage People to Build Homes in Wildfire Zones?*, WASH. POST (June 17, 2013), <https://www.washingtonpost.com/news/wonk/wp/2013/06/17/why-does-the-government-encourage-people-to-build-homes-in-wildfire-zones/>.

- Staffing is static or decreasing;⁴ and
 - Fire seasons are getting longer (in the past decade alone, the average fire season is now 60–70 days longer!).⁵
- ❖ The average # of structures burned each year continues to rise:⁶

<u>Decade</u>	<u># of structures/yr</u>
1990's	932
2000's	2,970
2010's (Ongoing)	3,500

- ❖ Wildland firefighter deaths continue to increase:⁷

<u>Decade</u>	<u># of deaths/yr</u>
1990's	17.2
2000's	19.3
2010's (Ongoing)	Note – 34 in 2013, highest annual # ever

4. HYLTON J.G. HAYNES & GARY P. STEIN, NAT'L FIRE PROT. ASS'N, U.S. FIRE DEPARTMENT PROFILE 2013 1, 3 (2014), <http://www.nfpa.org/~media/files/research/nfpa-reports/fire-service-statistics/osfdprofile.pdf?la=en>.

5. Adam Voiland, *Study: Fire Seasons Getting Longer, More Frequent*, NASA (July 28, 2015), <http://climate.nasa.gov/news/2315/>; see also *Special Report: The Legacy of the 1910 "Big Burn"*, KTVB (Nov. 5, 2015, 7:41 AM), <http://www.ktvb.com/story/news/local/2015/11/05/special-report-legacy-1910-big-burn/75173142/>.

6. KATIE HOOVER & KELSIE BRACMORT, CONG. RESEARCH SERV., WILDFIRE MANAGEMENT: FEDERAL FUNDING AND RELATED STATISTICS 1, 5 (2015), <http://nationalaglawcenter.org/wp-content/uploads/assets/crs/R43077.pdf>; see also Erik Litzenberg, *2013 in Review*, FIREFIGHTER NATION (Jan. 1, 2014), <http://www.firefighternation.com/article/wildland-urban-interface/2013-review>.

7. RITA F. FAHY, PAUL R. LEBLANC & JOSEPH L. MOLIS, NAT'L FIRE PROT. ASS'N, FIREFIGHTER FATALITIES IN THE UNITED STATES (2015), <http://www.nfpa.org/research/reports-and-statistics/the-fire-service/fatalities-and-injuries/firefighter-fatalities-in-the-united-states>; NAT'L WILDFIRE COORDINATING GRP., WILDLAND FIREFIGHTER FATALITIES IN THE UNITED STATES: 1990–2006 2 (2007), <http://www.fs.fed.us/t-d/pubs/pdfpubs/pdf07512814/pdf07512814dpi72.pdf>.

❖ Wildfire appropriations & expenditures continue to go-up:⁸

<u>Decade</u>	<u>Ave annual \$ Federal*</u>	<u>Ave annual \$ FEMA**</u>	<u>Ave annual \$ State</u>	<u>Ave annual \$ Local</u>
1990's	\$1 billion	\$24 million	\$300 million	\$100 million
2000's	\$3 billion	\$71 million	\$2 billion	\$1 billion

* Federal—USFS, and all DOI wildland agencies: NPS, BIA, USF&WS, BLM.

** FEMA—Fire Management Assistance Grants to state and local government to combat fire on non-federal lands.

❖ Mitigation efforts are insufficient to reduce risk significantly: There are 230 million federal acres alone at risk for ecological damage from wildfire due to excessive fuel loads.⁹ Yet, on average, only three million of these acres are treated each year.¹⁰❖ The true cost of wildfires continue to rise:¹¹

<u>Fire</u>	<u>Year</u>	<u>Suppression \$</u>	<u>Recovery \$</u>
Cerro Grande, NM	2000	\$2.7 million	\$910 million
Rodeo-Chediski, AZ	2002	\$4.6 million	\$320 million
San Diego, CA	2003	\$5 million	\$1.2 billion
Schultz, AZ	2010	\$12 million	\$140 million
Rim, CA	2013	\$127 million	\$1.8 billion

I. WHAT'S REALLY AT RISK?

For some, the problem is confined to the “wildland urban interface,” a rather nebulous term that has vastly different meanings depending upon who

8. ROSS GORTE, HEADWATERS ECON., THE RISING COST OF WILDFIRE PROTECTION 1 (2013), <http://headwaterseconomics.org/wphw/wp-content/uploads/fire-costs-background-report.pdf>.

9. Ray Rasker, *Resolving the Increasing Risk from Wildfires in the American West*, 6 SOLUTIONS J. 48, 57 (2015), http://headwaterseconomics.org/wphw/wp-content/uploads/Solutions_Journal_Resolving_Wildfire_Risk.pdf.

10. HOOVER & BRACMORT, *supra* note 6, at 4.

11. See ECOLOGICAL RESTORATION INST., A FULL COST ACCOUNTING OF THE 2010 SCHULTZ FIRE 22 (2013), <http://www.idahoforests.org/img/pdf/FullCostAccounting2010SchultzFire.pdf>; W. FORESTRY LEADERSHIP COAL., THE TRUE COST OF WILDFIRE IN THE WESTERN U.S. 7, 10–11 (2010), http://www.blm.gov/or/districts/roseburg/plans/collab_forestry/files/TrueCostOfWilfire.pdf; William Clark, *Large Fires & Fatalities*, U.S. NAT'L PARKS SERV., <http://www.nps.gov/fire/wildland-fire/learning-center/fireside-chats/history-timeline.cfm> (last visited Mar. 9, 2016); Bill Gabbert, *The True Cost of Wildfire*, WILDFIRE TODAY (Apr. 18, 2014), <http://wildfiretoday.com/2014/04/18/the-true-cost-of-wildfire/>.

is defining it. One of the most common traits is that it is “a geographic area where formerly urban structures, primarily homes, are built in immediate proximity to naturally occurring flammable fuels.”¹² Some think of this as the area within a dog’s-walk of the house, or as far as one can hit a golf ball from the porch.¹³ These describe what many have come to accept: that the interface is what’s in the yard, or within sight of a structure.¹⁴ The underlying theme is that the interface is within a relatively close distance to a structure—the home ignition zone—often expressed as anywhere from 30–600 feet from one’s front porch or back deck.¹⁵

Some have used these definitions to justify the belief and position that the fire “problem” is really one of proximity to structures, and that efforts to address the issue should be focused exclusively on hazard fuel mitigation work within that narrow band.¹⁶ At first blush, this approach may appear sound. However, it is a path that offers only the illusion of neighborhood and community protection and leaves the forest at-large highly vulnerable.

Others believe that no attempt should be made to reduce hazardous fuel accumulations;¹⁷ when fires burn, forest dwellers should be on-their-own, especially if they or the community they live in has taken no steps to reduce risk and ensure their own protection. The rationale for such a stance ranges from financial—why spend taxpayer dollars?—to outright opposition to cutting trees and/or removing any resulting product from the forest.¹⁸

12. C. PASCUAL ET. AL., PRELIMINARY DESCRIPTION OF URBAN SETTLEMENT TYPOLOGIES RELATED TO FOREST FIRE RISK (WARM PROJECT) 207, <http://www.fria.gr/WARM/chapters/warmCh25Pascual.pdf> (last visited Mar. 9, 2016).

13. Paul Summerfelt, *Wildland/Urban Interface: What’s Really at Risk?*, AZ DAILY SUN (Jan. 7, 2003, 11:00 PM), http://azdailysun.com/wildland-urban-interface-what-s-really-at-risk/article_2e23bc01-1617-5f33-9150-abf8a07c4b35.html.

14. *Id.*

15. *Id.*

16. *Id.*

17. *Id.*

18. *Id.*



Traditionally, the Interface has been viewed as an area immediately adjacent to structures. Photo by Bonnie Holmes (1999).

Those who advocate these positions fail to understand that structure damage or loss is not the only, and may not even be the main, value-at-risk. Surprised? The key lies in recognizing the multiple threats posed by wildfire.¹⁹

A. Immediate

When fires rage, our focus is drawn to the event itself. The underlying theme is “Smoke & Flames.” It can be dramatic and scary, and may be of regional or national interest.

1. Homes (and other Infrastructure)

Fire professionals realize that in today’s world, few wildfires burn where there is not some threat to structures, fences, power lines, communication

19. *Id.* To be clear, I am talking here about severe, destructive wildfire, not beneficial wildfire. There are differences, and the latter will be discussed elsewhere in this article.

sites, or some other type of infrastructure.²⁰ “Structures threatened” is often the lead for media stories emerging from an incident, and stories and pictures after the fire often focus on individuals sifting through the rubble searching for whatever’s left.²¹

Given the right conditions, fire spread can be spectacular and rapid.²² Multi-mile spread during a single day’s burn period is not uncommon.²³

There is no disputing the fact that treatments in the immediate area around structures, designed to reduce fire intensity and slow spread, can dramatically improve their survival potential.²⁴ However, restricting treatments to these areas does little to protect other values-at-risk, some of which may be equally or more important from a neighborhood and community standpoint.²⁵

20. *Id.*

21. *See, e.g.*, Phil Helsel & Tim Stelloh, *Third Body Found in Aftermath of ‘Butte Fire’ in California*, NBC NEWS (Sept. 17, 2015, 12:23 AM), <http://www.nbcnews.com/storyline/western-wildfires/body-found-aftermath-large-butte-fire-california-n428676>.

22. Summerfelt, *supra* note 13.

23. Kevin Bonsor, *How Wildfires Work*, HOW STUFF WORKS (May 29, 2001), <http://science.howstuffworks.com/nature/natural-disasters/wildfire.htm>.

24. *Fire in the Wildland-Urban Interface*, U.S. FOREST SERV., <http://www.fs.fed.us/pnw/research/fire/wildland-urban.shtml> (last updated Sept. 14, 2015).

25. *Id.*



A fire start many miles from a developed area can literally be in the backyard by nightfall. Photo by Paul Summerfelt (2000).

2. Public Panic

Wildfires can induce fear, concern, and panic. This can result in a marked increase in call volume at the local dispatch center, reducing the ability to service other emergency calls.²⁶ In addition, access routes into an incident may be clogged as people either flee the scene or attempt to return home to protect their property or remove other family members or pets.²⁷ Anyone who has attempted to manage a panicked public knows how hopeless that can be and how it drains resources away from where they are really needed.

26. JAVIER MAINAR, CITY OF SAN DIEGO, FIGHTING A WILDFIRE—10 YEARS AFTER THE CEDAR FIRE 5, <http://www.sandiego.gov/fire/pdf/cedartenth.pdf> (last visited Mar. 9, 2016).

27. Marisa Gerber et al., *Flames Sweep Over Freeway; Motorists Run for Their Lives*, L.A. TIMES (July 18, 2015, 7:36 AM), <http://www.latimes.com/local/lanow/la-me-ln-fire-in-cajon-pass-20150717-story.html>.

3. Public Health

During any large fire event, residents and visitors, both near-and-far to the fire itself (in some cases, states away), can be severely impacted by smothering smoke for days at a time, if not weeks.²⁸ Many of those impacted are not able to leave the affected area, and this can result in a dramatic increase in both doctor visits and hospital admissions during and immediately after the fires.²⁹

4. Firefighter Safety

In 1997, the *TriData Study: Wildland Firefighter Safety Awareness Study* identified 114 recommendations to improve firefighter safety.³⁰ The number one recommendation was to “implement a large-scale, long-range fuel management program.”³¹ Nothing has changed in the eighteen years since that study was released.³²

Hazard fuel mitigation treatments, forest restoration projects, or whatever exact terms, intent, and practices one chooses, such work must occur on a landscape-scale basis if we are to be truly serious about improving safety. Small isolated treatments, such as those within a few feet of a structure, or in the middle of a surrounding untreated area, do not provide the level of protection necessary in today’s world of mega-fire.

B. Secondary

After the fire is controlled, suppression resources have been hailed as heroes and return home, and media have left the area, property and business owners, neighborhoods and communities are left with the result.³³ Savvy fire

28. *Wildfire Smoke Threatens Public Health in the Valley*, Foothills Sun-Gazette (Sept. 8, 2015), <http://www.thesungazette.com/article/news/2015/09/08/wildfire-smoke-threatens-public-health-in-the-valley/>.

29. See R.J. Delfino et al., *The Relationship of Respiratory and Cardiovascular Hospital Admissions to the Southern California Wildfires of 2003*, 66 OCCUPATIONAL ENVTL. MED. 189 (2008), <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4176821/pdf/nihms-630048.pdf>.

30. See generally TRI-DATA, WILDLAND FIREFIGHTER SAFETY AWARENESS STUDY (1996), https://www.nifc.gov/safety/safety_documents/phase1.pdf.

31. *Id.*

32. See Bill Gabbert, *Introducing—Safety Matters: A Wildland Firefighter Forum for Change*, WILDFIRE TODAY (Jan. 29, 2014), <http://wildfiretoday.com/2014/01/29/introducing-safety-matters-a-wildland-firefighter-forum-for-change/>.

33. Nathan Solis, *Trinity Pines Slowly Recovers from Summer Fires*, REDDING.COM (Dec. 29, 2015), <http://www.redding.com/news/fires/trinity-pines-slowly-recovers-from-summer-fires-271b316b-220d-1ead-e053-0100007feca2-363777361.html>.

professionals realize that control of the fire may be the easiest part of the entire incident. For many of those who “remain behind,” recovery of community well-being can be a long-and torturous road.

1. Financial

Every fire season, stories emerge about the loss of revenue suffered by local businesses attributed to an ongoing fire in the area.³⁴ This can be particularly acute during the height of a summer tourist season. As an example, in the three months following the 2014 Slide Fire in Oak Creek Canyon—a fire which was miles away from the community itself—the Sedona Chamber of Commerce reported a \$100 million downturn in their economy!³⁵

2. Transportation

Fires can often disrupt travel corridors.³⁶ This may involve air, rail, or vehicle routes.³⁷ It may not be confined to the fire itself—it is much more likely to involve debris slides and flood damage well after the smoke has cleared.³⁸

34. E.g., Jordan Blum, *Calpine Estimates \$35 Million in Damages, Lost Revenue from Wildfires*, FUEL FIX (Sept. 28, 2015), <http://fuelfix.com/blog/2015/09/28/calpine-estimates-35-million-in-damages-lost-revenue-from-wildfires/>.

35. *Arizona Forward*, AZ BUS. MAG., Nov.–Dec. 2015, at 94, http://www.arizonaforward.org/pdf/AZF_SUPPLEMENT_AZ_BIZ_MAG_NOV_DEC.pdf; *B.C.’s Rock Creek Fire Hurting Local Economy During Busy Tourist Season*, CBC NEWS (Aug. 18, 2015, 11:01 PM), <http://www.cbc.ca/news/canada/british-columbia/b-c-s-rock-creek-fire-hurting-local-economy-during-busy-tourist-season-1.3195583>; see also Wayne Freedman, *Middletown Tries to Return to ‘Business As Usual’*, ABC 7 NEWS (Sept. 28, 2015), <http://abc7news.com/education/middletown-tries-to-return-to-business-as-usual/1007247/>.

36. Jim Carlton & Tamara Audi, *Firefighters Struggle to Contain Raging California Wildfires*, WALL ST. J., <http://www.wsj.com/articles/california-wildfire-forces-thousands-from-homes-1442232510> (last updated Sept. 14, 2015).

37. Eric Malnic, *Wildfire Disrupts Nation’s Air Travel*, L.A. TIMES (Oct. 27, 2003), <http://articles.latimes.com/2003/oct/27/local/me-airport27>; Associated Press, *Wildfire Contained, Authorities Worry About Landslides*, BOSTON HERALD (Dec. 28, 2015, 1:50 AM), http://www.bostonherald.com/news/national/2015/12/wildfire_contained_authorities_worry_about_landslides.

38. Associated Press, *supra* note 37.

3. Recreation

Opportunities to enjoy the out-of-doors are cherished by many. Activities are as varied as those who seek them out. But few individuals will travel to a blackened site to pursue recreation possibilities: the opportunity is “lost” until the effects of the fire have passed, which can take years if not decades.³⁹

4. Rebuilding

For most areas, structures and infrastructure damaged or destroyed during a wildfire will need to be repaired or replaced. For many communities, this will involve rezoning requests, public hearings, issuance of new permits, and necessary work-related inspections. Building and engineering Departments can be quickly overtaxed.⁴⁰

It is true that in some cases where actual damage occurs to a neighborhood or community that state and/or federal money may be available to help offset recovery costs.⁴¹ However, this money is not without cost. Staff time devoted to documentation and accounting requirements can be extensive and it may literally be years before all is settled.⁴²

5. Environmental

A devastating wildfire can affect a variety of environmental concerns. One of the most obvious is wildlife and plant habitat.⁴³ Some of the sites most at risk are home to various Threatened & Endangered species: it is extremely unfortunate that many who spend considerable time “protecting” these species by restricting or preventing forest treatment work may actually be dooming their habitat to destruction.⁴⁴

39. MARY ANN FRANKE, *YELLOWSTONE IN THE AFTERGLOW: LESSONS FROM THE FIRES* 40–41 (2000).

40. PAUL SUMMERFELT, *THE WILDLAND/URBAN INTERFACE: WHAT’S REALLY AT RISK?* 4–5 (2001), <http://www.flagstaff.az.gov/DocumentView.asp?DID=82>.

41. *E.g.*, *The Disaster Process & Disaster Aid Programs*, DEP’T OF HOMELAND SEC., <https://www.fema.gov/disaster-process-disaster-aid-programs> (last updated Oct. 3, 2015).

42. Miranda Leitsinger, *‘Where is all the Money?’: Pace of Aid Effort Frustrates Sandy Survivors*, NBC NEWS (Oct. 29, 2013, 3:23 PM), <http://www.nbcnews.com/news/other/where-all-money-pace-aid-effort-frustrates-sandy-survivors-f8C11487331>.

43. Doug Inkley, *5 Ways Wildfires Threaten Western Wildlife*, NAT’L WILDLIFE FED’N (June 19, 2012), <http://blog.nwf.org/2012/06/5-ways-wildfires-threaten-western-wildlife/>.

44. *Residents Oppose Controlled Burns*, AVERY J. (Jan. 10, 2013), http://www.averyjournal.com/news/residents-oppose-controlled-burns/article_ecbcc986-cc53-5b06-af18-1db959356c3f.html.

Watershed values are another important concern, increasingly so in the arid southwest.⁴⁵ We often neglect to realize that our forests, the very source of much of our water, may be our most important, and most vulnerable, water utility infrastructure component.⁴⁶

Soil erosion and sedimentation can reduce water quality, thereby increasing water treatment costs to the consumer hundreds of miles away from the fire site.⁴⁷ Sedimentation can fill reservoirs, decreasing storage and requiring expensive and repeated dredging to remedy.⁴⁸

Another major environmental impact is to the soil itself. If left in-place, the chemical composition and/or other properties may be so changed that it will take years to fully recovery and become productive once again.⁴⁹ If washed away, it will take literally eons to replace.⁵⁰

Finally, the forest itself, the very reason so many enjoy our State, may be lost. Low-intensity recurring fire, relatively benign and quiet, has been present from the beginning of time in the pine forests of northern Arizona.⁵¹ What has changed, however, is the severity of fires we are now experiencing.⁵² Western pine forest ecosystems have not evolved and developed with the fire intensity they are now subjected to.⁵³ Inaction or a timid approach to the issue is a death sentence for our forests.

45. See generally DANIEL G. NEARY ET AL., HYDROLOGIC IMPACTS OF HIGH SEVERITY WILDFIRE: LEARNING FROM THE PAST AND PREPARING FOR THE FUTURE (2011), http://www.fs.fed.us/rm/pubs_other/rmrs_2011_neary_d003.pdf.

46. *Id.* at 3.

47. *Id.*

48. Press Release, U.S. Dep't of Agric., USDA and Interior Announce Partnership to Protect America's Water Supply from Increased Wildfire Risk (July 19, 2013), <http://www.usda.gov/wps/portal/usda/usdamediafb?contentid=2013/07/0147.xml>.

49. Leonard F. DeBano, *The Effect of Fire on Soil Properties*, SOLO, http://forest.moscowfsl.wsu.edu/smp/solo/documents/GTRs/INT_280/DeBano_INT-280.php (last visited Mar. 8, 2016).

50. SUMMERFELT, *supra* note 40, at 5.

51. W. Wallace Covington, *The Evolutionary and Historical Context*, in *ECOLOGICAL RESTORATION OF SOUTHWESTERN PONDEROSA PINE FORESTS* 26, 28 (Peter Friederici ed., 2003).

52. *Id.* at 39.

53. *Id.*

6. Public Confidence/Support

Following any major incident, public scrutiny of officials and programs may occur.⁵⁴ Blame often follows.⁵⁵ The examination may very well be warranted. But the lesson should be clear—foster efforts to prevent or mitigate the effects of the event prior to its occurrence or face the consequences after it happens. We should always bear-in-mind the post-event potential for detrimental reactionary program or legislative changes.

7. Scenic

Picturesque long-distance vistas are an important component of our landscape; many travel great distances to partake of the experience. For some, it may be much closer-to-home, such as an open-space area they pass everyday on their way to work. For others, it's simply enough to know they exist. Pictures, and views, do speak louder than words. A comment often heard is “should a fire occur, that's what insurance is for.” It's ironic that one never hears that from those who now overlook a black, desolate landscape or from those whose home has survived but now are confronted with several feet of mud in their home.⁵⁶

8. Emotional/Spiritual

Many individuals and groups may have intense bonds to a particular site.⁵⁷ This bond is often overlooked or under-appreciated by many. Nonetheless, it is true and powerful. Damage, real or perceived, to these sites can cause mental or even physical pain to an individual, a family, or an entire culture.

Astute readers will notice that *Public Safety* is not listed in either the Immediate or Secondary threat list. Although fire professionals and public officials are occasionally chided for using the public safety argument too-

54. Fox21 News, *Federal Officials Face Scrutiny for Waldo Canyon Fire Response*, YOUTUBE (Jul. 3, 2012), <https://www.youtube.com/watch?v=DoyZGU9weOU>; Dana Wilkie, *FEMA to Face Scrutiny During its Response to California Wildfires*, SAN DIEGO UNION-TRIB. (Oct. 24, 2007, 4:40 PM), <http://legacy.utsandiego.com/news/metro/20071024-1640-cnsfema.html>.

55. Jeanette Russell, *Place Fire Blame Where it Belongs*, SPOKESMAN-REVIEW, July 2, 2002, at B5, <https://news.google.com/newspapers?nid=1314&dat=20020702&id=bmVWAAAAIIBAJ&sjid=kPIDAAAIAIBAJ&pg=4611,226955&hl=en>.

56. SUMMERFELT, *supra* note 40, at 5.

57. *Id.* at 5–6; e.g., Robyn Walery, *Survivors Speak: Observations from a Teenage Wildfire Survivor*, UNITED POLICYHOLDERS, <http://uphelp.org/pubs/survivors-speak-observations-teenage-wildfire-survivor> (last visited Mar. 8, 2016).

frequently, it is real, and not exclusive to either time-frame. The effects of a fire—both immediate and secondary—may threaten public safety throughout the length of an incident. As demonstrated above, the life of an incident may extend for years.

II. FINANCIAL REALITY

It's a given—the more money spent on wildfire suppression, the more money that must be spent on wildfire suppression.⁵⁸ Shocking isn't it? For roughly 70 years, beginning immediately after the 1910 fires in the northern Rockies which gave the US Forest Service its first mission (fire suppression) and which defined its character for decades thereafter, we did a remarkable job at holding the lid on the pot: keeping fires small and relatively inexpensive.⁵⁹ But all the while, fuels continued to pile-up and the pot continued to boil.⁶⁰ In the late 1980's, Yellowstone exploded in flames, unlike anything any modern-day fire professional had seen before: the pot had split.⁶¹ And, like Humpty-Dumpty, we aren't able to put it back together again. Nor should we try.

Suppression forces will always be needed and are a critical component of community and resource protection.⁶² But by itself, suppression can't fix our problem, and relying upon new technology, more staffing, or additional funding for suppression action alone, even if it were available, is a sure path to defeat and loss.

III. WHAT'S BEEN OUR RESPONSE?

Too often, action doesn't take place until there is smoke in the air or flames on the horizon. And then it's generally too late. Those spared often donate clothing, water, and food,⁶³ showing gratitude or honestly believing firefighters need the items to carry on the fight. They don't. "Thank You"

58. Covington, *supra* note 51, at 41.

59. *Id.* at 38.

60. *Id.* at 39.

61. Liane Hansen & Laura Krantz, *Remembering The 1988 Yellowstone Fires*, NAT'L PUB. RADIO, <http://www.npr.org/templates/story/story.php?storyId=94126845> (last updated Aug. 31, 2008, 2:37 PM).

62. STEVE GATEWOOD, COMMUNITY WILDFIRE PROTECTION PLAN: BLUE RIDGE AREA AND MOGOLLON RIM RANGER DISTRICT OF THE COCONINO NATIONAL FOREST 4 (2010), <http://coconino.az.gov/DocumentCenter/View/676>.

63. Travis Taborek, *Butte Fire Survivors Praise Local Charities*, CALAVERAS ENTERPRISE (Dec. 28, 2015), http://www.calaverasenterprise.com/news/article_83149d92-adc1-11e5-8936-8bd056424ae6.html.

signs and letters are always welcome, but the reality is that all the other stuff doesn't help. In fact, it misses the mark.

Too often, decision makers and policy-setters have the opportunity to take meaningful action before a fire starts, but either pass altogether, make symbolic pronouncements, or take a course of action that actually hurts the cause.⁶⁴ Whatever the reason for doing so, it doesn't change the bottom line: Wildland Urban Interface code standards and Land-Use Planning needs are left unaddressed, firefighters are left with little comfort knowing that they are "supported," partnership opportunities are lost, and forests are left unprotected as finger-pointing, blame, and demands fly.⁶⁵

After a fire, if things have gone well, some sort of "thank you" ceremony is not uncommon: when things don't go so well, there is silence, or criticism. When things go really bad, funeral(s) follow.⁶⁶

Those who fight fire certainly deserve our respect and gratitude. But if clothing, water, and food, inaction where it's actually needed, a hero's welcome, or a moment of somber reflection are all that happens, then all we'll be good at is gathering donations, attending parades, going to memorial services, . . . and fighting more fires.

IV. A PATH FORWARD:

Does this mean that federal or state land managers, who administer the bulk of the forested landscape in Arizona, are solely responsible to "fix the problem"? Are local government and private landowners excused from the need to build wisely or implement vegetative treatments in the area immediately adjacent to the structure? The answer to both questions is a resounding NO!

If we believe that the forests of our State belong to us, then the problems and opportunities afforded by fire are ours as well. Reality is more important than blame: only by working together, each doing their part, can we address the issue and ensure our forests, wherever they are located and whoever owns them, do not become a liability but instead continue to endure, function, and

64. Michael Kodas, *Fighting More Forest Fires Will Come Back to Burn Us*, ONEARTH (June 19, 2003), <http://archive.onearth.org/articles/2013/06/let-it-burn-is-the-best-wildland-fire-policy>.

65. *Better Planning to Reduce Wildfire Risk: A Summit County Case Study and Lessons for Other Communities*, HEADWATERS ECON. (May 2015), <http://headwaterseconomics.org/wildfire/solutions/summit-county-recommendations-policies>.

66. Connie Cone Sexton, *Yarnell Hill Fire: Firefighters Laid to Rest in 4 Different States*, AZ CENT. (July 14, 2013, 1:19 AM), <http://www.azcentral.com/news/arizona/articles/20130713yarnell-hill-fire-firefighters-funerals.html>.

benefit our state. Flagstaff provides an example on how that might look in practice.

A. The Flagstaff Approach:

To be sure, some other local governments, at the community or county level, do operate effective wildfire programs.⁶⁷ But far too few have any such an effort in-place, either ignoring the issue or hoping someone else will rescue them when the inevitable occurs. Flagstaff, on the other hand, offers a tantalizing view of what is possible when an effective, comprehensive program is put into motion in a coordinated way.



Forest treatments close to development, along with applicable building codes and land-use planning, will protect structures and neighborhoods, while that done at further distances from communities and throughout our forests can prevent or reduce other damaging effects of a serious fire. Flagstaff Fire Department—Woody Fire, 2006

Begun in 1996 following a devastating fire season in-and-around the community, the program, overseen by the Flagstaff Fire Department but

67. See generally Terry Haines et al., *The National Wildfire Mitigation Programs Database: State, County, and Local Efforts to Reduce Wildfire Risk*, in PROCEEDINGS OF THE SECOND INTERNATIONAL SYMPOSIUM ON FIRE ECONOMICS, PLANNING, AND POLICY: A GLOBAL VIEW 505 (2008), http://www.fs.fed.us/psw/publications/documents/psw_gtr208en/psw_gtr208en_505-512_haines.pdf.

involving to some extent almost all city Departments, has grown to encompass a variety of activities and efforts, all geared toward one objective—reducing the threat of destructive wildfire and resulting post-fire effects.⁶⁸

The focus of all action are the “Four E’s”:

- ❖ **Educating** all publics and stakeholders to enable wise choices and resulting actions;
- ❖ **Engineering** our built environment to withstand damaging events;
- ❖ **Enforcing** applicable codes, Fire Adapted Community standards, and Firewise practices; and
- ❖ **Environmental** actions that restore and maintain natural processes to reduce the risk of severe wildfire and to create conditions that allow ecologically critically fire to perform its natural function.⁶⁹

Undergirding this approach is the belief that those engaged in this effort— at all levels within City government—are accountable to the community and the greater Flagstaff area, and have a responsibility to act: doing anything less is to jeopardize the lives of emergency responders, residents, and visitors, and the livability and well-being of neighborhoods and the community. This sense of *duty* is critically important to understanding what follows.

Using the *National Cohesive Strategy* as a guide, the program has established three over-arching goals which provide direction and flexibility:

- ❖ Our forests are resilient to disturbances;
- ❖ Our community can withstand a wildland fire without loss of life and property;
- ❖ We practice making and implementing safe, effective, efficient risk-based wildland fire management decisions.

To achieve these goals, effort and activity is conducted within five core operational areas: Prevention, Preparedness, Hazard Mitigation, Response, and Recovery.⁷⁰

It’s important to recognize that many of these activities and actions must-and-do extend outside the city corporate limits. This reality flows from an understanding of the nature of the fire risk, the forest resource itself, and the communities *place* in engaging in the issue. The City Limit boundary is not a wall or moat, and there is a requirement for strategic partnerships as well as independent action in order to be successful.

68. *Wildland Fire Management*, CITY FLAGSTAFF, <http://flagstaff.az.gov/index.aspx?nid=132> (last visited Feb. 8, 2016).

69. *Id.*

70. *Id.*; U.S. DEP’T OF HOMELAND SEC., NATIONAL PREPAREDNESS SYSTEM 1 (2011), http://www.fema.gov/media-library-data/20130726-1828-25045-9792/national_preparedness_system_2011.pdf.

Three notable areas with two examples each are worth touching upon briefly. Each highlights a specific issue, all have contributed to the success of the others, and taken together, they illustrate the breadth, support, and success of the effort:

B. Planning

1. Greater Flagstaff Area Community Wildfire Protection Plan (CWPP)

The *Healthy Forests Restoration Act*, passed by Congress in November 2003, authorized development of CWPP's to identify priorities for protecting communities from wildfire.⁷¹ The Flagstaff CWPP was developed over an 8-month period as a cooperative venture lead by the Greater Flagstaff Forests Partnership.⁷² Once completed, it was approved in 2005 by local fire departments, local government (city and county), and Arizona State Forestry; it was reviewed and agreed with by the Coconino National Forest.⁷³

The *Analysis Zone* included over 900,000 acres of mixed ownership/jurisdiction.⁷⁴ Within this area, a smaller *Wildland/Urban Interface Zone* (a bit over 200,000 acres) was identified.⁷⁵ This area is where public safety was the over-riding goal, and it was sufficiently large to:

- ❖ reduce the potential of a high intensity fire entering the community,
- ❖ create an area whereby fire suppression efforts would be successful,
- ❖ limit the large amounts of wind-driven embers or “fire brands” from settling on the community, and
- ❖ protect critical infrastructure outside of identified at-risk communities.⁷⁶

Extensive fire modeling was conducted during development, resulting in a shape and size of the *Interface Zone* that took into account prevailing wind direction, historical ignition areas and spread direction, forest conditions,

71. Healthy Forests Restoration Act of 2003, Pub. L. No. 108-148, § 103, 117 Stat. 1887, 1896 (codified at 16 U.S.C. § 6513 (2016)).

72. GREATER FLAGSTAFF FORESTS P'SHIP & PONDEROSA FIRE ADVISORY COUNCIL, GREATER FLAGSTAFF AREA COMMUNITY WILDFIRE PROTECTION PLAN 2 (2012), <http://gffp.org/wp-content/uploads/2015/09/Combined-2012-CWPP-Review-Report.pdf>.

73. *Id.*

74. *Id.* at 7.

75. *Id.* at 15.

76. *Id.* at 16.

road access, etc.⁷⁷ The Plan was reviewed and updated in 2012, and continues to provide overall direction and standards.

2. Flagstaff Wildland Urban Interface Code (WUI)

Development of the WUI began in 2007 and was adopted, without a single dissenting voice or vote, in late 2008:⁷⁸ by itself, a remarkable achievement! In the decade prior to adoption of the WUI, several initiatives helped shape public perception and lay the foundation of public and political support. They included:

- ❖ Working with the City’s Community Development Department, an administrative procedure was developed which required vegetation management/mitigation activities on any property prior to development;
- ❖ Independent studies confirmed Flagstaff’s wildfire threat;⁷⁹
- ❖ “The 2006 Woody Fire, totally within the City, was successfully suppressed when it encountered an area previously treated by forest thinning and prescribed fire.”⁸⁰
- ❖ Key partnerships with community groups were initiated and each was engaged in the overall effort.⁸¹
- ❖ “The Fire Department [took] Council members and other community leaders on field trips, providing an opportunity to view the magnitude of wildfires, as well as the benefits of forest health treatments,” then Mayor Joe Donaldson said in 2008. “This [brought] clarity and political will to change the status quo to better protect our home town.”⁸²
- ❖ Partnering with citizens, the Fire Department not only assessed and advised, but actually assisted with or did the recommended treatment—planning, thinning, debris disposal, and prescribed fire.⁸³

During the 18-month adoption process, extensive outreach was conducted with various stakeholders, including the Homebuilders Association, Real Estate and Insurance agents, community leaders, engineering firms,

77. *Id.* at 10–11.

78. PAUL SUMMERFELT & JIM WHEELER, WILDLAND-URBAN INTERFACE CODE ADOPTION: HOW TO AVOID THE AGONY 1, <http://www.flagstaff.az.gov/DocumentCenter/Home/View/15342> (last visited Mar. 8, 2016).

79. *Id.* at 2.

80. *Id.* at 1.

81. *Id.*

82. *Id.*

83. *Id.*

developers, and others.⁸⁴ Almost all input received was incorporated into local amendments that better fit the community environment and needs. The Code continues to guide forest treatment and building principles in new developments, and is readily accepted as a community standard.

C. Partnerships

1. Greater Flagstaff Forests Partnership (GFFP)⁸⁵

Started in 1997, the Fire Department was one of four founding members.⁸⁶ The US Forest Service, Grant Canyon Trust, and Northern Arizona University's Ecological Restoration Institute (NAU-ERI) were the other three.⁸⁷ The goal was to treat 180,000 acres of vulnerable forest around the community.⁸⁸

In its eighteen years of existence, GFFP has raised hundreds of thousands of dollars in grant money and contributions to fund public outreach, produce necessary plans and reports, and conduct forest treatments on tens of thousands of acres.⁸⁹ But perhaps the greatest contribution of GFFP has been the change in the community's awareness and understanding of the forest itself. What would have met with resistance two decades ago is now an accepted practice.

Recently, GFFP was designated as a *Fire-Adapted Community Learning Network Hub*, the only one in Arizona.⁹⁰ Over the years, membership and leadership has changed and boundaries and programs have expanded, but GFFP continues to this day, one of the longest lasting community collaborative groups in the nation.⁹¹

84. *Id.*

85. More information on GFFP can be found at www.gffp.org.

86. JACKIE MARLETTE, GREATER FLAGSTAFF FORESTS PARTNERSHIP: A RESEARCH REFERENCE GUIDE 2-3 (2014), http://gffp.org/wp-content/uploads/2014/02/Monitoring-ref_guide_2.pdf.

87. *Id.* at 2.

88. *Id.* at 3.

89. *Id.* at 4-5.

90. *Member Directory*, FIRE ADAPTED COMMUNITIES, <http://fireadaptednetwork.org/member/2859/> (last visited Feb. 14, 2016).

91. MARLETTE, *supra* note 86, at 2-3.

2. Four Forests Restoration Initiative (4FRI)⁹²

Started in 2009, 4FRI is a recognition by many that forest restoration work needed to be planned and implemented on a large landscape scale if we are to protect and keep pine forests across northern Arizona.⁹³ Two mega-fires within the project area over the past fifteen years, each over 500,000 acres in size, dramatically illustrated the threat faced and the need for action on an unprecedented scale.⁹⁴ The work done by GFFP around Flagstaff, coupled with the White Mountain Stewardship Project in the White Mountains of eastern Arizona, helped pave-the-way.

At 2.4 million acres, this is the largest forest restoration project in the country.⁹⁵ Much has been accomplished in the past six years to launch the effort. But we are only at the start of work that must be completed if we are to be successful.

The City was one of the initial Stakeholders, and continues to function in a leadership role within the Collaborative. Treatment on the scale presented by this effort requires the involvement and development of forest industry not currently available in the State. Involvement in this effort, with much of the landscape a ways from the community (two to three hours in some cases) is a logical outgrowth of the desire and need to protect our forest at-large and our community in particular, and a realization that we will be successful only if we work outside of the City.

D. Treatments

Fire Departments are routinely rated as the most trusted and credible government entity.⁹⁶ The visible, active leadership and direct action provided by the Flagstaff Fire Department, coupled with community acceptance of and

92. More information on 4FRI can be found on two websites: Stakeholder's site—www.4fri.org and the U.S. Forest Service site—www.fs.usda.gov/4fri.

93. U.S. FOREST SERV., GET INVOLVED 2, http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5328017.pdf (last visited Feb. 14, 2016).

94. Claudine LoMonaco, *Lost in the Woods: How the Forest Service is Botching its Biggest Restoration Project*, HIGH COUNTRY NEWS (Sept. 1, 2014), <http://www.hcn.org/issues/46.15/lost-in-the-woods>.

95. *Id.*

96. Adam K. Thiel, *Contemporary Fire and Emergency Services*, in POLICY AND ORGANIZATIONAL ENVIRONMENT FOR FIRE AND EMERGENCY SERVICES 8, <http://icma.org/Documents/Document/Document/303439> (last visited Mar. 14, 2016).

demand for the service, provided the “social license”⁹⁷ to conduct the type of forest treatment work needed within and adjacent to the community.

1. City Projects

Since we began our effort in 1997, we have conducted forest treatments (thinning and debris disposal) on nearly 15,000 acres within the community: roughly 900 individual properties ranging in size from less than ¼ acre to some over 600 acres.⁹⁸ (We provide this same service to various entities outside the community as well.⁹⁹) This work also involves planning and implementing low-intensity prescribed fire on some sites, treatments designed for ecological benefit, in some cases literally feet from homes and other improvements.¹⁰⁰

In 2007, we were awarded the national *FireWise Leadership Award*, a validation of the effort to our entire community.¹⁰¹ But perhaps more important is the demonstrated impact of the work itself. In addition to the Woody Fire on the City’s west side, discussed previously, the 2010 Hardy Fire, burning entirely within the City, threatened a significant area in east Flagstaff.¹⁰² Burning one day prior to the ignition of the devastating Schultz Fire outside the City, the Hardy Fire burned into a previously-treated area and was easily controlled that evening.¹⁰³

2. Flagstaff Watershed Protection Project (FWPP)¹⁰⁴

In November 2012, Flagstaff voters approved a historic \$10 million bond to reduce the risk of devastating wildfire and post-fire flooding in the Rio de

97. Brian F. Yates & Celesa L. Horvath, *Social License to Operate: How to Get It and How to Keep It* 2 (Pac. Energy Summit, Working Paper, 2013), http://www.nbr.org/downloads/pdfs/eta/PES_2013_summitpaper_Yates_Horvath.pdf.

98. *Wildland Fire Management*, *supra* note 68, at 3.

99. *Id.* at 2.

100. GREATER FLAGSTAFF FORESTS P’SHP, FLAGSTAFF WATERSHED PROTECTION PROJECT: PRESCRIBED FIRE 1, http://www.flagstaffwatershedprotection.org/wp-content/uploads/2015/12/Prescribed-Fire-Final_I.pdf (last visited Mar. 14, 2016).

101. *Wildland Fire Management*, *supra* note 68, at 3.

102. *Arizona Wildfire Forces Animal Shelter, National Monument Evacuations*, CNN (June 21, 2010, 11:53 PM), <http://www.cnn.com/2010/US/06/21/arizona.wildfire/>.

103. Joe Ferguson, *Wildfire Jolts Flagstaff*, AZ DAILY SUN (June 20, 2010, 5:30 AM), http://azdailysun.com/news/local/wildfire-jolts-flagstaff/article_0a624e8f-4e95-56d1-9bb7-a12fcae4ad01.html.

104. More information on FWPP can be found at www.flagstaffwatershedprotection.org.

Flag and Lake Mary watersheds, two areas critical to the community.¹⁰⁵ What is significant is that this is the first voter-approved bond initiative for this type of work in the country, and that the work in-question will largely take place on federal land outside the City.¹⁰⁶

Because of all that preceded the vote itself, in some cases reaching back eighteen years to the courageous decision to initiate the City's Wildland Fire Management program, 74% of voters viewed the threat of inaction as very real, and FWPP as an *investment*, and not a *cost*.¹⁰⁷ It passed in every precinct in the City.¹⁰⁸

Two reports completed after the election lend credence to the concept of investment:

- ❖ In 2013 the *Schultz Fire Full Cost Accounting Report* was released by NAU-ERI.¹⁰⁹ This fire, which occurred within full sight of Flagstaff in 2010, cost \$12 million to suppress, but in the three years since the last flames were extinguished, had cost an additional \$140 million in recovery efforts.¹¹⁰
- ❖ In 2014, the *FWPP Cost Avoidance Report*, using the same methodology as the *Schultz Full Cost Accounting Report*, was released by NAU-ERI.¹¹¹ It documented that a fire which burned of the magnitude of the Schultz Fire within the two FWPP watersheds would result in damage to the Flagstaff community of anywhere from \$600 million to \$1.2 billion!¹¹²

The \$10 million bond cost looks like a very wise investment, indeed. Of interest, since January 2013, an additional \$2 million in non-City funding has been added to the overall bond portfolio.¹¹³ Roughly 75% of this added

105. *Id.*; SUSANNA EDEN ET AL., CLOSING THE WATER DEMAND-SUPPLY GAP IN ARIZONA 14 (2015), <https://wrrc.arizona.edu/sites/wrrc.arizona.edu/files/Arroyo-7-24-2015.pdf>.

106. *Project Background*, FLAGSTAFF WATERSHED PROTECTION PROJECT, <http://www.flagstaffwatershedprotection.org/about/background/> (last visited Feb. 14, 2016).

107. Paul Summerfelt, *An Open Letter to the Community*, FLAGSTAFF WATERSHED PROTECTION PROJECT (Nov. 14, 2014), http://www.flagstaffwatershedprotection.org/wp-content/uploads/2014/11/FWPP-Open-Letter_Nov-14.docx.

108. COCONINO CTY., STATEMENT OF VOTES CAST 487-495, <http://coconino.az.gov/DocumentCenter/View/9156> (last visited Feb. 14, 2016).

109. ECOLOGICAL RESTORATION INST., *supra* note 11.

110. *Id.* at 2.

111. N. ARIZ. UNIV., FLAGSTAFF WATERSHED PROTECTION PROJECT COST VOIDANCE STUDY (2014), <http://www.flagstaffwatershedprotection.org/wp-content/uploads/2014/10/Final-FWPP-Cost-Avoidance-October-27.pdf>.

112. *Id.* at 3.

113. ECOLOGICAL RESTORATION INST., FLAGSTAFF WATERSHED PROTECTION PROJECT: CREATING SOLUTIONS THROUGH COMMUNITY PARTNERSHIPS 11 (2015), <http://www.flagstaffwatershedprotection.org/wp-content/uploads/2015/11/FWPP-Creating-Solutions-Through-Community-Partnerships.pdf>.

capacity is from the US Forest Service, but over a dozen other parties have contributed the balance.¹¹⁴ This is a testament to the unique nature, and interest in, this effort.

FWPP was billed as a ten year project to plan and complete the initial forest treatments on nearly 15,000 acres of city, state, and federal lands.¹¹⁵ The first three years, post-election, have largely been devoted to required environmental planning.¹¹⁶ (It should be noted that due to the nature of this project and the national attention it has garnered, this planning effort has been completed one to two years faster than is typical for such efforts.)

Even while planning was underway, however, forest treatments were occurring where possible. The result has been that nearly 1,500 acres have already been treated, with large-scale treatment expected to commence in 2016.¹¹⁷

Public outreach has been an on-going component of the project. These have taken the form of news releases, field trips, website updates, presentations, and other activities.¹¹⁸ Of primary importance is the ability to convey to voters that the money they allowed us to use for the benefit of our community is well-spent and achieves what it was designed to do. One way we are doing that is through a citizen-developed Monitoring Plan, designed to answer questions the voters had about the effort.¹¹⁹ Spearheaded by GFFP, development of this Plan took twenty-five community workshops and roughly eighteen months to complete, and will undergo annual reviews and updates.¹²⁰

FWPP offers an exciting option to prioritize and treat critical areas, and a new opportunity for communities and land management agencies to enter into a fresh era of cooperation and partnership.

SUMMARY

When severe and unwanted fire strikes, Fire officials, Incident Commanders, and Agency Administrators seldom have time for studies,

114. *Id.*

115. *Id.* at 5.

116. *Id.* at 11–13.

117. Anne Mottek Lucas, *Decades of Progress—Promoting Forest Treatments and Public Support*, FIRE ADAPTED COMMUNITIES, <http://facnetwork.org/progress-promoting-treatments-in-flagstaff/> (last visited Mar. 13, 2016).

118. *Id.*

119. *Id.*

120. INTERSECTOR PROJECT, REDUCING THE RISKS OF CATASTROPHIC WILDFIRES IN FLAGSTAFF 3, http://intersector.com/wp-content/uploads/2014/09/I6_flagstafffire_arizona.pdf (last visited Mar. 14, 2016).

debate, or prolonged discussions. Such fires, especially in the initial stages of response, are often a defensive battle. The stakes are high and delays in action are not acceptable: in the fire environment, indecision is NOT the key to flexibility. Tactical decisions made will often occur on the front lines by firefighters, without the direct involvement of those who call the area “home.”

Prescribed fires initiated for ecological benefits, or suitable wildfires managed for resource benefit, offer us an exciting tool-in-the-toolbox for helping to manage the growing wildfire threat and restore/improve forest health and function. Any fire use carries risk, but the risk of delay and inaction is higher. Contrary to what was once thought of as the norm, all fires are not bad.

The key take-home message to anyone who lives in, works around, is responsible for, or enjoys the forest is to work collectively together and act. We cannot afford to ignore the issue, simply talk, act irresponsibly, or “kick the can down the road.” We MUST develop a fire environment, extending from one’s front door well into the forest itself, across all ownerships and jurisdictions, where any fire which burns does so in such a manner so that it fulfills its ecological role in our forests, where values-at-risk are easily protected, and where strategic and tactical decisions required are practicable, safe, and implementable.

Inaction, or the wrong action, whatever the cause or reason, only transfers the risk to others, most often without their knowledge or input.

There is a better way—Arizona can *Learn TO Burn*, purposely. If we do not do so, we WILL Burn, catastrophically. There are no other options available.