



FLYING BLIND: Federal Misuse of Airtankers Adds to Skyrocketing Fire Suppression Costs Accountability and Reform Needed

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INTRODUCTION: AIRTANKERS AND THE SOARING COSTS OF FIRE SUPPRESSION

Wildfire suppression expenditures have averaged over \$1 billion per year since 2000, but with a 71 percent increase in spending in the last five years the annual average is now \$2.9 billion. Firefighting now accounts for 61 percent of the Forest Service's total discretionary budget.⁸ While suppression cost-containment has been a stated goal within the agency and a keen interest among Members of Congress for the last 15 years, there are no legal or policy mandates requiring Forest Service line officers or incident commanders to limit costs, and they have tremendous discretion in suppression expenditures.¹¹ Recent research challenging the costs and effectiveness of different suppression strategies, tactics, and resources all beg the question—what are taxpayers getting from the billions of dollars spent fighting fires?

Airtankers streaming red clouds of fire retardant are one of the iconic symbols of firefighting that enjoys widespread popularity by politicians, the public, and news media. Aviation is one of the most expensive resources used in wildfire suppression, accounting for well over 25 percent of the agency's total suppression expenditures each year and is one of the reasons why suppression costs are soaring. The Forest Service accounts for over 90 percent of the federal government's use of airtankers which partly accounts for why its average costs of fighting large fires is more than double that of the Department of Interior agencies. The average cost of fighting large wildfires is \$3.6 million for USFS fires compared to \$1.2 million for DOI agencies.⁴

In response to concerns from Members of Congress and the USDA Inspector General, Forest Service researchers have begun taking a hard look at airtanker use. Available research points to substantial uncertainty regarding their effectiveness in wildfire suppression. Studies have found that the Forest Service typically deploys airtankers during the least effective times, places, and conditions for retardant to be successful in actually slowing fire spread.⁹ Specifically, contrary to current policy directives for aviation resources, almost half of all Forest Service airtanker use is on extended attack of large wildfires rather than initial attack of small fires, and the majority of retardant drops are on steep, densely forested slopes in the heat of the afternoon—the times, places, and conditions that make retardant drops least effective or ineffective. Researchers also discovered that the agency does not record the specific objectives or the outcomes of retardant drops.^{2,3,5,9} In essence, the agency is flying blind—neither looking ahead strategically nor looking behind in terms of the cost-effectiveness or the ecological impacts of airtankers dumping chemical retardants on wildfires.

AIRTANKERS USED WHEN AND WHERE THEY ARE LEAST EFFECTIVE

Initial Attack vs. Extended Attack: Aerial retardant does not extinguish flames, rather it merely slows the rate of fire spread to give ground crews more time to build firelines. Accordingly, federal policy guidance states the priority use for airtankers is during Initial Attack (IA) when fires are small and crews are most able to contain and control them. However, 75 percent of airdrops occurred on wildfires that escaped control efforts and became large fires.² Furthermore, 45 percent of the time airtankers were deployed on large fires during Extended Attack (EA) situations where they are least justified in terms of suppression policy.²

Early Morning vs. Late Afternoon: The best conditions for aerial retardant to work are during the cooler period of the morning, in sparse vegetation, on fairly level terrain. However, just 14 percent of all airdrops occurred before 12:00 noon; instead, 35 percent of all retardant drops on National Forests were done in the peak burning period of the afternoon, in dense forest cover, on steep slopes.^{1,7} In short, airtankers are often being used at times, places, and conditions where aerial retardant is least effective in slowing fire spread, making much of the expense of airtankers a waste of money and effort.

LARGE AIRTANKERS BURN LOTS OF MONEY

Aviation costs are consistently over 25 percent of total annual suppression expenditures, with large airtankers using the lion's share of those aviation costs.³ From 2007 to 2011, with total suppression costs adding up to \$6.2 billion, aviation costs added up to approximately \$1.6 billion.³ The total cost and average cost per flight has increased even while the number of large airtankers have decreased in recent years.⁵

AIRTANKERS MAKE WINDFALL PROFITS FOR PRIVATE CONTRACTORS

Suppression costs have been rising far above the rate of inflation based on a multitude of socio-environmental, institutional, and operational factors.¹⁰ Part of the rising cost of suppression is due to the system of "exclusive use" contracts that the Forest Service provides private companies that own and operate all but a handful of the airtankers used for wildfire suppression. Contractors are paid daily rates for "availability" whether or not their planes are actually used or are parked in the tarmac, plus hourly rates for "flight time" when they are actually in the air.³ Availability costs have risen 40 percent since 2007, and contractors are guaranteed at least 84 days of availability status pay. In just a three-year period, daily availability rates for airtankers more than doubled, rising from a total of \$15 million in 2007 to \$33 million in 2010.⁶ According to best estimates (based on 2011 dollars) and depending on the specific type of airtanker, availability costs range from \$13,740 to \$28,000 *per day*, and hourly rates for flight time range from \$6,660 to \$10,000 *per hour*.⁶ These costs do not include the pilots' pay or the expense of the retardant used—they are just payments to the aircraft owners.

THE ULTIMATE COST OF AIRTANKERS: FIREFIGHTER FATALITIES

Fire managers often use airtankers on portions of wildfires that are considered too unsafe for ground crews to work in: steep and rugged terrain, dense flammable vegetation, or extreme fire weather conditions. However, the use of airtankers is not without risk. Aircraft accidents have accounted for over half of all firefighter fatalities since 2000, with half of these fatal accidents caused by large airtankers.¹ The relatively high accident rate and high proportion of fatal accidents is causing the Forest Service and members of Congress to take steps to modernize the air fleet, letting go of antiquated Korean War-era airtankers, but the hard question that needs to be asked is: are the use of airtankers really worth the high costs to taxpayers and the high risk to firefighters given their relatively limited effectiveness?

AIRTANKERS ARE RARELY USED WHERE THEY MIGHT BE HELPFUL IN SAVING HOMES, BUT ARE USED WHERE THEY ARE COUNTERPRODUCTIVE TO ECOSYSTEM RESTORATION

The most justified use of airtankers is for initial attack on wildfires spreading towards homes and communities where timely retardant drops may delay fire spread until suppression crews can arrive and engage the fire. However, only 4 percent of airdrops are within wildland/urban interface (WUI) designated boundaries, and just 30 percent of total airdrops are within two kilometers of communities.⁷ Inexplicably, 21 percent of all retardant drops are inside designated wilderness, inventoried roadless areas, wild and scenic river corridors, or other natural areas, and another 6 percent of drops are in remote uninhabited areas.⁷ In these areas, wildfire often yields ecological benefits and suppression operations are not justified, and thus are largely a waste of taxpayer money.

CONCLUSION

Last year's Forest Service firefighting appropriation of \$3.9 billion was the largest ever, and accounts for 61 percent of the agency's total discretionary budget. The agency routinely overspends its annual firefighting budget, and Congress usually responds by writing a blank check for supplemental appropriations with no questions asked about how that money was spent or whether or not it was spent effectively. Suppression spending is soaring, and apparently, even the skies are no limit. Given the hundreds of millions of tax dollars spent annually on airtankers and aerial retardant with little or no evidence of their effectiveness in accomplishing suppression objectives, the expensive luxury of blindly flying airtanker missions must end. Congress should put a cap on the Forest Service's firefighting budget to reign in suppression overspending unless and until there is appropriate cost accountability, and critical analysis of the effects and effectiveness of suppression methods, especially aerial retardant. The evidence so far points to the need for significant reform of policies and practices to reign in suppression overspending.

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