

# A Short History of the Costs of Military Air Shows

Squandering the Planet's Increasingly Scarce Fossil Fuels for our Amusement

By [Dr. Gary G. Kohls](#)

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Featured image: The U.S. Air Force Thunderbirds perform the "Diamond pass and review" at Travis AFB, California on July 30, 2011. (U.S. Air Force photo/Staff Sgt Richard Rose Jr.)

*"Knowledge is power; but who hath duly Considered the power of Ignorance? Knowledge slowly builds up what Ignorance in an hour pulls down. Knowledge, through patient and frugal centuries, enlarges discovery and makes record of it; Ignorance, wanting its day's dinner, lights a fire with the record, and gives a flavor to its one roast with the burned souls of many generations." — George Eliot, from the author's last novel, *Daniel Deronda**

Pilots from the US Department of the Navy returned from World War II flush with pride at winning the war in the Pacific. So, in 1946, the Navy established a base of naval air operations on the shores of the Gulf of Mexico where the Blue Angels began doing air shows for the public, partly for recruiting future pilots and partly for raising unit morale.

Within a few years the US Air Force established a base in Texas, where the first USAF Thunderbird team began doing air shows in 1953.

The Gulf of Mexico has been the Blue Angels' base of operations ever since 1946, first at Jacksonville, Florida (until 1950), then at Corpus Christi, Texas (from 1950 to 1954), and finally settled in its permanent home at Pensacola, Florida.

The Thunderbirds started in Texas but have been based near Las Vegas, Nevada for decades. Every US military base has suffered serious environmental damage, just like every military base in the history of the world, and the Blue Angels and Thunderbird bases are no exception. Many US military bases are so seriously polluted that they have acquired the infamy of being designated EPA SuperFund sites. The process is called "fouling your own nest".

The Blue Angels have been petrochemically poisoning the Gulf of Mexico when the Navy thought it wise to have its jets dump their excess fuel over the Gulf just prior to landing, in order to decrease the remote possibility of a lethal fireball engulfing the plane and pilot in case of a crash landing.

No records seem to have been kept quantifying the volume or frequency of such fuel dumps, and, simply out of ignorance or arrogance, no environmental impact study was ever done or even considered. I have heard that the Blue Angels have discontinued fuel dumping a decade or so ago when the price of fuel rose dramatically; so now they only dump fuel

before landing in certain emergencies.

#### JP-5 Jet Propellant is Highly Toxic Whether Burned or Dumped

The fuel that the Blue Angels and the Thunderbirds use is a highly toxic propellant, a recent permutation of which is called JP-5. The many additives in the fuel do not burn “clean”, no matter what the Navy or Air Force says.



Blue Angels air show

JP-5 is actually a highly refined kerosene that also contains a complex mixture of hundreds of volatile chemical additives, some of which are carcinogenic. Many of them can be toxic to liver, brain, kidney and human or human or animal immune systems.

The post-combustion exhaust from jet engines is equally poisonous to air, water, soil, animal, plant and many forms of aquatic life.

The military personnel that handle the JP-5 fuel are at high risk of being poisoned by the chronic inhalation of either the raw fumes or the engine exhaust. Those exposed can easily develop, in a delayed fashion, chronic illnesses because of the toxicity of the volatile organic chemicals (VOCs) in the fumes.

#### The Sobering Economics of Military Air Shows

The fuel consumption data for the Blue Angel and Thunderbird air shows are generally kept secret – and for good reasons. The alarmingly high fuel consumption would tend to dampen the enthusiasm of all but the most patriotic, thrill-seeking or willfully ignorant ticket-buyers.

The aviation industry says that JP-5 jet fuel costs 2-3 times more than automotive fuel. A few years back JP-5 cost the Pentagon between \$8 and \$12/gallon!

In 2014, the Blue Angels were in Duluth, headlining the biannual air show, which many of those critical of US militarism, US imperialism and US exceptionalism derogatorily call the Duluth Hairshow). During the 2014 pre-show promotional build-up, a local reporter for the Duluth News-Tribune was given a publicity ride, and he enthusiastically wrote in his column that the jet burned 1,200 gallons of fuel per hour! That number should sober up every thinking person, for a very fuel-efficient car that gets, say, 40 mpg, could drive 48,000 miles

on the 1,200 gallons.

Back in 2014, 1,200 gallons of JP-5 cost the military upwards of \$12,000 (at \$10/gallon). If one multiplied that consumption by 6 (the number of jets in each performing team) the fuel costs would be \$72,000 per hour just for the fuel used up doing the performance. And that is not counting the essentially daily practice sessions year-round that also last an hour. Nor does that count the fuel consumption for the round trip to Florida and back for each of the 70 air shows that the Blue Angels do in a typical year.

How much of the Pentagon's "missing" \$23 trillion dollars can be Blamed on Military Air Shows?

Do the math and you will start to reconsider the wisdom of supporting such environmentally-insensitive and earth-unsustainable entertainment events. Surely some of the "missing" \$23 trillion dollars (23,000,000,000,000 dollars) that the Pentagon recently reported that it can't account for can be blamed on fuel wastage and other expenses that air shows incur.

On Bastille Day of 2014 (July 14) eight USAF Thunderbird F-16 jets arrived in Duluth along with the obligatory C-17 cargo plane carrying 30 support staff and spare parts for the jets (for air shows the support contingent usually numbers 50-55 members).



Three of six U.S. Air Force Thunderbirds take off simultaneously as they begin their aerobatic performance at the Duluth Airshow in 2016. (Source: Duluth News Tribune)

The next day, 6 of the 8 Thunderbird jets left Duluth to do a 10 second flyover for the start of the Major League Baseball All-Star game at Target Field in Minneapolis – the only reason for them to be in Minnesota! (No information on the economics of the event was published. Hopefully, Major League Baseball footed the bill.)

The flyover was to coincide with the last strains of the Star-Spangled Banner. The two spare jets, who made the trip for nothing except as back-ups, were left sitting on the tarmac in Duluth, thus saving us taxpayers \$10,000. The News Tribune reporter covering that story wrote that "each of the multi-million-dollar fighter jets will consume about 500 gallons of fuel just to make the 30-minute round trip to and from Minneapolis".

The cost of the fuel just for that quick trip from Duluth to Minneapolis and back for 10 seconds of entertainment? Here's the math: \$10 dollars/gallon X 500 gallons, X 6 Thunderbirds = \$30,000!! And that is not considering the costs of the maintenance and the crews of the other planes involved, the practice sessions, the salaries and pensions and health care costs of all the military personnel involved.

We're talking big bucks and a massive amount of fuel wastage every time the two stunt-flying teams perform or practice, even if one acknowledges that a portion of the costs are covered by civilian event sponsors. But there is more to understand about US military air shows that should raise additional concerns.

More Sobering Math: How much does it Cost to Train the Pilots?

A Duluth News-Tribune reporter covering one of Duluth's past air shows wrote that the commanding officer of one of the flight teams was required to fly a minimum of 3,000 training hours (paid for by the US taxpayer) to qualify for the role of commander. The other team members had to fly 1,350 training hours. The reporter noted in that article that there were 15 pilots in the team, although only 6 perform at a time. The team members (the subs as well as prime time flyers) practice their highly technical and dangerous stunts virtually every day of the year in order to keep their skills honed and the air shows relatively safe.

As of 2006, there had reportedly been 230 fighter pilots since the Blue Angels started their stunt-flying for audiences. Since the Blue Angels teams began flying in 1946, about 25 of their pilots have died in crashes, which means that as many as 25 multimillion-dollar planes went down in the crashes as well (this figure does not factor in the number of planes that were demolished while the pilot survived by ejecting safely).

In 2011, 70 Blue Angel air shows (two shows per weekend) were presented at 35 different sites, with rehearsal flights the day before each performance. When they are not touring, the Blue Angels practice their routines year-round, usually over the Gulf of Mexico at their Pensacola base of operations. The Thunderbirds practice over Nevada's vast desert north of Las Vegas, which is where a rookie Thunderbird pilot recently died in a practice session crash on April 4, 2018, just a couple of months before he was to be in Duluth. The crash was the third Thunderbird accident in the past 22 months.

Using the figures that the journalist obtained from the Blue Angels, the 3,000 hours of training for the single Commanding Officer (CO) used up as many as 2,400,000 gallons of jet fuel just to qualify ( $3,000 \text{ hours} \times 800 \text{ gallons/hour} = 2,400,000 \text{ gallons}$ , which at \$10 per gallon amounts to \$24,000,000 for every qualifying commanding officer)! Of course, this training number does not include the equally enormous amounts of fuel consumed during the air show performances, the rehearsals or the flights to and from Pensacola.

The 1,350 training hours for the other pilots on the team (at one time there were as many as 15 pilots on Blue Angels teams) consumed as much as 1,080,000 gallons for each pilot's training (which costs us taxpayers, at \$10/gallon, \$10,800,000 for each Blue Angel pilot that qualified!). For the 14 non-commander pilots, the total fuel costs expended just to qualify comes to \$15,120,000!

And those costs do not factor in the airmen's or support crew's salaries, the pensions or the tens of millions of dollars that each jet costs.

I challenge readers to try to estimate in dollar figures the enormous fuel costs for all of the US military shows/year, and then try to calculate the fuel used up in the flights to and from Pensacola or Las Vegas (in the case of the Thunderbirds). And then add in the costs of the huge transport planes that carry all the repair parts and the 50-55 support crew members that work in supply and maintenance.

Of course, the costs to the American taxpayer are impossible to calculate precisely, but surely it must be many billions of dollars per year, admittedly partly offset by ticket sales. Nevertheless, since so many of America's military excursions are for control of oil, the burning of precious fuel for whatever reason must be taken into account if and when the future of fuel-wasting military air shows is to be re-considered.

Squandering Increasingly Scarce Fossil Fuel for our Amusement

In 2016 the USAF Thunderbirds headlined what used to be biannual Duluth air shows. But in 2017 the Blue Angels were back again. At every show there are any number of other stunt-flying participants, all using up increasingly scarce petroleum products for purposes of entertainment plus, of course, for the recruitment of starry-eyed, vulnerable young boys (and girls) who are being primed, partly because of their extensive experience with first person shooter videogames, to want to join the death-dealing military professions that make homicidal violence normal and attractive.

The world is over-populated and heading for catastrophic economic and climate change cliffs, so isn't it about time for people to get serious about what should be the sobering realities mentioned above? We live in a world of dwindling, irreplaceable fossil fuel resources that are already being squandered by thousands of corporate misleaders on Wall Street and War Street, including Big Oil, Big Agribusiness, Big Chemical, Big Food, Big Media and Big Armaments. Each of these industries – in one way or another – profits from wars and rumors of war, and so the mesmerizing beat goes on.

Far too many US military veterans are physically, neurologically and/or spiritually dead or dying. Often the deaths are by suicide – 22 per day for active duty soldiers and veterans combined! These once-gung-ho wounded warriors were easily seduced by the pseudo-patriotic jingoism coming from the “military-industrial complex” often wasting the best years of their lives. And then they were sacrificed, not for American “democracy”, but for American capitalism and the money-hungry, pro-militarism, war-profiteering corporations (and the subservient politicians and presidents of both political parties) that cunningly waved the flag and dutifully wore the flag pins on their suit coat lapels.

Now we know that these corporate entities never really cared about the well-being of their “cannon fodder” warriors who were doing the dirty work to ensure the success of their evil enterprises abroad. The flag that corporate CEOs pledge allegiance to is NOT the Stars and Stripes but the flag that has their corporate logo on it.

Millions of dead and dying American veterans from every war since 1898 (the year that the US military captured the Philippine Islands, Puerto Rico and Cuba from Spain and started feeling their imperialistic oats) joined the US military partly out of a sense of patriotic duty, partly to “see the world” and partly to get out of their poverty; but most of them soon found themselves either

- 1) disillusioned by the atrocities they witnessed or had been ordered to commit;
- 2) sickened from their exposures to military toxins (including the obligatory, massive over-vaccination agendas for every member, no matter how irrational);
- 3) malnourished or sickened from the, toxic, non-organic, highly processed, chemically-treated, pseudo-food in their rations;
- 4) neurologically and/or psychiatrically sickened from the ubiquitous overuse of alcohol, tobacco, illicit drugs or the cocktails of legal psych drugs given to them by military psychiatrists, medics and the VA; and/or
- 5) tormented by the post-combat demons, the nightmares and the suicidality – while at the same time earning less than the minimum wage.



And part of the process that led many of the above victims (of America's endless military adventurism) to think that there somehow was glory involved in killing and dying for their nation's financial elites, may have begun with the thrill of experiencing military air shows.

America's soldiers, airmen, seamen and Marines have been, in reality, working not for the US Constitution to which they pledged allegiance, but rather for a whole host of nefarious special interest groups that stopped supporting them when their broken bodies, their broken brains and the body bags came home under cover of darkness.

Hopefully, acknowledging these unwelcome realities may someday set us free from the war-glorifying, war-profiteering, war-mongers on Wall Street and War Street. Good examples would include Lockheed-Martin, General Dynamics and McDonnell Douglas/Boeing, the suppliers of the Thunderbird planes, who depend on wars and rumors of war to continue doing business, maintain dividend payments and ensure high stock prices for their investors.

So, while thousands of patriotic Duluthians watched in wide-eyed wonder last week-end as the highly skilled jet pilots did their breath-taking stunts, there were, at the same time, tens of thousands of Duluthians that refused to spend their time and money attending and supporting these pro-militarization air shows.

Sadly, the Thunderbirds, their sponsors and fans are unconsciously hastening America's impending moral, energy, climate and financial collapse by ignoring the wastefulness of burning up precious, expensive, non-renewable fossil fuel resources while simultaneously poisoning the planet and risking the health of everybody, including America's progeny.

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*Dr Kohls is a retired physician from Duluth, MN, USA. He writes a weekly column for the Duluth Reader, the area's alternative newsweekly magazine. His columns deal with the dangers of American fascism, corporatism, militarism, racism, malnutrition, Big Pharma's psychiatric drugging and over-vaccination regimens, and other movements that threaten the environment, health, democracy, civility and longevity of the populace.*

*He is a frequent contributor to Global Research.*

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