

# The High Costs of Military Air Shows

A Short History. Squandering the Planet's Increasingly Scarce Fossil Fuels for our Amusement

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Region: [USA](#)

Theme: [Environment](#), [Military](#), [WMD](#), [Oil and Energy](#)

## Author's Note and Update

*The US Navy's "Blue Angel" fighter jet squadron are scheduled to "perform" at Duluth, Minnesota's military air show on July 15/16, 2023. The economic and environmental costs of such pro-military propaganda stunts that heavily contribute to the trillion dollar annual "defense department" budgets and federal deficit crises and the promotion of the aggressive militarization of our nation by such things as this weekend's National Memorial Day celebration that was sponsored by Lockheed Martin Corporation, one of the largest, most profitable military weapons manufacturers in the world that depend on war-readiness, military dominance, massive deficit spending and "keeping our nation safe".*

*Incidentally, Lockheed's stock price today is \$450 per share and is scheduled to pay a \$3 quarterly dividend at the end of this quarter. Witnessing the over-the-top patriotic propaganda of the Memorial Day concert in Washington, D.C. today, I felt it was necessary to re-issue an old Duty to Warn article, which was published by Global Research on July 10, 2019.*

*Dr. Gary G. Kohl, May 29, 2023*

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*In 1825, long before anybody even thought about air flight, the US Navy began operations in the Pensacola, Florida area, when the federal government built a naval yard on Pensacola Bay.*

90 years later, in 1914, the naval yard became home to the Navy's first permanent air station. Since that time, NAS (Naval Air Station) Pensacola has served as the primary training base for naval aviators and has housed the Blue Angels aerobatic programs, which will be giving 61 shows at 32 locations from March through November of 2019. The two Blue Angel shows in Duluth are scheduled for July 20 - 21, 2019.

The US Navy pilots that came back in one piece from World War II returned flush with pride for doing their part in 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 training pilots to perform aeronautic stunts to entertain the public (Pentagon budgetary costs partially offset by attendance fees). The airshow were done partly for recruiting future pilots, partly for raising unit morale, partly to gain the support of congresspersons who vote on military budgets and, one supposes, to further glorify America's military conquests in the eyes of the public.

The United States Air Force (USAF) shortly established a similar air base in Texas, where the first Thunderbird team began doing air shows for public entertainment in 1953.



Source: salinasairshow.com

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 into its permanent home at Pensacola, Florida. The NAS that houses the Blue Angels occupies 5,900 acres on a peninsula just south of Pensacola in western Florida.

However, all has not been well. According to the US Environmental Protection Agency (EPA), base operations and maintenance activities (at 47 separate US Navy sites around the nation) have generated a variety of waste materials, including waste oils and solvents, human waste material, paints, electroplating wastes, radium paint waste, pesticides and insecticides. Supposedly the Navy is leading the cleanup and review processes, with oversight occasionally provided by the EPA and, for the NAS at Pensacola, the Florida department of Environmental Protection (FDEP)".

In 1989 the EPA placed the Pensacola site on the National Priorities List (NPL) of contaminated sites (Super Fund sites), with no apparent end to the clean-up 30 years later. Of course, the contamination of the ground water and the contamination of the waters of the Gulf of Mexico will be impossible to clean up.

#### Fouling Their Own Nests

Of course, the bases of operations of the USAF Thunderbirds (now located near Las Vegas, Nevada) are no different. One can safely assume that ALL US military bases have serious environmental contamination beneath them as well as downstream and downwind, just like every military base of every nation in the history of the world.

The Blue Angels began petrochemically poisoning the Gulf of Mexico when the Department of the Navy decided to have all 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 have been kept quantifying the volume or frequency of such fuel dumps, and environmental impact study was ever done or even considered until 1989. Apparently, the Blue Angels have discontinued pre-landing fuel dumping a number of years ago when the price of fuel rose dramatically; so now they only dump fuel in certain emergency situations.

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

The current jets (Boeing F/A-18 Hornets) that the Blue Angels fly burns a highly toxic propellant fuel which is called JP-5. And the many additives in the fuel do not burn "clean", no matter what the Navy (or Air Force) says.

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

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

The military personnel on the ground 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, any or all of the multitude of common chronic illnesses, cancers, mental ill health, suicidalities, premature deaths and neuropsychiatric disabilities that are suffered by both military personnel and domestic staffers that live on, downwind or downstream of the bases.

### The Sobering Economics of Military Air Shows

The fuel consumption data for the Blue Angel and the 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!

It was in 2014 and 2016 that the Blue Angels last flew in Duluth. 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 40 mpg) could drive 48,000 miles on 1,200 gallons of fuel.

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 stunt practice sessions that also last an hour. It also does not factor in the fuel consumption for the round trip to Florida and back for each of the scores of air shows that the Blue Angels do in a typical year.

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 acknowledged that it can’t account for can be blamed on fuel wastage on air shows.

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).

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 partially 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. 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”.

What are the Fuel Costs for 4 USAF Thunderbirds to Fly From Duluth to Minneapolis and Back?

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.

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.

#### Some More Sobering Math

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, while the Thunderbirds practice over Nevada's vast desert north of Las Vegas, which is where a rookie Thunderbird pilot 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 crash in the 22 months prior to the 2018 crash.

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 hours X 800 gallons/hour = 2,400,000 gallons)! 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 the Blue Angels teams) consumed as much as 1,080,000 gallons for each pilot's training (1,350 hours X 800 gallons/hour). Multiply that by 14 non-CO pilots and you get 15,120,000 gallons of fuel just for the hours spent training those pilots.

Considering the fact that in 2012, a gallon of JP-5 jet fuel cost \$8 to \$12/gallon (average \$10/gallon), every new Navy pilot who succeeds at becoming a Blue Angel pilot cost the US

taxpayer approximately \$10,080,000 per pilot (1,080,000 gallons X \$10/gallon) – just for the fuel used to become a member of the team! And the 10 million dollars is not factored into the airmen's salaries, the retirement 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. And what about retirement costs for the lifers and the lifetime VA healthcare costs for virtually everybody else that qualifies.

Of course, the costs to the American taxpayer are impossible to calculate precisely, but it must be tens of billions of dollars per year, admittedly partly offset by ticket sales. Nevertheless, since so many of America's economic wars and military wars 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 are to be re-considered.

### Squandering Increasingly Scarce Fossil Fuel for our Amusement

In 2016 the USAF Thunderbirds headlined the Duluth Air Show. Every year there are a number of other stunt-flying participants, all using up increasingly scarce petroleum products for purposes of entertainment and, 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 a catastrophic economic and climate change cliff, so isn't it about time for people to get serious about what should be the very 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, War Street and Capital Hill, including Big Oil, Big Agribusiness, Big Chemical, Big Food, Big Media and Big Armaments. Each of these sociopathic industries (look up the definition of sociopathy) – in one way or another – profits from wars and rumors of war, and so the mesmerizing beat goes on.

Too many American military veterans are now physically, neurologically and/or spiritually dead or dying (often by suicide – 22 per day for active duty soldiers and veterans combined!). These once-gung-ho, now-wounded warriors were too easily seduced by the pseudo-patriotic jingoism coming from the "military-industrial complex" during 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 their subservient politicians and presidents of both political parties) that cunningly waved the flag and dutifully wore the flag pins on their 3-piece 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 for their evil enterprises abroad. The flag that the corporation's CEOs pledge allegiance to is NOT the Stars and Stripes, but it is a flag that has their corporate logo on it. And they are NOT our friends.

Millions of dead and dying American veterans from every war since 1898 (the year that the

US military murderously captured the Philippine Islands, Puerto Rico and Cuba from Spain and started feeling their imperialist oats) joined the US military partly out of a sense of patriotic duty, partly to “see the world” and partly to get out of poverty; but most of them soon found themselves either:

- 1) disillusioned by the atrocities they saw 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, highly processed pseudo-food in their rations;
- 4) neurologically and psychiatrically sickened from the ubiquitous overuse of alcohol, tobacco, illicit drugs or the cocktails of psych drugs given to them by military psychiatrists, medics and the VA; and/or
- 5) tormented by the post-combat demons, the nightmares, the mental ill health (of known causation) 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 think that there was glory involved in killing and dying for their nation’s financial elites, began 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, honestly acknowledging the above unwelcome realities may someday set America free from the war-glorifying, war-profiteering warmongers on Wall Street and War Street. Good examples would include Lockheed-Martin, General Dynamics and McDonnell Douglas/Boeing, the suppliers of the planes, who depend on wars and rumors of war to continue doing business and maintaining dividend payments and high stock prices for their wealthy investors.

So, while thousands of patriotic Duluthians watch in wide-eyed wonder as the highly skilled jet pilots do their breath-taking stunts, there will also be tens of thousands of Duluthians that refuse to spend their time and money attending and supporting these shows.

Sadly, the airshow sponsors are unconsciously hastening America’s 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 family physician from Duluth, MN, USA. Since his retirement from his*



*holistic mental health practice he has been writing his weekly Duty to Warn column for the Duluth Reader, northeast Minnesota's alternative newsweekly magazine. His columns, which are re-published around the world, deal with the dangers of American fascism, corporatism, conscienceless industrialization, militarization, racism, xenophobia, malnutrition, sea level rise, global warming, geo-engineering, solar radiation management, electromagnetic radiation, Big Copper Mining's conscienceless exploitation of northeast Minnesota's water-rich environment, Big Medicine's over-screening, over-diagnosing, over-treating, Big Pharma's over-drugging and Big Vaccine's over-vaccination agendas (particularly of tiny infants), as well as other movements that threaten human health, the environment, democracy, civility and the sustainability of life on earth. Many of his columns have been archived at a number of websites, including these four:*

[http://duluthreader.com/search?search\\_term=Duty+to+Warn&p=2:](http://duluthreader.com/search?search_term=Duty+to+Warn&p=2:)

<http://www.globalresearch.ca/author/gary-g-kohls;>

<http://freepress.org/geographic-scope/national;> and

<https://www.transcend.org/tms/search/?q=gary+kohls+articles>

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