

# Polluting Air and Water: The US Air Force Blue Angel F-18 Uses a Highly Toxic Propellant Fuel

Inconvenient Truths About Duluth Air Show Featuring the USAF Thunderbirds

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

Global Research, July 09, 2016

Region: [USA](#)

Theme: [Environment](#), [Military](#), [WMD](#)

*The Big Oil cartels have, for decades, been poisoning the Gulf of Mexico, the Persian Gulf and many other oceans and ocean floors with uncounted millions of gallons of toxic crude oil via their risky, and very leaky deep water oil wells. It wasn't just the crime against the planet that British Petroleum and Dick Cheney's Halliburton perpetrated in the Gulf of Mexico in 2010. There are many other entities that have contributed to the mortal wounding of the Gulf, including the US military.*

A prime example of the damage done to the Gulf by corporate entities includes the Mississippi River delta's massive dead zone that has been enlarging rapidly for decades, thanks to the many shoreline polluters that have been allowing industrial waste, herbicides, insecticides, fertilizers and other toxins to flow downstream from such so-called "environmentally friendly" states like Minnesota and its Big Chemical and Big Agribusiness-mesmerized farmers.

There are hundreds of dead zones at the mouths of many of the world's major rivers, but much of the pollution that caused the huge dead zone at the Mississippi's mouth started in Upper Midwest farmlands, especially the corporate mega-farms. (See [www.geoengineeringwatch.com](http://www.geoengineeringwatch.com) for more details.)

Carcinogenic corporate waste products that are dumped directly into the river or otherwise seep into the ground water are known to sicken and then kill living creatures downstream. As I was growing up, I fished in the Minnesota River and I witnessed the beginnings of the mortal wounding of that river because of massive corporate farm chemical runoff. The Minnesota went from swimmable and fishable to muddy, smelly, toxic and relatively fishless during the years in which I was coming of age.

So far the corporate criminals in the Big Oil, Big Chemical and Big Agribusiness cartels have been making "good for us" but "bad for your planet" economic decisions, but they keep getting off with barely a rap on the knuckles for contributing to the slow death of our increasingly poisoned planet, especially the water. And, just like the Big Bank's predatory lenders on Wall Street who have had controlling power in all recent administrations, the corporate elites are still awarding themselves lavish bonuses and getting everything they want from our bribed legislators and co-opted Supreme Court justices.

These elite sociopaths who have both political and economic power could just as well be saying to us: "to hell with the long-term sustainability of Mother Earth. And to hell with you peasants in the lower 99% who depend on the health and sustainability of Mother Earth's

air, water and soil. We in the upper 1% got ours by hook or by crook, thanks to our owned media, our owned politicians, our owned lawyers, our owned judges, our owned police, our owned lobbyists, our gated communities and our body guards, and we dare you to try to take any of it back.”

Whatever the highly paid lobbyists from Big Business tell us in their ever-present, staged Big Media interviews, the only things that really matter to them and their paymasters is shareholder value, the next quarter’s profit report and today’s share price (that they know will not be adversely affected by the ever-present criminal or unethical activities – Big Media will not be reporting on them!).

### **Big Oil and Big Agribusiness Aren’t the Only Industries that Have Been Polluting the Air and the Water**

Of course, the history of petroleum pollution of the once pristine, fertile and life-giving waters of the Gulf of Mexico didn’t just start with Big Oil’s inadvisable – and very risky – deep water drilling.

In 1946, flush with pride at winning WWII, the US Department of the Navy established a base of naval air operations on the shores of the Gulf of Mexico. For the purpose of recruiting pilots to the Navy and raising unit morale it started performing airshows for the public, and the Blue Angels flying team was born. The Gulf has been its base of operations ever since, first at Jacksonville, Florida (until 1950), then at Corpus Christi, Texas (from 1950 to 1954), and finally at its permanent home at Pensacola.

The Angels began petro-poisoning the Gulf when the Navy found it advisable to have its fighter jets dump excess fuel over the Gulf just prior to landing, thus decreasing 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 to quantify the volume or frequency of such fuel dumps, and, simply out of ignorance or arrogance, no environmental impact study was ever considered. I have heard that the Blue Angels have discontinued fuel dumping a number of years 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 current Blue Angels F-18s use a highly toxic propellant fuel, a recent permutation of which is called JP-5. And the many additives do not burn clean, no matter what the US Navy or Air Force says.

JP-5 is actually a highly refined kerosene that also contains a complex mixture of volatile chemicals that can be toxic to liver, brain, kidney and immune systems.

The post-combustion exhaust from jet engines is an equally carcinogenic polluter of air, water and soil that can then be poisonous to human, non-humans and plant and aquatic life.

The military personnel who handle the JP-5 fuel are at high risk of being poisoned by inhaling 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 VOCs.



### **The Sobering Economics of Military Air Shows**

The fuel consumption data for the US Navy's Blue Angel and US Air Force's 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 and thrill-seeking 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!

### **The Duluth airshow is Coming**

In 2014, the Blue Angels were in my hometown of Duluth, MN, headlining the biannual stunt-flying air show, which many of those critical of US militarism, US imperialism and US exceptionalism derogatorily call the Duluth Hairshow. During the pre-show promotional build-up, a local journalist for the Duluth News-Tribune was given a publicity ride and wrote in his column that the jet he rode in burned 1,200 gallons (8,000 pounds) of fuel per hour. That number should sober us all, for 1,200 gallons of fuel for a fuel-efficient car that gets 40 mpg would cover 48,000 miles. If you were driving 10,000 miles per year, the amount of fuel that that jet burns up in one hour would fuel your car for nearly 5 years.

Back then 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 Blue Angels performing team) the fuel costs for 60 minutes would be \$72,000 just for the fuel costs (not counting the daily practice sessions that also last an hour). And those costs didn't factor in 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. Do the math and you will start to rethink the wisdom of supporting such environmentally-insensitive and unsustainable entertainment events.

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 Thunderbirds left Duluth for their only reason to be in Minnesota: to do a 10 second flyover for the start of the Major League Baseball All-Star game at Target Field in Minneapolis. The flyover was to coincide with the last strains of the Star Spangled Banner. Two spare jets, who made the trip for nothing, 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 3,000 pounds – or 500 gallons – of fuel to make the (30 minute) round trip to and from Minneapolis.

We’re talking big bucks every time either the Blue Angels of Thunderbirds 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 questions.

A Duluth News-Tribune reporter covering one of Duluth’s 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) in order to qualify for the role of commander. The other team members had to fly 1,350 training hours. The journalist noted in that article that there were a total of 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 safe.

### **The History of US Military Air Shows**

As of 2006, there had reportedly been 230 fighter pilots since the Blue Angels started their stunt-flying for audiences. Since the Angels began flying in 1946, about 25 of their pilots have died in crashes, which means that as many as 25 multimillion-dollar planes probably went down in the crashes (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 Angels practice their routines year-round, usually over the Gulf of Mexico at their Pensacola base of operations.

Now for more really sobering math.

Using the figures that the journalist obtained from the Blue Angels, the 3,000 hours of training for the single Commanding Officer used up as many as 2,400,000 gallons of jet fuel just to qualify (3,000 hours X 800 gallons/hour)! 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 around \$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 factoring in 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 Blue Angel 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 in supply and maintenance.

Of course, the costs to the American taxpayer are impossible to calculate precisely, but surely it must be billions of dollars per year, admittedly partly offset by ticket sales. Nevertheless, the burning of precious fuel 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**

This weekend (July 9 - 10, 2016), the USAF Thunderbirds will be headlining the Duluth Air Show. There will be a number of other participants, all using up increasingly scarce petroleum products for purposes of entertainment and the recruitment of starry-eyed, vulnerable young children who have been primed for wanting to join the military professions because of their extensive experience with first person shooter videogames that make homicidal violence normal and attractive.

America is headed for an over-population, Peak Oil, economic and climate change cliff, so isn't it about time for people to get serious about the worrisome realities above? We live in a world of rapidly dwindling fossil fuel resources that are cavalierly being squandered by thousands of sociopathic 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 the other – profits from wars and rumors of war, and so the mesmerizing beat goes on.

And then of course we have our equally pro-war political (in both major parties) and military misleaders at both state and federal levels that have been mis-leading America into our current quagmire of military misadventures everywhere in the world And none of them has a clue as to how to honorably (or even dishonorably) extract our nation out of any of those messes.

Too many military veterans are now physically, neurologically and/or spiritually dead or dying (way too often at their own hands), and they sacrificed the best years of their lives not for American “democracy”, but for money-hungry corporations and CEOs that cunningly waved the flag and wore the patriotic lapel pins. Now we know that they never really cared about the well-being of their “cannon fodder” warriors who did the dirty work for them. The flag that multinational corporations and their CEOs pledge allegiance to IS NOT the Stars and Stripes, but it is a flag that has their corporate logo on it.

Millions of dead and dying American veterans from every war over the last century enlisted out of a sense of patriotic duty; but most of them soon found themselves 1) disillusioned by the atrocities they had been ordered to commit; 2) sickened from the exposures to military toxins (including the over-vaccination program for every enlistee); 3) malnourished from the highly processed pseudo-food; 4) neurologically and psychiatrically sickened from the ubiquitous cocktails of psych drugs given to them by military psychiatrists, medics and the VA; and 5) tormented by the post-combat demons, the nightmares and the suicidality - all the while earning less than minimum wage. And part of the propaganda that led to think that killing and dying for their nation was glorious may have begun with the supposed glory of 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 quickly stopped supporting them when the body bags and broken brains came home.

Hopefully, acknowledging these unwelcome realities will someday set us free from the war-mongering schemers on Wall Street and War Street.

One of the purposes of this column is to point out some of the serious downsides of military air shows in order warn others about the connection between America's unaffordable imperialistic, endless war agenda and the on-rushing energy and environmental crises that have been censored out of our consciousness by a feel-good media that chooses vagueness or silence when courageous clarity is what is needed.

So, this next weekend, many patriotic Duluthians will be watching in wide-eyed wonder the highly skilled jet pilots as they do their breath-taking stunts.

But there are many Duluthians who will refuse to spend their time and money attending and supporting these shows. They are capable of understanding the many negatives of America's energy-wasting air shows that are being sponsored by corporate entities that have closed their eyes to the above realities.

Sadly, the Thunderbirds and their sponsors and fans are unconsciously hastening - if nothing is done to change things - America's inevitable moral and financial bankruptcy by ignoring the wastefulness of burning up precious non-renewable fossil fuel resources and at the same time permanently poisoning the planet and risking the health of everybody and their progeny.

**Dr Kohls** is a retired physician from Duluth, MN, USA. In the decade prior to his retirement from family practice, he practiced what could best be described as "holistic (non-drug) and preventive mental health care". He frequently dealt with combat-induced PTSD, a totally preventable disorder. Dr Kohls has been actively involved in peace, justice and nonviolence issues for much of his adult life and, since he retired, he has written a weekly column for the Duluth Reader dealing with the dangers of American fascism, corporatism, militarism, racism, malnutrition, psychiatric drugs, vaccines, and movements that threaten American health, democracy, civility and longevity. Many of his columns are archived online at

[http://duluthreader.com/articles/categories/200\\_Duty\\_to\\_Warn](http://duluthreader.com/articles/categories/200_Duty_to_Warn) and at <http://www.globalresearch.ca/search?q=gary+kohls&x=0&y=0>

The original source of this article is Global Research  
Copyright © [Dr. Gary G. Kohls](#), Global Research, 2016

---

[Comment on Global Research Articles on our Facebook page](#)

[Become a Member of Global Research](#)

Articles by: **[Dr. Gary G. Kohls](#)**

**Disclaimer:** The contents of this article are of sole responsibility of the author(s). The Centre for Research on Globalization will not be responsible for any inaccurate or incorrect statement in this article. The Centre of Research on Globalization grants permission to cross-post Global Research articles on community internet sites as long the source and copyright are acknowledged together with a hyperlink to the original Global Research article. For publication of Global Research articles in print or other forms including commercial internet sites, contact: [publications@globalresearch.ca](mailto:publications@globalresearch.ca)

[www.globalresearch.ca](http://www.globalresearch.ca) contains copyrighted material the use of which has not always been specifically authorized by the copyright owner. We are making such material available to our readers under the provisions of "fair use" in an effort to advance a better understanding of political, economic and social issues. The material on this site is distributed without profit to those who have expressed a prior interest in receiving it for research and educational purposes. If you wish to use copyrighted material for purposes other than "fair use" you must request permission from the copyright owner.

For media inquiries: [publications@globalresearch.ca](mailto:publications@globalresearch.ca)