

GEOENGINEERING CONTRAILS -- What We Know, 3 pages as of 7/22/14. +70 lab reports, photo/objective evidence, logic, facts, research, and scientist observations.

LAB/FIELD REPORTS -- *Normal rain is zero ug/l metallic elements, pH about 5.6.*

- A lined pond (guzzler) near Redding has about 375,000 ug/l of aluminum. We are concerned that deer and wildlife drink this water. USFS ignored letters.
- Sugar Pine Canyon Creek, Redding, CA has 4,600,000 ppb of aluminum (normal soil 15,000 ppb) in upper and lower stream. Fish losing scales, ulcerous, sick.
- Sisson meadow pond sludge water in Mt Shasta has 12,000 mg/kg of aluminum, and pond is fed by city spring water, but exposed to sky (sample taken at outlet).
- Mt. Shasta City Park spring water had 1540 ug/l of aluminum in 2009. Other streams have more. Aquatic and terra insects about 20% of numbers since 2007.
- Since terrestrial insects are now very low, song bird and wildlife populations are low. Road and window kill birds and wildlife are lean, diseased, or cancerous.
- Fish and insects died in Cold Creek, Mt Shasta. Aluminum, lead, arsenic. Of 200 trout stomachs examined in 2014, 98% had nothing in them and trout are starving.
- Strontium, barium, and aluminum are often found in soil. "Dust" does not explain high amounts in the rain or snow, nor zero, nor concentration above soil numbers.
- Outside soils in Mt. Shasta area in 2007 have over 1.6 % or 16,000 mg/kg of aluminum. Soil is 13000 mg/kg (1.3%) aluminum under my house, likely natural.
- Snowdrift near McCloud on Mt Shasta at 8000' has 61,100 ug/l aluminum, 83 of barium, and 383 of strontium, over 4 times that of protected soil.
- 2013 rain report in Mt. Shasta NWS gauge is 13,100 ug/l aluminum, 130 barium, 138 strontium. Undrinkable by state standards, 13 times the allowable limit.
- Lab reports of storms range from 0 to 30 ug/l in rain with no spraying to 13,100 ug/l of aluminum; always positively correlated to jet spraying (national info).
- Mt. Shasta samples were taken by a USDA scientist with legal water sampling experience and MS degree; he uses a plastic USNWS rain gauge on a 7' pole.
- Samples show a direct relationship to contrail density: More contrails, higher Aluminum, Barium, and/or Strontium in water; also boron, titanate, and arsenic.
- Zero readings of any elements prove our samples are not self-contaminated.
- The Mt. Shasta city water report indicates that aluminum, barium, strontium, lead, mercury, cadmium, arsenic, boron, and chromium are not found in city water yet.
- Other states show high Al, Ba, Sr, As, B, Pb, Fe, and Mn, but any may be zero.
- Iron/manganese may be meteor dust. Lead is from planes or leaded gasoline.
- Some have higher Al, Sr, or Ba, or zero on any, so formulas may change.
- Radioactivity in rain was tested with a Geiger counter, no abnormal indications.
- Some readings may be the result of local polluting industries. However, results are nationally correlated to jet spraying, over 90% with no local factory source.
- Fibers that appear instead of dust have Welsbach elements; they are a spray error.
- Geoengineeringwatch.org posting scientists' data after the UV report was then crashed 8 times by hackers (military?). Over 12 million hits. Debunkers only 175.
- Ultraviolet B is up 1200% of normal. UVA also up. UVB causes skin cancer and sunburn, and cell death on plants. Nanoparticles destroy ozone.

- Mutagenic effects on corn, ovaried tassels, tomatoes. Tree top and bark damage evident, notably betulaceae, tulipifera, deodars, maples. Grapes, legumes immune.

SAMPLING PH – *From USDA 1983 Soil Survey Siskiyou Co. and rain reports.*

- ✓ When contrails are inactive, rain is under 6 pH. With activity, pH is 6.5 to 7.5.
- ✓ The pH of rain is directly and nationally related to contrail pre-storm weather front spraying. Over 600 tests have been made, and this pattern continues.
- ✓ Coniferous Douglas fir forest north of Redding, CA was tested by USDA Soils specialists Komar and Jim Collins at 7.4 pH. He said it should be 5.5 for the soil.
- ✓ Normal acidity for Mt. Shasta area Deetz 125, 126 soils, a habitat of acidic black oak and mixed conifer forest, is 4.5-6.0. Now it is 6.5-7.5 pH in over 400 samples.
- ✓ About ten samples were taken by meter in McCloud, CA of yards, oak forest, and gardens. They ranged from 7.0 to 8.5, or un-naturally alkaline. pH papers agreed.
- ✓ The St. Francis organic garden and lawn in Mt. Shasta was 5.5 pH in 2003, now 6.5 to 7.0. Soil is 10-20xs more alkaline. The pH papers, meters, kits all agreed.
- ✓ Garden compost is black oak leaves, acorns, and ponderosa pine needles (acid), maybe mixed in grass. Sulfur slightly lowered pH, maybe aluminum is buffering.
- ✓ A pH increase is likely oxides, hydroxides, and carbonates of Welsbach elements.
- ✓ Contrails boomed during George Bush years 2000-2008, especially after 2006 and pH increased remarkably in soil and rain in those anti-environment years.
- ✓ Garden yield declined for acid-soil-loving vegetables like potatoes and tomatoes. Most root crops declined in Deetz soils, but unpredictable in neutral Diyou soils.
- ✓ Some metallic cations are toxic to biological systems, and could explain 90% loss of aquatic insect populations in 4 headwater streams. Less change below springs.
- ✓ Natural insect variations occur, but not an 80% loss, particularly of diptera that live in sediment deposits in streams, where toxic metals accumulate.
- ✓ The metals, etc. are not from China. Scientists on Mt. Rainier verified it.
- ✓ The three main cations (as nanoparticles?) cause endocrine/enzyme malfunction. They are the basis for, or act similar to, prion diseases such as “mad cow.”
- ✓ Sufficient evidence indicates correlation with neurological, lung, and bone diseases, particularly in children as autism, asthma, and in adults as Alzheimer’s.
- ✓ Breathing and neural problems increased after spraying, esp. elderly and children. Autism 1/15,000 to 1/50, Alzheimer’s is now 1 of 3 a plague in 2013 says CDC.
- ✓ Five pet dogs refuse to drink rain/snow water, but insist on tap water. Witness!
- ✓ Similarly, neural, skin, lung, cancer, or endocrine problems are now frequently reported in cats (meticulous groomers), dogs, and horses (drink pond water).

MILITARY CONTRAIL OBSERVATIONS – *Observations, telescopes, retired military.*

- ✓ In telescopes, contrail jets have few side windows, and usually military kc135 or kc434s. Some contract Boeing 737s have belly/wingtip nozzles. Video/pics available.
- ✓ Some contrails are multi-colored; often the middle streak shiny blue, brown, dark gray, but outside two are white. 2 or 4 engine jets, often with 3-6 trails, some offset.
- ✓ San Francisco Flight Aware says over 30 jets per day over Mt. Shasta are normal, about 100 West Coast. Odd patterns happen, at any altitude, but are frequent now.

- ✓ Heavy spraying days are often just before weather fronts, and mostly by military jets. A weather lady on TV-12 remarked on this 11/24/10 and was fired.
- ✓ Contrail jets are most active dawn to dusk. Commercial jets do not usually leave persistent contrails, but military jets almost always do. Some jets contrail at night.
- ✓ Cloud formations and combinations are changed, new, and unusual since 2003.
- ✓ Before 2000, skies were typically a deep blue. Skies are now typically whitish haze or gray-brown blue, and true blue is unusual due to high elevation jet nano-pollutants.
- ✓ In the 1950s to 1980s, a normal contrail was maybe 30 jets long and disappeared. Now they last several hours to all day, especially since 2003, or George Bush years.
- ✓ Some jets emit a ball of smoke over 5 degrees in diameter, and the contrail begins. If it were a lens of cold air, it would not be a ball, but fade in or out. Impossible display.
- ✓ Some contrails appear to have particulate matter streaming down out of them, much like fireworks displays, leaving trails of smoke as the particles descend. Smoke balls.
- ✓ Some contrails converge to a point, often over Mt. Shasta, then re-align, cross, curve, grid format, or radiate (asterisk-like) out from the mountain. Atypical flight variants.
- ✓ Two-engine and four-engine jets leaving 3 or 5 line contrails, with nozzles seen in mid-belly or wings. Military jets leave persistent contrails, usually in threes.
- ✓ Republican or conservative pro-military congressmen and USFS claim contrails are harmless. Results of certified mail/phone: no answer, ignorance, security reasons.
- ✓ Many locals and USFS indicate lightning is more violent after jet spraying, esp. width and number of bolts. The number of thunderstorms now is below normal and erratic.
- ✓ Heat of condensation in physics indicates micron-sized particles reduce rainfall. California is in a drought since spraying began, as rain transfers to Eastern USA.
- ✓ Contrail composition measured in rainfall is the same as indicated in the San Diego conference Feb 20 and in Welsbach geo-engineering patents used by military jets.
- ✓ Geo-engineers at the Feb. 20, 2010 meeting in San Diego saw D. Keith admit on camera that spraying may have terrible consequences. They don't know.
- ✓ The military says that "engine erosion" causes metals in contrails, but won't say more (military secret). Do engines wear out to require an extra 20 million tons Al per year?
- ✓ Solar collection panel efficiency remarkably decreases with contrail spraying, robbing investors of their just share of solar electric power up to 50%. Industrial jeopardy.
- ✓ At "What in the World Are They Spraying" in Redding, CA 12/10 a full panel of medical, ex-military, solar experts, and scientists affirmed it before over 500 people.
- ✓ Weathermen report consistent upper atmosphere conditions, but one day has 50 trails and the next day none, can one believe all jets cancelled? Where is consistency?
- ✓ Once a year, we watch two jets fly at a giant thunderhead, melt a 1-mile blue hole in it, fly through it, and the storm falls apart. What a drought-causing weapon!
- ✓ Many photos are available of straight lines, X's, grids, circles, squares, and combos in high clouds, and in nature this is impossible; it is a weather changing influence.
- ✓ Only the military industrial complex has funding capability; a black hole budget (\$1.3 trillion) and control to be able to do geoengineering at \$5 billion per year.
- ✓ Mud rain in Chico, CA on 5/14/12 had 58,000 ug/l Al, 480 Sr, and 413 Ba. "Never seen it before. Hard to get off," the newspaper said, "Dust in rainy weather." Oh?
- ✓ We observed a military jet 1/2 mile away spraying Shasta via nozzles, returning over precisely the same route 1/2 hour later, not spraying (no time to land), routine pattern.

- ✓ **Why would all these scientists be making this stuff up about climate and geoengineering effects? A fact is a fact is a fact, not a belief or opinion.**

This is revised as new reliable observations and data are available. Phone 530-926-0311 in pm PST for Francis Mangels. See geoengineeringwatch.org for more info.