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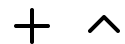


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David Wood (/profile/0

27 May (/p/324xmFbNc

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Rocky Flats, Rocky Mountain Greenway, and Boulder County: misinfo apocalypse



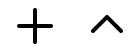
Wow, out of town for 5 days and I missed a biggy. As I've observed before, the farther from Rocky Flats, the more nonsensical the posting. Inexplicably, some reliable info from Tod Anderson crept into the discussion. (Thanks, Tod!)

Political background: The Boulder County Commissioners have a member on the Rocky Flats Stewardship Council (Claire Levy) AND another member (Ashley Stolzmann) in the anti-nuclear, no-evidence camp and apparently unaware of (despite a degree in chemical engineering) the science about Rocky Flats. The Commissioners are unlikely to support continued membership in the Stewardship Council, which is probably going to wind down anyway.

I spoke briefly at a March 11th Westminster City Council meeting. Obi Ezeadi, a Westminster City Councillor, after a deluge of anti-Refuge speakers, almost fell over himself in his eagerness to halt support for the Rocky Mountain Greenway bridge over Indiana Street. I followed up later with a detailed letter and additional information to the City Council, but have little hope. Paper trails are useful in establishing whether due diligence takes place, however.

As with anything related to Rocky Flats, recent local decisions (Superior, Broomfield, probably Westminster, now maybe Boulder) have been the triumph of politics over science. For some of these, the municipality manages to eke out operating funds by failing to honor financial commitments to something Rocky Flats related—the Jefferson Parkway or the Greenway. The concept of having the anti-Refuge groups (with two pet scientists with no concept of radiation dose) actually provide ANY evidence is apparently too novel to consider.

Free advice: the groups opposing use of the Refuge are anti-nuclear, not pro-health. You should trust (possibly) only their statements about history. The Downwinders would love for you to believe that 'young breast cancer' (an international problem), or in fact almost any illness, is related to Rocky Flats. Consult the conspiracy theory/pseudo-science 'smell o-meter' at <https://rockyflatsneighbors.org/wp-content/uploads/RevisedJul21SmellOMeter.pdf> (<https://rockyflatsneighbors.org/wp-content/uploads/RevisedJul21SmellOMeter.pdf>) **Chats** to hone your nonsense detector.



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Anti-Refuge groups are exceptionally adept at playing a contemptible trump card to swing local municipalities to an anti-science stance: "There could be a health risk", from Pu in soil. If you visit the link below you can pick your favorite values of Pu concentrations in picocuries per gram of soil, and the amounts of dust and soil YOU believe people breathe in and swallow per year to compute your annual radiation dose from inhaled and swallowed Pu in dust and dirt. Using commonly accepted values and current 'dose coefficients' (which translate Pu activity (decays per second) into dose) you can compute your own total dose from Pu in soil. A dose over-estimate using Pu soil values larger than 90% of all samples and including an overestimate from hot particles yields a dose about 420 times SMALLER than background. (This is mostly because  $^{239}\text{Pu}$  contributes about only 0.8% of total soil radioactivity, with another drop because it emits almost no whole-body dose gamma rays.)

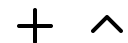
For fun: ask an activist for the annual doses of radiation you get, what local background is around here, and what the dose from  $^{239}\text{Pu}$  might be.

The Channel 7 report states "During a windstorm on April 6, Michael Ketterer, a retired scientist and adjunct professor at the University of Denver, took samples and said he detected high levels of plutonium in the air." I have repeatedly written Ketterer (over several years) about his data with never a response. Because his work is typically paid for by the Rocky Mountain Peace and Justice Center, it will probably never be published. Ketterer (whose hot particle measurements I DO trust) and other the other pet scientist appears incapable of figuring out radiation dose and risk.

For the few who care about facts and data: the linked 4-page PDF is terse but fairly complete. <https://rockyflatsneighbors.org/wp-content/uploads/FlyerUncompr.pdf> (<https://rockyflatsneighbors.org/wp-content/uploads/FlyerUncompr.pdf>) shows data and graphics about background radiation around Rocky Flats, what the National Institute of Standards and Technology measured in Rocky Flats soil (in addition to plutonium), Ketterer's data on hot particles along the eastern Refuge boundary, the data that informed the cleanup, and some of the epidemiology for radio-sensitive leukemias that confirm that no health effects for the public have ever been found and published in the scientific literature for people downwind of Rocky Flats. It also briefly debunks some of the more outlandish recent claims from the transcript of the March 11 Westminster meeting.



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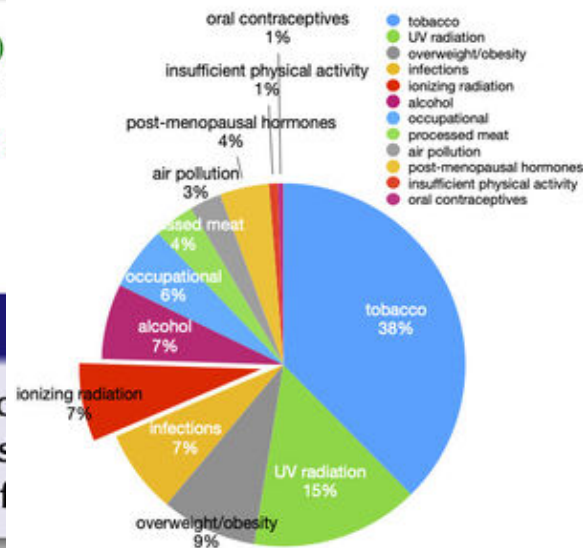
Focus on radon, not plutonium if you feel compelled to worry about nuclear radiation.

$$\begin{aligned} & \text{Pu } (16.0 \times 0.840 + 0.251 \times 36.5) \times (\lambda_{un} + \lambda_{hp}) \\ & \text{Am } (96.4 \times 0.840 + 0.204 \times 36.5) \times (\lambda_{un} + \lambda_{hp}) \end{aligned}$$

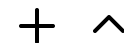
Annotations:  
- **dose coefficients** (blue arrows pointing to 0.840)  
- **mass of dirt (g) inhaled/y** (pointing to 16.0)  
- **mass of dirt (g) ingested/y** (pointing to 36.5)  
- **pCi/g (uniform)** (green arrow pointing to  $\lambda_{un} + \lambda_{hp}$ )  
- **pCi/g (hot particles)** (green arrow pointing to  $\lambda_{un} + \lambda_{hp}$ )  
- **dose/year in  $\mu\text{Sv}$**  (pink text below the equations)

**yearly dose from soil Pu levels**

can do own calculations for Pu dose using local Pu pCi/g. (No hot particles demonstrated throughout most of Rocky Flats)



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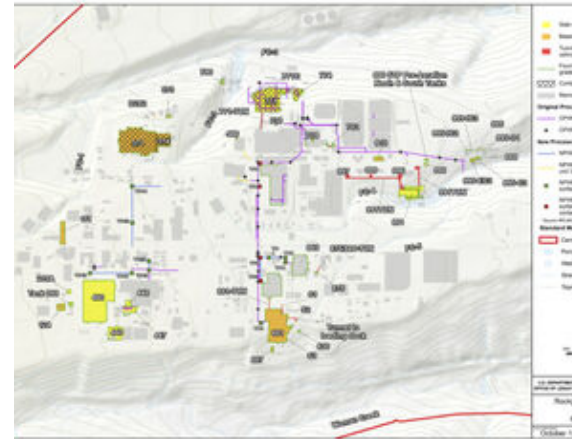
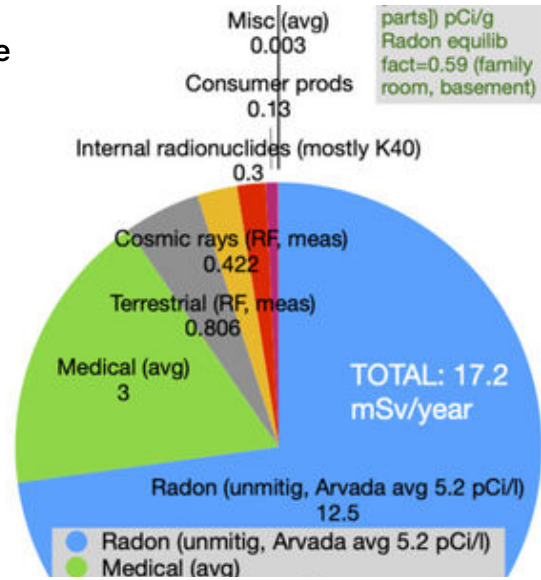
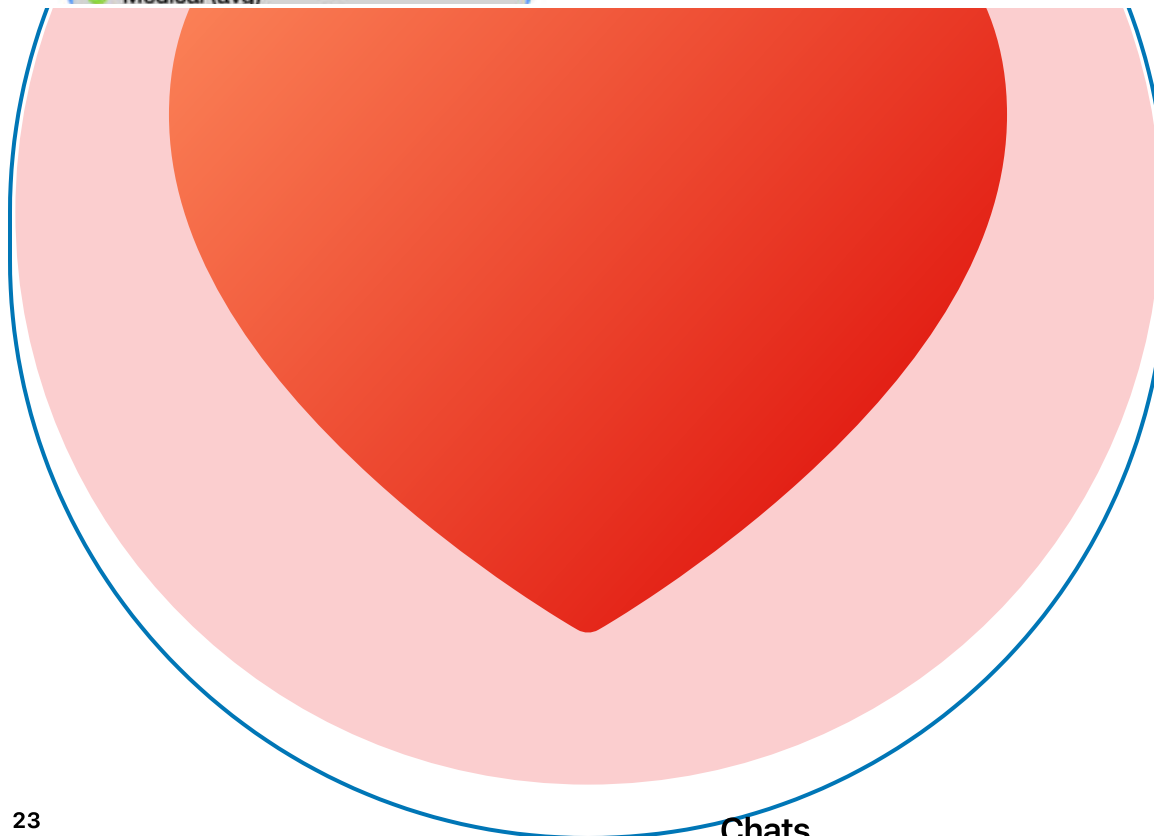


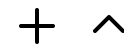
Figure 3. Subsurface Features Remaining Infrastructure (Adapted and modified from the RFLM)



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Terry Branaman (/profile/01ZF8NDL28thRph3W/?is=)

Four homes in my family (current, previous, vacation, in-laws') have all tested positive for, and had mitigation installed for, radon. Radon emits ionizing radiation, the type emitted by uranium. Plutonium emits alpha radiation, which is stopped by a sheet of paper or a few inches of air; it is only dangerous if it becomes embedded in your body. If you are worried about downwind exposure, wear a mask on windy days or stay indoors. I fail to see how a bridge over Indiana would be dangerous, or how the street would keep contamination on the west side while the east side would be free of contamination. I'm not a nuclear scientist, but I have seen information about the subject from many sources.

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