

USA at Risk?

January 3, 2024 (Updated February 20, 2024)

It is my opinion that the year 2024 will be a time of heightened risk for the USA. Why do I think that? Based on publicly available news reports many factors might make an adversary think that this year would be optimum to take action against the USA. At least, an adversary might draw that conclusion. Consider the following:

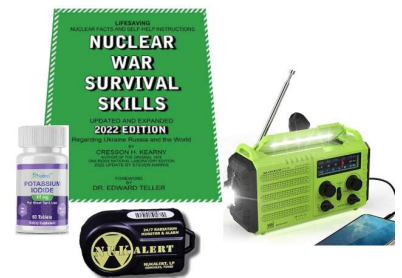
1. Higher likelihood of US being drawn into war between China and Taiwan this year after Jan 13, 2024. This is the date of the elections in Taiwan, and communist China opposes the presidential candidate leading in the polls. (**Update:** This candidate won the election.)
2. US weapons stocks are depleted due to the war in Ukraine, and it is going to take some time before they are replenished.
3. The US military buildup in Pacific to counter China is incomplete.
4. Multiple new conflicts around world seem to be intentionally created to distract and stretch the US.
5. Many recruiting goals in the largest branches of US military were missed in 2023.
6. Perceived weakness of Biden administration might make 2024 look like a window of opportunity for an adversary while he is still in office.
7. Growing divisions also make US look weak.
8. Increasing verbal nuclear threats aimed at the US from Russia, N. Korea, Iran, and implied from China.
9. **Update:** Continuing tensions between the West and Russia over Ukraine.

Is it possible to prepare for the unthinkable? Some would say no. However, just as there were survivors of the attacks on Hiroshima and Nagasaki, there are preparations that individuals and families can make that will greatly increase the chances of survival in any future attack, if one were to occur. Here are some recommended first steps for preparation:

Step A: Print and read the separate 13 page document, "What to do if nuclear disaster is imminent"

Step B: **Updated:** Order these 4 items from amazon, or first 3 from ki4u.com NOW. These will not be available after an event begins to unfold.*

NukAlert Radiation Monitor – for keychain, 10 yr life	https://www.amazon.com/gp/product/B004SZ2HXQ
Potassium Iodide Tablets – 60 tablets, 65 mg	https://www.amazon.com/gp/product/B09WK3DFX9
Nuclear War Survival Skills – 341 pages, updated 2022	https://www.amazon.com/gp/product/1603220704
Emergency Radio – hand crank, solar AM/FM/SW NOAA	https://www.amazon.com/dp/product/B07TFCFS57

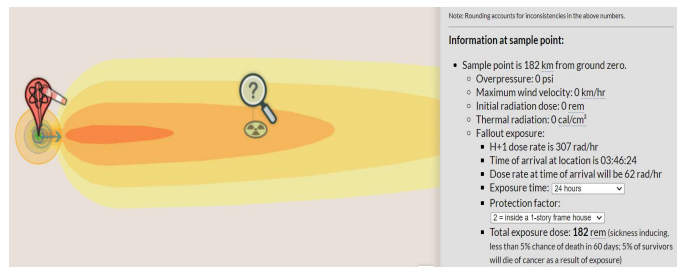


Step C: Make a plan in case the worst happens. And pray that it doesn't.

As part of making a plan you will need to know if you are too close to likely targets and will need to evacuate. Use the following link to see the effects of a nuclear detonation on a map anywhere in the world. An air burst is the more likely choice by an attacker as damage reaches farther than for a surface burst. **Updated:** However, a ground or surface burst would be used on hardened targets such as missile silos and possibly on strategic bomber-capable runways over 7,000 ft long (i.e. most major US airports). A ground burst spreads more deadly radioactive fallout. A 1,000 kT size is probably largest bomb that would be used.

<https://nuclearsecrecy.com/nukemap/>

Updated: Example blast and thermal damage results on the next page assume a 1,000kT (1 megaton) weapon with a 15 mph wind speed. Nuclear radiation effects can be displayed using the "inspector tool" at any user selected location. Radiation effects are for 24 hours sheltering in a 1 story frame house with a typical protection factor (PF) of 2. This is the dwelling type with the least shielding. Other types and PF can be selected in the program.



Example results

- **Airburst: Light blast damage radius (1 psi) out to 12.3 mi**
At a around 1 psi overpressure, glass windows can be expected to break. This can cause many injuries in a surrounding population who comes to a window after seeing the flash of a nuclear explosion (which travels faster than the pressure wave). Often used as a benchmark for light damage in cities.
- **Airburst: Thermal radiation radius (1st degree burns (50%)) out to 13.7 mi**
First degree burns are superficial burns to the outer layers of the skin. They are painful but heal in 5-10 days. They are more or less the same thing as a sunburn.
- **Surface burst: Nuclear radiation radius 40 rem (no immediate symptoms) , 117 mi**
Total exposure 40 rem, no immediate symptoms, 1% will eventually die of cancer.
- **Surface burst: Nuclear radiation radius 101 rem (sickness 5% die), 96 mi**
Total exposure 101 rem, sickness inducing less than 5% die in 60 days, 3% eventually die of cancer.
- **Surface burst: Nuclear radiation radius 254 rem (medical care required), 75 mi**
Total exposure 254 rem, sickness inducing, medical care required, some deaths in 30-60 days; 7% will eventually die of cancer.
- **Surface burst: Nuclear radiation radius 2100 rem (fatal), 23 mi - max fallout dose rate radius**
Total exposure 2,100 rem (fatal, incapacitating within five minutes, death within four to six days).

These example results show that the dangers that reach the farthest are for a surface or ground burst. This is due to all the tons of material swept up from the ground that is made radioactive and becomes lethal fallout. This fallout can land over 100 miles from the target. However, these results must be used with caution since they will change depending on the actual wind speed and direction, the weather, the terrain and characteristics of the target. Also, if there is more than a single detonation, that can change the fallout dose rates. Missiles can also miss their target.

Sheltering conclusion

What is the bottom line conclusion? Here are my sheltering recommendations:

- If you are closer than about 200 miles of a ground burst target construct some sort of high protection factor fallout shelter. This can be improvised in many basements. It should have a protection factor PF of at least 100 to 200. Examples for PF 100 shielding include: 16 inches of solid or core-filled concrete block, 2 feet of packed earth (3 feet if loose), or 3 feet of water. Sheltering in a PF 100 location, compared to the PF 2 house used above cuts the above exposures to 1 rem, 2 rem, 5 rem and 42 rem. These are all survivable. Note that to increase PF100 to PF200 you do not have to double the thickness. All it takes is to add one halving thickness for the material. For concrete simply adding 2.4 inches to the 16 inches above will achieve PF200.
- If you are closer than about 14 miles of a target you should study further how to protect against thermal and blast effects. This can be more complicated than a simple fallout shelter, and you may need to consider an evacuation plan rather than sheltering in-place.

The referenced publications provide the additional details and important information needed to construct, supply and use the shelter. Having a good shelter will be of limited use if the supplies are not available to last the necessary 2 weeks or more that you may have to remain there.

Comments welcomed. Send to sales2021@nooutage.com

Any updates will be posed here: <https://www.nooutage.com/books-DisasterPrep.htm>

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Disclaimer:

I am an engineer with career experience in the commercial nuclear power industry and university training in nuclear reactor theory. However, I have no experience with nuclear weapons technology. The information contained herein is based on my review of the below sources. It is provided with the hope that others can become better informed and prepared in case a nuclear attack ever occurs. I sincerely hope it never will. Verify all information before using it. All is believed to be accurate and true as of the date shown.

recent public news reports

<http://www.ki4u.com/>

Kearny, Nuclear War Survival Skills, ed 1999 & 2022

<https://nuclearsecrecy.com/nukemap/>