Crypto and Cyber Bank Attacks Lessons Learned Report

-- Best Barter Items for a Collapse Situation

April 21, 2024

https://www.collapsesurvivor.com/

This 6th Collapse Survivor exercise training simulation dealt with a small Chinese nuclear attack on the U.S. that took down our electric grid, a High Altitude EMP or HEMP attack. This Lessons Learned report covers electric grid vulnerabilities, the effects of Electro Magnetic Pulse (EMP) from a nuclear detonation high in the atmosphere, the grossly exaggerated threat of EMP to vehicles, means to protect equipment form EMP, and some other basic collapse survival measures.

A video that covers some of these lessons learned issues from this simulation is available at:

https://www.youtube.com/watch?v=TAIXfttqbUc&t=91s

The trigger for this scenario was China's invasion of Taiwan—which will be the least surprise war in history. China has claimed that Taiwan is part of their country, occupied by the losers of their decades long civil war in 1949. Every Chinese leader since then has proclaimed that they will recover Taiwan, and the current President of China has been clear insisting that he wants to accomplish the "Re-unification" of China, as they refer to this, while he is in power. You can find massive reports of this in open source media, China is prepared and ready to retake Taiwan.

After warning the U.S. and Japan not to interfere in what they regard as a civil war, China's President gave a live broadcast and 15 minute warning that the U.S. President must back down and withdraw from Taiwan's defense or they would fire 6 nuclear armed ICBMs that our Anti-Ballistic Missile Defense system might or might not shoot down.

It was a brilliant move by China, and one that we must expect. It is basically "nuclear chicken" to use the term for this foolish game,

sometimes played by teenage males in the 1950s where they drove cars at high speed towards each other, and one of the two parties needed to "chicken out" and swerve off the road or they both would be severely injured or killed. China is far more willing to suffer the millions of casualties of a nuclear exchange than the U.S., has far more ruthless and powerful leadership, so they would expect the U.S. President to back down in any situation that threatened escalation to nuclear weapons use. In this case, the U.S. POTUS did back down, but not immediately. The President doesn't want to look spineless, or he didn't act in time and in the scenario, China did launch 6 ICBMs, 3 were shot down by the U.S. Anti Ballistic Missile system, but 3 detonated high in the atmosphere, and destroyed the U.S. electric grid. The US President, at this time Biden, would probably choose to surrender Taiwan rather than sacrifice millions of American lives in a nuclear war with China, and that is what happened in this scenario. Chinese leadership will not be deterred by loss of millions of its citizens, but a U.S. President would not be willing to pay this kind of price to try and protect Taiwan. And if China calls our bluff and attacks, a nuclear exchange between the superpowers won't likely protect Taiwan anyway. The U.S. backed down and lost the nuclear chicken game--they just didn't lose it fast enough to avoid losing the electric grid, the obvious, fatal flaw of the U.S. and it's military forces.

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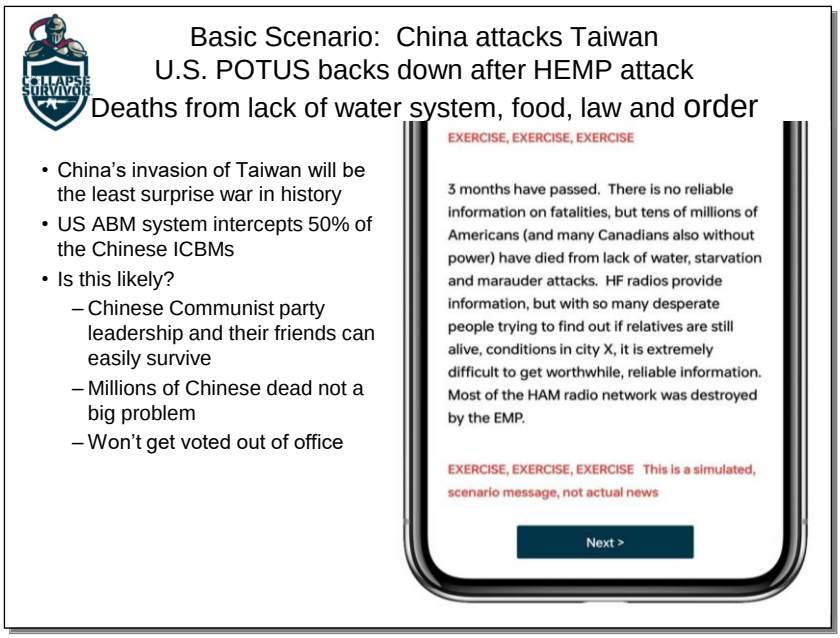
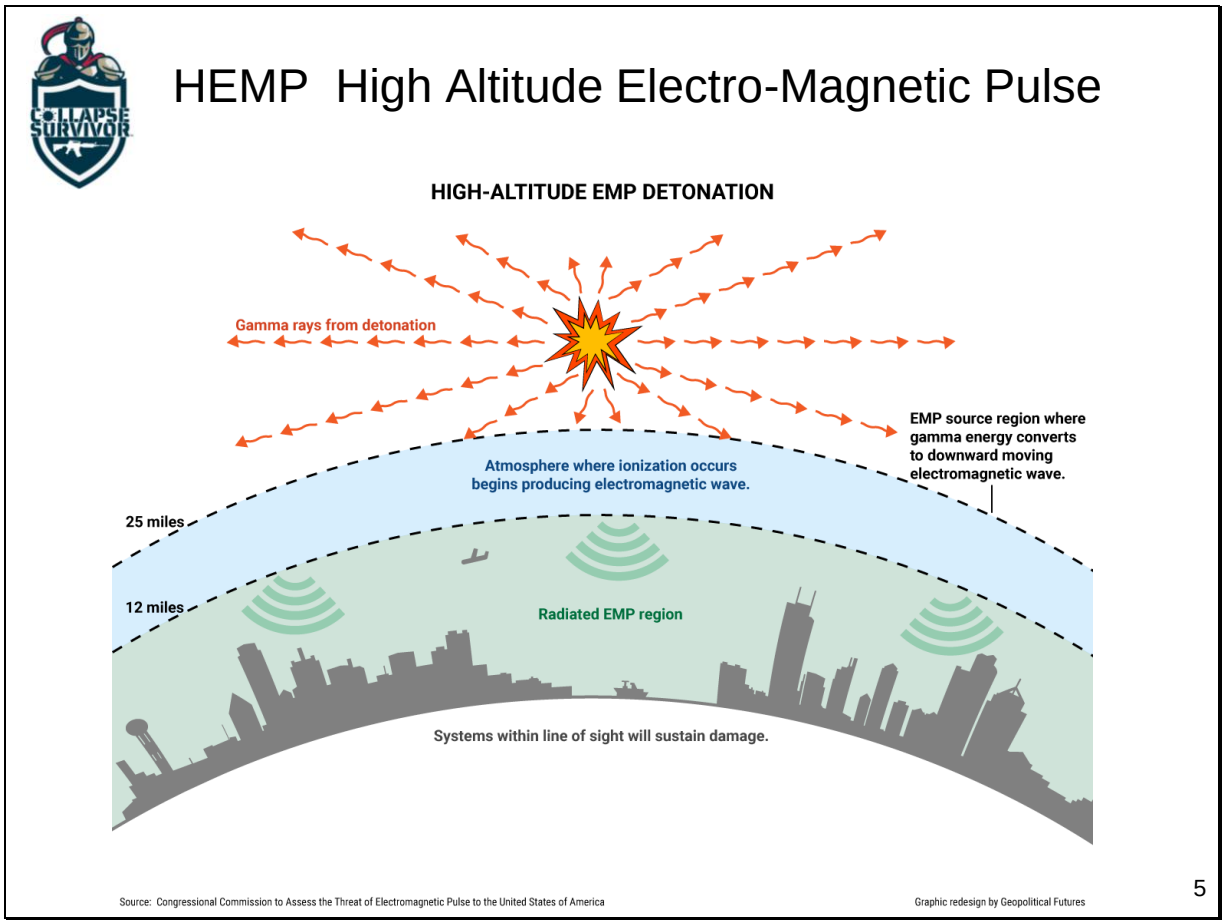
Once the small salvo of Chinese ICBMs took down the electric grid they effectively eliminated the U.S. as a superpower, or even a nation that can keep it's population alive. The rest of the scenario was about dealing with the grid down for at least a year, and the aftermath of no municipal water systems, almost no food production or distribution, and widespread low of law and order.



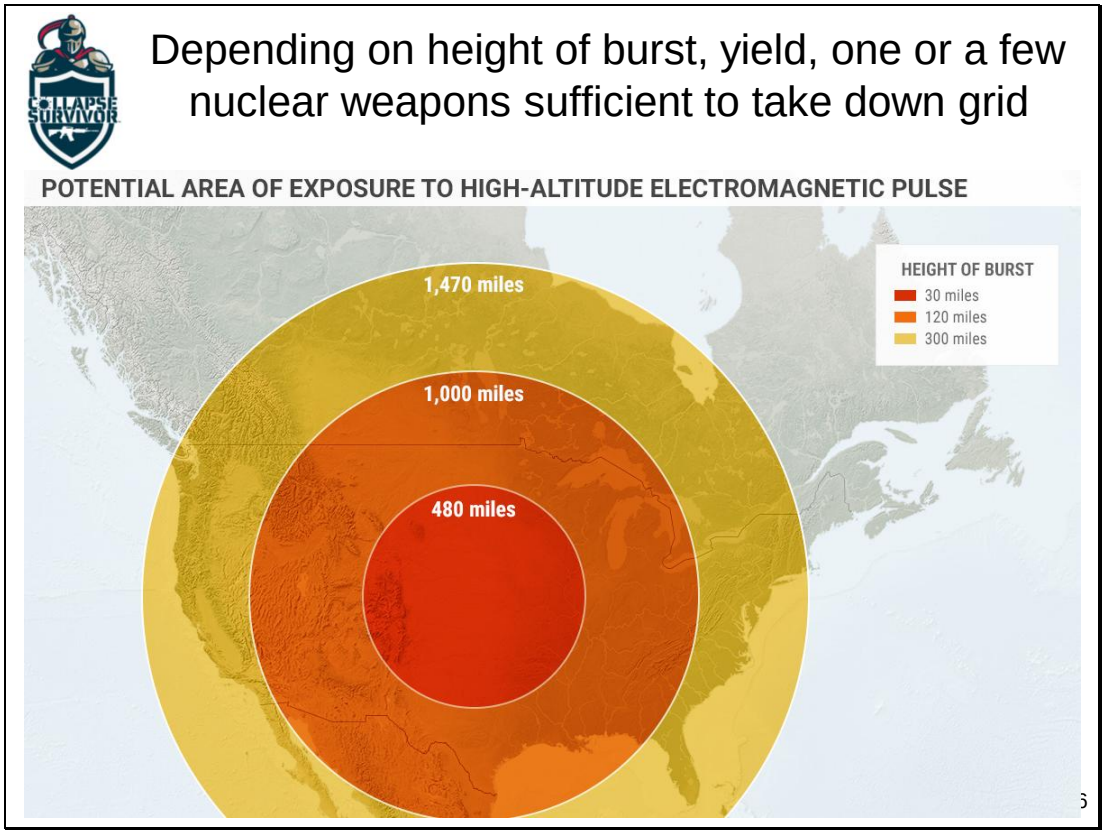
How does a Nuclear weapon detonation in the atmosphere Develop Electro Magnetic Pulse?



A nuclear device that explodes at high altitude, somewhere between 25 miles (40 kilometers) and 250 miles above the Earth, produced powerful gamma rays that radiate outward. Upon colliding with molecules in the Earth's atmosphere, the downward-directed gamma rays create a powerful electromagnetic energy field. The EMP doesn't hurt humans directly, but it makes some electrical devices and attached cables act as antennas, hitting electronic systems with a surge of high-voltage current. This surge of EMP is especially destructive for small computer chips—but will also take out huge electric transformers since they are connected to miles of electric wires that collect the EMP and transfer it into the transformer, destroying it (photos later in this report).

EMP form a high altitude detonation (a HEMP attack) arrives in three phases—a near-instantaneous, powerful pulse known as E1, a subsequent high-amplitude pulse known as E2, and a slower and lower-amplitude (but still damaging) waveform known as E3. E1 causes most of its damage by inducing voltage in electrical conductors beyond what they can handle. E2 pulses behave similarly to the current produced by a lightning strike, likely the least-damaging phase (assuming standard lightning protections haven't been disabled by E1). E3, which can last from several seconds to several minutes, occurs when the fireball from a large detonation briefly warps the Earth's magnetic field. Its effects are akin to those of a geomagnetic storm caused by

solar flares. It impacts long electrical conductors, such as power and telecommunications lines, allowing the EMP's destructive effects to ripple outward.



You need a highly accurate, advanced, big megaton nuclear weapon, and a lot of them to destroy an enemy's ICBMs. Russia, China and the U.S. have this capability. Others nuclear powers do not. France and the United Kingdom, Israel, India and Pakistan, North Korea (and at any time Iran) have small nuclear forces, but not capable of a big disarming Counterforce Strike. But North Korea now, and in the near future perhaps Iran, could take out the U.S. electric grid because for a HEMP attack, you just need a very few, possibly just 1 nuclear detonation, and it can be very inaccurate, off by several states, and still do the job. We know that North Korea's nuclear weapons have been designed to have optimal EMP effect, not blast; from reliable, open source reporting.

No electric grid means no municipal water systems, so people have 3 days to find alternative sources of water, or they start dying. Grocery stores will be emptied in an hour or two, and you won't see large scale food production for a year or more because you need electric power for the economy and transportation to unction; plus you need law and order for the economy to function. It will be hell on earth, people dying of lack of water and starvation, and marauders stealing food with no effective law enforcement. That's the obvious consequences that our irresponsible government that despite knowing about our vulnerable electric grid for decades has not required it's hardening and protection, does not warn citizen's about this vulnerability, and does absolutely nothing to prepare citizens for surviving the collapse that will result.

Fatalities according to Congressional EMP study: could be up to 90% of U.S. population

THE HILL

How North Korea could kill 90 percent of Americans

BY R. JAMES WOOLSEY AND VINCENT PRY, OPINION CONTRIBUTORS - 03/29/17 07:00 AM EDT

STATEMENT FOR THE RECORD
DR. WILLIAM R. GRAHAM, CHAIRMAN
DR. PETER VINCENT PRY, CHIEF OF STAFF
COMMISSION TO ASSESS THE THREAT TO THE UNITED STATES FROM ELECTROMAGNETIC PULSE (EMP) ATTACK
TO
U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON HOMELAND SECURITY
SUBCOMMITTEE ON OVERSIGHT AND MANAGEMENT EFFICIENCY
HEARING
"EMPTY THREAT OR SERIOUS DANGER:
ASSESSING NORTH KOREA'S RISK TO THE HOMELAND"
October 12, 2017

North Korea Nuclear EMP Attack:
An Existential Threat

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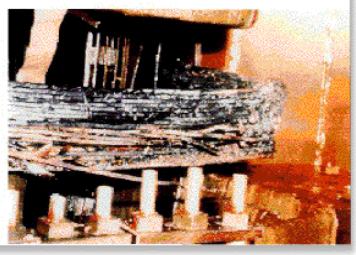
The Congressional EMP Commission had access to classified research and was allowed to conduct some testing of its own in a laboratory environment. According to their 2008 report on critical infrastructure: "The cascading effects from even one or two relatively small weapons exploded in optimum location in space at present would almost certainly shut down an entire interconnected electrical power system, perhaps affecting as much as 70 percent or possibly more of the United States, all in an instant.… Should significant parts of the electrical power infrastructure be lost for any substantial period of time, the Commission believes that the consequences are likely to be catastrophic, and many people may ultimately die for lack of the basic elements necessary to sustain life in dense urban and suburban communities." The following year, the chairman of the EMP Commission told

U.S. foolishly produces few transformers, does not stockpile them, does not harden our grid

PJM Public Service
Step Up Transformer
Severe internal damage caused by the space storm of 13 March, 1989.



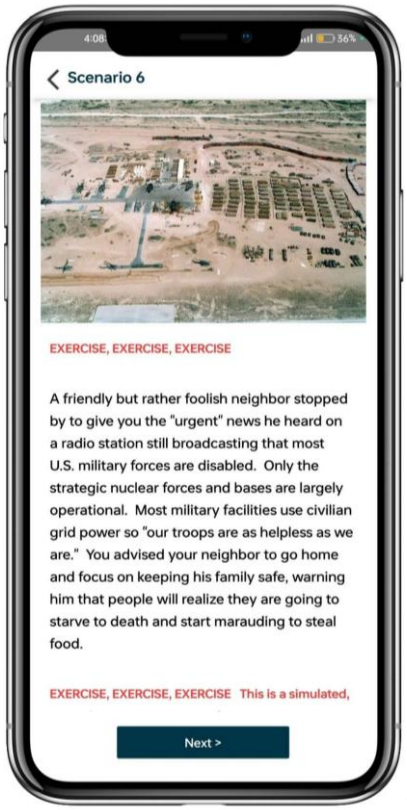
If a major Solar Flare or Nuclear EMP attack

1. Lots of transformers could be damaged
2. Months to get imported and replaced in peacetime
3. If large numbers out, during a world war or crisis (China blocking exports) or pandemic:
   - Large parts of U.S. electric system could be down for years

Congress that a 90% fatality rate nationwide within a year could result due to starvation and systems breakdown. Officials, including a former CIA director, have routinely given credence to the 90% figure. North Korea also appears to be aware of this, since they got help from Russia to design nuclear weapons optimized for EMP effect, and have threatened to destroy our grid.

When the grid goes down—the U.S. military is also disabled

- U.S. military bases, like many hospitals, have diesel backup generators for some services—but few days of fuel
- The Military is largely dependent on the civilian electric grid
- The "Achille's heel" of the U.S. is our fragile, vulnerable electric grid
- This vulnerability invites and may force China or Russia (or North Korea, Iran) to take down our grid to avoid losing to U.S. military
- Fatal vulnerabilities, known for decades by government and nothing done to require hardening the electric grid
  - Career politicians seeking re-election want the utility lobbyist donations
  - Concern that raising electric rates will cost them votes



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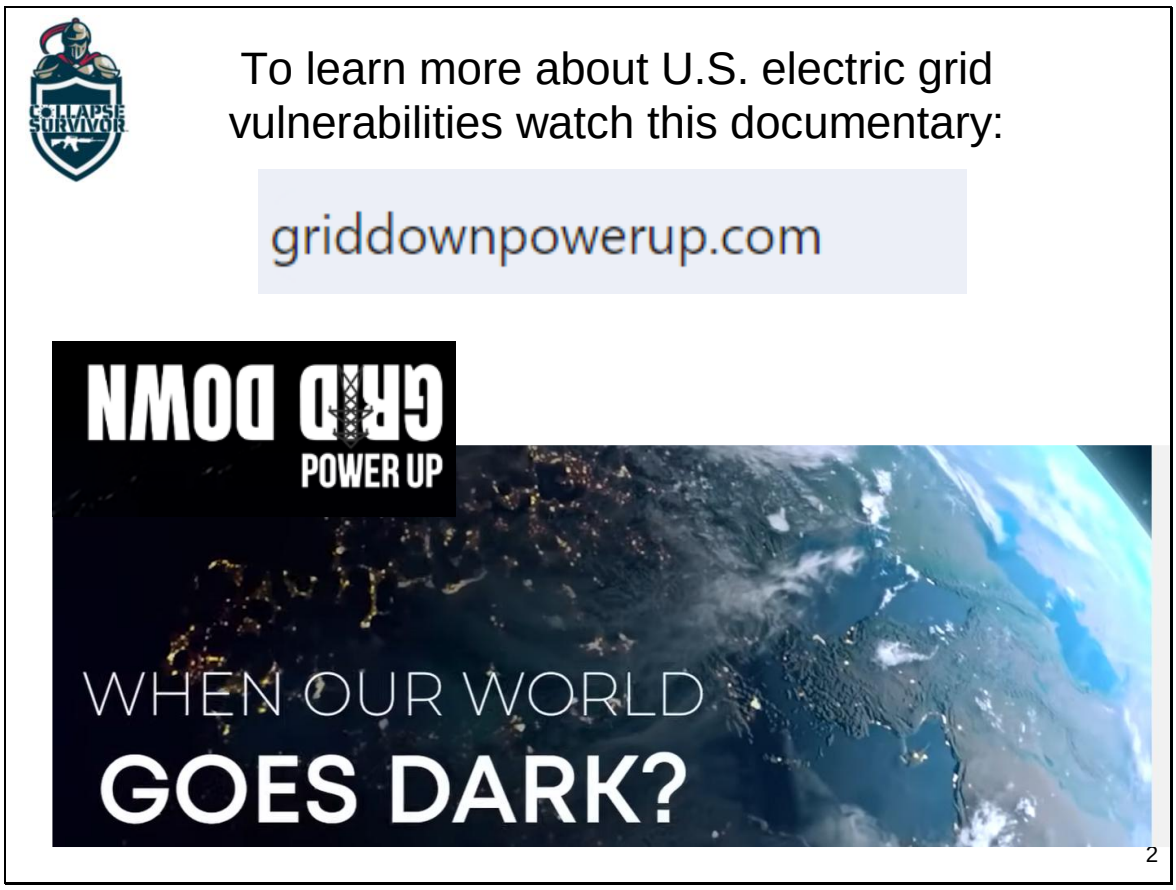
When the electric grid goes down, U.S. military power goes down as well. Strategic nuclear forces are more robust, but the vast majority of our military power will vanish when we lose electric power, just as the economy and civilian infrastructure quits functioning without electricity. If you see diesel backup generators somewhere, you're looking at maybe a few days of power and then nothing. Solar farms and wind generators might be destroyed by the EMP, but even if not—without the transformers, that are destroyed by EMP, you can't transmit power, the grid is dead, and will be for years. The estimates are at least a year, and many experts believe the timeframe is a long period of many years—assuming some overseas help. In this scenario, China worked to block Japan from providing the U.S. with replacement transformers. Unfortunately, the U.S. produces relatively few transformers, and millions would have to be replaced if there is a HEMP attack on our grid.

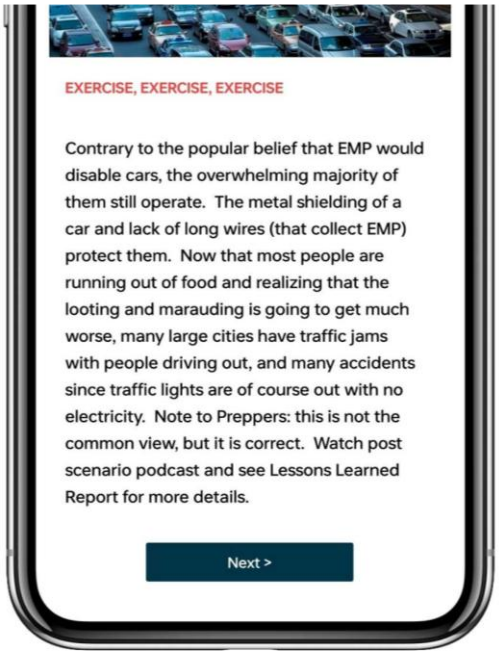
To understand how vulnerable our electric grid is, how easy (many ways to destroy it without nuclear weapons), and how hard and long it would be to repair it, you should watch this professional documentary with experts explaining this fatal U.S. Achille's heel:



After the Congressionally funded and chartered EMP Commission with top scientists, industry experts, even a former Navy Admiral and Director of the CIA issued their report to Congress explaining how our electric system was highly vulnerable, hardening essential or 90% of Americans could die Congress did absolutely nothing.

What is the impact of EMP on cars and trucks?

What will EMP do to cars and trucks?



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Contrary to popular belief, EMP is not going to disable many cars, most will still operate just fine. William Forschten's post-apocalyptic novel, *One Second After*, famously describes a post-apocalyptic world of clogged roadways and stranded motorists. His book was a novel, not a scientific report; but it has helped create a very widespread view that cars are doomed if an EMP strike occurs. Experts who work with EMP and EMP shielding say that this is largely a myth.

Most modern gas/diesel cars are NOT highly vulnerable to EMP—contrary to Prepper Myth

- 99% of Preppers believe that EMP will destroy cars--incorrectly
- EMP Engineers working for USAF, extensive testing of EMP and effects on cars insist: cars are **not** very vulnerable to EMP
  - Metal body protects
  - No big cable, antennae to collect EMP
- 1962 "Starfish Prime" test caused EMP damage including disabling approximately 300 streetlights, triggering burglar alarms, damaging a microwave link—but not destroying cars
- An operating gas/diesel vehicle may get shut off by an EMP blast—but it will very likely restart
- An electric vehicle, fiberglass body—would be more vulnerable to EMP
- Vehicles in garage, underground, more protected

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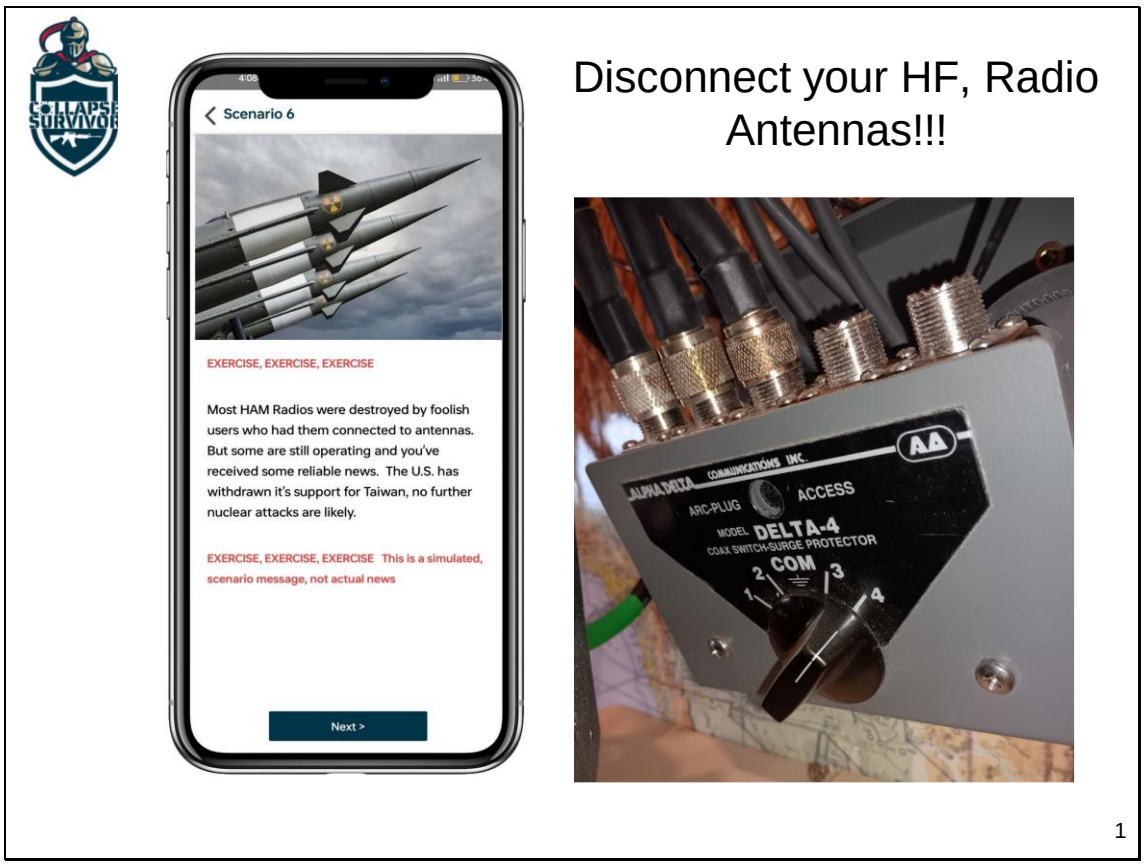
Electric cars may be vulnerable, but a typical fuel injected gas or diesel vehicle, even one with a lot of chips in them as cars for decades have had, will not be destroyed by EMP. There are two major reasons for this.

1. The metal body of the car is going to shield a lot of the EMP. Not all of it, but some.
2. There is no big cable or antennae extending beyond the car to collect EMP. There is for electric systems, or HF radios with big wire antennas; they will collect the EMP waves and bring them in to destroy transformers and computer chips in a radio. Cars and trucks do not this, and the EMP engineers who work with shielding insist that cars are not very vulnerable to EMP.

If a car does get an EMP hit it might turn off, but it should restart. Lots of cars will be in valleys, underground, shielded by buildings, further reducing their exposure.

What is highly vulnerable to EMP destruction beyond the electric grid is radios hooked up to antennas.



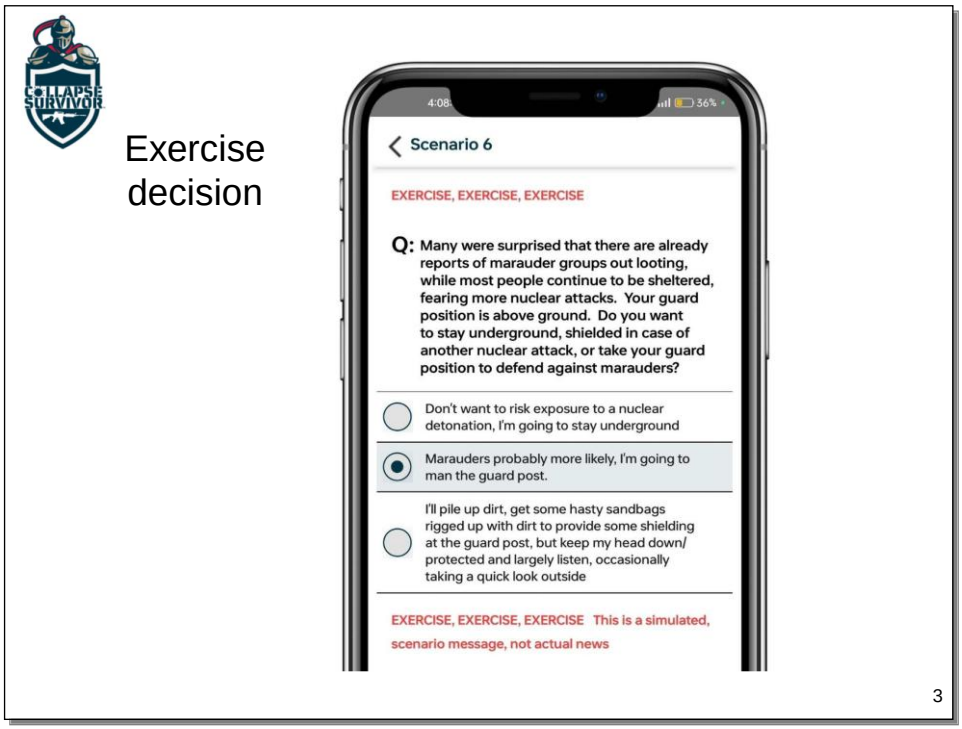
It is essential not to leave your HAM, HF, other radios hooked up to their antennas. At Fortitude Ranch the policy to protect radios includes using an antenna switch selector (which is also a surge protector) that has more settings (antennas you can switch between) than you need. The off position or an open position effectively disconnects your radio. It is still possible that the EMP could be powerful enough to hit your radios' circuits and chips to destroy them—but the antenna is by far the biggest EMP problem to solve. The best solution is to take a second radio

(many HAM operators have many) and put it in a metal trash can (with metal lid) and put it in a basement, underground room.

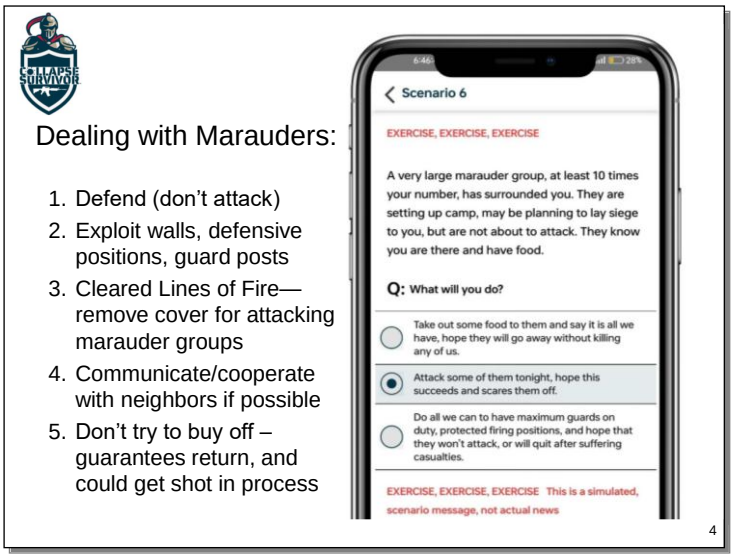
Another EMP protection concern is solar systems. At Fortitude Ranch they often will not connect solar systems to provide EMP protection. The solar panels are fairly safe from EMP. It is the wires, cables running from the solar panels to the inverter that is the EMP problem. You can disconnect the wires at both ends (protecting the panels as well) and should have good EMP protection. There are also EMP Shield devices that may help; though some EMP experts question the workability and claims of some of these devices. If you do not need your solar system prior to a collapse the best approach is do not assemble it. Put the inverter in a basement, ideally with a metal shield. Keeping your panels inside is also wise—not just for EMP but hail, tornado protection.

Marauder protection in a collapse

This is an exercise message noting that marauders were out after the initial HEMP nuclear strike, while most people were still sheltering underground concerned with more nuclear strikes. Players were asked if they should stay underground, or defend against marauders. After an EMP attack, the public broadcasting system won't work; and even if it did, it might not give fast enough warning of another round of incoming nukes. For this situation, the best decision is probably to focus on the most likely or immediate threat, and it appears to be marauders. But if you can put some dirt in sandbags or boxes and have some shielding at your above ground guard post, the third option listed, is likely the best course of action.



Here is another exercise message from this simulation, dealing with a large marauder group. You should always try to take advantage of the easier and more powerful task of defending rather than offensive attack operations. You should clear lines of fire, stack downed trees and cleared material into walls so you've got cover and something to rest and steady your weapons on. If you can communicate with neighbors to pass on warnings that's nice.



Trying to buy off a marauder group is probably a bad mistake. You'll have just proven you've got supplies, so they'll likely come back for more, or they may kill you in the process of giving them something.

Even the 10 to 1 manpower advantage for the marauders that was cited in this exercise situation should not dissuade you from manning your defensive positions an standing up to them. 10 to 1 might not be enough to defeat you, and even if they could overrun you they would suffer casualties if you've got a well prepared defense and Marauders are not Marines. The goal or marauders is to stay alive, not get killed. We suspect they would disobey an order to charge a prepper group that had great defensive walls and cleared lines of fire they had to move through. Even a minor gunshot wound with no operating hospitals, no anti-biotics, can be fatal in a collapse situation. Marauders will not want to risk getting shot, and are unlikely to try and overrun a well defended survival community. They could resort to a long siege—but the survival community is already in siege mode, riding out a long collapse in relative comfort compared to a marauder group outside the walls.

We welcome inputs and suggestions to improve our training exercise simulations. If you have some ideas for an interesting, realistic collapse scenario, please send them to us. If you've got some ideas for collapse survival situation preparations, decisions to make we should use in a simulation, please email those to us as well. And if you are a threat or survival expert and want to guest write a scenario or appear on our post exercise simulation podcast, please contact us about that.