

How Long Can You Tread Water? by Tom S.

By [James Wesley Rawles](#) on July 5, 2010 6:14 PM

Noah may have questioned God about why he should build such a big boat. To quote the comedian [Bill Cosby](#), God might have asked: "How long can you tread water?"

In the event of an [Electromagnetic Pulse](#) (EMP) burst 250 miles above Kansas or a super solar flare, the loss of the electrical grid would stop almost all food production and importation in the USA. Some estimate there is, at any given time, more than 1,000 pounds per capita of food in consumable form available in the USA. Unfortunately, it is very poorly distributed and will not be available to the populace in a "Grid Down" scenario. So the question is then, if you personally have not stored at least a three years supply of food per person (and, no, a one year supply just won't due), "How long can you live on a zero calorie diet"?

Iran, as this is written, has a small satellite circling the earth 250 miles high. They are building a satellite launching facility for larger rockets. They have launched missiles from a barge in the Caspian Sea and detonated them at high altitude. They have tested a sophisticated two point detonation method which allows a much smaller nuclear bomb (reduced payload on a rocket). They have enough material right now, if further enriched, to build at least 2 nuclear bombs (although too heavy for missiles). North Korea has enough plutonium for at least 10 bombs, they are making more every day, and they successfully detonated a small nuclear bomb (Hiroshima size) in 2009. As well, they are developing missile and space technology. Chavez just met with Putin to obtain nuclear energy and space technology. Pakistan's nuclear guru A.Q. Khan is known to have shared nuclear bomb technology throughout the Middle East. According to [Times Now](#), "Already Pakistan has 60 nuclear warheads, and now with two new plutonium reactors nearing completion in Khusab, its weapons grade plutonium production will jump seven-fold, according to latest figures released by Swedish institute SIPRI."

North Korea needs money, a lot of money. Plutonium is one of the most precious commodities on the planet. Will Pakistan or Korea sell their plutonium or complete nukes? It does not take a rocket scientist to figure that one out. Syria has transferred [Scud](#) [SS-1] missiles to the Lebanese Shiite militant group Hezbollah (Jihadi terrorists). North Korea is suspected of transferring nuclear technology to Syria, Iran and Myanmar (Burma). In short, the nuclear genie is out of the bottle and it is all over the globe. We have simply lost control and now it is only a matter of when, not if.

A [super solar storm](#) can do the same thing as an EMP and would have done so in 1859 and 1921 if our electronics had the sensitivity that they do today. As reported by [NASA Science](#) in May, 2010, "The sun is waking up from a deep slumber, and in the next few years we expect to see much higher levels of solar activity. At the same time, our technological society has developed an unprecedented sensitivity to solar storms...." Such an event just recently took place. On April 19, 2010, *Science Daily Online* observed one of the most massive solar eruptions in years. Earth was not in the line of fire ... this time." Again, it is only a matter of time.

A [massive cyber attack](#) to the Grid: "The severity of what we're seeing is off the charts," said Tom Kellermann, vice president of security awareness for Core Security Technologies and a

member of the Commission on Cyber Security that is advising President Obama. "Most of the critical infrastructure in the U.S. has been penetrated to the root by state actors." Joe Weiss, a security expert and managing partner of Applied Control Solutions, who has testified before Congress about such threats, said "The industry has failed to address these vulnerabilities." He said "The long-term ramifications of such an attack would be severe: If electrical equipment were destroyed, power could be lost for six to nine months, because the replacement gear would take so long to manufacture." Note: As you read the following, consider what that six to nine months without electricity and what the power grid really means to our society.

EMP is optimized by the detonation of a nuclear weapon at 25 to 250 miles above the Earth's surface. An electromagnetic field radiates down to the earth, creating electrical currents. These instantaneous currents accumulate and migrate on long electrical lines and overheat transformers, large and small. Breakers are of no use due to the speed of the pulse which is 1,000 times faster than lightning. EMP will cover the wide geographic region within line of sight to the nuclear burst. A 40 mile high detonation over Virginia would black out the entire East Coast. A 250 mile high detonation over Kansas would take out most, if not all, of the continental USA.

The lead time for obtaining a single replacement of the very large "step-up or step down" type transformer is two to three years from overseas (Total worldwide production of these huge transformers is less than 100 per year); there are about 2,000 in the USA that would need to be replaced plus the millions of small transformers (frequently mounted on utility poles) in the distribution system. There is a huge and perhaps insurmountable problem with almost all electrical power generation plants. They must be shut down gradually according to carefully designed procedures. A sudden shutdown from an EMP or super solar flare would cause the destruction of major components of most power plants and, in a grid down scenario, it would not be possible to repair them. Further, most that survive must have outside power for start up and that outside power won't exist.

The point is Noah only had to contend with a boat ride and live off of stored food with no one coming to his door asking for a handout. We, on the other hand, will be without electricity for many years, able to create very little new food, and will have to defend against a continuous onslaught of attackers.

Even a small nuclear weapon at 250 miles high would permanently take down the electrical grid by shorting out transformers, large and small, because they are all tied into long distribution lines which would pickup, magnify and transmit the surge. Although cars, computers, televisions, generators, etc. may or may not continue to be operational, a regional or national grid failure would cause a cascade of failures throughout the broader infrastructure due to our highly interdependent systems and "just in time" delivery systems. Even if cars and trucks still ran there would be no new fuel supplies. The disruption would include communications (radio, television, phones, GPS), banking (including ATM machines and credit cards), cash registers at stores, medical, police ([911](#) dispatching), fire fighting support, fuel and energy (including gas stations), transportation, food production, processing and delivery systems (including farm equipment, fertilizer and insecticides), water for consumption and irrigation, emergency services, satellites and the Internet. The fundamental force behind any and all modern industrial societies is electricity.

A small nuclear weapon specifically designed to produce a very powerful EMP would take out

virtually every electrical device that was not protected. In either case, effectively, the U.S. would be thrown back to the pre-electrical age and 99% of US food production and processing would cease. Such an event is frequently referred to as “The end of the world as we know it” ([TEOTWAWKI](#)) or “When the Schumer hits the fan” ([WTSHTF](#)).

There would be immediate loss of access to our money. Under Martial Law, if communications existed to transmit the orders, there would be extreme limits on access to our money, they would allow maybe a maximum of 5% of funds on deposit to be withdrawn per month, but banks would run out of currency almost immediately, if they were open at all, and would not have access to more. Currency itself would only have value as long as people believed the government could restore the electrical grid and get things back to normal. Within a few weeks, when people realize the power will not be coming back on, currency would have no value. Further, the rest of the world, seeing our hopeless condition, would realize we would have no ability to generate revenue and they would deem the US dollar worthless. Investments in US stocks and bonds would be worthless. The value of real estate would be at or near zero. There would be no access to funds held off shore. The loss of wealth as we know it today would be nearly total. Wealth after TEOTWAWKI would have its basis in clean water (and the means to make it), food (and the means to grow and preserve it), fuel, tools and arms and in the knowledge and skills useful in a world without electricity. Gold and silver may have their place, but “you can’t eat gold” e.g. If I only have enough food for me and my family to survive, I won’t be trading it for gold or silver.

After an EMP or super solar flare, except for those on life support systems or perhaps in airplanes, there would be no immediate loss of life due to the burst(s). There would be no shock wave or radiation. For awhile it would seem to be just an ordinary power outage, but gradually, hour by hour, the seriousness of the problem would be realized. Water from the tap would stop very soon if not immediately. Most emergency generators, if they worked, would run out of fuel within 72 hours. Food in freezers would last a few days then spoil. Grocery stores would be looted within a couple of days. Most food in the USA is stored in regional warehouses, and some of it requires refrigeration. Most people, probably 80%, would choose to stay in their homes for as long as the food in their pantry lasted and they had access to clean or treatable water. They would be hoping, day by day, that the power would come back on and they could resume their everyday lives again. When the water and/or food ran out or they were overrun by looters, they would have no choice but to hit the road in hopes of finding food somewhere. Ninety percent of the US population will run out of food in their homes in less than two months, many in a week or two. They would become refugees. A refugee is a person who is carrying with them all of their means for survival and cannot survive more than a few weeks without help since they cannot produce new food. Many would loot, burn and destroy the cities and suburbs while most would hope to find survival in the country believing that farmers have an abundance of food. Eventually virtually all must leave the cities because there will be nothing left to eat and the means to produce new food there will not exist. (Often referred to as the “[Golden Horde](#)” which would follow “[Refugee Lines of Drift](#)”. See: [SurvivalBlog.com](#))

Vladimir Lenin is often quoted as saying, "Where there is hunger, there is no law." In their struggle to survive refugees would first be beggars, but very quickly, with the increase in hunger, they would become looters and spread out like locusts stripping the land of everything edible. Remember, these people would not be on a simple weekend camping trip. Rather, they

and their children would be starving, desperate and probably sick. They would have lost everything. They would face a horrific and uncertain future and they would pretty much do anything to survive. A few may indeed maintain their moral integrity and quietly watch their children starve to death, but the vast majority of refugees will become looters, most of them violent? Many would be in loosely formed bands for the purpose of overwhelming homes or retreats. They will resent and hate those who have stored food in advance and feel it is not fair that preppers should "hoard" food while their families starve. From the preppers point of view they may only have enough food for their own family to survive and to give it away would doom their own family.

Some "Preppers" will have stored food, fuel and arms for themselves and their loved ones, but unfortunately most will have chosen to do so in their suburban or country home, hobby farm or cabin on the lake. First, when WTSHTF, the neighbors that knew of your prepping will come to your door when they run low on food, first asking then demanding your food; see the *Twilight Zone* episode "[The Shelter](#)" by Rod Serling who understood human nature. Second, looting attacks (violent home invasions) will take place again and again and again on every house, occupied or not, as the locust like hoard spreads across the land looking for that last morsel of food. Remote homes/retreats will be least susceptible but eventually every home/retreat that can be found will be looted. It may take some time for them to reach the mountain lake cabins, but they will reach them, and overwhelm them all. The defenders of homes and retreats will be forced to repeatedly kill and dispose of the bodies of the attackers and deal with the heartbreak of their own dead and wounded until they themselves are eventually overwhelmed by a superior force. No matter how well prepared, the retreat will be overrun. Why? There will be a great many attacks from random groups large and small, day and night, day after day, week after week for months. Also, well organized and well armed groups may note your solid resistance and plan your demise over time since they know you are not going anywhere. Eventually they will use tear gas, explosives, armored vehicles, etc. When they want you, they will take you. The other contingency is that the "attackers" may be the U.S. Military or a local government enforcing Martial Law for the confiscation of food and arms. Frankly, I do not foresee long term survival unless the retreat remains unknown to all.

Typical homes and cabins cannot be defended well. A high velocity .308 projectile will pass through the entire house unless it hits a wall stud or appliance and wall studs are typically spaced 16" apart. Eventually a large enough group or gang will take the house, kill/rape/plunder, transport the goods to their lair and then move on to other targets. They would systematically attack every home/retreat they can find. Any surviving defenders will become refugees. Even with a remote food/equipment cache, the defenders will still be refugees with insufficient food to survive until food could be grown and without the means to preserve it if they could grow it. Almost everyone who becomes a refugee will surely die quickly from exposure, violent mobs, physical attack, starvation, disease, infection or dysentery (which would be epidemic due to fouled water).

You may think this is an exaggeration about the vulnerability of your home and our society, but just take a minute here to step out of your house, walk to the street and study your home for a minute. Imagine you, your brother, and your friend from down the street trying to defend your house at night with two deer rifles and a 12 gauge shotgun against 20 guys with semi-automatic assault rifles, night vision goggles and maybe tear gas and an armored

vehicle. You would be surrounded. There would be no help from anywhere and you would not have a "snowball's chance". They will tell you that if you just give up your supplies they will leave you unharmed. When you surrender they will have you haul your goods to their vehicles with smiling gratitude then they will tie you up and torture your wife or children in front of you until you tell them where your "secret supply caches" of food and gold are located, even if you do not have one. (For an example in fiction, see the movie [Nevada Smith](#) with Steve McQueen.) The thing is they already know that many retreats have such caches so, until dead from torture, they will not believe that you do not. They will kill the men, children and older women and take any young women with them. Yes, in many cases it will be that horrific. Throughout history it has always been such.

Your home was built completely dependent on services, including sewer, water, electricity, heating fuel and the fuel for your car to get you to and from work and stores. Without electricity you have no heat, no air conditioning, inability to cook (a large propane tank is an exception), no lights, no water, no sewer (requires water for the toilet). Without these services your home is a poorly located weatherproof shell that was built the way it was and where it was only because of the "absolute certainty" that there would always be electrical service. **Here is an eye opening weekend experiment:** Turn off all the electricity to your house (except the refrigerator and freezer which would be taped shut), turn off the gas and water and prohibit the use of your vehicles. You will find out in a hurry about life without electricity. Now look at your neighbor's house, think about the houses across town, think of your parents or brother's house across the country. All across the nation homes are about the same (about 99%), they all depend upon services that will not be available after the loss of electricity. And almost all will only have a few weeks to a few months of food on their kitchen shelves, pantry and refrigerator. Translation, almost all of their occupants will become refugees when the food runs out or when they are overwhelmed by attackers and will die soon thereafter. All of them. Again, the fundamental force behind any and all industrial society is electricity.

Think about it: When you are forced out of your home or run out of food and there is no new food to be had anywhere, what are you going to do, where are you going to go? This won't be like in the movies or books, there will be no cavalry, no supplies parachuted in, and no relief trucks arriving just in time. There will be no help at all. Over 310 million people in the U.S. will be on their own just like you with almost no new food being produced or imported. Think of the total USA food supply like a giant hour glass being filled with food production and imports just as fast as it is being consumed. After an EMP or super solar flare the consumption will continue at the same rate while food production and importation will essentially stop completely. That means no more new food added to the hour glass! Perhaps one third of total US food supply will rot due to the lack of refrigeration and 80% of the balance is somewhere in the production, storage or distribution system, none of which still function. The balance available to the masses will be consumed as it is looted. The hour glass will be essentially empty for the masses. For anyone to survive they must have enough to eat until new food could be grown, perhaps the second summer after TEOTWAWKI, assuming you have the means and know how.

[Hansel and Gretel](#) were dumped in the forest to die or fend for themselves, probably so their parents could try to feed the then smaller family. During severe famine in the middle ages this forced reduction in the size of families was not unheard of. Most of us have no concept of real famine. If we did, each and every one of us would have at least three years supply of

food while obtaining it was so simple, so easy. The representation of the Witch as a cannibal is not a coincidence. [Cannibalism](#) was widespread in the past among humans throughout the world; in many cultures it was an everyday thing even without famine. Severe famine and cannibalism, however, go hand and hand, for example the [Uruguayan Air Force Flight 57](#), the [Donner Party](#), [Siege of Leningrad](#), etc. So, when the masses are starving, be careful, they may not look on you as either friend or foe; they may think of you as dinner. New food cannot be grown until after the violent gangs are gone and those with seeds and know how are no longer afraid of having their gardens discovered. The first new food probably could not be safely grown until the *second* summer. The first crop by inexperienced gardeners without insecticides, fertilizer, equipment or pumped water will be a disaster. You had better have enough food to get your family through at least until the third year and way more (non-hybrid) seeds than you think you need. My mother was a teenager in the Great Depression. She said they would plant one seed for the birds, one for the bugs and one for themselves, but since they could buy seeds, you should add one more category, production of the seeds for next year's crops. By the way, do you know how to avoid cross pollination and loss of the usefulness of the seeds? Do you know how to collect and store the seeds? If you are not doing it now, you probably won't be able to do it later when your lives depend on it.

After the burst, widespread looting would begin within a day or two in larger cities without containment due to limited communications and totally inadequate law enforcement. Within a week there would be near total anarchy except in some small towns and military bases. Well armed gangs and escaped prisoners, with the most brutal and ruthless taking leadership, would essentially take over and loot, rape, kill and plunder every house and food source within their territory no matter how well defended. In only a couple of weeks these well armed gangs would become very proficient at taking homes and farms and all they could find would be overrun. Over time, every farm animal of every description would be consumed. Wildlife and fisheries would be wiped out. The seed grains needed for next year's crop would be consumed. Unspeakable atrocities, cannibalism, and torture would be rampant. The desperate conditions will unleash the darkest side of human nature. Throughout history, such atrocities consistently take place when there are no consequences in desperate times. Absolute power corrupts absolutely.

As we go about our day to day lives it is very difficult to comprehend that any of the people we know or those that live down the street would do such things, but studies such as the "[Stanford Prison Experiment](#)" and others have shown perhaps one third of a random selection of emotionally stable individuals will, within a matter of a few days, show brutal tendencies. Think of that! One third of the "problem free, mentally stable" people! Further, these guys were not trying to survive, they were merely placed in a position of near absolute power over others. In the anarchy after "Grid Down", if the above is any indication, one third of the population (or much more considering the survival circumstances) would become violent predators plus virtually all of the neighborhood nut cases, criminals, perverts and those in prison. It would be the worst nightmare of the zombie horror films. The [Los Angeles] Lakers [basketball team] recently won their umpteenth season and there were riots, even with a huge law enforcement presence. One news report read: "Despite a massive Los Angeles police presence Thursday night, sporadic violence broke out near Staples Center after the Lakers defeated the Boston Celtics in the NBA Finals. Crowds hurled bottles and other objects at police, smashed marquees, jumped on vehicles, broke windows, and set rubbish dumpsters and vehicles on fire..." But, what if there had been **no** police presence? This was

a *happy* mob.

Eventually, over a year or so, these gangs would be killed off by a variety of means such as losses taking retreats, heavily armed organized communities, occasional army units, rival gangs trying to survive, fighting amongst themselves or, when there were no more places to loot or stored food to eat, they would starve to death.

In six months to a year 90% of the US population would be dead. The higher the current population density of an area the higher percentage death rate since the density of looters and gangs would wipe out almost every prepper, farmer, or retreat no matter how well defended leaving nothing to survive on until food could be grown and leaving very few who have the supplies and know how to grow it. A much higher percentage will survive in rural Kansas while almost no one would survive in densely populated areas.

What about help from overseas? The USA currently exports a great deal of food to feed a hungry world. Without those exports the rest of the world will have food shortages. Some countries may send aid over the short term of a month or two, but over the long term of a year or two, it would be very doubtful since what country is going to starve its own people so that food can be shipped to the USA? Even if ships are sent, what captain will dock his ship amongst a mob of looters. Even if they docked, how do you unload a container ship with no operable cranes? Even if you could unload ships, how could you move goods inland with no fuel for trucks or trains? Even if food could be moved inland, what coastal community would export food when they need it desperately for their own survival?

It would be far far worse for us now than it was in 1890 because then they had systems in place that worked without electricity such as steam locomotives, horse drawn wagons and plows and lots and lots of work horses and mules. Most important, they had era farming tools and the knowledge of **how** to live their lives and store food without electricity. Just as vital, they had a functioning society with on-going production capacity and supply lines for basic staples. Even the Amish buy staples, they do not produce everything themselves. After TEOTWAWKI almost no one will have those tools, supplies, sources for staples or that knowledge. Realistically, the USA could not even begin to support the 1890 population of about 64 million people. Unfortunately our existence might be more like the [Jamestown colony](#), circa 1609-10 or so with hostiles at the gate, starvation, disease, and massive die offs so severe they called it the "[Starving Time](#)". It could be like that for us without adequate food storage.

What about the military? The nation's military is largely unprotected from an EMP. Since the early 1990s, "Essentially all our new weapon systems have been built with a waiver for EMP hardening," says Bartlett, a scientist and inventor who is the ranking member of the House Armed Services' Subcommittee on Air and Land Forces according to a [NewsMax](#) article.

The Military would be pretty much immobilized although they would have more stored fuel and supplies than most. The good news is that if the soldiers who remained with their units could maintain order in the immediate area of their base, food could be grown the first summer. Therefore, if you cannot afford to have a hidden retreat, relocating to be close to a military base in a farming area with good rainfall may save you. The bad news is that while the military won't rape and plunder, they will take your food, fuel and guns "for the common

good". Since they could defeat gangs that had taken over regional food storage warehouses they may be able to accumulate a very large supply of food. They would balance out the food supply and your only hope then is that enough food could be produced for everyone or else everyone would starve together. Still, it is better than being a refugee with no future at all.

The consequences of an EMP burst are consistently understated. Writers of reports or articles don't tell the whole story because they either worry about being accused of "Fear mongering" or they are in denial themselves, being unwilling to let their mind take them to the inevitable consequences of a modern society suddenly finding itself permanently without electricity. Frequently there are articles about the possibility of an EMP and they state that the consequences would be "catastrophic" or "disastrous" or "devastating" without going into detail about what that really means. What they don't say is this: Considering our limited ability to create, process and transport new food without electricity and doing so in a state of near total anarchy, the survival rate would be maybe 10%. Even [Dr. William R. Graham](#) who is Chairman of the Commission to Assess the Threat to the United States from Electromagnetic Pulse Attack and who is intimately familiar with all aspects of EMP and the vulnerability of our infrastructure and the EMP effect on transformers, etc. has concluded that a 250 mile high burst over Kansas would cause the death of about 80% of the 310,000,000 US population. The actual report to Congress, however, just says "Catastrophic".

Who will survive? Primarily those who use the "The Art of War" tactics of avoiding a direct conflict with superior forces by using deception and concealment "The general who is skilled in defense hides in the most secret recesses of the earth". Without electricity the majority of the population will either kill each other off or die from disease, exposure or starvation. The survivors, for the most part, will be those who do not fight at all. The Golden Hoard or a Government entity cannot fight you or take your supplies if they do not know you exist. The key is to be well hidden during the six months to a year or so after TEOTWAWKI, then keep hidden as much as possible while you grow food but maintain a high level of surveillance and defense. This tactic is completely contrary to the Rambo survivalist types with an arsenal at their disposal and an attitude of "Bring it on" for the Golden Horde and gangs.

"There are a few possible survival scenarios presented here in no particular order since each individual must adapt their skills, knowledge and resources to their situation. 1. Very remote, well hidden, well armed, well trained and well stocked retreats with enough people to guard and defend the retreat and the equipment and other resources to produce food. Food production could begin by the second summer but if it is far away from where you live, you might not be able to get to it. (["Patriots"](#)). 2. Very small towns that are cohesive enough to band together, consolidate resources and defend against gangs or refugee throngs (as in the novels [One Second After](#) and [Lights Out](#)). This is a tactic that would allow food production to begin ASAP. A defendable town on the coast or a large river would be best to allow fish to supplement the diet. However, because it will be ruled by a government, they may also confiscate your supplies for the common good. The Alaska panhandle would be ideal but you "gotta like the rain". 3. Areas in the immediate proximity of military bases where good gardens could be grown. You would still have to survive some home invasions and looting early on but the military presence could provide the security, technical knowledge, tools, equipment and fuel for food production to begin ASAP following TEOTWAWKI. You will be under their "anal" direction and have few freedoms, but you and your family may survive. 4. Those who have stored food and fuel, have access to good water and can stay completely out

of sight for up to a year (undetected fully serviced basement or bomb type shelter). This would allow a family to live in quiet comfort while the rest of the world kills itself off. It is much more doable than one might think, see the references section about "Basements".5. Those very rare few who could survive in the wilderness well off any trails and undetectable by smoke, smell or sight for a year or more by placing a large cache of food and survival equipment at a wilderness hide. While I could survive year around in the Alaska wilderness if I did not get sick or hurt and if properly prepared (having done so), here in Georgia, the forests would just be too "crowded" to keep hidden; the survivor in the woods here would simply be "The Last Man Standing".6. Those who had a well stocked sailboat that could be sailed to the tropics (Watch out for Pirates). This is a situation where having gold and silver would pay big dividends.7. The Amish are wonderfully equipped with tools and knowledge to survive and thrive in the long term without electricity, however, they will be wiped out and their food stocks taken since they do not have guns or knowledge of defensive tactics. They do not have the ability to survive in the short term against armed gangs. This is a classic example of the skill sets necessary to survive early in TEOTWAWKI are much different than those required much later in TEOTWAWKI but that for anyone to survive in the long term, they must have both sets. Since the Amish farms function without electricity, when they and the gangs are dead and gone, the tools and systems will still be in place if you know how to utilize them. Of course, all of the animals will have been consumed.

Others who may survive are refugees with skills useful in a post TEOTWAWKI world who may find refuge in one of the above. What skills? Read books about life in 1890 (Lawyers, politicians and stock brokers need not apply but those who could fix a tooth or build a steam engine would be in high demand... a steam engine fired by wood or coal could power a generator to create electricity). Travel tip: have a map showing the nearest military base and be there very soon because even the military will have its limits of how many people they can handle. WTSHTF, at some point each and every one of us must decide if we actually want to survive to a life that would be harder than any we have ever imagined. But more than that we must decide if we are willing to kill other human beings to defend our food cache and loved ones? Are we willing to kill others to take food so our loved ones could survive? What about witnessing the killings, rapes, torture of our friends, neighbors and loved ones and enduring the smell of rotting bodies that goes on without end. Are we strong enough to mentally go through all of that and keep our sanity and our will to live? Will we survive the guilt of our own survival when the vast majority has died? Further, the mental stress after an EMP burst would be monumental. People would have to instantly transition from the availability of vast amounts of information at their fingertips and information overload to a near total information vacuum. A great many will not be able to handle all or even part of it. Even highly trained military personnel do not handle such events well, how can ordinary citizens hope to live through it and stay sane.

What about Mutual Assured Destruction that kept USA and USSR from war? Maybe but MAD might not work. There are some fanatics in Iran. Ahmadinejad has said that he wants to bring about the coming of the 12th Imam: "*Our revolution's main mission is to pave the way for the reappearance of the 12th Imam, the Mahdi*" – Ahmadinejad. (So what then are the conditions for the Mahdi's arrival? The destruction of Israel and world conflagration). The threat of our retaliation and the destruction of Iran and the Middle East may not be much of a deterrent in Ahmadinejad's belief system. If Ahmadinejad could simultaneously detonate a bomb in Tel Aviv and 6 to 10 nuclear satellites around the globe at 250 miles high to cause the

eventual death of the majority of the world's infidel population and significantly level the playing field, do you think he would? Are you kidding? In a New York minute. He can't do it yet, but, even though it may take years, Iran is working feverishly on the satellite delivery system and in making bombs themselves.

Of course, our own Sun could beat Ahmadinejad to the punch. Severe space weather events that we know about originating from the Sun with the Earth in the "line of fire" have occurred in 1989, 1921 and 1859 (geomagnetic solar super storms). In 1989 only one of the very large difficult to replace step up/step down transformer was destroyed. The 1921 event was 10 times stronger and if it happened today it would probably destroy all of the large transformers. The 1859 event was much stronger than the one in 1921. Such an event could easily destroy the huge transformers that would take years to replace (If the capacity to produce them still existed) which means years without electricity for most of the population. The problem is, we can't survive that long. Scientists consider the recurrence of such a solar super storm as not just a possibility but as inevitable. **Indeed, if the Earth had been in the line of fire on April 19, 2010 we quite probably would be living "Grid Down" in TEOTWAWKI right now. How prepared were you and your family on April 19?**

Can an EMP burst be prevented? The [Heritage Foundation](#) has written extensively on the subject and it is well worth the read. At present defensive missiles are in place in Alaska and California to take out intercontinental missiles in the atmosphere from N. Korea. We must have defensive missiles around the entire USA that are capable of taking out long and short range missiles (such as a Scud or Iran's new 1,200 mile missile launched from a freighter like Iran did in the Caspian Sea). When the "Star Wars" defense was proposed in the 1980's there were those who said such a defense was not possible because "you can't hit a bullet with another bullet", but now the experts say "We can hit a spot on a bullet with another bullet". We have the technology to do this.

We should protect our transformers by requiring all new ones to be EMP and solar flare protected (it adds about 5% to the cost). We could use that stimulus money to retrofit existing transformers, if possible and protect our railroad engines and systems, fuel production, transportation, and electrical generation systems.

If we prepare now, quickly, two things will be accomplished: First, there would be a good chance that the civilized world we know today would survive an EMP burst or super solar storm and, two, there would be far less incentive for an EMP strike. But, as it stands now, if you wanted to destroy the USA whom you perceive to be the devil, you would be salivating at the prospect of launching a few missiles off a freighter in the Gulf of Mexico and causing the death of 90% of the US population. For those who wish to destroy us it has to be positively orgasmic and we should absolutely **not underestimate** their resourcefulness. Remember, they have access to all of the EMP information you and I do and probably much more. They also have the ability to coordinate a massive cyber attack on the electrical grid which is extremely vulnerable.

That said, the nuclear genie is indeed out of the bottle. Al-Qaeda is said to control 80 freighter ships. It is only a matter of time before organized terrorist groups obtain a bomb that they can sail into one of our port cities. A crude bomb from Iran's uranium would weigh a few thousand pounds. The fact is, we will have to accept the horrific reality that, from time to time, a major coastal city will be nuked from a freighter or small submarine, terrorists have

both. Such is the reality of the failure to contain the nuclear genie. They have the desire to kill every man, woman and child in the USA and they have the means to deliver a nuke to our coastal cities; they just need the nuke.

What would be so difficult about having someone like “Jihad Jane” purchase a good sized boat with a dock slip at Gangplank Marina on the Potomac River in Wash. D.C., motor out through Chesapeake Bay to the ocean to pick up a nuke from a freighter at night then arrive at Gangplank Marina on a weekday afternoon and detonate it ?

If one of our cities is nuked, the nation will be under martial law. If your retreat is very far away, the police or military may prevent you from getting there. If you live anywhere on either coast they will probably not let you exit inland. Both politicians and the military have shown their propensity to confiscate guns at such times and most certainly will do so again. Further, the “temporary” martial law may well become permanent. Your stored food may be deemed “Hoarding” and be confiscated in an unconstitutional but nonetheless real house to house search performed by guys who are looking for secret hiding places. You do not want these people to be able to find either your beans or your bullets because, even under permanent martial law, we may still be hit by an EMP burst or solar storm or another coastal nuke.

The world is different today than ever before. The basic problem in our psyche is that we have the “white hat” cowboy mentality; we never throw the first punch, we never draw the gun first; we wait for the bad guy to shoot or draw and only then do we react. This time, if we wait for them to strike first with an EMP without being well prepared, this country, as we know it, will cease to exist. Our military may well destroy their country in retaliation, if they knew where the nuke(s) came from, but the above EMP scenario will still take place here regardless of what happens to the other guy later.

During the cold war we lived with the fear in the back of our minds that one day there may be Global Thermonuclear War that would destroy the world. However, while Global Thermonuclear War is still a possibility, a super solar storm, EMP burst and/or nuked coastal cities are eventual *certainties*. Nuking a coastal city is easiest and most likely, of course, but our unconscionable lack of preparation makes an EMP burst so appealing they will do everything in their power to make it happen.

Noah knew he could not tread water for long and built the Ark. Since people cannot live on a zero calorie diet for long and the Federal Government, who’s primary duty is to protect us, is doing nothing to prevent or prepare for an EMP, super solar flare or cyber attack, we all had better store at least three years of beans, band aids, bullets and *benzin*. In other words, become a “Prepper”, but do so wisely, very well hidden and very very secretly.

“If you think the unthinkable and devise plans to survive, then when the unthinkable occurs, you are prepared and will make the correct choices automatically.”

(SurvivalBlog.com) A basic rule of thumb in survival situations is that 10% will do the absolute wrong thing, 80% will do nothing and wait to be led, while 10% do the right thing.

An EMP, a massive cyber attack, and a nuked coastal city are all possible but a super solar flare is inevitable. Just a word of caution here, once you let yourself think about such threats and project the inevitable outcomes of life here in the USA without electricity, it is very

difficult to get your mind back inside that “denial” box.”- Tom S.

About wood stoves: Having lived in an Alaskan cabin with only wood heat for four years I know that the smoke makes it very difficult to keep your presence a secret. Even a year or two after TEOTWAWKI you still will want to keep your existence as secret as possible, therefore do not use just any wood stove; use the 95% efficient and virtually smokeless wood stoves available that, with very dry wood, produce almost no smoke. Further, use wood fuel that does not have a strong odor such as birch and avoid those that do such as cedar or some hardwoods. For wilderness survival there is nothing better than a small [fan forced wood stove](#) such as the [Sierra](#) stove or similar. I have used these on extended Alaska camp-outs with the Boy Scouts with great success and always unlimited fuel. Because they are fan forced they are very good at burning any wood and producing almost no smoke. This type of fan forced fire is very useful for surviving in the wilderness or, with larger versions and side feed, using outside your retreat to process food.

Basements: Undetectable fully serviced basements/retreats: A family or group in an undetectable basement or bomb shelter can survive in quiet comfort while the rest of the world kills itself off without the tear jerking confrontations from starving beggars, violent confrontations with gangs, looters or the military. And yes, it is very possible.

I once saw an article about a family who bought a house and after living there for two years discovered there was a full basement under the house. The previous owner had sealed up the stairs going down and filled in the small windows that had previously been visible. Why did he do that? He was hiding a flooded basement. So, if a basement can be invisible to someone who actually lives in a house for over two years, what would it take to make a basement invisible to looters and gangs who would be there for less than 30 minutes? That will be the subject of a separate article.

Selected References:

[SurvivalBlog.com](#), numerous writings

“[Electromagnetic Pulse Weapons](#): Congress Must Understand the Risk” by Baker Spring, Heritage Foundation *WebMemo* #2822

"Report of the Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack," Volume 1: [Executive Report](#), 2004

"Report of the Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack: [Critical National Infrastructures](#)," April 2008 [Executive Report](#) (See the [EMP Commission](#) web site.)

From the Executive Report Summary: “However, now even a single, low-yield nuclear explosion high above the United States... can produce a large-scale EMP effect that could result in a widespread loss of electronics, but no direct fatalities, and may not necessarily evoke a large nuclear retaliatory strike by the U.S. military. This, coupled with published articles discussing the vulnerability of U.S. critical infrastructure control systems, and some U.S. military battlefield systems to the effects of EMP, may create a new incentive for other countries to rapidly develop or acquire a nuclear capability.”

“The electrical power system has become virtually fully dependent upon electronic systems working nearly flawlessly. The overall system reliability is testimony to the skill and effectiveness of the control systems. However, the lack of margin (combination of generation and transmission margins) results in making catastrophic cascading outages far more likely, and should the electronics be disrupted, the system is highly likely to fail on a broad scale. Thus, the small margin and reliance on electronics give rise to EMP vulnerability.”

“All production for these large transformers used in the United States is currently offshore. Delivery time for these items under benign circumstances is typically one to two years. There are about 2,000 such transformers rated at or above 345 kV in the United States with about 1 percent per year being replaced due to failure or by the addition of new ones. Worldwide production capacity is less than 100 units per year and serves a world market, one that is growing at a rapid rate in such countries as China and India. Delivery of a new large transformer ordered today is nearly 3 years, including both manufacturing and transportation. An event damaging several of these transformers at once means it may extend the delivery times to well beyond current time frames as production is taxed. The resulting impact on timing for restoration can be devastating. Lack of high voltage equipment manufacturing capacity represents a glaring weakness in our survival and recovery to the extent these transformers are vulnerable....”

“Many electric generating plants would be severely damaged by uncontrolled shut down. Almost none, even if not damaged, would be able to restart without external power.”

“EMP is one event that may couple ultimately unmanageable currents and voltages into an electrical system routinely operated with little margin and cause the collapse of large portions of the electrical system. In fact, the Commission is deeply concerned that such impacts are certain in an EMP event unless practical steps are taken to provide protection for critical elements of the electric system and to provide for rapid restoration of service, particularly to essential loads.”

“The current strategy for recovering from such failures is based on the assumption of sporadic failures of small numbers of components, and for larger failures, drawing on resources from outside the affected area. This strategy leaves us ill-prepared to respond effectively to an EMP attack that would potentially result in damage to vast numbers of components nearly simultaneously over an unprecedented geographic scale.”

“The Commission has concluded that the electrical system within the NERC region so disrupted will collapse with near certainty. Thus one or more of the three integrated, frequency-independent NERC regions will be without electrical service. This loss is very large geographically and restoration is very likely to be beyond short-term emergency backup generators and batteries. Any reasonable EMP event would be much larger than the Texas region so basically the concern is the Eastern and Western regions with Texas either included or not depending upon the location of the weapon. The basic threat to U.S. society that moves an EMP event from a local or short-term adverse impact to a more prolonged and injurious event is the time it takes to restore electrical and other infrastructure service.

North American Electric Reliability Corporation three regions, Texas, West and East. All of these collapse mechanisms acting simultaneously provide the unambiguous conclusion that electrical power system collapse for the NERC region largely impacted by the EMP weapon is

inevitable in the event of attack using even a relatively low-yield device of particular characteristics.

EMP attack on the electrical power system is an extraordinarily serious problem but one that can be reduced below the level of a catastrophic national consequence through focused effort coordinated between industry and government.”

[Independent Working Group](#), "Missile Defense, the Space Relationship, and the Twenty-First Century," 2009 Report, p. 130, at

Rawles, James Wesley, "[Patriots: A Novel of Survival in the Coming Collapse](#)", Ulysses Press, 2009

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[Lights Out](#), by Half Fast (formerly an Internet e-novel, now being published)

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[Severe Space Weather Events](#)—Understanding Societal and Economic Impacts Workshop Report Committee on the Societal and Economic Impacts of Severe Space Weather Events: A Workshop, National Research Council <http://www.nap.edu/catalog/12507.html>

[“EMP Attack Would Send America into a Dark Age”](#) “EMP Attack Would Wipe Out U.S. Military”, NewsMax, Monday, 28 Sep 200

Some key quotes:

“An estimated 80 percent of the population would die within a year of an EMP strike from starvation or disease or would freeze to death, according to William Graham, who was chairman of the congressional Commission to Assess the Threat to the United States from Electromagnetic Pulse Attack.”

“The nation’s military is largely unprotected in the event an enemy launches a nuclear bomb that would fry microchips and the power grid with an electromagnetic pulse (EMP), Rep. Roscoe Bartlett, R-Md., tells Newsmax.”

“Since the early 1990s, “Essentially all our new weapon systems have been built with a waiver for EMP hardening,” says Bartlett, a scientist and inventor who is the ranking member of the House Armed Services’ Subcommittee on Air and Land Forces. “If an enemy used an EMP enhanced weapon — and Russian generals told our EMP commission that they had developed weapons which emit 200 kilovolts per meter weapon — I’ve been assured by experts in the area that everything would be down,” says Bartlett, who has been the leading member of Congress fighting to recognize EMP as a threat.”

In fact, “One of the first things [an enemy] would do is an EMP laydown to deny you the use of all your equipment which is not EMP hardened, which is essentially all our equipment,” Bartlett says. “They don’t harden against EMP any more.”

[The Stanford Prison Experiment:](#)

The Stanford prison experiment was a study of the psychological effects of becoming a prisoner or prison guard. The experiment was conducted in 1971 by a team of researchers led by Psychology Professor Philip Zimbardo at Stanford University. Twenty-four undergraduates were selected out of 70 to play the roles of both guards and prisoners and live in a mock prison in the basement of the Stanford psychology building. Those selected were chosen for their lack of psychological issues, crime history, and medical disabilities, in order to obtain a representative sample. Roles were assigned based on a coin toss.

Prisoners and guards rapidly adapted to their roles, stepping beyond the boundaries of what had been predicted and leading to dangerous and psychologically damaging situations. One-third of the guards were judged to have exhibited “genuine” sadistic tendencies, while many prisoners were emotionally traumatized and two had to be removed from the experiment early. After a graduate student (prisoner #819) broke down from the inhumane conditions in the prison, and realizing that he had been passively allowing unethical acts to be performed under his direct supervision, Zimbardo concluded that both prisoners and guards had become too grossly absorbed in their roles and terminated the experiment after six days.

Milgram, Stanley, 1974 book, [*Obedience to Authority: An Experimental View*](#). Milgram described experiments conducted at Yale University in 1961 after the start of the trial of German Nazi war criminal Adolf Eichmann in Jerusalem. Milgram devised his psychological study to answer the question: "Was it that Eichmann and his accomplices in the Holocaust had mutual intent, in at least with regard to the goals of the Holocaust?" In other words, "Was there a mutual sense of morality among those involved?" Milgram's testing suggested that it could have been that the millions of accomplices were merely following orders, despite violating their deepest moral beliefs. He set up an experiment and showed that most ordinary people can become accomplices in killing totally innocent individuals. Tom Peters and Robert H. Waterman Jr wrote in 1981 that the Milgram experiment and the Stanford prison experiment were frightening in their implications about the danger which lurks in the darker side of human nature.

[33 Minutes](#) Protecting America in the New Missile Age (2008) by [The Heritage Foundation](#), 214 Massachusetts Avenue, NE, Washington, DC 20002 Ph. (202) 546-4400

Food production and life styles in the USA in 1900 compared to life today:

In 1900, 39 percent of the U.S. population (about 30 million people) lived on farms; today that percentage has plummeted to less than 2 percent (only about 4.5 million people). The transformation of the United States from a nation of farmers to a nation in which less than 2 percent of the population is able to feed the other 98 percent is made possible only by technology.

[Human survival without food:](#)

Physical condition, age, amount of fat, and air temperature are major factors but an absolute deprivation of food, on average, will greatly diminish a person's capacity for physical work within a few days. After 4 to 5 days without food, the average person will suffer from impaired judgment and have difficulty performing simple intellectual tasks. After two weeks without food, the average person will be virtually incapacitated. Death typically results between 30 to 60 days with a few being able to last up to 70 days. This is without any

physical activity and plenty of good water.

[Irish Hunger Strike of 1981](#)