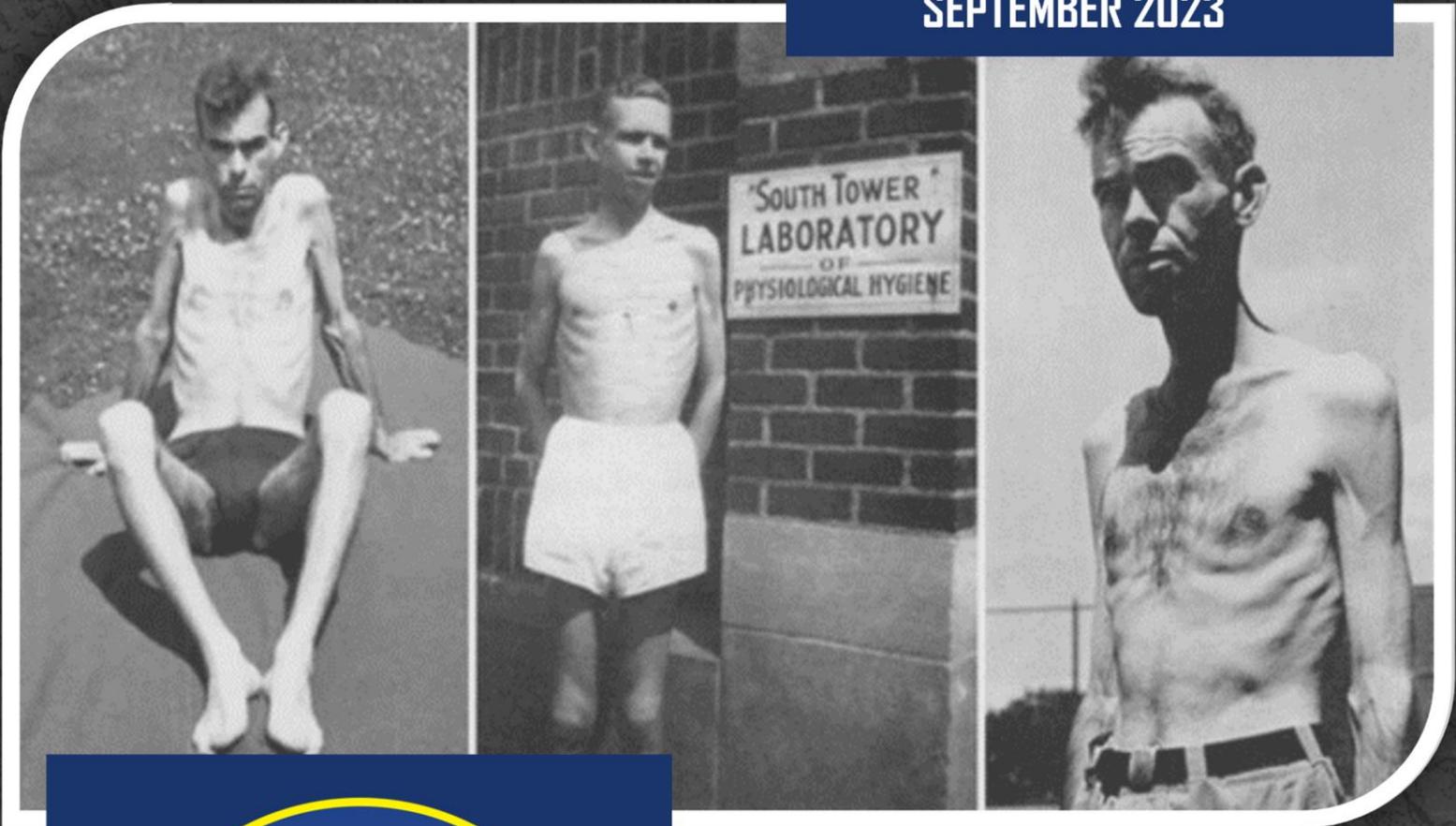


SEPTEMBER 2023



Product of the
**TASK FORCE ON NATIONAL
AND HOMELAND SECURITY**

a

CONGRESSIONAL ADVISORY BOARD

under the
CONGRESSIONAL EMP CAUCUS
on November 17, 2011

GRID DOWN: DEATH OF A NATION

THE PSYCHOLOGY AND PHYSIOLOGY OF:
HUMAN DESPERATION, STARVATION, AND
LIVING WITHOUT RULE-OF-LAW THROUGH
A PROLONGED GRID DOWN SCENARIO

Written and Compiled by:
JONATHAN HOLLERMAN

GRID DOWN: DEATH OF A NATION

The Psychology and Physiology of:
Human Desperation, Starvation, and
Living Without Rule-of-Law through
a Prolonged Grid Down Scenario



Written and Compiled By:

Jonathan Hollerman

Deputy Director – US Task Force on National and Homeland Security

President and CEO – Grid Down Consulting

Senior Fellow – EMPact America

Member - Electromagnetic Defense Task Force

Member – Secure the Grid Coalition

Veteran – USAF SERE Specialist

STATEMENT of FAIR USE

All images and book excerpts/quotes in this report are used under the rules of "Fair Use".

1. Content used in this report for Criticism and Commentary and for purposes of illustration and comment, and used as supporting evidence for the author's main premise.
2. Content used in this report for Research and scholarship by quoting the passage in a scholarly, scientific, or technical work for illustration or clarification of the author's observations.
3. Content used in this report for nonprofit educational uses by offering the report to the public in PDF format, free of charge, for scholarly and educational application.
4. Content used in this report was for creating something new in a transformative way: creating new information and ideas in discussion of a new topic (combining the factors of Starvation, Human Desperation, and Living without Rule of Law) and not just rehashing the original authors' premises or intent.
5. Content used in this report was not from creative or fictional works, but solely from factual scholarly works dealing with historical events and accounts of real-life events.
6. Content used in this report is not competing with the original authors' works. If anything, broad distribution of this report should increase and promote the sales of the original authors' works. This report is a scholarly research report and intended to educate and warn the reader of a valid threat to our national security and our American way of life.
7. Content used in this report was given full credit to the original author. All content used was for commentary, not criticism, and the readers of this report are strongly encouraged to purchase and read the original authors' works for more historical evidence supporting the premise of this report.
8. All images in this report were taken from publicly available locations online and used in a scholarly way to support this report's primary mission to research, report, inform, and educate for the primary benefit of the public to learn the dangers of starvation, human desperation, and living without Rule of Law in an extended grid down event.

*If you are the rights holder to any of the quoted works or images in this report and wish to have it removed or cited in a different way than it is currently, please contact me at JonathanHollerman@gmail.com

4th Edition - Aug 2023

© 2023 Jonathan Hollerman. All rights reserved.

This Report can be downloaded in PDF format for free at:

<https://www.griddownconsulting.com/grid-down-report>

Please share and disseminate as widely as possible!

**The American people need to know and understand what's coming
if our government fails to act and harden the US electric grid.**

Table of Contents

TABLE OF CONTENTS.....	i
A CALL TO ACTION FOR AMERICA DOCUMENT	iii
INTRODUCTION.....	1
UNDERSTANDING THE THREAT	7
Factor #1 – Human Desperation.....	8
Factor # 2 - Starvation.....	10
Factor # 3 – Living Without-Rule-of-Law	16
HISTORICAL EVIDENCE:.....	21
The Great Chinese Famine – 1958-1962.....	23
The Holocaust – 1941-1945.....	27
The Balkan Wars – 1992-1995.....	30
The Holodomor (Ukraine Famine) – 1932-1933.....	36
Four Points of Discussion - Historical Examples of Starvation	53
Recommended Reading List – Historical Starvation.....	59
CONCLUSION.....	60
THOUGHT EXERCISES.....	65
Feeding the Troops: A Mental Exercise.....	65
Feeding the Troops: By the Numbers.....	68
Feeding the Troops: The Wrong Answer to a Tough Problem - Partnership.....	69
A Thought Exercise for Civilian Emergency Planners:.....	74
How Would a Grid-Down Scenario Affect You Personally?.....	76
MAJOR POINTS TO CONSIDER.....	85
APPENDIX.....	87
Disaster Response Survey:.....	90
BIO – JONATHAN HOLLERMAN.....	92
ENDNOTES.....	93

Note:

It is important for the reader to understand the validity, probability, and seriousness of the various grid-down threats before discussing the aftermath of such an event.

The following primer, A Call to Action for America, is a collaborative effort by many members of the Task Force on National and Homeland Security (emptaskforce.us), with assistance from equally-committed members of the Center for Security Policy's Secure the Grid Coalition (securethegrid.com) as well as additional, allied organizations.

Free PDF Download of the most current version of A Call to Action for America can be found on either of the above two websites.

A Call to Action for America

A Collaborative Report

Task Force on National and Homeland Security, Secure the Grid Coalition, and other partners...



Updated and Revised, August 2023

An unaware and unprepared America: Without a change in policy for electric grid security, 90% of Americans are at risk of dying.

A Call to Action for America

The goal of this document is to save lives.

You can help us save lives, including your own and your loved ones' ...

Our Vision: *“We believe the citizens and the state and national governments of the United States of America can come together to save lives by protecting our electric power¹ and our critical infrastructures² - including water & wastewater, communications, emergency services, transportation, healthcare & public health, food & agriculture, energy, and financial services - against any and all threats, including those from extreme solar weather, nuclear and non-nuclear electromagnetic pulse (EMP), physical and cyber-attacks, and supply chain threats. Together, we can save millions of lives by taking action at the personal, state and national levels.”*

This report is a collaborative effort by many members of the Task Force on National and Homeland Security, with assistance from equally-committed members of the Center for Security Policy’s Secure the Grid Coalition as well as additional, allied organizations. It is intended to explain this issue of national importance, using as little scientific and technical language as possible in the body of the text (and go into greater detail in the footnotes), so that the greatest number of Americans, particularly those in a leadership capacity, can clearly understand the issues. This report should evoke both **Anger** and **Courage** in Americans, because only then will action be taken. It should also provide **Hope** to America, because this senselessly perilous situation is well within our Nation’s ability to act on and resolve. We each just need to “roll up our sleeves” and get started...

Our organizations thank you for reading this and taking action to save lives. May God Bless America.



<https://emptaskforce.us/>: The Task Force on National and Homeland Security is an official Congressional Advisory Board recognized as such by the Ethics Committee under the name “Task Force on National and Homeland Security” and as a 501(c)(3) nonprofit under the name “EMP Task Force on National and Homeland Security”. The Task Force on National and Homeland Security also provides leadership for and coordinates with other affiliated groups that are concerned about the loss of our power grid and critical infrastructures from any and all threats. The original Executive Director for The Task Force on National and Homeland Security was Dr. Peter Vincent Pry, who passed away in 2022. His vast body of work in this field is relied upon throughout this “Call to Action”, and his full biography is included in the footnotes.³ The Acting Executive Director is Cynthia Ayers, the Deputy Executive Director is Jonathan Hollerman, and the Director of National Operations is Glenn Rhoades.



<https://securethegrid.com/>: The Secure the Grid Coalition is an ad hoc group of policy, energy, and national security experts, legislators, and industry insiders who are dedicated to strengthening the resiliency of America’s electric grid. The Coalition aims to raise awareness about the national and international threat of grid vulnerability and to encourage the steps needed to neutralize it. The Secure the Grid Coalition operates under the direction of the Center for Security Policy and is managed by President and CEO, Tommy Waller. The Executive Chairman and Founder of the Center for Security Policy is Frank J. Gaffney, Jr.

Imagine the following:

Day 1, Noon EST (9am PST): The power goes out across the entire continental United States. High voltage transformers have blown out everywhere. Within minutes, all 54 commercially operating nuclear power plants across the Nation have “scrammed” (i.e. shut down) their reactors, which is standard operating procedure during the loss of external electric power. Millions of TVs, laptops, and computers have shorted out. Cell phones and landline phones aren’t working. The Internet is down. Smoke is visible from a number of small fires across every community, but very few sirens from fire engines can be heard. Traffic lights are out, and a significant number of cars and trucks that were running are now inoperable and scattered about the roadways. Trains and subways are shutdown. ATMs don’t work, banks close, and Wall Street closes. The Emergency Broadcasting Service and 911 are not operating. First responders are unable to communicate, coordinate or respond, not that they could get anywhere on the clogged roadways. Many of the planes that were in the air have crashed, and those that didn’t must now attempt to land without help from air traffic control or ground radar. No one seems to know what’s going on. By nightfall, most homes, hospitals, and elderly care facilities are without running water. The nighttime sky is pitch black across America, and the stars seem eerily bright overhead.

Days 2-3: There’s a run on everything at the stores; those that are open will only accept cash or barter since debit card readers are non-functioning. There will be no trucks coming to resupply the stores, since canning facilities, distribution centers, and interstate trucking all rely on the electric grid to function.

There are long lines at the very few gas stations that have emergency diesel generators powering their pumps. In homes without emergency backup power, anything remaining in refrigerators and freezers spoils and becomes unsafe to eat.

Days 4-6: Law and order begin to break down. Without communications and functioning electronic equipment, many emergency responders stay home to protect their own families. Stores are looted for anything and everything. Many in the cities evacuate to the suburbs, often on foot, overwhelming the already limited resources there. Emergency backup diesel generators in most homes run out of fuel.

Days 7-10: Emergency backup diesel generators run out of fuel at most water and wastewater facilities, radio and TV stations, hospitals, food processing plants and emergency services locations, if they weren’t damaged or destroyed on Day 1. There will be no tanker trucks coming to refuel. Hospitals are required to evacuate their patients if they are without external electric power for more than 72 hours, except there aren’t any hospitals with electric power to evacuate their patients to. By now, there are few doctors, nurses and hospital staff members remaining, because the majority have gone home to protect themselves and their families. Many patients requiring constant care either have died or will die soon. Without firefighters and water pressure, a number of fires that started from a variety of causes, from blown High voltage transformers and electrical equipment on Day 1, from nature, from human error or from arson, burn out of control until there is nothing left to burn. As a result, entire city blocks and many homes

are now in ashes. In the same manner, hundreds of wildfires burn out of control throughout the U.S., until they eventually burn themselves out. Without water pressure, there is no clean, safe drinking water available. Without wastewater processing, the situation quickly becomes disgusting and dangerous as pressurized, raw sewage pours from toilets and sinks in the lowest elevations of the system. This makes millions of homes and apartments uninhabitable due to both the health risks and the high levels of methane gas.

Days 11-15: Without law enforcement, the hungry and desperate masses break into their neighbors’ homes for food and supplies. Armed groups and gangs roam the streets, preying on the weak and defenseless. Even “good people”, if unprepared and forced to survive, do “whatever it takes” to feed their children and keep their loved ones alive. Like first responders, many in the stateside military and National Guard abandon their posts and go home to protect their own families from the looters. Stateside military bases are 99% reliant on the civilian power grid and are just as “dark” as everywhere else. National Guard Armories around the Nation have been or will soon be looted by well-armed gangs intent on stealing loosely protected military vehicles (if they’ll run), weapons, supplies, and hardware. The thin layer of civilized society is slipping away in the fight for survival.

Days 16-30: By the end of Day 7, the Nuclear Regulatory Commission’s (NRC) mandated diesel fuel supply for backup emergency diesel generators at most nuclear power plants runs dry. For backup

generators and reactor cooling pumps damaged or destroyed on Day 1, there are two primary, central locations in the U.S. with spares that would need to be transported many miles on clogged highways to their destinations. If reactor plant operators are unable to operate and resupply fuel to backup diesel generators, and if they are unable to power and operate reactor cooling pumps, reactor cores will eventually overheat and pools for spent fuel rods will eventually boil. If this is the case, over the next few days to weeks, many of the 54 commercially operating nuclear power plants with 93 nuclear reactors in 28 states (as of 2/28/2023) will experience disasters, similar (or possibly worse) than the

Fukushima nuclear power plant did in Japan following the tsunami of 2011.⁴ Based on 2010 Census data, more than 120 million Americans live within 50 miles of a nuclear power plant. Their already bad situation will become far worse as grainy, radioactive debris blows downwind from failed reactor plants. There is nowhere to evacuate to, no one to oversee or coordinate any evacuations, and few methods available to communicate the problem. Adding to the social breakdown, many of the 2 million adults in federal and state prisons and county jails across the U.S. are either let free or escape due to lack of power, resources, and personnel to contain them. The first outbreaks of

dysentery, cholera, and typhoid, all brought on by drinking unpurified water and living in unsanitary conditions, begin to spread throughout the country. These, and other treatable third world diseases, along with dehydration, starvation, and murder, claim the lives of tens of millions of Americans. There are no hospitals to go to. There are no medications available. Even minor injuries and infections become life-threatening. In most parts of the country, there is no one coming to help... and this is just the first 30 days following the grid being down nationwide. It'll get much worse in the days and weeks to follow...

Does this all sound like an apocalyptic movie or a “prepper” fantasy? We wish it were. What we have described above is the beginning of the collapse of the United States of America caused by as few as one to three nuclear weapons detonated high in the sky above our magnificent, but totally unprepared, country.⁵ The effect would be an ELECTRONIC shock wave that would burn up electrical power lines and transformers and would “fry” many electronic devices, such as portable radios, TVs, computers, and telephones (especially those plugged into electric or telecommunications outlets).

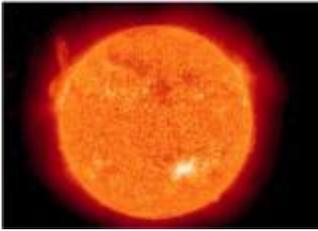
This is NOT science fiction material but CONFIRMED SCIENCE. The worst-case scenario described above, High Altitude Nuclear Electromagnetic Pulse (EMP or HEMP), has been known and studied by the Department of Defense and our Government ever since the ‘Starfish Prime’ nuclear test on July 9th, 1962; this was one of a series of five tests by the U.S. testing the effects of nuclear weapons in high-altitude/lower outer space.⁶ We could also lose our electric power and our critical infrastructures dependent upon electric power for an extended period of time across the United States by a massive solar storm striking Earth, OR a well-coordinated physical attack on our power grid, OR a sophisticated cyber-attack, OR any combination of these threats.

Does our government know about this? YES! No fewer than eleven studies conducted by or for federal agencies over the past decade have all agreed: the Nation’s bulk power distribution system can be disrupted or destroyed over large areas due to various manmade and naturally occurring events.⁷ The “backbone” of our power grid is our massive, custom-built high voltage transformers, typically weighing between 200-400 tons each. Most of these are made overseas and require 12-18 months to order, build, and ship before needing additional months to transport over land and install. Additionally, the “Achilles heel” to the operation of both our power grid and our critical infrastructures is their almost complete dependence on computers and technology, which rely on very delicate microchips and microprocessors.⁸

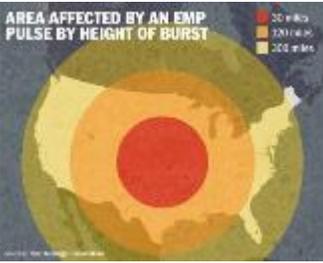
If you think the coronavirus or other potential pandemics are frightening, wait until a solar superstorm or a nuclear EMP attack blacks out the national electric grid, collapses our economy and our critical infrastructures, and up to 9 out of 10 Americans die within a year through starvation, disease, and societal collapse

How long before a major blackout with these 5 serious hazards threatening the grid?

Geomagnetic Disturbance (GMD) from Extreme Solar Weather: According to NASA, a very large solar flare from our sun narrowly missed Earth by 9 days on July 23, 2012. It would have generated a geomagnetic superstorm, destroying many difficult-to-replace, unprotected high voltage transformers and collapsing electric grids and life-sustaining critical infrastructures worldwide, putting the lives of billions at risk.⁹ [Our grid is still dangerously vulnerable](#) to this threat because of the ineffective standards established by industry and approved by government. It is 100% certain that we will be struck by a massive solar storm in the future. The question: When?



High Altitude Nuclear Electromagnetic Pulse (EMP or HEMP): Besides Russia, China and Iran, a failed nation state, such as North Korea or a terrorist cell, could detonate as few as one nuclear weapon high in the sky above the atmosphere. The EMP effect would cover a much larger area than from a surface nuclear detonation and cause an extended blackout of the entire Continental United States. With a high altitude nuclear detonation, identifying who attacked us could be very difficult or downright impossible. Moreover, a Super-EMP weapon might paralyze U.S. strategic forces and Command, Control, Communications & Intelligence (C3I), making retaliation impossible.¹⁰ Super-EMP weapon delivery systems continue to proliferate from legacy land and sea based ICBNs to aircraft and high-altitude balloon delivery systems.



Physical Attacks/Sabotage and Non-Nuclear EMP: *“Destroy nine interconnection (transformer) substations and a transformer manufacturer and the entire United States grid would be down for at least 18 months, probably longer.”* - Internal memo, Federal Energy Regulatory Commission. Besides the sophisticated and highly publicized attack on the PG&E Metcalf Substation on April 16, 2013, other high voltage transformers around the country have been physically attacked, which is relatively easy to do; many substations are unguarded and surrounded by only chain-link fences with padlocked gates. Besides shooting at them, attackers could use Radio Frequency (RF) weapons or non-nuclear EMP weapons; these can be purchased online without licensing requirements or can be built from parts purchased from local electronics stores and instructions from the internet.¹¹ From January 1, 2010, through August 2022, there have been at least 919 physical attacks on the grid, and the attacks are increasing.



Cyber-Attacks: *“A massive and well-coordinated cyber-attack on the electric grid could devastate the economy and cause a large-scale loss of life”* - Dr. Richard Andres, U.S. National War College. Cyber-attacks are constantly directed against our power grid. The most threatening attacks are the attempts to destroy our difficult-to-replace, unprotected high voltage transformers or to destroy critical infrastructure, such as cooling pumps at our nuclear reactor plants. With cyber, it is often difficult or downright impossible to determine the origin and culprit of the attack.¹²



Supply Chain Attacks: *“They found hardware that was put into that that had the ability for somebody in China to switch it off.”* - Latham Saddler, the former Director of Intelligence Programs at the National Security Council in the Trump Administration. Saddler’s quote was referencing [a Chinese-made transformer that was seized by the Federal Government](#) and transported to Sandia National Laboratory for evaluation. The results of its inspection are highly classified and while President Trump passed an Executive Order meant to curb this supply chain problem, the U.S. continues to import Chinese transformers. We now have more than 400 in the grid, in addition to thousands of Chinese inverters. We must immediately locate and inspect this equipment, stop importing it from adversaries, and manufacture it here.



Finally, while we think of cyber warfare as *computer-based hacking*, Russia, China, Iran, and North Korea all view nuclear EMP as *the ultimate cyber weapon* to be used either by itself or in coordination with other methods of attack they have available, such as physical attacks and cyber-attacks. This is a part of the military doctrine of each of these four countries, and they are all very aware of our nation's grid vulnerabilities.¹³

In comparison with the other threats described above, **nuclear EMP would cause significantly more damage to electronics with delicate microchips and microprocessors (e.g. computers, laptops, cell phones, cell phone towers, radios, modern automobiles, debit card readers, ATMs, home appliances, etc., if powered on and within direct line of sight of the blast), greatly compounding the problem.**¹⁴ This is because nuclear EMP has all three damaging electromagnetic waveforms: E1: the short-wavelength electromagnetic "shock wave" that would do the most damage to most electronics; E2: similar in effect to lightning, except it would be everywhere; and E3: the long-wavelength electromagnetic pulse both nuclear EMP and solar storms/GMD share, which affects long power lines and overwhelms transformers, among other effects. **The "bad actors" of greatest concern are those who both hate us the most and have the least to lose if discovered.** These include rogue states, such as North Korea and Iran, and terrorist organizations, such as ISIS and Al Qaeda.

For decades, the Department of Defense (DOD) employed EMP simulators to test effects and to develop protection for military aircraft, missiles, communications, and other vital military systems. Since 1963, a scientific and strategic consensus among EMP experts moved Republican and Democrat administrations and Congresses to invest billions of dollars to protect the most important U.S. Government and DOD assets.

Scientific and strategic consensus on the EMP threat can also be found in the joint DOD and Energy Research and Development Administration landmark book, *The Effects of Nuclear Weapons* (1977). *The Effects of Nuclear Weapons* declassified much research and warned EMP can inflict "severe damage" and the "consequences could be serious for any system that relies on...commercial electric power generation and distribution systems, telecommunications...radio, radar, television, telephone, and telegraph systems, and electronic computers." Unfortunately, with the end of the Cold War, very little has been done regarding EMP testing and hardening of our U.S. Government and DOD assets. The EMP threat is much greater now than it was then.

An extended blackout of our power grid is on the short list of "Black Swan"¹⁵ events that could effectively end the United States of America. Regarding a nationwide solar GMD event, or a nuclear EMP attack, or a massive physical and/or cyber-attack occurring in our current state of unpreparedness, Dr. Peter Vincent Pry stated:

"The Congressional EMP Commission on which I served calculated that within a year of a blackout that knocks out the national grid, we would probably lose up to 9 out of 10 Americans through starvation, disease, and societal collapse... The only reason we can sustain a population of 326 million Americans is technology. If you take that away, we don't have any way of feeding, providing water or even providing communications and government for an orderly society that is going to sustain 326 million Americans." – Dr. Peter Vincent Pry, original Executive Director for the Task Force on National and Homeland Security, 2017.

If our government knows about this, what has been done about it? Next to nothing, considering the gravity of the situation! If our electric grid is really this vulnerable, why hasn't Washington or the utilities industry adequately secured it by now? The White House and Congress clearly DO know about the EMP threat and have enacted major policies to

protect the nation (further described on pages 8-9). *The problem is that lobbyists of the utilities industry, among others, have been working hard to downplay this threat and to portray this issue as “alarmist fiction.” They are more concerned with profit margins than with the safety of the American people.*

Besides a few alarmed politicians and others both in and out of government pushing the issue, there has been very little pressure placed on our elected officials, regulators, or the utilities industry to actually solve this problem:

- most have either conflicting political interests or misguided trust of “junk science” and lies¹⁶
- OR they are more interested in their jobs or their re-elections¹⁷
- OR they are lulled into a false sense of complacency from the “normalcy bias”¹⁸
- OR they are simply unaware of the problem
- OR any combination of these factors.

With most Americans unaware there is such a serious problem and the rest dismissed as “crazy preppers”, the issues have gone unattended for far too long.

A short summary of FERC and NERC and Regulating the Utilities Industry:

The **Federal Energy Regulatory Commission (FERC)** is a U.S. government agency, established in 1977 to oversee the country's interstate transmission and pricing of a variety of energy resources, including electricity, natural gas, and oil.

The **North American Electric Reliability Corporation (NERC)** is a [nonprofit](#) corporation based in [Atlanta, Georgia whose 1900+ members represent 70% of the owners and operators of the utilities industry](#). NERC's mission states that it is to "ensure the reliability of the North American bulk power system." FERC has very little regulatory authority on NERC; FERC can presently only suggest regulations on which NERC members have voting rights on whether or not they wish to adopt them. *The utilities industry is the ONLY critical infrastructure that is virtually unregulated by the government, and it underpins all of the other 15 critical infrastructures in the U.S.*

Because The Federal Energy Regulatory Commission (FERC) does not have lawful authority to require the utilities industry to harden the grid to realistic standards:

FERC's approved Standard for natural E3 EMP/GMD is far too low (merely 8 volts/kilometer) and should be at least three times higher (24-30 volts/kilometer). The EMP Commission recommended EMP/GMD Standard is over ten times higher (85 volts/kilometer), so the national grid would survive a worst-case solar storm or the long-wavelength threat (E3 EMP) from nuclear EMP attack.

There is still no FERC approved Standard for E1 EMP, the short-wavelength electromagnetic “shock wave” from a nuclear EMP attack that would do the most damage to most electronics. Protection against E1 EMP (at least 50-100 kilovolts/meter) would also help mitigate lesser threats from non-nuclear EMP weapons and system-generated over-voltages from cyber-attacks, physical sabotage, and severe weather like hurricanes.

Just to add another layer of complexity, the bulk power system consists of approximately 1,500 entities operating at 100 kilovolts or higher which are regulated by NERC, overseen by FERC. However, the bulk power system does not include distribution to end-users. Distribution is under the jurisdiction of state public utility commissions. This means that there are over 60 state and federal government agencies as well as a number of non-profit corporations involved in the regulation of the electric grid. Finally, there are almost incomprehensible complexities in the regulation of electricity markets. (More at [https://michaelmabee.info/.](https://michaelmabee.info/))

A short summary of the Congressional EMP Commission¹⁹: The Congressional EMP Commission, composed of senior statesman and nationally recognized EMP scientists and experts, selected on a bi-partisan basis so that their findings would be respected by all regardless of party affiliation, was first established by the U.S. Congress in 2001 and served until 2008. Their mission was to develop recommendations to protect the U.S. military forces, national electric grid, and other critical infrastructures from nation-ending threats of nuclear EMP attack and natural GMD from solar superstorms. EMP simulators were extensively used to perform the most comprehensive testing of effects on modern electronic systems vital to the operation of electric grids and other life-sustaining critical infrastructures — including communications, transportation, banking and finance, food and water. This EMP testing proved modern microelectronics are significantly more vulnerable than the vacuum tubes and electronics prevalent in the early 1960s. Moreover, as modern electronics have continued to improve after 2008, becoming ever smaller and more efficient, their vulnerability to EMP has increased exponentially.

The 2004 and 2008 reports are unclassified and anyone, including our nation's enemies, can read them online at: <http://www.empcommission.org/>. The findings and conclusions of the EMP Commission were conclusive. The first pages of this document came largely from information provided in their 2008 report. The book *Guilty Knowledge*⁷ provides the executive summaries from both the 2004 and 2008 EMP Commission Reports, as well as nine additional federal agencies' studies that all agree in their findings.

The EMP Commission was re-established in 2016-2017 by the U.S. Congress due to the lack of implementation of the 2008 EMP Commission's recommendations to protect the electric grid and other critical infrastructures. These recommendations included protections from the growing threat of nuclear EMP attack from North Korea, Iran and other potential adversaries, the ever present risk from extreme solar weather, and the increasing threats from cyber warfare and physical attack. Despite significant opposition²⁰, the EMP Commission produced both classified reports as well as 10 unclassified reports. The unclassified reports are available online at: <http://www.firstempcommission.org/>.

A Short Summary of Legislation: After many years of research and reports from multiple government and private sector agencies, heated political debate, and strong bi-partisan support (even one unanimously supported bill in the U.S. House), legislation in both the U.S. Congress and several states has all failed, primarily due to the well-funded efforts of special interest groups.²¹

Finally, on October 13, 2016, President Obama signed the [Executive Order 13744](#) on **“Coordinating Efforts to Prepare the Nation for Space Weather Events”**. President Obama deserves credit for being the first President to include natural EMP from solar storms as among the threats of concern for the Department of Homeland Security. An excerpt from this Presidential Executive Order: “Extreme space weather events – those that could significantly degrade critical infrastructure – could disable large portions of the electrical power grid, resulting in cascading failures that would affect key services such as water supply, healthcare, and transportation. Space weather has the potential to simultaneously affect and disrupt health and safety across entire continents. Successfully preparing for space weather events is an all-of-nation endeavor that requires partnerships across governments, emergency managers, academia, the media, the insurance industry, non-profits, and the private sector.”

On December 23, 2016, the **“2017 National Defense Authorization Act”** was also passed and included the complete language of the **Critical Infrastructure Protection Act (CIPA)** that had struggled for years to be approved. Credit for CIPA goes to Senator Ron Johnson (Chairman, Senate Homeland Security Committee). CIPA amended the Homeland Security Act of 2002 and addressed the need for Electromagnetic Pulse (EMP) and Geomagnetic Disturbance (GMD) protection of all 16 critical infrastructure segments. This law requires the Secretary of Homeland Security to oversee an intelligence-based review of a complete strategy to protect and eventually prepare all 16 Critical Infrastructure Sectors against the threats of EMP and GMD.

On March 26, 2019, President Trump issued the [Executive Order 13865](#) on “Coordinating National Resilience to Electromagnetic Pulses” (also available online at: <http://www.firstempcommission.org/>), responding to 18 years of warnings by the EMP Commission that solar superstorms, or manmade EMP from nuclear or non-nuclear weapons, poses an existential (i.e. – a nation-ending) threat to the United States. Credit goes to Senator Inhofe (Chairman Senate Armed Services Committee) for incorporating the EMP Executive Order into the FY2020 National Defense Authorization Act. This is a “whole of government” product involving coordination and concurrence by the Department of Defense, Department of Homeland Security, Department of Energy, Intelligence Community, and other relevant departments and agencies. It seeks to implement core recommendations of the Congressional EMP Commission on an accelerated basis. Among the best and strongest features of the EMP Executive Order is putting the White House in charge of national EMP preparedness, rather than relying on the Department of Energy (DOE) or the Department of Homeland Security (DHS) to lead. White House leadership on EMP preparedness is imperative: both the DOE and the DHS have a long history of underestimating and under-prioritizing the EMP threat. Among its many strong features, this executive order combines cybersecurity and EMP. One of the smartest features of the EMP Executive Order requires that vulnerability of critical infrastructure vital equipment be established through empirical testing in EMP simulators.

On May 1, 2020, the [Executive Order 13920](#) on “Securing the United States Bulk-Power System” was issued, dealing with the foreign, economic, and cyber threats to the electric power grid.

The passage of these Executive Orders and CIPA marked a milestone in legislation and proved these are real problems facing America today, not just rantings by “extremists” as some sources portray. The American people have been and continue to be misled and uninformed of this threat. However, the passing of legislation doesn’t mean anything is actually being done...²²

From Dr. Peter Pry: “The strategy of pretending to do something, but really doing nothing, and then throwing money at the threat when it happens, will get millions of Americans killed when there is an EMP.”

What can be done?

A LOT! This is a very real but manageable problem. Solutions are readily available. Protecting our electric grid and critical infrastructures must be prioritized and placed immediately on a “war footing”:

- The recommendations of the 2017 EMP Commission need to be implemented (described on pages 11-12).**
- The 2019 Executive Order on Coordinating National Resilience to EMP” needs to be followed.**
- These can best be accomplished through an EMP “Manhattan Project” (described on pages 12-13).**

This will require overcoming the steadfast resistance to government oversight and regulations by many in the utilities industry. Reform of the Federal Energy Regulatory Commission (FERC) is crucial. Staff appointments must be redirected to people committed first and foremost to the safety and well-being of the American people. FERC also needs to be given lawful authority to require the utilities industry to harden the grid to realistic standards. FERC currently does NOT have that authority, which permits the utilities industry to essentially regulate themselves with very little oversight by ANY outside government agency. Without such reforms, adequate grid security is highly improbable. While there are over 3000 utility industry companies throughout the United States, this industry can be regulated for grid safety and security from all hazards, including nuclear EMP and solar GMD. As a comparison, there are many airline companies throughout our country and throughout the world, yet the airline industry is closely regulated for all aspects of aviation safety.

The utility industry is not currently required to install specific hardware to protect critical components of the electric grid. Only a combination of hardware-based solutions plus procedural plans can adequately protect against all risks to our electric grid, including manmade EMP and natural GMD. The procedural-only plans proposed by the utilities industry, so that real money doesn't actually have to be spent, are grossly inadequate to protect our electric grid and other critical infrastructures. This is the reason that key military and government installations have used both hardware-based and procedural-based solutions since 1963.

The federal government's current cybersecurity standards designed by "the industry" and "approved" are dangerously insufficient. Their security standards lean towards gross negligence and apply only to the "bulk power system." The current cybersecurity standards clearly state: companies are NOT required to seek detection, mitigation, or even removal of malware (like the virus Russia employed to terminate electricity in Ukraine and then implanted in *our* systems). We must continue to push and encourage the federal government, state legislators, and public service commissioners to mandate upgraded cybersecurity standards to protect our power grid.

The EMP Commission Chairman's Report recommends that *"the President direct the Nuclear Regulatory Commission to launch a crash program to harden the active nuclear power reactors and all spent fuel storage facilities against nuclear EMP attack. Even if the reactors and storage facilities survive an initial EMP attack, they currently are not able to restart generating power if there is no electric power available on its grid, and they typically only have enough emergency power to cool reactors and spent fuel facilities for several days, after which they would 'go Fukushima', spreading radioactivity over adjacent areas."* Moreover, *"The NRC has regulatory power to compel the nuclear power industry to incorporate nuclear reactor design features to make nuclear power safe...failure to...mandate protection from EMP...[risks] the safety of...people living in the vicinity of these reactors."*

The best and least costly way to secure our electric grid is to use an "all hazards" strategy. It is senseless to protect the grid against some threats but not others. It is also far less expensive to harden the electric grid with a combined "all hazards" approach rather than "piecemeal" the hardening process by addressing each threat singularly. (*The utilities industries often report inflated estimates which are the result of "piecemeal" solutions.*)

Our most vulnerable, irreplaceable, high voltage transformers need to be hardened against "all hazards". The EMP Commission's 2008 Report estimated it would cost \$2 Billion to protect transformers, generators, and SCADAS⁸ throughout the entire bulk power system. (Note: \$2 Billion/year is what the U.S. used to give away to Pakistan every year in foreign aid.) More robust plans for EMP hardening of our electric grid, from the Foundation for Resilient Societies (visit the "Research" tab at <https://www.resilientsocieties.org/>), would cost between \$10-30 Billion, which equates to \$6 to \$18 per person, per year, for the next 5 years. The Federal government could easily pay for these costs from national security programs, which would greatly reduce the resistance by the utilities industry. *At present, the civilian electric grid has essentially **no** hardening.*

This paragraph is directed at the "techies" reading this document. A properly designed Faraday cage²³ can protect electronics from nuclear EMP, non-nuclear EMP weapons, directed energy weapons, accidental electromagnetic transients, such as from a ship's radar, and even kinetic threats from sabotage (e.g. bullets) and severe weather. Similarly, a properly designed surge-arrestor can protect electronics from nuclear and non-nuclear EMP weapons, natural GMD, and over-voltages caused by cyber-attack and severe weather. It is also much less expensive, when replacing electronics and electrical systems, to replace them with new electronics and electrical systems that are built with "all hazards" protection (from every threat up to the most severe which is nuclear EMP) than to go back in and retrofit systems that are not protected.²⁴ There is much more that can be done. We have the ability, resources, knowledge, and expertise; we just need the motivation and commitment to proceed. (For more technical solutions, please read this footnote at the end.)²⁵

According to EMP expert, Dr. George Baker: “Low-cost, stopgap measures will be important, including hardened microgrid installations as a near-term solution for life-line infrastructures. As mentioned, *we are presently at a watershed moment due to the onset and rapid acceleration of microgrid installations. Federal EMP standards are desperately needed to inform and govern the protection of microgrids. Otherwise, microgrids will actually increase the vulnerability of the existing grid due to the added layer of complexity, including heavy reliance on microprocessor controls vulnerable to the E1 pulse.* While I commonly learn about efforts to protect commercial systems against EMP, I would be hard-pressed to give a good example of EMP-protected microgrids in the civilian infrastructure. Accordingly, I estimate that the microgrids now being developed and installed would fail under EMP attack conditions.”²⁶

For the *\$Trillions* allocated to be spent on “infrastructure” with the “Bi-Partisan Infrastructure Bill” and “Inflation Reduction Act,” this is our best opportunity to harden *our most critical infrastructure*: the grid.

FROM THE 2017 EMP COMMISSION REPORT - ASSESSING THE THREAT FROM ELECTROMAGNETIC PULSE (EMP) EXECUTIVE REPORT - CONCLUSIONS (<http://www.firstempcommission.org/>)

The critical national infrastructure in the United States faces a present and continuing existential threat from combined-arms warfare, including cyber and manmade electromagnetic pulse (EMP) attack, as well as from natural EMP from a solar superstorm. During the Cold War, major efforts were undertaken by the Department of Defense to assure that the U.S. national command authority and U.S. strategic forces could survive and operate after an EMP attack. However, no major efforts were then thought necessary to protect critical national infrastructures, relying on nuclear deterrence to protect them. With the development of small nuclear arsenals and long-range missiles by new, radical U.S. adversaries, the threat of a nuclear EMP attack against the U.S. becomes one of the few ways that such a country could inflict devastating damage to the United States. It is critical, therefore, that the U.S. national leadership address the EMP threat as a critical and existential issue, and give a high priority to assuring the leadership is engaged and the necessary steps are taken to protect the country from EMP.

Protecting and defending the national electric grid and other critical infrastructures from cyber and EMP attacks could be accomplished at reasonable cost and minimal disruption to the present systems that comprise U.S. critical infrastructure. The following six recommendations are offered to accomplish this goal.

Recommendation 1: *The Commission recommends the President establish an Executive Agent with the authority, accountability, and resources to manage U.S. national infrastructure protection and defense against the existential EMP threat.*

Recommendation 2: *The Commission strongly recommends that implementation of cybersecurity for the electric grid and other critical infrastructures include EMP protection.*

Recommendation 3: *The Commission encourages the President to work with Congressional leaders to establish a joint Presidential-Congressional Commission, with its members charged with supporting the Nation’s leadership to achieve, on an accelerated basis, the protection of critical national infrastructures.*

Recommendation 4: *The Commission recommends that government agencies and industries adopt new standards to protect critical national infrastructures from damaging E3 EMP heave fields, with more realistic standards of 85 V/km.*

Recommendation 5: *The Commission recommends that the Department of Defense and the Department of Energy provide expedited threat-level, full-system testing of large power transformers in wide use within the bulk electric system and share key findings with the electric utility industry.*

Recommendation 6: *The Commission recommends the Director of National Intelligence circulate to all recipients of the 2014 JAEIC report the EMP Commission critique and direct a new assessment be prepared that supersedes the 2014 JAEIC EMP report.*

IN ORDER TO IMPLEMENT THE RECOMMENDATIONS ABOVE - AN EMP “MANHATTAN PROJECT” IS NEEDED (This Entire Section from Dr. Peter Vincent Pry’s book, *EMP Manhattan Project*²⁷):

“President Franklin Roosevelt’s Manhattan Project (1942-1945) was a crash emergency program to develop the atomic bomb before Nazi Germany could confront Western Civilization with an unanswerable existential threat.

Miraculously, in merely three years, the Manhattan Project organized an army of scientists and engineers, built nuclear industrial facilities and entire cities that never before existed, and achieved the seemingly impossible feat of translating arcane and problematical scientific theories into the reality of revolutionary new weapons that ended World War II and prevented the Cold War from becoming World War III.

Today the United States and the world faces another existential threat — from an electromagnetic pulse (EMP), that can be caused by Nature or Man, and topple the technological pillars of modern electronic civilization.

Why does the EMP threat warrant another Manhattan Project?

EMP Commission Chairman Dr. William Graham warns: ‘an EMP event causing **a nationwide blackout lasting one year could kill up to 90 percent of the American people and that such a catastrophe could**, figuratively and literally, turn out the lights across entire nations and be the advent of a new Dark Ages.’

Worth quoting at length is the Congressional EMP Commission’s 2017 ‘Executive Summary Assessing the Threat from Electromagnetic Pulse’:

- ‘The United States—and modern civilization more generally—faces a present and continuing existential threat from naturally occurring and manmade electromagnetic pulse assault and related attacks on military and critical national infrastructures.’
- ‘A nationwide blackout of the electric power grid and grid-dependent critical infrastructures—communications, transportation, sanitation, food, and water supply—could plausibly last a year or longer. *A long-term outage owing to EMP could disable most critical supply chains, leaving the U.S. population living in conditions similar to centuries past, prior to the advent of electric power.* In the 1800s, the U.S. population was less than 60 million, and those people had many skills and assets necessary for survival without today’s infrastructure.’
- The EMP Commission recommends protecting the national electric grid and other critical infrastructures utilizing an ‘all hazards’ strategy. Thus, protecting against the worst threat—nuclear EMP attack—can also mitigate all lesser threats, including natural EMP from solar superstorms, non-nuclear EMP weapons, cyber-attacks, sabotage, and severe weather like hurricanes.

- The challenge of protecting the nation’s critical infrastructures from EMP is—from a scientific, technological, and financial perspective—modest compared to the original Manhattan Project:
 1. **Scientifically.** The original Manhattan Project began merely with a physics theory about atomic weapons, not knowing whether they would be possible or practical to build given the technology of the 1940s. In contrast, EMP is a proven scientific phenomenon demonstrated and well understood.
 2. **Technologically.** The original Manhattan Project had to invent not only the atomic bomb, but a wide array of new machines, new chemical and metallurgical industries, new electronics and instruments, to manufacture and refine weapons-grade uranium and plutonium. In contrast, technologies for EMP protection already exist and have been used to protect military systems for over a half-century.
 3. **Financially.** The original Manhattan Project cost about \$20 Billion in today’s dollars, an enormous expense for the U.S. government in the midst of fighting World War II. In contrast, the Congressional EMP Commission estimates protecting the national electric grid would cost as little as few billion dollars, a relatively trivial expense today and just a small fraction of the monies allocated each year for infrastructure.

So why is an EMP Manhattan Project necessary?

The bureaucratic politics of EMP protection are so formidable, despite the best bipartisan efforts of Congress, that no real progress has been achieved in implementing the EMP Commission’s recommendations made in 2008, over a decade ago. Despite years of educational and legislative effort, American civilization remains unprotected from EMP extinction.

Moreover, the U.S. government of the 21st century is not the same highly competent U.S. government of the Greatest Generation that successfully ran the Manhattan Project to invent the atomic bomb, won World War II, built the national highway system, and sent a man to the moon.

Today’s U.S. government is generally so corrupt, incompetent, divided, and obstructionist that it seems no longer capable of carrying out great enterprises, as it did in the past.

An EMP Manhattan Project is necessary because the bureaucratic politics of EMP protection are even more formidable than the scientific, technological, and financial obstacles that faced the original Manhattan Project’s development of the atomic bomb.”

(End of Section, from Dr. Peter Vincent Pry’s book, *EMP Manhattan Project*²⁷)

Whose problem is this? EVERYONE’S!

Is grid security a Democrat vs. Republican issue? Is grid security a liberal vs. conservative issue? Is grid security a race, religion, sexual orientation, or gender issue? NO, to all of the above! *This danger will kill up to 90% of us regardless of our personal differences.* In regards to securing the electric grid:

“The vulnerability of America’s electric grid is a ticking time-bomb. The government knows that if that vulnerability is exploited by enemies or afflicted by space weather, we could experience the end of our Nation as we know it. Many of our foes are aware of both the grid’s susceptibility to attack and the potentially catastrophic consequences for this country and its people should it happen... Only the public is still largely in the dark about these dangers. If something is not done promptly to rectify the situation, our countrymen and women risk being kept in the dark permanently. We must secure the grid now.” – Frank J. Gaffney, Jr., Executive Chairman and Founder of the Center for Security Policy.

In order to save lives and protect America, we need to IMMEDIATELY: Educate as many concerned citizens as possible to spread the word to others to better personally prepare themselves and their communities against the possibility of a long-term grid-down situation and to exert overwhelming political pressure at the state and national level. This political pressure should be focused on State Governor Executive Orders as well as supporting the existing Presidential Executive Orders and the Critical Infrastructure Protection Act (CIPA).

State orders and national emphasis should focus on: 1) the protection and hardening of the key 20% of the existing national power grid that supports critical infrastructures in every community; 2) protection and hardening of these critical infrastructures themselves; 3) resiliency (i.e. backups and ability to “restart” the power grid in the event it goes down); 4) and finally, creation of new, “all hazards” protected “micro-grids” that would provide power directly to these critical infrastructures.

If we can keep water and wastewater, food, communications, hospitals, and emergency services going, the American people would be able to “shelter in place” and not have to evacuate our cities. Our stateside military bases must lead the way in developing and utilizing “all hazards” protected “micro-grids” so that they are not completely dependent on the civilian power grid, as they are now. As an attractive side-benefit, creating resiliency for our power and critical infrastructures also creates numerous new jobs and new industries.

How this affects you directly and what you can do to better protect yourself and your loved ones:

1. **Do your own homework.** There are plenty of high-quality references available in the footnotes and online. Make your own informed decision on whether or not you feel our electric power grid and our critical infrastructures are at risk. You, ultimately, are responsible for your own safety
2. If you feel that “bad things could happen” and that the government might not be able to be there immediately to help, then you should **take actions to better prepare yourself and your family.** The goal is saving lives, and certainly the lives of those you care about the most come first. There is a wealth of information about disaster preparedness following grid-down and other emergency events available online, in books and videos, on YouTube, etc. Start with the assumption that help won’t be coming, and if it did, it could be a while. Clearly, 3 to 14 days of food won’t be enough. You would also need stored water and/or a way to collect and purify water to drink, and some means to properly defend yourself and your loved ones. We very much hope America never has to face a situation like this, but it is wise to be prepared for anything, just in case. The better prepared you are, the better able our government can direct limited resources to those who aren’t well prepared (i.e. most everyone else). The good news about being better prepared individually and as a family: you’re much more likely to be OK and not have to rely on initially limited Government resources in the vast majority of regional emergencies (such as a localized loss of the power grid, or an earthquake, flood, tornado, hurricane, etc.), where communication still exists and outside help is able to arrive within several days to several weeks to the whole of the affected area. The bad news: in a worst-case GMD or nuclear EMP or other event affecting the entire country, this level of preparedness will not be sufficient. It would only be a matter of time before the vast majority of “prepared” family homes are overrun by those who are starving and desperate.
3. **A significant step up from the solo prepared person or family is a community of prepared individuals.** Two books on this topic are from Jonathan Hollerman, *Survival Theory: A Preparedness Guide*²⁸ and *Survival Theory II: The Psychology of Human Desperation, Starvation, and Living Without Rule of Law*²⁹. Also, a good resource is from Michael Mabee, *The Civil Defense Book*³⁰. All are included in the footnotes and are excellent reading. *One Second After*⁵ is an excellent fictional accounting of a prepared community’s struggles in the first year following a

nationwide nuclear EMP event. The good news: you are much more likely to survive in a community of prepared individuals or a prepared small town than by going it alone; you would have a much better chance of being included within the small percentage of survivors following a nationwide EMP or GMD event. The bad news: if we haven't protected our grid from widespread damage and destruction **before** a nationwide EMP or GMD event, the majority of Americans would likely die within the first year.

4. **A very significant step up from communities of prepared individuals is what this Call to Action is all about: protecting in advance our electric power grid and our critical infrastructures from all hazards.**³¹ If we are not satisfied with an America consisting of isolated pockets of prepared survival communities vs. roving armed gangs in the starvation and disease-ridden, smoke and radiation filled aftermath of our once great country, then we have an overwhelming need to be able to keep at a minimum, at least some of our electric power and critical infrastructures running, such as water, wastewater and communications. This would allow our population to “shelter in place”, even in the big cities, while we restore remaining power and critical infrastructures as quickly as possible to affected areas and to save the greatest number of lives in any large scale or nationwide grid-down event. The effects of not protecting our electric grid against all hazards would be far worse than anything we have ever experienced before. If we are unprepared, there is no effective response **after** a massive EMP or Solar Flare/GMD event. You either prepare beforehand, or our country ceases to exist as we know it.

YOU CAN BE PART OF THE SOLUTION!

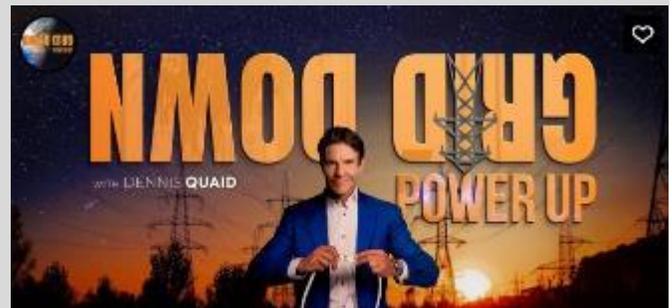
If this is important to you, here are some additional things you can do:

1. **Forward this information** to family, friends, co-workers, church members, and groups you know. The public has largely been kept in the dark. An ignorant public cannot effect change.

2. **Watch and share the excellent, brand-new documentary, *Grid Down Power Up***

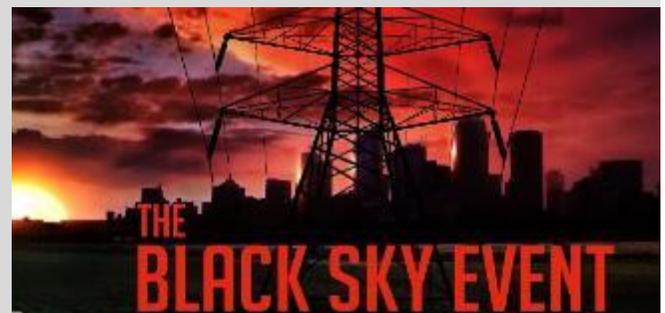
<https://griddownpowerup.com/>

On their website use the “Participate” tab to “pay it forward” and to send emails to all your Legislators, to your Utility Board Members, and to your Regulators, with very little effort on your part.



3. **Watch and share the excellent documentary series *The Black Sky Event* for more excellent and highly detailed analysis on the gravity of our unprotected grid and our lack of readiness for a “Black Sky Event.”**

<https://theblackskyevent.com/>



4. **Send this “Call to Action” to your elected government officials. Include a short cover letter with your own words. They work for us on the matters that are important to us. They need to hear from you and understand this is important.** This “Call to Action” is written with enough facts, information and references to prove that a very real problem exists, that solutions are available, and that action needs to be taken NOW. Continued excuses are unacceptable. To find your Federal, State and Local elected officials, go to this website: <https://www.usa.gov/elected-officials>.

5. **Concern without action achieves little, but concern with action can be unstoppable.** There is much that can be done, but it needs to be done NOW. For more information, go to either or both of the organizations listed at the beginning. Donations are greatly appreciated and help us to reach broader audiences who need to be aware of this information. There are additional resources in the footnotes.

To Summarize: *“We believe the citizens and the state and national governments of the United States of America can come together to save lives by protecting our electric power¹ and our critical infrastructures² - including water & wastewater, communications, emergency services, transportation, healthcare & public health, food & agriculture, energy, and financial services - against any and all threats, including those from extreme solar weather, nuclear and non-nuclear electromagnetic pulse (EMP), physical and cyber-attacks, and supply chain threats. Together, we can save lives and protect America by taking action at the personal, state and national levels.”*

“We Americans have had our backs up against the wall before and we can do this. Choose power up, not grid down.”
-Dennis Quaid (<https://griddownpowerup.com/>)

Hope has two beautiful daughters. Their names are **Anger and **Courage**. **Anger** at the way things are, and **Courage** to see that they do not remain as they are.”**

-St. Augustine

Footnotes:

(Note: website hyperlinks have been removed to avoid this report being treated as “spam” when emailed. Please copy and paste any website links.)

¹The **U.S. National Power Grid** is composed of the Eastern Interconnection, Western Interconnection, and Texas Interconnection Power Grids. Much of Canada is included in the Eastern and Western Grids.

²The **16 Critical Infrastructure Sectors**: Energy; Defense Industrial Base; Communications; Healthcare & Public Health; Emergency Services; Water & Wastewater Systems; Transportation Systems; Food & Agriculture; Information Technology; Financial Services; Nuclear Reactors, Materials, & Waste; Chemical; Commercial Facilities; Critical Manufacturing; Dams; and Government Facilities. All of these infrastructures are highly dependent on electricity and technology.

³Until his passing in 2022, Dr. Peter Vincent Pry served as the Executive Director of the Task Force on National and Homeland Security, a Congressional Advisory Board dedicated to achieving protection of the United States from electromagnetic pulse (EMP), cyber-attack, mass destruction terrorism, and other threats to civilian critical infrastructures on an accelerated basis. Dr. Pry was also the Director of the United States Nuclear Strategy Forum, an advisory board to Congress on policies to counter Weapons of Mass Destruction. Dr. Pry served on the staffs of the Congressional Commission on the Strategic Posture of the United States (2008-2009); the Commission on the New Strategic Posture of the United States (2006-2008); and the Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack (2001-2017) as Chief of Staff.

Dr. Pry served as Professional Staff on the House Armed Services Committee (HASC) of the U.S. Congress, with portfolios in nuclear strategy, WMD, Russia, China, NATO, the Middle East, Intelligence, and Terrorism (1995-2001). While serving on the HASC, Dr. Pry was chief advisor to the Vice Chairman of the House Armed Services Committee and the Vice Chairman of the House Homeland Security Committee, and to the Chairman of the Terrorism Panel. Dr. Pry played a key role, running hearings in Congress that warned terrorists and rogue states could pose an EMP threat, establishing the Congressional EMP Commission, helping the Commission develop plans to protect the United States from EMP, and working closely with senior scientists who first discovered the nuclear EMP phenomenon. Dr. Pry was an Intelligence Officer with the Central Intelligence Agency. His responsibilities included analyzing Soviet and Russian nuclear strategy, operational plans, military doctrine, threat perceptions, and developing U.S. paradigms for strategic warning (1985-1995). He also served as a Verification Analyst at the U.S. Arms Control and Disarmament Agency, responsible for assessing Soviet compliance with strategic and military arms control treaties (1984-1985).

Dr. Pry wrote numerous books on national security issues, including *The Power and the Light: The Congressional EMP Commission’s War to Save America 2001-2020*; *EMP Manhattan Project: Organizing Survival Against An Electromagnetic Pulse Catastrophe*; *Nuclear EMP Attack Scenarios and Combined-Arms Cyber Warfare*; *Apocalypse Unknown: The Struggle To Protect America From An Electromagnetic Pulse Catastrophe*; *Electric Armageddon: Civil-Military Preparedness For An Electromagnetic Pulse Catastrophe*; *War Scare: Russia and America on the Nuclear Brink*; *Nuclear Wars: Exchanges and Outcomes*; *The Strategic Nuclear Balance: And Why It Matters*; and *Israel’s Nuclear Arsenal*. Dr. Pry often appeared on TV and radio as an expert on national security issues. The BBC made his book *War Scare* into a two-hour TV documentary *Soviet War Scare 1983*. His book *Electric Armageddon* was the basis for another TV documentary *Electronic Armageddon* made by National Geographic.

⁴Two excellent resources to learn more about the vulnerabilities of our nuclear power plants on loss of external electric power and what can be done about it:

PRM-50-96, *a research-based analytical petition to supply long-term power for spent fuel pools at nuclear power plants*. Foundation for Resilient Societies: <https://www.resilientsocieties.org/nuclear-regulatory-commission.html>

Campbell, Hershel and David Stuckenberg, *Electromagnetic Pulse and Space Weather and the Strategic Threat to America’s Nuclear Power Stations, Final Report, June 2015*. The American Leadership & Policy Foundation: <https://www.emptaskforce.us/wp-content/pdf/Electromagnetic-Pulse-and-Space-Weather-Final-Report-2015.pdf>

⁵Forstchen, William R., *One Second After*. New York: Tom Doherty Associates, 2009. This is a fictional, but very realistic, account of what the first year would be like after a high altitude nuclear EMP attack, set in the author’s hometown of Black Mountain, NC. Its information is based largely upon the 2008 Congressional EMP Commission Report.

⁶A number of high-altitude nuclear tests were conducted by both the US and the USSR in the early 1960s:

Starfish Prime was a July 9, 1962, high-altitude nuclear test conducted by the United States, a joint effort of the Atomic Energy Commission (AEC) and the Defense Atomic Support Agency. It was launched from Johnston Atoll, was the largest nuclear test conducted in outer space, and was one of five conducted by the U.S. in space. The actual weapon yield was in the range of 1.4 to 1.45 megatons and detonated at an altitude of 250 miles (400 km).

Starfish Prime *caused an electromagnetic pulse (EMP) that was far larger than expected*, so much larger that it drove much of the instrumentation off scale, causing great difficulty in getting accurate measurements. The Starfish Prime electromagnetic pulse also made those effects known to the public by causing electrical damage in Hawaii, about 898 miles (1,445 km) away from the detonation point, knocking out about 300 streetlights, setting off numerous burglar alarms, and damaging a telephone company microwave link. The EMP damage to the microwave link shut down telephone calls from Kauai to the other Hawaiian Islands. Starfish Prime. In Wikipedia. Retrieved May 5, 2020, from https://en.wikipedia.org/wiki/Starfish_Prime

The **Soviet Union's K project nuclear test series** was a group of 5 nuclear tests conducted in 1961-1962.

The K project nuclear testing series were all high altitude tests fired by missiles in Russia across central Kazakhstan. Two of the tests were 1.2 kiloton warheads tested in 1961. The remaining three tests were of 300 kiloton warheads in 1962.

The worst effects of a Soviet high altitude test were from the electromagnetic pulse of the nuclear test on 22 October 1962 (during the Cuban missile crisis). In that Operation K high altitude test, a 300 kiloton missile-warhead detonated at an altitude of 180 miles (290 km).

The Soviet scientists instrumented a 350 mile (570 km) section of telephone line in the area that they expected to be affected by the nuclear detonation in order to measure the electromagnetic pulse effects. The electromagnetic pulse (EMP) fused all of the monitored overhead telephone line with measured currents of 1500 to 3400 amperes. The monitored telephone line was divided into sub-lines of 25 to 50 miles (40 to 80 km) in length, separated by repeaters. Each sub-line was protected by fuses and by gas-filled overvoltage protectors. The EMP caused all of the fuses to blow and all of the overvoltage protectors to fire in all of the sub-lines of the 350 mile (570 km) telephone line. The EMP also caused the destruction of the Karaganda power plant and shut down 620 miles (1,000 km) of shallow-buried power cables between Astana (then called Aqmola) and Almaty. Soviet Project K nuclear tests. In Wikipedia. Retrieved May 5, 2020, from https://en.wikipedia.org/wiki/Soviet_Project_K_nuclear_tests

Note: the damage from these high altitude nuclear tests occurred in 1961-1962 when vacuum tubes were in use, long before the advent of much more susceptible electronic equipment, such as personal computers, cell phones, etc.

The Partial Test Ban Treaty was passed the following year, ending atmospheric and exo-atmospheric nuclear tests.

⁷Gaffney Jr., Frank J, *Guilty Knowledge: What the US Government Knows about the Vulnerability of the Electric Grid, But Refuses to Fix*. Center for Security Policy, 2014. The executive summaries of eleven Federal Agency studies, including the 2004 and 2008 Congressional EMP Commission Reports, have been compiled into this short (60 pages) reference book. (A PDF copy of the book downloadable at <http://securethegrid.com/vulnerability> along with an excellent "Threats to the Grid" PDF presentation.)

Frank J. Gaffney, Jr. is the Founder and Executive Chairman of the Center for Security Policy in Washington, D.C., a not-for-profit, non-partisan educational corporation established in 1988. Under Mr. Gaffney's leadership, the Center has been nationally and internationally recognized as a resource for timely, informed and penetrating analyses of foreign and defense policy matters. Mr. Gaffney is the host of *Securing America*, a nationally syndicated radio program heard weeknights throughout the country.

⁸The computers that are located throughout the power grid and within critical infrastructure are called Supervisory Control and Data Acquisition (SCADA). They typically look just like personal computers and take on responsibilities that human beings used to do, such as regulating power load on the electric grid, operating nuclear reactor cooling pumps, controlling natural gas pipelines, or operating water and wastewater pumps and systems.

⁹The massive solar flare that narrowly missed Earth in 2012 would likely have been similar in size to the "**Carrington Event**" of 1859, the largest solar flare on record to hit Earth. It caused fires in many telegraph stations world-wide and destroyed the recently laid trans-Atlantic Ocean telegraph cable. Solar flares of this magnitude are estimated to hit Earth every 100 to 150 years, and NASA estimates the likelihood of another at 12% per decade. Other scientific names for these regularly occurring natural events are "Coronal Mass Ejections" (CMEs), "Geomagnetic Disturbances" (GMDs), Magneto-Hydrodynamic (MHD) phenomena, "Natural EMP", and "Solar Storms". Meanwhile, "For the cost of less than 1% of the Biden infrastructure bill we could protect our electric grid from certain collapse": <https://centerforsecuritypolicy.org/for-the-cost-of-less-than-1-of-the-biden-infrastructure-bill-we-could-protect-our-electric-grid-from-certain-collapse/>

¹⁰A **high altitude nuclear EMP** event could be accomplished without identifying the attacker and by making missile intercept extremely difficult by using a nuclear-tipped, scud-type missile, launched from various sources, such as a container ship in international waters along any of our coastlines (both Iran & North Korea have practiced launching missiles from container ships). A low-yield nuclear device could be placed aboard and detonated in a meteorological balloon or in a civilian jet aircraft on a suicide mission. This could also be done using a satellite, such as the two North Korean KMS-3 and KMS-4 satellites that currently and regularly orbit over the U.S. on the optimum trajectory for a surprise EMP attack if nuclear armed. The entire Continental U.S. could be crippled by several different combinations of nuclear detonation, including 1 nuclear weapon detonated at 250 miles or higher (which is the height of many satellites), 3 nuclear weapons detonated at 18 miles or higher, or most effectively, 3 nuclear weapons detonated at 80 miles or higher (which is well within the capability of Scud-type missiles).

¹¹Maloof, F. Michael, *A Nation Forsaken: EMP: The Escalating Threat of an American Catastrophe*. Washington D.C.: WND Books, 2013. Besides covering solar GMD and nuclear EMP threats, the author provides excellent information on non-nuclear EMP and RF

weapons threats, which are devices easily made or purchased that can have devastating effects on electronics and transformers but often have limited damage radiuses of 1 kilometer or less. (Available on Amazon.)

¹²Koppel, Ted, *Lights Out: A Cyberattack, A Nation Unprepared, Surviving the Aftermath*. New York: Crown Publishers, 2015. This is an excellent study on the cyber threat, by award winning reporter, Ted Koppel. (Available on Amazon.)

¹³Pry, Dr. Peter Vincent, *Nuclear EMP Attack Scenarios and Combined-Arms Cyber Warfare*. Report to the Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack. July 2017. (Available on Amazon.)

¹⁴Four excellent videos to watch to quickly educate on the dangers to our electric grid and critical infrastructures from all hazards, including nuclear EMP and large solar storms:

Electronic Armageddon. 2010. <https://www.dailymotion.com/video/xp1waq> (46 minutes)

EIS Council, *Global Energy Security*. 2014. <http://www.eiscouncil.com/Video> (14 minutes)

The Black Sky Event. 2022. <https://theblackskyevent.com/> (Episode One: 20 minutes)

Grid Down Power Up. 2023. <https://griddownpowerup.com/> (1 hour)

¹⁵The **black swan theory** is a metaphor that describes an event that comes as a surprise, has a major effect, and is often inappropriately rationalized after the fact with the benefit of hindsight. What we call a Black Swan is an event with the following three attributes: first, it is an outlier, since it lies outside the realm of regular expectations, because nothing in the past can convincingly point to its possibility; second, it carries an extreme 'impact'; and third, in spite of its outlier status, human nature makes us concoct explanations for its occurrence after the fact, making it explainable and predictable. A small number of Black Swans explains almost everything in our world, from the success of ideas and religions to the dynamics of historical events and to elements of our own personal lives. Black Swan. In Wikipedia. Retrieved July 4, 2017, from https://en.wikipedia.org/wiki/Black_swan_theory

¹⁶Dr. William Radasky and Dr. Peter Vincent Pry, "Rebuttal to The EMP Threat: Fact, Fiction, and Response," July, 2010, <http://www.thespacereview.com/article/1656/1>. This excellent piece gives the reader valuable insight into "junk science" paid for and widely distributed by the utilities industry. The reader gains an appreciation of the scientific falsifications used by special interest groups to justify doing nothing in the face of national peril.

¹⁷There's an **Unwritten Law in Government** of "Thou shalt not panic or upset the American people", because it is bad for the economy and it is bad for re-elections to say otherwise. "There is nothing that can happen that the U.S. government can't help you with in a few short days" is how the public sentiment goes. The Department of Emergency Management previously stated citizens only needed 3 days of food; now they have extended their recommendations to 2 weeks. The assumption is help will always be there, no matter what, within that amount of time.

¹⁸The **normalcy bias** is a mental state people enter when facing a disaster. It causes people to underestimate both the possibility of a disaster and its possible effects because it causes people to have a *bias* to believe that things will always function the way things *normally* function. This may result in situations where people fail to adequately prepare and, on a larger scale, the failure of governments to include the populace in its disaster preparations. The assumption made in the case of normalcy bias is that, since one has never personally experienced a disaster, one never will. It can result in the inability of people to cope with a disaster once it occurs. People with a normalcy bias have difficulties reacting to something they have not experienced before. They also tend to interpret warnings in the most optimistic way possible. Normalcy bias is essentially a "desire for the status quo." "With a normalcy bias," writes one observer, "we project current conditions into the future. Normalcy bias is a form of denial where we underestimate the possibility and extent of a looming disaster even when we have incontrovertible evidence that it will happen. We assume that since a disaster never has occurred, then it never will occur. Consequently, we fail to prepare for a disaster and, when it does occur, we may be unable to deal with it." Normalcy bias has also been called analysis paralysis, incredulity response, the ostrich effect and, by first responders, the negative panic. Normalcy Bias. In Wikipedia. Retrieved July 4, 2017, from https://en.wikipedia.org/wiki/Normalcy_bias

¹⁹Congressional commissions, like the **Congressional EMP Commission**, are instruments of last resort, established when departments and agencies and the U.S. Congress cannot achieve agreement on a controversial issue vital to our national interest. Typically, commissioners are senior statesman and nationally recognized scientists or experts, selected on a bi-partisan basis, so that their findings will be respected by all regardless of party affiliation. Congressional commissions typically are invested with broad legal powers to carry out investigations, to compel departments and agencies to provide any and all relevant information, to hold hearings to air all points of view, and to conduct research. The Congressional EMP Commission was chaired by Dr. William Graham, the foremost EMP expert in the Free World, who served as President Reagan's White House Science Advisor, was Director of NASA, and was on the defense science team that first discovered the EMP phenomenon during the 1962 STARFISH PRIME high altitude nuclear test. The EMP Commissioners and staff included some of our greatest scientists and strategic thinkers, including Dr. John Foster (designed most U.S.

nuclear weapons currently deployed), Dr. Lowell Wood (formerly Lawrence Livermore National Lab, the most inventive American in history, holds world record for inventions), Ambassador Henry Cooper (former Director of the Strategic Defense Initiative), Dr. Peter Vincent Pry (formerly with the CIA, until his passing in 2022 the Executive Director of the Task Force on National and Homeland Security, author of numerous books on national security issues) and many others.

²⁰ The 2017 Congressional EMP Commission was hampered from doing their job throughout all of 2016. In early 2017, they were finally able to begin their work, but were further hampered by false allegations of corruption levied against them. These allegations were soundly disproven, but not without reputational damage being inflicted on the Commission. (Note: The EMP Commission members have worked without pay, essentially for the last 20 years, only having some of their out of pocket expenses provided for between 2000-2008 and in 2017.)

²¹ The argument of many in the utilities industry typically follows this order: FERC and NERC report performances are high for reliance and resilience, the risks to the electric grid are highly inflated, and they have procedural plans in place to address the security of the electric grid for most threats. FERC and NERC also frequently state grid security from man-made threats is an issue of national security and that the Department of Defense has not reported to them directly that grid security is an issue the utilities industry needs to address. Among NERC's concerns are the bottom line expenses of hardening/protecting the grid and an unwillingness to pay for these expenses, particularly for what they feel are "very remote probability events". Members of NERC feel they have many other events of higher frequency but lower impact with which to be more concerned.

²² Pry, Dr. Peter Vincent, *The Power and the Light: The Congressional EMP Commission's War to Save America 2001-2020*. EMP Task Force on National and Homeland Security, 2020. Mandated by the EMP Executive Order was a progress report from the Department of Homeland Security (DHS), Department of Energy (DOE), and other relevant parts of the U.S. Government due to the White House on March 26, 2020. This book was Dr. Pry's progress report to the American people on implementation of EMP national preparedness. (Available on Amazon.)

A Short Summary of the Opposition to National Preparedness from Dr. Pry's *The Power and The Light*:

—"Nuclear EMP attack was a 'politically incorrect' threat during the Obama Administration (2008-2016). President Obama did not want to acknowledge that North Korea or Iran became nuclear existential threats to the American people during his watch." (Pages 177-178): "The President's DoD knew the nuclear EMP threat was real and took it seriously enough to spend \$700 million further hardening NORAD against EMP attack from North Korea. Additionally, President Obama deserves credit for being the first President to include natural EMP from solar storms as among the threats of concern for the Dept. of Homeland Security. However, his public focus was on the... threat from 'climate change', not on the more... imminent threat from nuclear EMP attack by North Korea or Iran. Nor did President Obama move to protect the electric grid or other civilian critical infrastructures from EMP, which of course would have required public explanation that nuclear EMP attack is an existential threat perhaps eclipsing 'climate change'."

—"Previous administration... bureaucrats who are EMP non-experts and have long opposed national EMP preparedness for reasons ideological, political, and personal, not least stupidity, were largely in charge of "implementing" President Trump's EMP Executive Order."

—"The deeply erroneous EMP report by the Joint Atomic Energy Intelligence Committee (JAEIC) and the more recent so-called "Tri-Labs EMP Report", both written by a small number of non-experts parroting each other, continue to circulate, misinforming U.S. officials and damaging national security. Both reports are highly classified, apparently to protect them from scrutiny and criticism from real EMP experts, while being invoked to prevent mid-level officials (who lack the security clearances) from protecting their assets from EMP." The EMP Commission wrote a classified rebuttal and recommended the recall of these reports, including in letters to Director of National Intelligence (DNI) Dan Coates and DNI Joseph Maguire, which recommendations have been ignored, to the grave harm of our nation.

—"The Department of Homeland Security (DHS) "National EMP Strategy", drafted at the direction of Senator Ron Johnson's excellent Critical Infrastructure Protection Act, underestimates the EMP threat and is deeply flawed."

—"Bogus analysis that grossly underestimates natural and nuclear EMP threats by the Electric Power Research Institute (EPRI), a lobby for the electric power industry masquerading as a think tank, is being funded by the Department of Energy (DOE) and wrongly treated by DHS as analytically sound, even though the EPRI Reports have been critiqued and proven erroneous by the EMP Commission and the USAF Electromagnetic Defense Task Force. *EPRI's preposterous bottom-line: Nuclear EMP attack will be no more consequential than other localized or regional blackouts with which utilities have experience*—contradicting legitimate EMP studies by real experts including the Congressional EMP Commission, the U.S. Air Force Electromagnetic Defense Task Force, the Congressional Strategic Posture Commission, the U.S. Federal Energy Regulatory Commission, the National Academy of Sciences, and every other major study by the Department of Defense and the U.S. Government over more than 50 years. EPRI's 'happy face'

EMP reports are reminiscent of the cigarette industry's untrustworthy 'independent laboratory assessments', allegedly proving there is no causal linkage between smoking and lung cancer."

—"The rampant incompetence of DHS and DOE is manifest in that they give greater credibility to EPRI non-experts than to the EMP Commission and its Chairman, Dr. William Graham—the foremost EMP expert in the Free World. Chairman Graham also served as President Reagan's White House Science Advisor, ran NASA, was on the defense science team that discovered the EMP phenomenon, and has been protecting U.S. military systems from EMP since 1963."

—"President Trump's EMP Executive Order responded to the work and recommendations of the EMP Commission, yet the U.S. Government's implementation of the EMP Executive Order proceeds with almost no involvement or consultation with former EMP Commissioners and staff."

— "Dr. William Graham, and former CIA Director R. James Woolsey, warn that America faces an existential threat from EMP in part because of disinformation from the... media ('Prepare for The Worst' RealClearDefense.com, October 21, 2019): *'Not only has the EMP Commission faced a long uphill battle advancing national EMP preparedness against a resistant federal bureaucracy, but against an irresponsible press that often misinforms the public with absurd claims...'* For example, the Washington Post published 'Trump Issued an Executive Order to Prepare For An EMP Attack. What Is It And Should You Worry?' (March 29, 2019), written by four college students posing as 'instant EMP experts' that includes numerous errors of fact and omission. The latest soldier in the ignorant army of liberal reporters disinforming the public and belittling the EMP threat, is POLITICO's Sarah Cammarata in 'Is It Lights Out for Trump's EMP Push' (November 12, 2019)."

²³A **Faraday cage** or **Faraday shield** is an enclosure used to block [electromagnetic fields](#). A Faraday shield may be formed by a continuous covering of [conductive material](#) or in the case of a Faraday cage, by a mesh of such materials. Examples of a Faraday cage would be a metal or aluminum foil covered box with no gaps anywhere, with insulation on the inside, protecting electronics on the inside.

²⁴Lasky, Mary, *Powering Through from Fragile Infrastructures to Community Resilience*. InfraGard EMP Special Interest Group, 2016. (Available on Amazon.)

²⁵**The following would be actions that could be taken immediately to enhance grid resiliency and improve the prospects for recovery:**

1. Dispatching tanker trucks of diesel fuel for backup diesel generators to the most critical electric grid control rooms. Currently, some of these control rooms have only a few days of backup fuel.
2. Building up on-site coal stockpiles at coal-fired baseload generation plants to 60 days or more.
3. Ensuring oil tanks at dual-fuel gas-fired generation plants are filled.
4. Maximizing the storage of natural gas in transmission pipelines (a process known as "linepack") serving electric generation plants. Storing significantly more natural gas in depleted gas basins and salt mines.
5. Metal buildings and electromagnetic protected cabinets for SCADAS, with filters for incoming lines.
6. Backup Generators Installed, Set to "Manual Start", or Separated. Setting emergency diesel generators to "manual start" versus "automatic start" makes them less vulnerable to EMP and solar storms. This, however, is not a perfect solution, since the gap between the poles on the generator's manual control switch may still be small enough for EMP to flash over. The ideal solution is to further install a robust lever switch between the generator and the building system with a gap of several inches between the poles.

The following measures should be readied for swift implementation in the event an incoming ballistic missile-delivered EMP attack is detected or a solar storm is identified:

1. SCRAM (i.e. fast shutdown) of all nuclear generation plants.
2. Controlled shutdown of coal-fired plants with electronic controls to preserve the controls and prevent explosion due to uncontrolled combustion. (Steam turbines need to be carefully slowed down and stopped to prevent damaging the blades as the hot main shaft sags.)
3. Disconnection of transmission lines that have been modelled to have large induced currents due to the E3 (long wavelength) pulse. (To balance load and generation, load sheds will be required.)

Examples of necessary grid protection measures that will take longer to implement include:

- Resilient power for backup cooling of nuclear reactors and spent fuel pools at nuclear power plants.
- Encryption of communications between grid control rooms and substations.
- Removal of malware in the electric grid inserted by the Russians, Chinese, and other bad actors.
- Mandates for cyber security fixes for critical grid equipment, both within the FERC supervised bulk electric system and for state-supervised distribution utilities.
- Real-time data feeds from utilities to a U.S. government operations center to establish 24/7 situational awareness for all energy infrastructures, including gas pipelines and the electric grid.
- Dual-drive compressors for natural gas pipelines that can run on both natural gas and electricity.

- Automated cyber security for grid controls, based on machine-speed protective measures.
- Rotating Equipment Isolation Devices (REID) installed at substations feeding the key generating, pumping, and compression installation of water, oil and gas pipelines, and on substations serving Military, National Guard, and Emergency Management bases.
- For “all hazard” protection to include solar storms and nuclear EMP, installation of surge protectors, neutral current blockers, as well as improved physical security that includes bulletproof metal enclosures at 2,000-2,500 essentially irreplaceable critical transformer substations, at a cost of \$2-4 Billion.
- Protection of grid control centers against solar storms and nuclear EMP effects.
- Hardening control systems against “all hazards”, including EMP, at large hydroelectric facilities.
- Hardening on-site boiler control systems against “all hazards”, including EMP, at coal fired plants.
- A regional network of industry-funded strategic reserves of extra high voltage transformers, with cost-recovery for utilities from ratepayers.

²⁶Baker, Dr. George H., Testimony of Dr. George H. Baker before the Senate Committee on Homeland Security and Government Affairs, February 27, 2019.

²⁷Pry, Dr. Peter Vincent, *EMP Manhattan Project: Organizing Survival Against an Electromagnetic Pulse Catastrophe*. EMP Task Force on National and Homeland Security, 2018. This book advocates for another “Manhattan Project” to protect the U.S. electric grid and other life-sustaining critical infrastructures. (Available on Amazon.)

²⁸Hollerman, Jonathan, *Survival Theory: A Preparedness Guide, How to Survive the End of the World on a Budget*. Pennsylvania: APOC Publishing, 2016. Jonathan Hollerman’s well researched, honest, and uncompromising book sheds light on what would be required to survive an extended national blackout and how most lone-wolf individuals, even those who have prepared for disaster, would likely still die in the lawless aftermath. Survival would take prepared communities. (Available on Amazon.)

²⁹Hollerman, Jonathan, *Survival Theory II: The Psychology of Human Desperation, Starvation, and Living Without Rule of Law*. West Virginia: APOC Publishing, 2023. This book is a discussion on human psychology and physiology, and the threats posed by starvation psychosis during a prolonged, total electric grid collapse scenario. Many “survival experts” dangerously underestimate the threat posed by millions of starving, desperate people, and the necessity of fleeing major population centers after a societal collapse event. (Available on Amazon.)

³⁰Michael Mabee, *The Civil Defense Book, Emergency Preparedness for a Rural or Suburban Community*. South Carolina: CreateSpace Independent Publishing Platform, 2017. Michael Mabee’s excellent book discusses in great detail “community prepping”, also known as “civil defense”. It describes what it would take to properly protect and sustain a community as large as a town. (Available on Amazon.)

³¹Pry, Dr. Peter Vincent and the EMP Task Force on National and Homeland Security, *Catastrophe Now: America’s Last Chance to Prevent an EMP Disaster*. EMP Task Force on National and Homeland Security, 2023. This book is the last in a series of EMP books by Dr. Peter Vincent Pry. It illustrated the vulnerabilities, challenges, and solutions to the looming threat that EMP poses to the very survival of the United States as a sovereign state. In the race against time and complacency, the clock is ticking. This is America’s last chance to prevent an EMP disaster. (Available on Amazon.)

GRID DOWN: DEATH OF A NATION

The Psychology and Physiology of:
Human Desperation, Starvation, and
Living Without Rule-of-Law through
a Prolonged Grid Down Scenario





Introduction

In the aftermath of a long-term grid-down scenario brought on by an EMP attack, large CME, a cyber attack that destroys massive amounts of critical hardware, or a large-scale physical attack against our nation's HV transformers - how would the American people and the US military respond? When this question is asked, it is typically answered with ideas and platitudes that end in catchphrases and include words such as boot-straps and teamwork. The Lloyd's of London Report from 2013 titled, *Solar Storm Risk to the North American Electric Grid* ¹ described the aftermath of a worst-case scenario where the electric grid was destroyed by a Carrington-level solar storm, and our nation's critical infrastructure was not functional as follows:

"The absence of such fundamental services could lead to major and widespread social unrest, riots and theft with ramifications for the insurance industry and society in general."

Before we begin, a few parameters:

1. This paper is strictly written from the perspective of a long-term, national, grid-down scenario.
2. This information does not apply to grid down events that last less than a week or two.
3. This is written from the perspective that the attack is sudden and no last-minute government planning was available.
4. This is written to our current position of readiness, and not taking into account a hardened grid in the future.

Keeping those parameters in mind, this paper is going to primarily focus on three significant factors that are regularly overlooked when discussing or planning for the aftermath of a long-term grid-down event brought on by a

"Almost never, have I read a report that discusses starvation or accurately portrays what life will look like in a grid down event..."

"Social unrest, riots, and thefts..." Really Lloyd's? A year without electricity and those are the best descriptions you have? I read reports, plans, and recommendations regarding grid down events and how to plan for them. Rarely have I read a report that discusses starvation or accurately portrays what life will look like in a grid down event and what kind of psychological effects it will have on those involved. I will strive to do so in this paper.

HEMP (High Altitude Electromagnetic Pulse) attack, a massive CME (Coronal Mass Ejection), or catastrophic physical or cyber-attack that destroys electrical hardware and critical infrastructure.

Understanding the full psychological impact these three factors will have on civilian and military personnel will directly correspond to whether or not an emergency plan of action will be successful.



The Three Factors:

1

Human Desperation

A feeling of complete hopelessness and a life out of control. It's a negative psychological response to living in a horrific social [dis]order that is completely unrecognizable to a person's previous way of life and will likely prove to be unmanageable for the average person.

2

Starvation

This is not food deprivation, but true starvation on a scale that has never been seen in this nation. After a short time, civilians and military alike could go days and possibly weeks without a **single** substantial meal. The psychological and mental effects this will have on the US population is drastically ignored in most emergency planning.

3

Living Without Rule-Of-Law (WROL)

Living in an environment where there is no rule of law other than self-regulation will quickly lead to horrible atrocities not seen since the 12th century. Witnessing these events will be traumatic to most individuals.

All three of these factors can manifest themselves in varying levels of severity. Also, all three don't normally occur at the same time. In fact, I'm not sure you could point to a single instance in recent world history where all three came into play simultaneously, for an extended period of time, while also at the highest levels of severity. Many of the historical records of the atrocities committed (when you

combine just one or two of these factors) have been cleansed and removed from our history books including the atrocities committed during the fall of Nanking to Japanese forces, the stories of how the Russian's dealt with the Germans towards the end of WWII, stories from the Great Chinese Famine, the Holodomor, and many other horrific atrocities in world history that go largely ignored. The great World Wars are covered in school and any instances of evil deeds committed by America are usually discussed at length. But most people today don't realize that death by hunger and starvation has killed nearly a hundred times more people in the last two centuries than both World Wars combined². Most professors and teachers skip over the horrible atrocities that mankind always commits against each other when people go hungry. Many youths and college students are now considered too emotionally fragile to know the truth about humanity's depravity throughout the ages. It's why, shortly after 9/11, the major TV and news networks decided to stop showing any videos of the tragedies that happened during the 9/11 attack³. Unfortunately, this type of historical cleansing only reinforces the current and popular worldview that mankind is essentially "good and benevolent" by human nature. Showing people, the dirtiest and darkest parts of world history would be a stark reminder to the *Banality of Evil*⁴ and the average person's ability to commit atrocities against one another when placed in the right (or wrong) circumstances.





Many Americans today believe modern humanity has evolved past the dark Viking Days where life was “survival of the fittest.” We have not! Typically, a person only knows what they have experienced throughout their life. Our combined life experience in America is living in the greatest and richest country in the world overseen by a justice and legal system based on Judeo-Christian values.

Most Americans live their lives based on similar codes of morality regardless of their religious affiliation. With this comfort, the social boundaries, and our institutional systems in place, I understand how people can fall into the trap thinking that mankind is naturally good.

Because of modern technological advances on the battlefield, most third-world countries or terrorist organizations are realizing that conventional warfare against America is a losing, long-term strategy. The recent defeat of ISIS in Syria could possibly reinforce that realization. If the remnants of ISIS were to gain the knowledge, skills, or equipment on how to destroy or severely damage our electric grid, does any serious security analyst think they wouldn't take the opportunity of implementing it? It would be a slow and painful death to the country they consider The Great Satan.

The assumption that things will continue to function as before the crisis began is called normalcy bias, and it is one of the biggest reasons why most emergency plans will fail in spectacular fashion in a grid down event.

Unknown to most of its citizens, America is one extreme catalyst away from a horrific, overnight return to “survival of the fittest” as a way of life. Destroying the national electric grid in our country and thrusting our technology-dependent culture and infrastructure back into the stone age will certainly achieve that end. A total collapse may not happen in the first week, but as people begin to go hungry and eventually starve to death due to no food distribution networks or interstate trucking, a long-term grid down event in America will bring death, chaos, and unbelievable atrocities.



The Congressional EMP Commission has suggested that as many as ninety percent of Americans would die within the first year after the American electric grid came down⁵. While their assessment may be accurate, they haven't done a very good job of explaining why or how this would happen. It's not entirely clear whether they fully understand it themselves. Ninety percent of Americans dying is such a staggering percentage of our population, it's hard to fathom. If those percentages held up, the death toll would be higher than all the lives lost in World War I and World War II combined. Insinuating that between 200-300 million people will die in a single year, without any sort of explanation, makes it very easy for the naysayers to roll their eyes, dismiss the idea, or claim it's just fearmongering. With this in mind, it is vital that the military, government, emergency planners, and public at large understand the threat of a long-term grid down event and fully realize the ramifications of living in an environment dominated by human desperation, starvation, and living WROL.



Most emergency planners and preparedness experts, some with hundreds of thousands of YouTube followers, and the massive Emergency Management companies with millions of dollars in government contracts, don't have the life experience necessary to understand the various threats we will face in a long-term grid down scenario. The post-grid environment will be a radical departure from even the worst-case disaster they have prepared for or assisted in during natural disaster relief efforts. Every report or plan I've read requires and depends on electricity in some form, communication networks, and "all-hands-on-deck" to implement a proper pre-planned response. This applies to plans from politicians, some military brass, security analysts, civilian "prepping" experts, and consulting firms hired to strategize this scenario. Almost to the last, these experts are all average Americans whose only life experience is growing up and living in the richest country in the world with every creature comfort instantly available at their fingertips. Their life has never involved witnessing, understanding, or dealing with true hunger, starvation, desperation, or societies with no law and order governing the populace. Most importantly, most have obviously never performed any research into the psychology behind human desperation and starvation.

I believe that every person I have met in the emergency planning and preparedness industry has true and honorable intentions. They are sincerely trying to come up with a game plan to prevent or respond to a horrific scenario that is almost impossible to wrap their brain around.





Most Emergency Response Planners erroneously use their previous experience dealing with natural disasters like Hurricane Katrina as a launching point for their emergency response to a grid down scenario. Dealing with a severe, but localized, natural disaster like Hurricane Katrina, where you have entire federal agencies, the national guard, millions of volunteers, metric tons of civilian food and water donations, a functioning interstate trucking system, unlimited federal funds and the full weight and ingenuity of the American populace working together to find a solution and aid those in need, is completely different. These emergency response plans have ZERO BASIS IN REALITY for performing the same tasks in a world without electricity! Every aspect of human life today, and by default, every aspect of emergency response is run by electricity. Nearly every aspect of State, Federal, and Military emergency response agencies are run by and wholly reliant on electricity. Their plans simply will not work without electricity, open lines of communication, and coordinating relief from outside organizations. The long-term Plan of Action reports and recommendations, the ones I've seen, are generally written with logistical holes so massive you could drive a Mack truck through them.

The assumption that things will continue to function as before the crisis began is called normalcy bias, and it is one of the biggest reasons why most emergency plans will fail in spectacular fashion in a grid down event.

Typically, both civilian first-responders and military planners responding to a grid down event strictly focus on the first week or two after the event. It is understandable why they do so as it is the easiest timeframe in a grid down scenario to comprehend and plan for. However, they are likely missing the forest for the trees. If pressed, most planners will admit that "things" will likely get "very bad" if the grid stays down for an extended period. But typically, they'll quickly pull back and refuse to do anything more than acknowledge the presence of a non-specific, future potential chaos. They'll say things like, "We don't want to fear-monger" or "Let's focus on the factors we can control." As a result, they make plans and strategies based on today's current thought patterns and social norms. They make broad assumptions that the people in their Action Plan are going to continue to act, think, react, and function just like they do today and exactly how they always reacted to other emergencies in our nation's past. You can't fault them, because the same has always been true throughout history.

The assumption that things will continue to function as before the crisis began is called normalcy bias, and it is one of the biggest reasons why most emergency plans will fail in spectacular fashion in a grid down event. Per Wikipedia ⁶ —

"Normalcy bias, or normality bias, is a belief people hold when considering the possibility of a disaster. It causes people to underestimate both the likelihood of a disaster and its possible effects, because people believe that things will always function the way things normally have functioned... normalcy bias can manifest itself in various disasters, ranging from car crashes to world-historical events. It is hypothesized that the normalcy bias may be caused by the way the brain processes new information. Stress slows information processing, and when the brain cannot find an acceptable response to a situation, it fixates on a single and sometimes default solution. This single resolution can result in unnecessary injury or death in disaster situations. The lack of preparation for disasters often leads to inadequate shelter, supplies, and evacuation plans. Thus, normalcy bias can cause people to drastically underestimate the effects of the disaster and assume that everything will be all right."



One obvious example of normalcy bias I see is that the first responder and military plans assume all their forces will report for duty. How will their plans function with only fifty percent of their manpower in place? What if after six months, they only retain twenty percent of their manpower or less? The real problem is a lack of imagination and an understanding of the true threat. The real problem is a lack of imagination and an understanding of the true threat. It's almost as if the thought of a total societal collapse brought on by mass starvation is so disconcerting, unbelievable, and hard to plan for, that planners just ignore it and pretend it doesn't exist.

While I may not have access to detailed government or TS military response plans to a long-term grid-down event via EMP, CME, or a cyber-attack on the electric grid (I have been told they don't exist): I have read enough corporate action plans, civilian plans, and military strategic ideas to know they all have one thing in common... the authors and experts don't understand the real threat produced by Human Desperation, Starvation, and living WROL (Without Rule-Of-Law). For this reason, they can't envision the operating environment in which they are making their emergency plans.



How will the average American (or soldier) respond to a radical and unrecognizable new life filled with utter confusion and deep desperation, without access to regular food, and without effective oversight?

If you've never researched the answer to that threefold question, then you don't understand the real threat behind a long-term grid down event. Therefore, you are incapable to postulate on the aftermath accurately nor create an effective response plan to a devastating new world and an operating environment that will be completely foreign to you and to your subordinates.

Mistakes will be made. Mass casualty will ensue.



Understanding the Threat

The million-dollar question without a precise answer:

How will people react during a long-term grid-down situation?

In years of research, I have yet to find a single research paper, book, or article written by a social psychologist discussing how human desperation, starvation, and living without rule of law will be present in a total collapse scenario. To my knowledge no psychological study or experiment has been conducted with the proper parameters to extrapolate relevant information and apply it to how the American people would respond to the chaos brought on by a nationwide, long-term, grid down event. It would be virtually impossible to conduct an experiment today to study the behavioral impacts of today's populace in a grid down situation because this psychological and sociological research is purely situational.



What happens when, against their will, people completely lose life-sustaining necessities? What happens when the average person hasn't eaten a single, substantial meal in an entire week? A month? What happens when you combine those and take away every creature comfort as well? What if you placed them in a hostile environment where they could potentially be killed at any moment by a starving stranger, twenty-four hours a day, seven days a week? What if you place them in a test environment with no parameters, no rules, and no oversight? How do you put people in such a scenario without giving them any information about what is going on and making them believe their horrific circumstances could go on indefinitely? How do you even study that from a psychological standpoint? How do you duplicate a grid down environment without getting sued into the next millennium? You can't. And if you tried, it would be abusive.

All we can do is extrapolate as much information from prior studies and look to historical events involving human desperation, starvation, and living WROL.



Factor #1 – Human Desperation

Human Desperation is a very hard thing to explain or study because it encompasses such a wide range of issues in varying degrees. In America, we live our lives in a sort of protected bubble. Our world makes sense. There is a general sense of right and wrong on the macro level. We have drawn lines in the sand as to what type of behavior we will participate in and what type of behavior we will not. We can go about your daily life and it typically progresses as we planned it. Everyone develops life patterns and daily habits in the way we live our lives even if they don't realize it. Our human interactions with others are typically normal, safe, and sane. There is a pattern of cause and effect in our lives. We live in a generally safe environment. Most believe we will live to a ripe old age with our loved ones. If we are hurt, we can go to a hospital. If we are hungry, we can go to the store and buy food. If we want to know the secrets of the universe you can speak the words, "Ok Google" into a small handheld communication device and the secrets of the universe will appear before our eyes within milliseconds. If we want to converse with a loved one on the other side of the world, we can dial them on our cell phone and within moments we are talking with them or video conferencing with them in real time.

Life is... normal. Things make sense. They've always been this way.

It is now a month into a grid down environment. None of the previous statements are true for the average person. Nothing makes sense. You can't trust anyone. Nobody speaks to one another anymore and entering into a simple conversation with a stranger could get you robbed or killed. A few days ago, you watched a neighbor kill a traveler after fighting with them over a small can of baked beans the person was carrying inside their tattered backpack. The bloated victim is still lying in the middle of the street with his head half caved in. His empty eyes are staring at you through your front window. His empty eyes are staring at you through your front window, seeming to ask, "why didn't you help me?" There was a small child traveling with the man who stayed by the body for a while, but you don't know where the child has gone. You try not to consider the possibilities. You can't even feed your own children let alone a stranger's child. You wonder to yourself when you became so cold? However, you still don't respond any differently because you've learned the hard way to mind your own business and ignore the atrocities happening around you. There is no law enforcement to come to your aid and in truth, there don't seem to be any rules or laws to follow. You have





become numb to death and ignore the person's bloated body along with all the other bodies strewn about your neighborhood. The smell of the new world is unbearable: rotten food, decaying bodies, trash—it all combines to a horrific stench that you can't escape, indoors or out.

Your spouse was out of town on business when the lights first went out. They could be anywhere. Are they still alive? You have done things to acquire food for your children that you wouldn't have fathomed you were capable of before the electricity went out. Your home is nearly uninhabitable because raw sewage has backed up into it and you didn't know how to shut it off at the street. You tried to stuff rags into the drains, but the rags keep popping out by the backpressure of feces, urine, and putrid sewage. The grocery stores were looted weeks ago and you've long since eaten the dry food in your kitchen. For the last week, you've been reduced to scavenging and eating rotten food from refrigerators in some of the abandoned houses around you. The last meal you ate contained more worms than food. You closed your eyes and held your nose as you swallowed. You

You are a failure. You can't provide food for your family because there is no food... anywhere. You look once more at the newest dead body in the street. After watching what happened to the traveler in front of you, it's obviously too late and too dangerous to evacuate now. Besides, where would you even go? One of your neighbors left a week ago and told you that they'd heard word that Lackland AFB and San Antonio, Texas, had power somehow. Regardless of the ambush danger, they were going to make a foolish attempt to walk halfway across the country. You look down at your daughter's pale skin and gaunt face and wonder how much longer she'll live. She'd never make the journey. You still don't understand why the electricity hasn't come back on. What is taking them so long to fix it? When will this end? There's no TV, internet, or radio transmissions giving hope or offering suggestions. You've heard a dozen different rumors, but no one seems to know exactly what is going on. Absolutely nothing about your current existence resembles your previous life. You are exhausted and overwhelmed. What will you do? What can you do?

Human Desperation. You can't quantify it. You can't explain it. You can't study it. It will be different for everyone who lives through the grid-down scenario. Human Desperation will just exist.

are ashamed because you ate half of what you found and didn't give all of it to your children. You were just so unbelievably hungry. It took every last vestige of willpower to stop eating the rotten food once you started and save some for your kids.

You've been drinking water from a barrel in your backyard that you have rigged your downspouts into. You can't risk bringing attention to yourself by starting a fire and boiling it, so you've just been drinking the water as it is. Everyone in the house has diarrhea now. Everyone is dehydrated and the rain barrel is almost empty. It hasn't rained in days. Your four-year-old child cut her leg last week; it's now badly infected and she has a fever. The hospitals are abandoned and desolate. There is no one to help.

That is Human Desperation. You can't quantify it. You can't explain it. You can't study it. It will be different for everyone who lives through the grid-down scenario. Human Desperation will just exist. It can be caused by something as simple as constantly worrying about a loved one who you can't find or get to, or maybe something larger like you were forced to kill someone in self-defense and haven't been able to sleep for a week. It can manifest itself in a variety of emotions like sadness, depression, and rage. Every person inflicted with desperation will have difficulties making logical and rational decisions. People who are desperate are also completely incapable of being relied upon or trusted. They are so far out of their comfort zone; you can't predict how they will act or react. Human Desperation is an enigma. It is also the new normal.



Factor # 2 - Starvation

This is the single most misunderstood and under-represented factor in all emergency planning (civilian, government, and military alike) when discussing a long-term grid-down event, primarily, because it's never happened in this country before. The planning of how to provide food to the populace without electricity is so overwhelmingly inconceivable that is oftentimes just ignored. However, to ignore human starvation in your planning doesn't make the threat go away or disappear; it is ignored to the peril of the plan itself. Without question, the most devastating effect a national grid down event would have on the US population would be the destruction of the food distribution network followed closely by the loss of interstate trucking. Many aspects of a nationwide grid-down event are debatable. Which electronics will, or will not, be harmed is debatable. Which percentage of cars will, or will not, run is debatable. **What is not debatable: it will be fundamentally impossible to feed all 320 million Americans spread out over the 3.8 million square miles without electricity and interstate trucking.** It cannot happen. You will not be able to feed a single, major metropolitan city without electricity.

Many people just assume that "country folk" in small towns will be fine in a grid-down scenario. It's not true. Maybe 100 years ago that would hold true, but not today. I have found that most small, country towns are every bit as reliant on electricity as big towns. If they knew the exact date of the attack and had a year to prepare for it then, yes, they could do it and they would spend the money preparing for that day. However, even if you had the farming infrastructure in place, you still need to feed those 1,000 people for three months (minimum) until your crops begin to grow (assuming the grid down event happened in spring and not the dead of winter). One thousand people eat a LOT of food every day. No food is the problem!

When most people consider the loss of electricity, their brain quickly moves to the lights going out, public water not working, and their heat and/or air conditioning not working in their home for a few hours. When you tell someone that they could be without power for a year or longer, they extrapolate their previous experience(s) out over a year and typically consider additional inconveniences like not having TV, internet, Social Media access, and waiting in long lines at the gas pumps. They quickly determine that life without electricity would "really suck." Rarely, do they

WHAT IS NOT DEBATABLE:

It will be fundamentally impossible to feed all 320 million Americans spread out over 3.8 million square miles without electricity and interstate trucking.

It will not happen.

I spent two full days brainstorming and game-planning this very scenario with the mayor of a small town out west. Even with the resources surrounding that small rural ranching town, we found it was impossible to feed the townspeople (less than 1,000 residents) for any extended period without outside aid and millions of dollars in 18th-century infrastructure installed and tons of food set aside before the grid came down.

ever consider the total and utter chaos and their own family slowly dying of starvation to be part of the longer-term effects of life without electricity. Again, it's a result of normalcy bias.

Over the years, the American people have proven to be very resourceful when confronted with hard times and catastrophes. Because of this, most people just assume that, as American's, we'll just pick each other up by the bootstraps,



help each other out, brainstorm the problem and fix it. It's what we've always done as a nation: Pearl Harbor, 9/11, Hurricane Katrina, The Great Depression, and many other examples throughout American history. I often hear of various natural disasters when discussing emergency preparedness. All those previous examples (minus the Great Depression) were localized tragedies. In every instance, the bulk of the country was unaffected and quickly rallied to the aid of those impacted. There might have been some hunger or food deprivation for very short periods of time, but never true starvation. It's an apples and oranges comparison.

Some will point to the Great Depression as the way America would deal with an extended grid down scenario. It



is not even remotely relevant. Our food infrastructure then functioned completely different than our computer controlled just-in-time delivery system of today. We don't have the small off-grid farming ability of a hundred years ago. In 1820, 72% of our population were farmers. In 1920, 30% of our population were farmers. Today, less than 2 percent of our population work in agriculture⁷. Our large-scale farming operations that feed our population today, like everything else in this country, don't function without computers,

electricity, the internet, access to large-scale commercial trucking industries, distribution algorithms, open lines of communication between the various entities, and access to large quantities of fossil of fuel.

Even outside of farming, a hundred years ago, a good percentage of Americans, both rural and urban, grew a fair portion of their own sustenance through gardening and keeping small animals like chickens. While some portions of that self-sustaining lifestyle are still present in a very tiny percentage of our populace, let's face it-- the majority of the US population don't have the life skills that were prevalent in the generation that lived through the Great Depression. We certainly don't have enough large-scale, non-electric farm implements and water wheel powered grain mills and grinding facilities. Remember, even during the Great Depression with mass hunger rampant and food deprivation common, cases of people dying of starvation were not very common in America. Most importantly though, throughout the Great Depression, you still had a country ruled by law and order and overall human desperation only reached moderate levels even in the portions of society that experienced the most hunger. **The Great Depression is not a good representation of the type of situation we would encounter after a year-long blackout from an EMP or Solar Storm.**

So that brings us to the truth of true starvation and what that looks like in a grid down scenario. Just like human desperation and living WROL, running a psychological study where you actually put real people into a horrific starvation situation would be impossible to perform in today's academic environment. Fortunately, regarding starvation, we don't have to extrapolate outside the test data very far. Believe it or not, we've actually performed a study during WW II where we did just that: We literally starved some men for six months to study their psychological and physiological reactions.

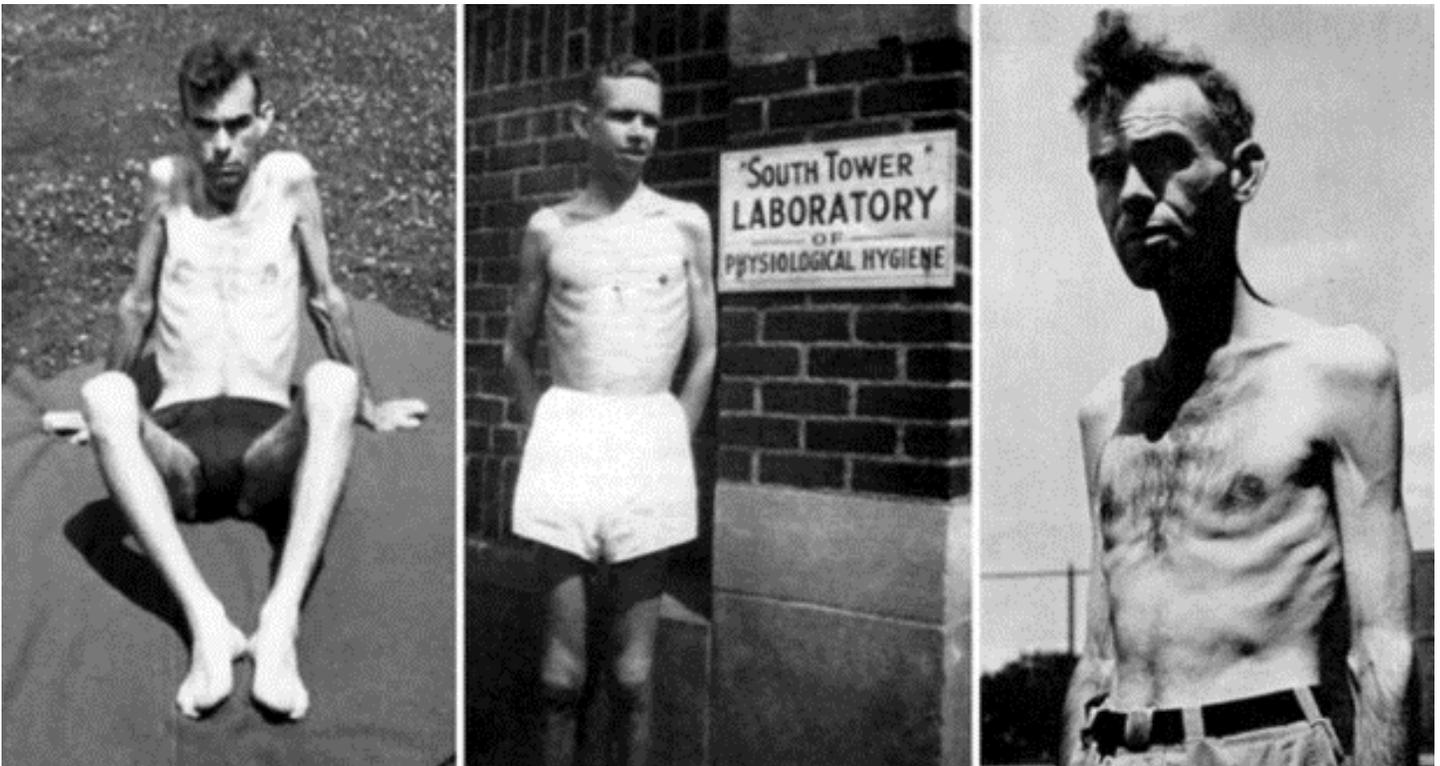


Otherwise known as the **Minnesota Starvation Experiment**⁸, the study was led by Ancel Keys (inventor of the K-ration) and involved 36 male volunteers between November 19, 1944, and December 20, 1945. In 1950 the full study was released in two large volumes, totaling 1,385 pages of slogging text entitled *The Biology of Human Starvation*⁹.

Here is a summary of what the study found¹⁰:

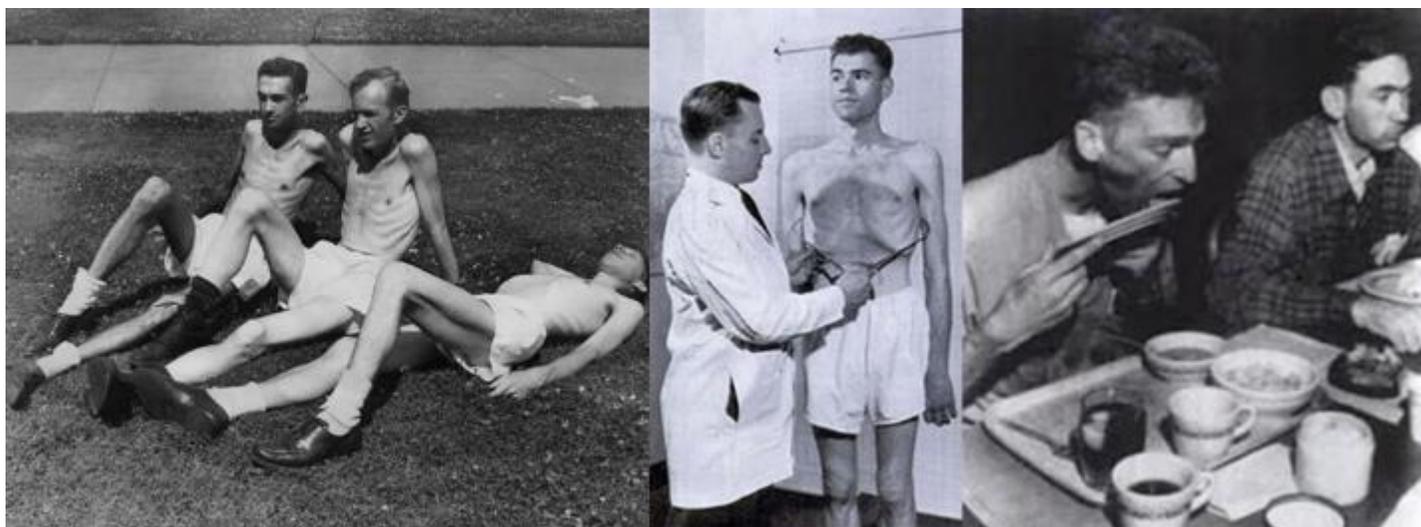
- Prolonged semi-starvation produced significant increases in depression, hysteria, and hypochondriasis (a focus on somatic concerns) as measured by the MMPI (a test of personality).
- Most participants experienced periods of severe emotional distress and depression and grew increasingly irritable.

- Some individuals engaged in self-mutilation (these days we call this self-harm, often seen in people struggling with regulating their emotions) – apparently one person cut off three fingers with an axe although it was unsure if this was deliberate or accidental.
- Many appeared apathetic and lethargic with a diminished sexual interest.
- Volunteers showed signs of social withdrawal and isolation.
- Participants reported a decline in concentration, comprehension and judgment capabilities.





Some of you may be left with the impression that these poor men weren't given any food for an extended period of time, but that's not the case. To be sure that you keep this in perspective, this was actually a very regimented study of "semi-starvation". These men were only restricted to **half-rations** (1,570 calories per day) for 24 weeks. Read over those symptoms again and consider the following outside factors when doing so. These men were fed twice, every single day on a very regimented schedule. At no point were they forced to wonder when or where their next meal would come. While the meals were bland, at no point did they go even a single day without access to normal food. They were never faced with the possibility of committing violence to get food. The men in the study knew they were part of and volunteered for the study. They knew the exact date the study would end, therefore they had hope and optimism for their future. There were doctors in lab coats and caretakers that poured over them daily to be sure their lives were not in danger. There were no outside forces endangering their safety or threatening their lives. None of them worried about the safety or health of their extended family and human desperation was not part of the study (outside of the normal emotions brought on by their hunger). There was rule-of-law and they were in a well-regulated environment. They had access to outside information, newspapers, and radio entertainment. If the symptoms presented in the study only paint a picture of "semi-starvation" during a peaceful environment: depression, hysteria and hypochondriasis, irritability, self-mutilation, apathy, lethargy, diminished sexual interest, social withdrawal, isolation, and a decline in concentration, comprehension, and judgment capabilities –



What does true starvation look like in a long-term grid-down scenario when there will be ZERO food available for an extended time for most of the population? What will those symptoms develop into when you take away ALL their food, their hope, and put them in a horrific environment. How bad would it get? Consider that the nation's grocery stores will be looted within days. Within a week or two every factory, store, distribution center, and canning facility will be picked clean of every last scrap of food. Remember, without interstate trucking, functioning gas stations, and a broken infrastructure... once those places are cleaned out, they will not be resupplied. Most large game in the wild will be shot and eaten within a month or two. By the end of the first month, most Americans will be going days between having access to any "real" food and it will only get worse as the year progresses. **Most people would be fantasizing over having access to 1,570 calories in a single day.** You can take those psychological responses from the study above and multiply them times ten... or times one hundred. It's almost impossible to wrap your head around the concept of starving to death in the richest country in the world. When you take true starvation and combine it with human desperation and living WROL, it's almost impossible to paint a picture of society in that instance. I fear the results will be infinitely worse than we can even fathom.



If you get nothing else from this report,
please realize this simple fact!

If you are unable to **consistently** and **adequately** feed your emergency personnel-- first responders, electrical engineers, military members, AND all their family members)—

EVERY PLAN YOU DEVISE WILL EVENTUALLY FAIL!

(It will likely fail faster than you believe possible)



Buyer Beware!

The average long-term freeze-dried food plans sold to unsuspecting buyers in the preparedness community typically contain around 800 calories per day. Let that number sink in when you consider that the men in this study were eating twice the calories per day than that food plan offers you.

In other words, if you are relying on that expensive 1-Year Food Plan to feed your family in a grid down event, you probably have less than 4 months of actual food and your family likely won't make it through the first winter. Make positively sure you are buying your long-term food based on the caloric count of the food plan AND NOT the various food companies' deceptive "total servings" they contain in their food plan.

In reviewing hundreds of clients' survival retreats, this is by far the #1 issue I see... Not enough food! For more information on how to buy and store long-term food, consider my book, *Survival Theory: A Preparedness Guide*.



A Personal Anecdote on The Minnesota Starvation Experiment



US Air Force SERE Training, Class 97-02 - Washington State, January 1997

One of the quotes from the Minnesota Starvation Experiment hit very close to home for me. "Sex and romance lost their appeal. Food became their overwhelming priority. Some of the men obsessively read cookbooks, staring at pictures of food with an almost pornographic obsession."¹¹

I laughed out loud at that description because I had personally experienced that emotion during my training to become a SERE (Survival, Evasion, Resistance, and Escape) Instructor in the Air Force during the late 1990s. Our first phase of

training was 22 frigid days in January, in the mountains of Washington State, given very limited amounts of food, worked tirelessly, given minimal hours of sleep... by the end, my nineteen-year-old, lean and muscular, 6 foot- 4-inch frame lost 15 lbs during those three weeks in the field. That trip was designed to push us to our limits and weed out the weak. We lost nearly a third of our class that first trip.

Over twenty years ago now, I can still envision sitting around the campfire in the evenings with my brothers literally fantasizing about food, talking about food, and arguing about food. Everyone had a write-in-the-rain notebook for taking notes and on the final page, everybody kept a list of food we intended to buy and eat when we returned to base. We would discuss those various food items for hours huddled around the flickering light of a campfire, scribbling in our notepads, ranking the food items, prioritizing them, and trying to figure out how we could barter a ride off base after returning and acquire the items on our list. As the study mentions, fantasizing about food was nearly an obsession towards the last few days of that trip and that's all anyone talked about.

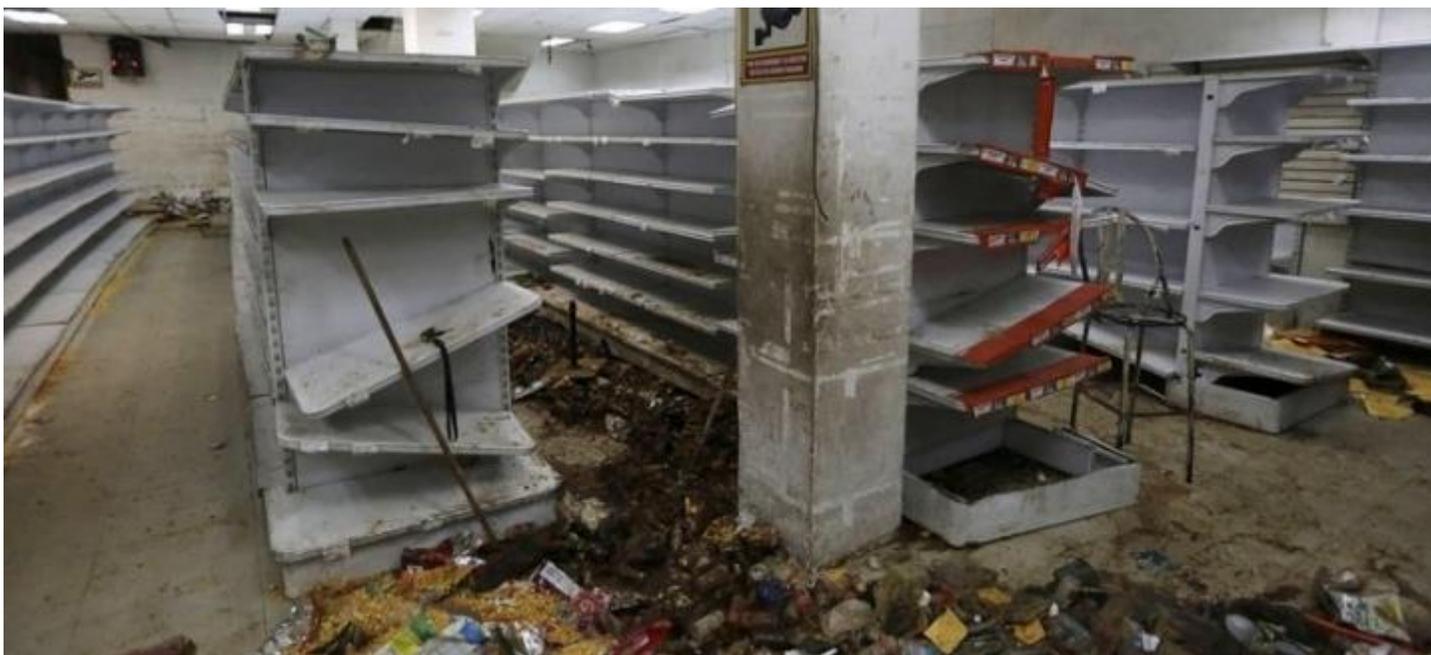
Unfortunately, I can also envision that first night back on base: gorging myself on 2 large bacon and pepperoni pizzas from Dominos, a one-pound bag of peanut M&M's, and a 2-liter bottle of Coca-Cola. I would eat until I puked and then start eating again. I would repeat the same process multiple times throughout that first evening and night. **Those memories have never left me.**



Factor # 3 – Living Without-Rule-of-Law

One of the biggest reason's society will collapse in the first week will be the loss of our law enforcement institutions. Just like healthcare workers, military, and other first responders, policemen are just people. Those with families will only show up for work for so long. When things start to fall apart, we will lose a good portion of our police force. I don't think anyone would debate that mass rioting and looting will ensue and escalate the longer we face a grid down event. Those with families and children in the path of the rioting and looting will immediately go home to protect their loved ones, and justifiably so. How long are the single men and women on the police force, the ones with no family, going to keep showing up? What happens if the police cruisers don't function? What happens if traffic is gridlocked and there is no way to get anywhere. What are you even responding to without the 911 telephone system functioning? Where do the police get the fuel for their cruisers? What happens when their radios don't work, and they can't call for backup? What happens when they do detain someone, and they can't use their computer to do a check on the person's background? If they arrest the person, how are they going to transport them back to the station? Is the prison functioning? There is mass rioting and looting; where do you house everyone you arrest? How do you feed them? In a world with little to no food, do you feed them? How do you schedule the judges time when that all runs through electronic scheduling? Is it even a fair hearing if you can't contact a lawyer for representation? What happens when the local jail is overflowing? How long do you think law enforcement will keep showing up for work in that kind of environment?

In the major cities, you'll likely lose law enforcement within a day or two at most. Again, that is not to denigrate them, it's just that they won't be able to perform their jobs and they'll need to go home to protect their families or other loved ones as the chaos worsens. In small rural communities, the local sheriff and deputies may be able to get around a while longer and deal with the logistical issues easier with fewer people in their town. But eventually, a week or two at most, they are going to face the same problems with maintaining order as the bigger cities. Trying to maintain order when people are beginning to truly starve will be like trying to herd cats. If you could maintain a strong enough police presence, you can maintain order for a short time. But once people begin to really starve, no amount of effective leadership or strict martial law will maintain order in that type of environment. At some point, we will lose law and order in our society.





What happens when there is no effective oversight or rule-of-law to live under? What happens, when you add Human Desperation and Starvation into the equation? For now, let's just focus on the results of living without oversight or living WROL by itself. One of my highest recommendations on this subject is a book by a world-renown scientist, Philip Zimbardo called, *The Lucifer Effect: Understanding How Good People Turn Evil* ¹².

Some may recognize his name. Professor emeritus at Stanford University, Zimbardo was the psychologist who conducted "The Stanford Prison Experiment" back in 1971. In the basement of an academic building on Stanford's campus, he created a simulated prison and then randomly assigned 19 normal students as either prisoners or guards without giving them any ground rules or oversight. He stepped back and observed them via cameras. Within 24

hours, the nice, normal, average college students began to delve into depression, violence, self-loathing, and downright cruelty to the other students. The horrific conditions ultimately escalated until the experiment was terminated far earlier than planned for safety reasons. If you've never read the Stanford Prison Experiment study, I suggest that you do so, in all its horrifying and fascinating detail. Otherwise, you might assume that modern psychology can take a person's individual character and the various characteristics of their personality and predict their future actions in an uncontrolled environment. It cannot!

Another book I recommend is *The Banality of Evil*, by Hannah Arendt¹³. A professor of sociology at Princeton, Hannah's many books and articles on topics ranging from totalitarianism to epistemology have had a lasting influence on political theory. Arendt is widely considered one of the



most important political philosophers of the twentieth century. During the post-war trial of Adolf Eichmann, one of the major organizers of the Holocaust, Arendt spent six weeks at the trial. Her argument was that Eichmann was not a monster, contrasting the immensity of his actions with the very ordinariness of the man himself¹⁴. While her findings are debatable in some circles, her research into Eichmann explains how outside, situational forces can be applied to a normal family man to carry out extraordinary evil. But most will say that they could never be forced or persuaded to commit extraordinary evil... could you?

action by the horrible events during the Holocaust and his reaction to the trial of Adolf Eichmann, Milgram set up a study to test the limits of obedience to authority. **Today it is widely known as The Milgram Experiment¹⁵**. The participants and volunteers for his study were instructed to shock a mental patient that was hooked up to a machine as part of a research study. The level of shock would [appear to] increase as the experiment progressed if the patient answered questions wrongly. The level of shock would progress all the way up to a deadly 450 volts which was clearly marked on the machine as a lethal dose of electricity.

Put yourself in the long-term grid-down scenario. Ask yourself what you would do? Better yet, ask yourself what wouldn't you do to acquire food for your starving child or a loved one?

Put yourself in the long-term grid-down scenario. Ask yourself what you would do? Better yet, ask yourself what wouldn't you do to acquire food for your starving child or a loved one? Would you steal from your neighbor? Would you commit a strong-armed robbery? Would you kill someone to get food if it meant life or death for your child? The lines you draw in the sand and the behavior you think you aren't capable of... that ship has long sailed. Some would say I'm exaggerating. I would say I'm doing the opposite. For fear of being dismissed, I may be drastically underselling the situation. How do you think the average American is really going to react during their starvation cycle?

If you are in the camp that things won't really get that bad or believe that normal people won't do commit horrible atrocities against each other, you are wrong. Some will be forced into it against their will for self-preservation of themselves or a family member. Some may be convinced or persuaded to do evil things in trade for food. Others may just follow the crowd and copy what others are doing in the situation. Consider a 1963 study by Stanley Milgram, a social psychologist and a professor at Yale University. Spurred into

[Naturally, the machine was fake and the "patients" were actors and not really getting shocked.]

Professor Milgram polled forty other Psychologists before he performed this study. They believed that only 1% of Americans would go "all the way" during the study. They believed that only sadists would engage in that behavior. In the random study of average Americans that took part in the experiment, over sixty-five percent went all the way to shocking a fellow stranger to death simply by obeying those in authority or being persuaded it was being done in the name of science! The study has been replicated hundreds of times all around the world with varying parameters. Most researchers experienced similar results. The relevance of Milgram's obedience to authority and dangers of conformity study may not directly compare to the psychology behind human desperation, starvation, and living WROL. However, the major takeaway from Milgram's study is that a large majority of average Americans were easily capable of committing great harm or even death to another human being, contrary to the opinion of modern psychology.



How is it that nearly all the Psychologists polled before this study were wrong in their predictions of the results? With modern Psychology, a psychiatrist's training is only in dispositional analysis. You may think you know what you are capable of. You may have drawn some invisible line in the sand regarding some "evil" behavior you're convinced that you would never take part in. **The truth is, you can never be sure.** A common issue with modern psychology is called Fundamental Attribution Error. Essentially this means it tends to focus on a patient's disposition and not the situational forces that surround them. In truth, your external environmental factors are massively important to the way you think. The external factors that shape your current decision-making process can also radically change in the future if new and different external factors are introduced. A good example of this you may recognize is the novel, *Lord of the Flies*, and how the behavior of average school students could radically change when their external environment changed.

Normally what controls our behavior is cognitive control (what are the consequences if I do this bad thing?) and self-restraint (based on laws and our concept of morality in our current environment). Those are the two factors typically keep us from acting immorally on a daily basis. But... what is immoral or wrong? It is important to note that there is no internal, biological standard of "right vs wrong" hard-wired into our human DNA at birth. This idea that



So many people planning for a long-term grid-down scenario seem to be utterly incapable of removing themselves from the world they currently live in because of normalcy bias. They want to believe that things will make sense later. They want to plan and rationalize their decisions based on a world that sadly won't exist when their plan is finally implemented.

mankind is generally good vs generally evil is just flat wrong and has been proven so in numerous studies.

What is acceptable behavior is wholly dependent on external environment and peripheral, situational forces. In other words, your behavior is primarily dominated by your environment. It is a widely accepted concept on a molecular level, but most don't realize the same is true on a universal level as well. For instance, it is common for a parent to tell a child "you are (or you will become) who you associate with at school." We say this as a warning to keep our children from hanging out with the "bad" kids at school and being influenced by them. However, while most people would easily accept that premise as being true for children, they might have a hard time accepting that every aspect of their daily decisions is driven by the same concept. **What is right or wrong?** It is developed by a lifetime of environment--watching your parents, peers, and leaders behave in the world around you as you grow up. Seeing how the people most important to you in your environment interact with others. In other words, you develop a perspective of social norms.



But the inevitable next question would be... where are social norms (or social behavior that is acceptable in a society) derived from? They are derived from our surroundings. Our current social norms are a result of the safe, sane, and lawful environment we live in today. However, if you radically transform the population's environment into something dark and terrible, you need to realize that what is considered "social norms" will also radically transform as well. So many people planning for a long-term grid-down scenario seem to be utterly incapable of removing themselves from the world they currently live in because of normalcy bias. They want to believe that things will make sense later. They want to plan and rationalize their decisions based on a world that sadly won't exist when their plan is finally implemented. Sometimes I wonder if some of these expert's only frame of reference to living through this type of event is from watching TV shows like *The Walking Dead* or another Hollywood movie.

This is where studying history comes into play and is so vitally important to understand the threat. Do you want to see the truth inside the depths of human depravity in historical times where Human Desperation, Starvation, and Living WROL? Do you want your eyes opened to a world you won't recognize? If to, continue to the next section – Historical Evidence.





Historical Evidence:

Historical Examples: Human Desperation, Starvation, and Living WROL from Literature

I could attempt to write with all the dignified prose I could muster to describe, in detail, the guttural, inhuman, and animalistic nature of humans responding to prolonged periods of human desperation, starvation, and living in a world without Rule of Law... but I cannot make it real for you.

While I have personally experienced a certain degree of hunger and pain during my SERE training, I could never fully explain a famine and the human desperation that goes along with true starvation. However, history proves that if a long-term grid down scenario occurs in this country, true starvation will become a reality for 80-90% of our population. If you obtain nothing else from my writings, please take these historical examples of starvation and human desperation as a warning of what is to come should the grid come down in this country for an extended period.

This is the most important research I will ever write because it is the most misunderstood in American society.

Most Americans reading this have never missed more than a handful of meals in a row. They've likely never seen the walking corpses of famished children begging for food. They've never experienced warlords without any ethical rules killing indiscriminately, trafficking young children, and gifting captured women to their private army. They've never considered the need to kill their [previously] friendly neighbor to protect their family because the neighbor's children are almost dead from starvation and the neighbor is coming to take their [supposed] food by force. Americans have never watched their closest loved ones suffer from starvation, famine related diseases, and the cruelest violence imaginable for weeks on end, with no end in sight, utterly desperate, always expecting and sometimes wishing the next day to be their last on this earth. They've

never had to ponder the need to eat the body of their deceased neighbor or a family member to stay alive.

There is no easy way to wrap one's head around these topics.

Sure, there are movies and TV shows loosely related to the topic at hand, but they are not real. It is only on your TV screen. You are watching it from the warmth of your living room with a bag of popcorn, and you can turn it off at any time. You can walk away from that movie and go to bed in the safest, most wealthy country on earth.

It is not reality.



You did not really "experience" the actual emotion, smell the rotting and bloated corpses of starved mothers and children piled up alongside the road, feel the physical pain or the mental anguish, or comprehend the utter desperation. You took a two-hour brain vacation into that fictional world without any lasting consequences and then



went back to your “safe” life. Even if the movie shocked or upset you...it was not real.

Even if that movie or TV show was based on a real life story, it still happened somewhere else to someone else. “It couldn’t actually happen to me here in America...” or could it?

- How do we make people understand the truth of what is coming for this country when the grid goes down and the 330 million Americans are thrust into unescapable starvation? I have written fiction books on the subject, but I am far from an artist at painting with words.
- How can I give someone my life experiences as a prior military Survival Evasion Resistance and Escape Instructor?
- How can I impart decades of research and study on these topics?
- How can I make this subject real to express the urgency for people to petition their government to take hardening the American electric grid seriously?
- How can I make it real to urge families to consider their self-sufficiency and have a preparedness plan of action in place to try to survive the worst effects of a grid down scenario?

The best way to show the truth of what life will be like in a starvation and societal collapse scenario is to show real-life, historical examples. Reader beware: the examples I am about to give will likely be difficult, gruesome, and emotional for the average person to read.

Nevertheless, it is imperative that you read them through completely and thoroughly to get a wide range of understanding from different perspectives of real-life situations. This is only a miniscule amount of examples available from historical literature, but for the sake of an introduction, they will have to do. While many of the examples are challenging to read, be assured they are not the “worst” or the most “awful” examples from the cited works, but only those that best covered the actual topics at hand.

It is strongly advised that everyone purchase and read these books* in their entirety for a fuller understanding of the effects of living through starvation in a future grid down scenario. Americans are not prepared for the hard decisions they will face after a post SHTF scenario will bring, and they are not ready for the mental and emotional breakdowns of the general populace surrounding them.

This is the most important research I will ever write because it is the most misunderstood in American society.

***At the end of this section, please see the full list of recommended books on this topic.**



The Great Chinese Famine – 1958-1962



The largest illustration of human starvation and suffering in modern history happened in China between 1958-1962. Chairman of the Chinese Communist Party, Mao Zedong, threw his country into despair and destruction with his “Great Leap Forward” policies geared at overtaking other industrialized nations, especially Britain. Regardless of the attempts from some of his top advisors (the small handful willing to speak the truth with great disregard to personal risk) to warn Zedong of the massive starvation happening in the country because of his policies, he pressed forward. Mao considered it an acceptable loss that millions of his rural populace might suffer and die if it resulted in meeting the country’s unrealistic industrial growth and export projections.

It is difficult to put an exact number on the death toll because many of the supporting documents and historical figures are still hidden. The Chinese archives that “are” available to the public are unreliable due to most of the

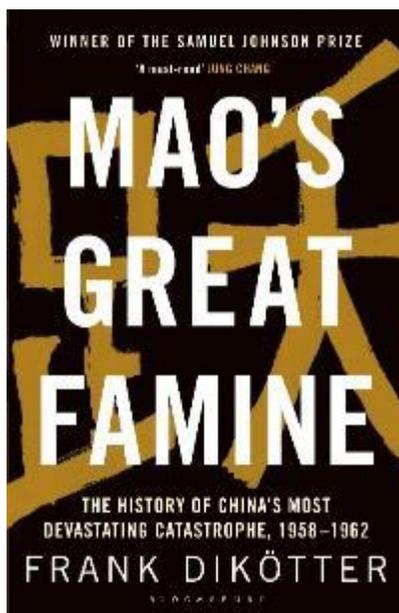
rural government’s attempts to hide the starvation and death counts from Mao during those years for fear of reprisals.

Frank Dikotter’s book *Mao’s Great Famine* displays his incredible research within the Chinese archives. In the final chapter of his book “Final Tally”, Frank looks at all the previous studies into the death counts of the Chinese Famine and makes the case that between 43 and 46 million Chinese people met premature death as a direct result of Mao’s Great Leap Forward policies. The following excerpts are a handful of snippets from his book detailing specific examples and firsthand accounts of the atrocities that befell the Chinese people during the famine. There were over a dozen example sections from his book I wanted to include, but these few will have to suffice. Please purchase his book and read the entire jaw-dropping account of *Mao’s Great Famine*.



“MAO’S GREAT FAMINE”

By Frank Dikotter



Page 278... Mental illness, however difficult to define, was widespread, no doubt because the incessant depredations of the state combined with widespread loss, pain and grief to drive famished people to insanity. Few meaningful studies were produced, but one Huazhou commune in Guangdong claimed that more than 500 villagers suffered from mental illness in 1959. In one curious case of mass hysteria, a third of some 600 students in a middle school in Rui'an county, Zhejiang, started crying and laughing without apparent reason in May 1960. Similar reports came from Sichuan, where hundreds of villagers in several counties went berserk, talking gibberish and bursting out in convulsive laughter. One estimate placed the national rate of mental illness at one per thousand, but as the case of Huazhou shows many more people must have been unable to cope with the sheer violence of collectivization and the horror of famine (that much is clear from very high rates of suicide, as we shall see in the next chapter). In any event, few were ever cared for, as the medical authorities had other priorities. In Wuhan, for instance, some 2,000 known cases had no access to specialist care, as a mere thirty beds were available for psychotic cases in the entire city.

Page 284... Leather was softened and eaten. Explained Zhu Erge, who witnessed half his village die of hunger in Sichuan but managed to survive because his mother was a cook in the canteen: 'We soaked the leather chairs people used to sit on. After they were soaked, we cooked the leather and cut it into small pieces to eat.'⁵¹

Infected animals were eaten by the famished, even in the outskirts of the capital. In Huairou county, lambs contaminated with anthrax were regularly devoured by starved villagers.⁵² Hundreds were poisoned after eating bits of smelly fat mixed with clumps of hair, scraped off animal hides by a Chengdu leather factory, which bartered for vegetables with a peoples canteen. Even the contaminated carcasses of diseased livestock, culled by a slaughterhouse in Guanxian county, were quietly sold to a local commune.⁵³ When people were not eaten by rats, rats were eaten by people, dead ones sometimes being fished out of cesspits.⁵⁴

When nothing else was left, people turned to a soft mud called Guanyin soil — named after the Goddess of Mercy. A work team sent by Li Jingquan was taken aback by what they saw in Quxian county, Sichuan. It was a vision of hell, as serried ranks of ghostly villagers queued up in front of deep pits, their shriveled bodies pouring with sweat under the glare of the sun, waiting for their turn to scramble down the hole and carve out a few handfuls of the porcelain-white mud. Children, their ribs starting through the skin, fainted from exhaustion, their grimy bodies looking like mud sculptures shadowing the earth. Old women in ragged clothes burned paper charms and bowed, hands folded, mumbling strange incantations. 250,000 kilos were dug out by more than 10,000 people. In one village alone 214 families out of a total of 262 had eaten mud, several kilos per person. Some of the villagers filled their mouths with mud as they were digging in the pit. But most of them added water and kneaded the soil after mixing it with chaff, owers and weeds, baking mud cakes that were filling, even if they provided little sustenance. Once eaten the soil acted like cement, drying out the stomach and absorbing



all the moisture inside the intestinal tract. Defecation became impossible. In every village several people died a painful death, their colons blocked up with soil.⁵⁵ In Henan, as He Guanghua recollected, so many people took to eating a local stone called yanglishi, which was ground and turned into cakes, that adults would help each other prise out their feces with twigs.⁵⁶ All over China, from Sichuan, Gansu and Anhui to Henan, people tormented by ravening hunger turned to mud.

People really did die of starvation — in contrast to many other famines where disease loomed large on the horizon of death. Starvation, in a strict clinical sense, means that the attrition of protein and fatty deposits in the body causes the muscles to waste away and eventually stop functioning, including the heart. Adults can survive for weeks without food, as long as they can drink water. The fat stored in the body provides the main source of energy and is broken down first. A small amount of calories are also stashed away in the liver as glycogen, which is generally converted within a day. But as soon as the fatty deposits have been exhausted, proteins are stripped from muscles and other tissues and used by the liver to produce sugars needed by the brain — the body's first priority. The brain quite literally starts



cannibalizing the body, taking bits of this or that tissue to come up with the glucose it needs to survive. Blood pressure lowers, which means that the heart has to work harder. The body weakens and progressively becomes emaciated. As proteins are depleted, fluids start leaking out of the blood vessels and from disintegrating tissues, accumulating beneath the skin and in cavities around the body, producing oedema. The swelling first appears in the face, the feet and the legs, but fluids can also gravitate around the stomach and chest. Swollen knees make walking painful. Taking extra salt or watering down a meal to make it last longer only worsens the condition. But some of the starving do not suffer from oedema and dehydrate instead, their skin turning to parchment, shriveled and scaly, sometimes covered with brown spots. As the throat muscles weaken and the larynx dries up, the voice grows hoarse before falling silent. People tend to curl up to save energy. The lungs weaken. The face caves in, cheekbones stand out and bulging eyeballs are a gruesome white, staring vacantly and seemingly without emotion. The ribs poke through the skin, which hangs in folds. Arms and legs look like twigs. Black hair loses its colour and falls out. The heart has to work harder still, as the volume of blood actually increases relative to a declining body weight. In the end the organs are so damaged that they fail.

Starvation may have been a taboo topic, but the archives are replete with reports about oedema (shuizhongbing) and death by starvation (esi).

Page 320... But after years of famine an eerie, unnatural silence descended upon the countryside. The few pigs that had not been confiscated had died of hunger and disease. Chickens and ducks had long since been slaughtered. There were



no birds left in the trees, which had been stripped of their leaves and bark, their bare and bony spines standing stark against an empty sky. People were often famished beyond speech.

In this world plundered of every layer that might offer sustenance, down to bark and mud, corpses often ended up in shallow graves or simply by the roadside. A few people ate human flesh. This began in Yunnan, where the famine started in the summer of 1958. At first the carcasses of diseased livestock were unearthed, but as famine tightened its grip some people eventually dug up, boiled and ate human bodies.' Soon the practice appeared in every region decimated by starvation, even in a relatively prosperous province such as Guangdong. For example in Tanbin, Luoding, a commune where one in twenty villagers died in 1960, several children were eaten.²

Page 322... Human flesh, like everything else, was traded on the black market. A farmer who bartered a pair of shoes for a kilo of meat at the Zhangye rail-way station found that the package contained a human nose and several ears. He decided to report the finding to the local Public Security Bureau.⁴ To escape detection, human flesh was sometimes mixed with dog meat when sold on the black market.⁵

Page 322 cont'd... Most of the culprits on the list practiced necrophagy, either eating those who had passed away or exhuming and eating cadavers after burial.



Page 322 cont'd... Luo Wenxiu, a seventy-year-old woman, unearthed the bodies of two small children and cooked them for herself. In some cases only parts of a body were eaten. Ma zemin's heart, for instance, was scooped out. Much of this may have been related to the fact that most of these corpses were already in an advanced stage of putrefaction. Some people covered the meat in hot peppers.¹²

In Russian there is a distinction between *liudoedstvo*, literally 'people' eating', and *trupoedstvo*, or 'corpse eating'. It is a very useful distinction, one which introduces much-needed nuance into a topic stigmatized not only by the party, but also by its enemies, keen to portray cannibalism as a metaphor for the very system itself. And as the villagers themselves told and retold stories about body snatchers, cannibals with red eyes or families swapping their children between them before eating them, the whole business was sensationalized to the point where it was placed under a cloud of skepticism.¹³

But as the cases of Linxia and Qiaotou show, very few people were actually cannibals who killed to eat. Most were scavengers, extending their survival techniques to the eating of cadavers. How they reached their decision to eat human flesh must surely have varied from one person to the next. But as desperate survivors all of them would have witnessed many of the horrors being inflicted on living human beings, from body parts being chopped off to people being buried alive. Surely, in the midst of state-sponsored violence, necrophagy was neither the most common nor the most widespread way of degrading a human being.



The Holocaust – 1941-1945



When most people consider the Holocaust, mental images of starving Jews inside concentration camps are typically the first thing that comes to mind. I do not feel that associating the conditions inside Auschwitz to a grid-down scenario would be a fair comparison because the Jewish population inside the camps were being intentionally and systematically exterminated. It is one of the darkest points of human history. The captives had zero autonomy to roam the countryside, scavenge, or barter for food from outside sources. Therefore, I am not going to use any examples from life inside the concentration camps.

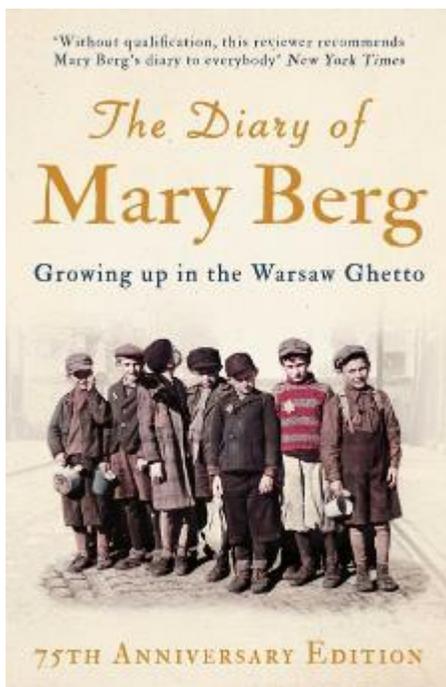
The truth is Hitler's attempts to exterminate the Jewish people began even before the concentration camps could be built.

The Nazi's initial step was to force the Jewish people into overcrowded "Ghettos" with minimal resources and instill fear and desperation into them through intimidation, dehumanizing abuse, and senseless violence and killings. I have read multiple books regarding life inside the Jewish Ghettos of WWII, but I'm only going to provide my examples from *THE DIARY OF MARY BERG* and *NOTES FROM THE WARSAW GHETTO*." I highly suggest both books should be purchased and read in their entirety.



“THE DIARY OF MARY BERG”

Edited by S.L. Shneiderman
Prepared By Susan Pentlin, PhD



Page 75... The typhus epidemic is raging. Yesterday the number of deaths from this disease exceeded two hundred. The doctors are simply throwing up their hands in despair. There are no medicines, and all the hospitals are overcrowded. New beds are constantly being added in the wards and corridors, but this does not solve the problem, and the number of victims is growing daily.

The hospital at the corner of Leszno and Rymarska Streets has put up a sign in the window of its office reading "No vacancies." The Berson Children's Hospital on Sienna Street is packed with children of various ages, all of them ill with typhus. The hospital at the corner of Leszno and Zelazna Streets has closed its doors; there is no room for even one more patient.

A few days ago, on Leszno Street, I saw a father carrying a fairly grown-up boy in his arms. Both father and son were dressed in rags. The young patient's face was burning red, and he was raving deliriously. As he approached the corner of Leszno and Zelazna Streets, the man stopped hesitatingly in front of the hospital gate. He remained standing there for a while, apparently wondering what to do. Finally, the unfortunate man laid his sick son down on the steps leading to the

hospital office and withdrew several paces. The exhausted boy tossed in convulsions and groaned heavily. Suddenly, a nurse in a white apron came out and began to berate the grief stricken father, who stood with lowered head, weeping bitterly. After a while, I noticed that the sick boy had ceased tossing, as though he had fallen asleep. His eyes were closed and a look of serene contentment was spread over his face.

A few moments later the weeping father cast a glance at his son. He bent over his child and, sobbing brokenheartedly, stared at his face for a long time, as though trying to discover a trace of life in it. But all was over. Soon a little black cart, a free service to the community, appeared, and the still-warm body of the boy was added to several others that had been picked up in adjoining streets. For some time the father gazed at the cart as it moved away. Then he disappeared.

Setting sick people down in front of hospitals has become a daily occurrence. Mothers, unable to stand the sight of their children suffering without medical aid, hope that by this method they will succeed in getting the patients to a hospital.

Page 80... Komitetowa Street, near Grzybowska, is a living graveyard of children devoured by scurvy. The inhabitants of this street live in long cellar-caves into which no ray of sun ever reaches. Through the small dirty window panes one can see emaciated faces and disheveled heads. These are the older people, who have not even the strength to rise from their cots. With dying eyes they gaze at the thousands of shoes that pass by in the street. Sometimes a bony hand stretches out from one of these little windows, begging for a piece of bread.

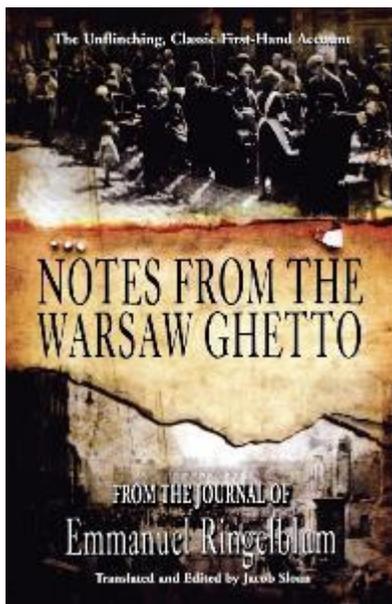


Page 109... In the streets, frozen human corpses are an increasingly frequent sight. On Leszno Street in front of the court building, many mothers often sit with children wrapped in rags from which protrude red frostbitten little feet. Sometimes a mother cuddles a child frozen to death, and tries to warm the inanimate little body. Sometimes a child huddles against his mother, thinking that she is asleep and trying to awaken her, while, in fact, she is dead. The number of these homeless mothers and children is growing from day to day. After they have given up their last breath they often remain lying on the street for long hours, for no one bothers about them. The little coaches of Pinkiert's funeral establishment are constantly busy. When a beggar sees a usable piece of clothing on a dead body, he removes it, covers the nude corpse with an old newspaper, and puts a couple of bricks or stones on the paper to prevent it from being blown away by the wind. On Komitetowa and Grzybowska Streets fewer beggars are seen this year than last; they have simply died off.

Hunger is assuming more and more terrible forms. The prices of foodstuffs are going up. A pound of black bread now costs four zlotys, of white bread, six zlotys. Butter is forty zlotys a pound and sugar, from seven to eight zlotys a pound. It is not easy to walk in the street with a parcel in one's hand. When a hungry person sees someone with a parcel that looks like food, he follows him and, at an opportune moment, snatches it away, opens it quickly, and proceeds to satisfy his hunger. If the parcel does not contain food, he throws it away. No, these are not thieves; they are just people crazed by hunger. The Jewish police cannot cope with them. And, indeed, who would have the heart to prosecute such unfortunates?

“NOTES FROM THE WARSAW GHETTO”

By Emmanuel Ringelblum



Page 234... Mid-November, 1941. The first frosts have already appeared, and the populace is trembling at the prospect of cold weather. The most fearful sight is that of freezing children. Little children with bare feet, bare knees, and torn clothing, stand dumbly in the street weeping. Tonight, the 14th [of November], I heard a tot of three or four yammering. The child will probably be found frozen to death tomorrow morning, a few hours off. Early October, when the first snows fell, some seventy children were found frozen to death on the steps of ruined houses. Frozen children are becoming a general phenomenon.

Page 238... The first cold spell has had very bad effects. On the streets one regularly comes across children frozen to death. One sees barefoot children walking outside on frozen legs. Today, 22 November, saw a boy dancing barefoot with the cold on Nowolipki Street. The sight of barefoot children and grown-ups makes you shudder. And yet, outside of one shelter for children, nothing has been done to provide lodgings for the poor.

Page 241... A terrifying, simply monstrous impression is made . . . [by] the wailing of children who . . . beg for alms, or whine that they have nowhere to sleep. At the corner of Leszno and Karmelicka Streets, children weep bitterly at night. Although I hear this weeping every night, I cannot fall asleep until late. The couple of groschen I give them nightly cannot ease my conscience.



The Balkan Wars – 1992-1995



Most people would not equate the Balkan War of the mid 90's to periods of "extreme hunger" or starvation because the total death toll did not reach the sheer numbers of some of the other historical famines. However, it is considered one of Europe's deadliest conflicts since WWII with many human atrocities occurred including ethnic cleansing, rape as policy, genocide, crimes against humanity, and other war crimes.

For over a year, Selco Begovich lived and survived inside a modern city after it lost: electricity, fuel, running water, food distribution, and any kind of organized law or government. Selco literally lived through a long-term grid-down scenario in modern times.

The atrocities he witnessed are essential to understand.

Try to internalize the thought process behind his decisions, how he handled hunger and starvation, and how

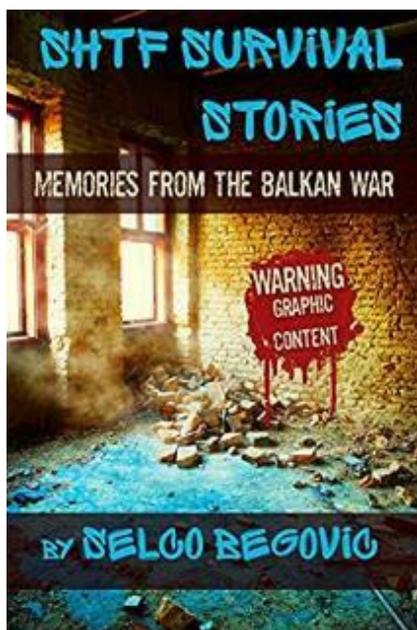
he dealt with mass casualties happening all around him. People must learn from these real-life accounts BEFORE they find themselves in a similar scenario.

Selco Begovic's book, *SHTF SURVIVAL STORIES – MEMORIES FROM THE BALKAN WAR*, will not win any literary awards. It is written in broken English, the margins are wide, and the grammar is not perfect... but the critical first-hand experience Selco relates to the reader and the visuals he paints of a grid down scenario are vital for Americans to see. It is not a perfect parallel to a grid down event in America as his city did receive the occasional food drops and warlords were occasionally successful in importing goods from outside the blockade. However, I do not believe there is a better case study to wrap your head around what it is like to live in a post-grid environment in a *formerly* modern city. Without a doubt, this is a must-read book for anyone pondering this type of scenario.



“SHTF SURVIVAL STORIES – MEMORIES FROM THE BALKAN WAR”

By Selco Begovic



Page 222... Some things about mentality and about morality changed drastically.

Every man changed in some way, some of us more, other less. Some people welcomed that change in their thoughts and saw whole new situation as some chance to do things that they could not do in normal times, not without punishment from system.

Most of the people accepted some things over the time almost without noticing it. For example, you might wake up one day with thoughts that to steal things had become almost normal, useful. It became a "must-do" thing. Even with some newly-accepted behavior, people still had some judgment about what is bad and what is okay. It was distorted, but it still was there.

The easiest way to explain it would be to say that almost everyone did things that normal people in normal times could not accept as a normal behavior but comparing to some other people's actions it was nothing. It was like the scale of what is good or bad was moved all together for everyone. Facing all the killing and misery, smoking marijuana became accepted by everyone. Humans look for an escape and alcohol was too precious.

But one thing is for sure, whenever I hear these days somebody says: "I will not do that if SHTF" or "I'll do only that if SHTF" - whenever I hear that I feel sick.

Wait and see...

The truth is this: You never know how far you are going to go in order to survive. There is no way to know that before SHTF. Everything else is only talking and discussing in front of PC, in nice and warm room, safe, not hungry or thirsty and not under fire or with the high chance of losing one's life or the likelihood that loved ones are going to get murdered at any time...

And to make things clear, I am not approving of those things that I wrote about. I am not advocating some actions. Everyone has to find the line and choose his own "good or bad" actions. I am just sharing what happened and how I experienced it. It is one thing to suggest what kind of medicines you must have in storage, but for some other things there is no advice. It is all on you. It is a mindset thing and no equipment can help.

Most of the people, a great majority of people, are ready to say instantly, "I am a good man, and I'll do only good things when SHTF." The truth is, when SHTF, a lot of those good and nice people forget those strong decisions, mostly after the first few close gunshots or explosions, or after finding out that the local food store is gone, just like any other store. I, like most of you, (I guess) want to believe in fact that some kind of punishment gonna catch up to all the people who did or who are gonna do bad things.



Page 262... We were feeling that after a long time of the same old politicians who cared only for themselves or their own circles and families, suddenly there is a man (or people) who will bring something new for us, pride, strength, wealth or whatever. Media was full of high hopes and praising, in order to bring new world for us, jobs, security and what not. New factories are promised, new liberties, patriotism and love for the country exploded. Something beautiful was expected. We felt like it is the dawn of a new era...

What a bunch of f***ing idiots we were.

Then the polarization started. In the beginning, it was something like "there are people FOR and there are folks AGAINST it" whatever that "IT" was. Pretty soon we were "thrown" into a situation where you have two families, they are neighbors, friends for years, decades even, but over the political reasons they started to see each other with kind of 'bad blood'.

And then one morning, SHTF and I found myself standing in my backyard like an idiot, still trying to find out what happened with great words of a new era and better life...?

People were shot dead on the street for fun or wrong words, fire trucks were driven by stoned teenagers in weird uniforms, police cars burning, men with assault rifles walking on the street in cowboy boots and metal band T-shirt acting like self-proclaimed government forces, every group who had more than 15 guys and 5 rifles was self-proclaimed police force doing whatever they want to do...

violence on so large a scale and so long-lasting that it brings something like a 'new way of living'.

A whole bunch of people who had dreamed of times where and when they can do whatever they want to emerge. I forget together with a bunch of other people high hopes and big words, all that was left is pure survival, day by day.

Page 119... Today I travel back in my mind. I write a lot about my preparations and assessments since the time I got trapped in my city and views on the future, but I will just write some about 'How It Was' back in that time. Remember, we were all thrown into that situation with no preparation, and found often our allies were our enemies from one day to the next...

Violence is something that people like to talk about, giving theories and opinions, but at the same time few of us experience the real 'deep' face of violence, being trapped in a prolonged a deteriorating situation. You may have experienced bar fights, or home invasions maybe, shooting somewhere and similar, and those events can be life-changing situations for sure (or life-taking). But I am talking here about violence on so large a scale and so long-lasting that it brings something like a 'new way of living', overwhelming violence that demands a complete change of mindset. I often hear, and I often agree, that violence cannot solve anything, and that violence only brings more violence, but when you are faced with a man who wants to kill you, you are going to have to probably kill him in order to survive.



I hope that, at this moment, you will not care philosophy, humanity or ethics, and that you just go do what you have to do and survive. Later you will cope with the other part of it; it is how things work. As I get older, I realize more and more that violence is the wrong thing, but at the same time, I also realize that I have to be more and more ready and capable to do violence when the time comes.

It is a paradox maybe, but again it is how things works. I do not like that, but it is what it is.

Violence and You

It is too big topic even to try to explain it in one article, but here are some things I must try to show you.

There is a man, let's say we are talking about you here. An average citizen, a law-abiding person, and suddenly you are going to be thrown into a prolonged situation where you are going be forced to watch and use exceptional levels of violence. Do you think that you are going to be able to operate in those conditions with the mindset you had from the time where you were average law-abiding citizen? No of course not, you will have to jump into another mindset in order to survive.



Let's call it survival mode.

In survival mode, you'll have to not to forget what it was like for you in normal times, but you will have to push like memories aside, in order to operate in a different mode- survival mode. In a real-life situation that means, for example, that you'll maybe have to ignore panic, fear, smells, and noises in the middle of an attack and take the steps you must in order to survive. Maybe you'll have to ignore the screaming, dying kid next to you. Maybe you'll have to ignore your pride and run, or maybe you'll have to ignore your normal mindset and you are going to have to kill the attacker from behind.

There is a list of priorities in normal life, and there is a list of priorities in survival mode. Let just say that you are using your different faces and mindset during your normal life and everyday business with different people around you. Just like that, when faced with violence you'll have to use a different mindset, a different face. Or another you.

Violence and Experience

There is a strange way of thinking here for me, but since I have lived through the time when a huge number of people did not die from old age, rather they died from violence, I have experience in this subject. So, here are few thoughts. Experiencing violence over a prolonged period of time does not make you superman. Actually in some way it makes you a crippled man, a man with many problems, both psychological and physical.



But am I in a better position now than people who died next to me, or in front of me? You may call me a winner or survivor but many days that title sounds very hollow,

Am I lucky man? Yes.

Am I a happy man? No.

But we are not talking in terms of quality of life. We are talking in terms of surviving or not. Ethics, psychology, and everything else here is a matter for a couple of books to be written, and even then, you are not going to say anything new. It is like that from the beginning of mankind.

What is more important about having experience in violence is that you simply KNOW how things work there. You simply know what you can expect. You know what chaos is. You know the best way of dealing with it. You know what it takes to do things.

Page 124 cont'd ...

BUT, during an SHTF situation you will find out these things about violence.

It is (especially in the beginning) like everything is possible. The law is gone, you could go outside and see people looting stores, groups organizing (by street, or other facts like the same job in a company for example) and they are trying to either defend part of the town, or bring more chaos just for fun. Sometimes you could not say what, but both could bring violence and death to you. Over time, the violence becomes more organized and structured to start to achieve certain specific goals (although there is always chaos, as well).

After some time, you will look at the violence you encounter in two ways. Violence happening outside your group, or inside your group. It is quite certain you will need to be in some sort of group to stand any chance of surviving.



Outside your group, you just wish to be very 'small', invisible after some time, and not pay attention to anyone doing violence to others. Because, quite simply, you are still alive and want to stay that way. In terms of "I am still alive, I do not care what they do to that person, and how bad it is." Your will and judging of good and bad is broken; you just care for your own life. Leaders of the "bad" group have best chances to stay leader if members fear him, so in fact, he is most dangerous, vicious, sick bastard, nothing like a reasonable Man. Competition is huge in SHTF. Instilling discipline through fear and enforcing your rules are paramount to holding your position as leader.

"People who never used violence before, committing 'hard' violence: normal people, dads, and mums, killing folks in order to save their families."



Various groups were interacting with the outside world and each other through fighting, exchange information, trading goods etc., but every group was more or less a closed world, with trust only for those inside the group. The forming of a group was quick, mostly because nobody expected this situation was going to happen, and so we were not prepared, but very quickly were literally fighting for survival. Any problems were solved along the way (bad members, not skilled, not obeying etc.). Sometimes through discussion and agreement, but always with the threat of violence as an option.

To finish, and to educate, as opposed to shock you.

Many folks cannot think too clearly about being involved in the level of violence I am describing. Maybe you think SHTF is just like Black Friday shopping but every day. So, let me just give examples of the how far the world I lived in descended from 'normal'. Remember this was a regular city, in a nice country in Europe, less than 25 years ago.

- **People who never used violence before, committing `hard' violence:** normal people, dads, and mums, killing folks in order to save their families.

- **Certain groups of people who looked like they just waited for the SHTF so they can go out** (crawl out from beneath some rock) and fulfill their own fantasies about being kings of the town, imprisoning people, raping women, torturing folks in the weirdest ways.

- **Strange groups organizing in whatever cause they choose to name it,** again only to gain Power in order to have more resources (sometimes simply "gangs" of so people, sometimes whole militias of thousands of people) through terror over other people or groups of people.

- **Irrational hate towards the "other"** whoever the "other" might be (other religion, group, street, town, nation) because it is very easy to manipulate groups of people through hate and fear from and towards "others." If someone manipulated you to believe that your kid is hungry because of the "others" he can do a lot with you.



Real life examples I saw:

- People burned alive inside their homes (And people 'enjoying' watching this)
- Private prisons were made where you could go and torture other folks for fun, or simply rape women as a "reward"
- Kids over 13 or 14 years of age were simply counted as grown-up people, and killed as an enemy
- The humiliation of people in all different ways in order to break their will, for example, forcing prisoners to have sex between same family (like father and daughter and similar)
- Violence was an everyday thing, you could go outside and get shot not because you were 'enemy', but only because sniper on other side want to test his rifle.

It is a needed, but depressing realization, that people, even regular folks can become so cruel, so fast.



The Holodomor (Ukraine Famine) – 1932-1933



In 1929-1930, as part of the collectivization policies of Stalin and the USSR, Ukrainian peasant farmers were requested, and as time progressed, required to transfer their land and livestock holdings to the state collective farms called Kolkhoz. The peasant farmers were required to work as day laborers on their own previously-owned property and to be reimbursed in kind. With multiple peasants revolting to the new policies, a severe drought in 1928, and peasant farmers butchering their livestock instead of giving them to the state, the result was lower than projected exports of grain and livestock from the region.

In response to the peasant farmers' unwillingness to cooperate in the collectivization plan, Stalin increased his confiscation of farms, raised production demands on the independent peasant farmers and began forced confiscation of any food that was produced. Most of the grain and livestock confiscated was sent to feed the urban workforces and the rural areas were left with essentially nothing to eat.

Stealing food (or hiding and keeping some food back from the state), attempting to flee their rural farms

(advocating their farming duties) or trying to enter a city to procure food for their family was punishable by death.

As the situation snowballed in 1930 and 1931, the famished Ukrainian peasant farmers produced progressively less grain and livestock, resulting in Stalin cracking down even harder on the peasant farmers and depicting them as counterrevolutionaries. By 1932, grain production in Ukraine was down by 85% compared to the year before resulting in one of the worst localized famines in recent world history.

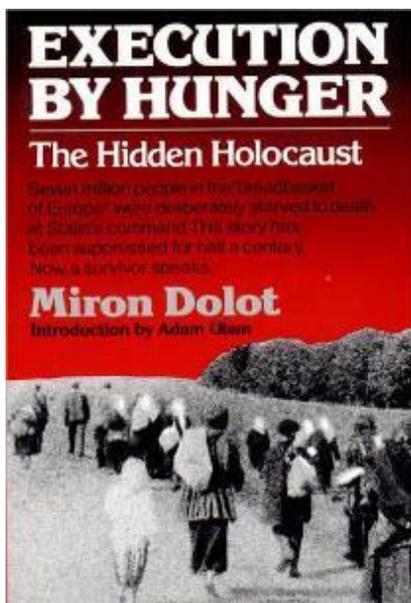
Between seven and ten million Ukrainians are projected to have starved to death between 1932 and 1933.

The stories and reports of living through the famine in those regions are heartbreaking to read. However, it is critical to examine and understand the effects of mass starvation on a population and the extents to which starving people will go to find food. The first historical book I would recommend you purchase on the Holodomor famine would be *EXECUTION BY HUNGER* by Miron Dolot. Here are a handful of excerpts from that book.



“EXECUTION BY HUNGER”

By Miron Dolot



Page 197...Toward the end of March, the famine struck us with full force. Life in the village had sunk to its lowest level, an almost animal-like struggle for survival of the fittest.

The village ceased to exist as a coherent community. The inhabitants who still managed to stay alive shut themselves within the walls of their houses. People became too weak even to step outside their doors. Each house became an entity in itself. Visits became a rarity. All doors were bolted and barred against any possible intruders. Even between immediate neighbors, there was little, if any, communication, and people ceased caring about one another. In fact, they avoided each other. Friends and even relatives became strangers. Mothers abandoned their children, and brother turned away from brother.

Some of those who still had strength left continued to forage for food, but as unobtrusively as possible, quietly and stealthily, as if feeling guilty for still being alive.

But what could they find under the snow? On the streets, in the fields, in gardens and orchards, and on the frozen river, everywhere lay the frozen bodies of starved villagers. Their corpses became petrified monuments, perfectly preserved by the snow and frost. They became memorials to the starving children, men and women, old and young: an indictment of official Communist policy and morality. As the snow continued to fall, the drifts became higher and more impenetrable. There was no one to clear them from the roads and pathways. Children who used to enjoy playing in the snow, making snowmen, skating and skiing, were nowhere to be seen. Cats used to purr more loudly, and dogs used to bark more lustily in winter. But, by the end of February our village had no pets left: all of them had either starved, become meals for starving families, or been shot by Thousands. The barns and barnyards had been empty since most of the domestic animals were confiscated by the state and transferred to the kolhosp. A few cows that still remained in the possession of the farmers were well-kept under lock and key as some kind of fabulous treasure. Indeed, even the farm buildings that used to house the domestic animals or serve as storage places, were now practically gone. They had been torn down long ago to be used as firewood. People burned everything in sight to keep warm: even fences, and furniture. In desperation, people dismantled abandoned houses or parts of living quarters.

Death had established its kingdom in our village. No human or animal voices were to be heard. The inhabitants inside their homes were either dead, or barely alive and paralyzed by starvation. Outside, everything was frozen and covered by snow and ice. The only sound that could be heard from time to time was that of the wind howling and whistling. What a contrast from the songs of our nightingales who were destroyed by the Thousands.

There were other atrocities that no one wanted to talk about. Every-one knew that they occurred, but there seemed to be some taboo about discussing them openly. One of them was the terrible curse of cannibalism. It still is something very difficult to think or talk about.



One must consider the inexorable pressure of hunger under which a person can completely become bereft of his or her senses and sink to an absolute animal-like level. That happened to many of our villagers. The more resistant ones who kept on living with minimal or no food at all for some time, felt no more of the initial hunger pangs. They either lapsed into comas, or existed in a semicomatose, lethargic stupor. But some reacted differently. They became like madmen. They lost all traces of compassion, honor, and morality. They suffered from hallucinations of food, of something to bite into and chew, to satisfy the gnawing pains of their empty stomachs. Intolerable cravings assailed them; they were ready to sink their teeth into anything, even into their own hands and arms, or into the flesh of others.

Page 205... The thaw brought with it a new wave of beggars. Those who still had strength enough to move left their dwellings and took off in search of food. Old and young, mostly women and children, slowly moved from house to house dragging their rag-covered feet. They pleaded for food: a potato, or a piece of bread, or at least a kernel—a single kernel! —of corn. At the onset of the famine, I remember how the emaciated would come to the doorstep, often sobbing, and would ask for some spare food. If refused, they would excuse themselves politely and go away, apologizing for bothering us.

But this spring's beggars presented an entirely different picture. These desperate people, numbed by cruelty and injustice as well as hunger, were no longer the modest, honorable small farmers they had been before. Their fear of starvation was so great that they lost all semblance of self-control, becoming more like wild, hungry beasts in their search for food. They no longer distinguished friends from enemies and were ready to commit even murder for a mere scrap. Their clothes had long ago turned to rags, and they themselves were worn out and exhausted to the point of collapse.

With protruding frightened eyes and outstretched hands, they would approach someone, but this time they did not plead: they were voiceless; they just cried. Often their heavy tears were mixed with fluid slowly oozing out of the cracks in their swollen faces. They whispered and begged for a crumb of bread.

One must consider the inexorable pressure of hunger under which a person can completely become bereft of his or her senses and sink to an absolute animal-like level.

Another sign of almost imminent death from starvation was the body lice, those small, flat, wingless, parasitic insects who were the constant companions of the wretched and impoverished. The starving villagers were no longer able to take care of their sanitary needs, nor had they strength to fetch water, let alone heat it in order to bathe themselves, or wash their clothes and their bedding. Those who still had strength could do some washing, but not properly because they had no soap. For a few years now, not a single bar of soap had been seen in the village. But, even if soap had been available, we could not buy it. First, we had no money; second, we were prohibited from buying any merchandise in the stores as our grain quotas had not been met. As a result, all of us were dirty and infected with lice.

As the limbs of a starving person turn cold with the approach of death the lice begin to migrate to the warmer facial areas such as the, eye sockets, ears, mouth corners, and nostrils. When this happened, it was an unmistakable sign that the starving person's sufferings would soon come to an end.

The plight of the children was one of the most heartbreaking experiences for me during that time, and their pathetic faces, parched or swollen, and streaked with tears, will remain in my memory forever.



They could not understand why they couldn't get a piece of bread or something else to eat. They were not able to comprehend what was going on in their own small world. Thinking of them still makes me tremble with horror. God is my witness that as I write these words, the paper is wet with my tears.

Not many children in our neighborhood had survived the terrible winter, but those who had were reduced to mere skeletons, too weak to cry. The heads on their small thin necks looked like inflated balloons. Their small bony arms and legs were like sticks protruding from their little bodies. Their stomachs were bloated to unusual proportions, and water flowed uninterruptedly from their genitals. Those childish faces looked prematurely aged and twisted. They resembled old folks: wrinkled, listless, and very, very sad. At their stage of starvation, they were in a constant stupor which is peculiar to those who suffer from extreme hunger. It seemed as if nature itself had conspired with the Communist regime to add a final touch of pathos and horror to the sufferings the children had to endure. Hair had started to grow on the faces of some, mainly on their foreheads and temples. I saw a few such children and they looked so strange to me—like creatures from another planet, and they left me with a feeling of helplessness and doom.

Often starvation would sweep away an entire family. The adult members would die first, leaving the children alone in a cold house, half-naked and hungry, to fend for themselves. One can imagine what happened to such hopeless children: these orphans, scantily clad and feet wrapped in rags, joined the rest of the beggars. Struggling in the snow, they would first go to their nearest neighbors only to find that they too were dead. Then they would go to another house and yet another farther away. Compassionate villagers who were still alive would let a child or two stay with them only to watch them slowly die.



Yet miraculously, some children managed to survive. These were mostly boys and girls between ten and fifteen years of age. With the mostly of spring, they saw their chances of survival in terms of leaving home, and going to the city. A few, but very few, children managed to do just that and were fortunate in finding help and understanding from some of the urban dwellers. Others, less fortunate, were picked up by the militia and locked up in the Children's Detention Home. These children had a better chance of surviving the famine, although we heard that many of them also died, And then, there were those whose fate it was to join the ranks of the city's juvenile criminals. God alone knows what happened to them. Finally, there were those who neither reached the city nor were picked up by the militia. They lay dead wherever they had fallen for days or even weeks, until someone would drag them out of sight into some ditch like a dead animal.



The Holomodor – Cont’d

The second book I would highly recommend on the Holomodor would be Anne Applebaum’s *RED FAMINE*. I consider her chapter titled, “Starvation: Spring and Summer, 1933” to be one of the greatest examples of historical starvation in print and why I finish with this particular example. The entire chapter is filled from the first sentence to the last with footnoted examples of starvation and precise documentation on the effects starvation will have on the human body and psyche. I strongly urge everyone to purchase this book and read it in its entirety.



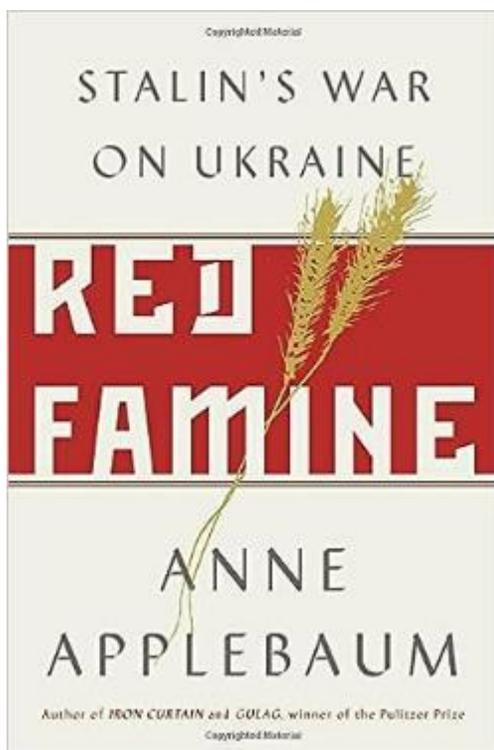


“RED FAMINE”

By Anne Applebaum

CHAPTER ELEVEN

Starvation: Spring and Summer, 1933



The starvation of a human body, once it begins, always follows the same course. In the first phase, the body consumes its stores of glucose. Feelings of extreme hunger set in, along with constant thoughts of food. In the second phase, which can last for several weeks, the body begins to consume its own fats, and the organism weakens drastically. In the third phase, the body devours its own proteins, cannibalizing tissues and muscles. Eventually, the skin becomes thin, the eyes become distended, the legs and belly swollen as extreme imbalances lead the body to retain water. Small amounts of effort lead to exhaustion. Along the way, different kinds of diseases can hasten death: scurvy, kwashiorkor, marasmus, pneumonia, typhus, diphtheria, and a wide range of infections and skin diseases caused, directly or indirectly, by lack of food.

The rural Ukrainians deprived of food in the autumn and winter of 1932 began to experience all these stages of hunger in the spring of 1933—if they had not already done so earlier. Years later some of those who survived sought to describe these terrible months, in written accounts and thousands of interviews. For others who managed to live through this period, the experience was so awful that they were later unable to recall anything about it all. One survivor, a child of eleven at the time, could remember things that caused sadness or disappointment before the famine, even trivial things such as a lost earring. But she had no emotional memory of the famine itself, no horror and no sorrow: "Probably, my feelings were atrophied by hunger." She and others have wondered whether famine wasn't somehow deadening, an experience that suppressed emotions and even memory later in life. To some it seemed as if the famine had "mutilated the immature souls of children."³

Some searched for metaphors to describe what had happened. Tetiana Pavlychka, who lived in Kyiv province, remembered that her sister Tamara "had a large, swollen stomach, and her neck was long and thin like a bird's neck. People didn't look like people—they were more like starving ghosts."⁴ Another survivor remembered that his mother "looked like a glass jar, filled with clear spring water. All her body that could be seen . . . was see-through and filled with water, like a plastic bag."⁵ A third remembered his brother lying down, "alive but completely swollen, his body shining as if it were made of glass."⁶ We felt "giddy," another recalled: "everything was as if in a fog. There was a horrible pain in our legs, as if someone were pulling the tendons out of them."⁷ Yet another could not rid himself of the memory of a child sitting, rocking its body "back and forth, back and forth," reciting one endless "song" in a half voice: "eat, eat, eat."⁸

An activist from Russia, one of those sent to Ukraine to help execute the confiscation policy, remembered children too:



"All alike: their heads like heavy kernels, their necks skinny as a stork's, every bone movement visible beneath the skin on the arms and legs, the skin itself like yellow gauze stretched over their skeletons. And the faces of those children were old, exhausted, as if they had already lived on the earth for seventy years. And their eyes, Lord!"⁹

Some survivors specifically recalled the many diseases of starvation and their different physical side effects. Scurvy caused people to feel pain in their joints, to lose their teeth. It also led to night-blindness: people could not see in the dark, and so feared to leave their homes at night.¹⁰ Dropsy—oedema—caused the legs of victims to swell and made their skin very thin, even transparent. Nadia Malyshko, from a village in Dnipropetrovsk province, remembered that her mother "swelled up, became weak and looked old, though she was only 37. Her legs were shining, and the skin had burst."¹¹ Hlafyra Ivanova from Proskuriv province remembered that people turned yellow and black: "the skin of swollen people grew chapped, and liquid oozed out of their wounds."¹²

People with swollen legs, covered in sores, could not sit: "When such a person sat down, the skin broke, liquid began to run down their legs, the smell was awful and they felt unbearable pain."¹³ Children developed swollen bellies, and heads that seemed too heavy for their necks.¹⁴ One woman remembered a girl who was so emaciated that "one could see how her heart was beating beneath the skin."¹⁵ M. Mishchenko described the final stages: "General weakness increases, and the sufferer cannot sit up in bed or move at all. He falls into a drowsy state which may last for a week, until his heart stops beating from exhaustion."¹⁶

An emaciated person can die very quickly, unexpectedly, and many did. Volodymyr Slipchenko's sister worked in a school, where she witnessed children dying during lessons— "a child is sitting at a school desk, then collapses, falls down"— or while playing in the grass outside.¹⁷ Many people died while walking, trying to flee. Another survivor remembered that the roads leading to Donbas were lined with corpses: "Dead villagers lay on the roads, along the road and paths. There were more bodies than people to move them."¹⁸

Those deprived of food were also liable to die suddenly in the act of eating, if they managed to get hold of something to eat. In the spring of 1933, Hryhorii Simia remembered that a terrible stench arose from wheatfields close to the road: hungry people had crawled into the grain stalks to cut off ears of wheat, eaten them and then died: their empty stomachs could no longer digest anything!¹⁹ The same thing happened in the bread lines in the cities. "There were cases when a person bought bread, ate it and died on the spot, being too exhausted with hunger."²⁰ One survivor was tormented by the memory of finding some beets, which he brought to his grandmother. She ate two of them raw and cooked the rest. Within hours she was dead, as her body could not cope with digestion.²¹

For those who remained alive, the physical symptoms were often just the beginning. The psychological changes could be equally dramatic. Some spoke later of a "psychosis of hunger," though of course such a thing could not be defined or measured.²² "From hunger, people's psyches were disturbed. Common sense left them, natural instincts faded," recalled Petro Boichuk.²³ Pitirim Sorokin, who experienced starvation in the 1921 famine, remembered that after only a week of food deprivation, "It was very difficult for me to concentrate for any length of time on any-thing but food. For short periods, by forcing myself, I was able to chase away the 'thoughts of hunger' from my consciousness, but they invariably returned and took possession of it." Eventually, ideas about food "begin to multiply abundantly in the consciousness, and they acquire a diversity and unprecedented vivacity often reaching the stage of hallucinations." Other kinds of thoughts "fade from the field of consciousness, become very vague and uninteresting."²⁴



Over and over, survivors have written and spoken about how personalities were altered by hunger, and how normal behaviour ceased. The desire to eat simply overwhelmed everything else—and familial feelings above all. A woman who had always been kind and generous abruptly changed when food began to run short. She sent her own mother out of her house and told her to go and live with another relative: "You've lived with us for two weeks," she told her, "live with him and do not be a burden to my children."²⁵

Another survivor remembered a young boy searching for extra grain in a field. His sister ran to him and told him to go home because their father had died. The boy replied: "To hell with him, I want to eat."²⁶ A woman told a neighbour that her youngest daughter was dying, and so she had not given the little girl any bread. "I need to try to support myself, the children will die anyway."²⁷ A five-year-old boy whose father had died stole into an uncle's house to find something to eat. Furious, the uncle's family locked him in a cellar where he died as well!²⁸

Faced with terrible choices, many made decisions of a kind they would not previously have been able to imagine. One woman told her village that while she would always be able to give birth to other children, she had only one husband, and she wanted him to survive. She duly confiscated the bread her children received at a local kindergarten, and all her children died!²⁹ A couple put their children in a deep hole and left them there, in order not to have to watch them die. Neighbours heard the children screaming, and they were rescued and survived.³⁰ Another survivor remembered her mother leaving the house in order not to hear a younger sibling cry.³¹

Uliana Lytvyn, aged eighty at the time she was interviewed, remembered these emotional changes, and especially the disappearance of family feelings—maternal and paternal love—above all else: "Believe me, famine makes animals, entirely stupefied, of nice, honest people. Neither intellect nor consideration, neither sorrow nor conscience. This is what can be done to kind and honest peasant farmers. When sometimes I dream of that horror, I still cry through the dream."³²

Distrust grew too, and indeed had been growing since the beginning of the collectivization and de-kulakization drives a few years earlier. "Neighbours had been made to spy on neighbours," wrote Miron Dolot: "friends had been forced to betray friends; children had been coached to denounce their parents; and even family members avoided meeting each other. The warm traditional hospitality of the villagers had disappeared, to be replaced by mistrust and suspicion. Fear became our constant companion: it was an awesome dread of standing helplessly and hopelessly alone before the monstrous power of the State."³³

Iaryna Mytsyk remembered that families who had always left their houses open, even during the years of revolution and civil war, now locked their doors: "Centuries-old sincerity and generosity did not exist anymore. It disappeared with hungry stomachs."³⁴ Parents warned their children to beware of neighbours whom they had known all their lives: no one knew who might turn out to be a thief, a spy—or a cannibal. No one wanted others to learn how they had survived either. "Trust disappeared," wrote Mariia Doronenko: "Anyone who got hold of food, or who discovered a means of obtaining food, kept the secret to themselves, refusing to tell even the closest family members."³⁵

Empathy disappeared as well, and not only among the hungriest. The desperation and hysteria of the starving inspired horror and fear, even among those who still had enough to eat. An anonymous letter that eventually found its way into the Vatican archives described the feeling of being around the starving:

"In the evening and even in daytime seize it is not possible to bring bread home uncovered. The hungry will stop and seize it out of your hands, and often bite your hands or wound them with a knife. I have never seen faces so thin and



savage, and bodies so little covered with rags . . . It is necessary to live here to understand and believe the scope of the disaster. Even today, having been to the market, I saw two men dead of hunger whom soldiers threw on a cart on top of each other. How can we live?"³⁶

As during the Holocaust, the witnesses of intense suffering did not always feel—perhaps could not feel—pity. Instead, they turned their anger on the sufferer.³⁷ Propaganda encouraged this feeling: the Communist Party loudly and angrily blamed the Ukrainian peasants for their fate, and so did others too. An inhabitant of Mariupol remembered a particularly ugly scene:

"One day, as I waited in a queue in front of the store to buy bread, I saw a farm girl of about 15 years of age, in rags, and with starvation looking out of her eyes. She stretched her hand out to everyone who bought bread, asking for a few crumbs. At last she reached the storekeeper. This man must have been some newly arrived stranger who either could not, or would not, speak Ukrainian. He began to berate her, said she was too lazy to work on the farm, and hit her out-stretched hand with the blunt edge of a knife blade. The girl fell down and lost a crumb of bread she was holding in the other hand. Then the storekeeper stepped closer, kicked the girl and roared: "Get up! Go home and get to work!" The girl groaned, stretched out and died. Some in the queue began to weep. The communist storekeeper noticed it and threatened: "Some are getting too sentimental here. It is easy to spot enemies of the people."³⁸

Hunger also heightened suspicion of strangers and outsiders, even children. The residents of cities became hostile towards any peasants who managed to get through police blockades and enter urban areas in order to beg, or indeed any city-dwellers who could not find anything to eat either. Anastasiia Kh., a child in Kharkiv during the famine, was taken by her father several times to stand outside a cafeteria to receive uneaten scraps of food—until a "well-dressed man" eventually screamed at them and told them to go away.³⁹ But she also had the reverse experience. Once, having managed to buy a loaf of bread, she was hurrying home with it. She was stopped by a peasant woman, carrying a baby, who begged her to share it. Thinking of her family, she hurried away: "No sooner had I walked away than the unfortunate woman keeled over and died. Fear gripped my heart, for it seemed that her wide open eyes were accusing me of denying her bread. They came and took her baby away, which in death she continued to hold in a tight grip. The vision of this dead woman haunted me for a long time afterwards. I was unable to sleep at night, because I kept seeing her before me."⁴⁰

In these circumstances the rules of ordinary morality no longer made sense. Theft from neighbours, cousins, the collective farm, workplaces became widespread. Among those who suffered, stealing was widely condoned. Neighbours stole chickens from other neighbours, and then defended themselves however they could.⁴¹ People locked their homes from the outside in the day-time and from the inside at night, one anonymous letter-writer complained to the Dnipropetrovsk province committee: "There is no guarantee that someone won't break in take your last food and kill you, too. Where to seek help? The militia men are hungry and scared."⁴²

Anybody who worked in a state institution—a collective farm, a school, an office—also stole whatever he or she could. People put grain in their pockets, shoved grain into their shoes, before walking out of public buildings. Others dug secret holes into wooden work implements and hid grain inside them.⁴³ People stole horses—even from militia headquarters—cows, sheep and pigs, slaughtered them and ate them. In a single district of Dni-propetrovsk province, thirty horses were stolen from collective farms in April and May 1933; in another district thieves stole fifty cows. In some places, peasants were reportedly keeping their cows, if they had them, inside their houses at night.⁴⁴



People also stole seed reserves, which had of course been confiscated from them and were now kept in storage facilities. Often the quantities were small—collective farm workers were regularly caught filling their pockets. But so widespread did this problem become that in March 1933 the Ukrainian authorities issued a special decree instructing the OGPU, militia and activist teams to protect the seeds and punish those caught under the harsh law of 7 August. Special mobile court sessions were set up to hasten prosecution.⁴⁵

No one felt at all guilty anymore about stealing communal property. Of his thefts during the famine period, one man wrote, "At that time we did not think that this was a big sin, nor did we remember that we probably killed someone by depriving them of food."⁴⁶ Ivan Brynza and his childhood friend, Volodia, stood outside a grain elevator and joined the mad scramble every time some kernels fell to the ground:

"The sacks would rip apart, but the keen-eyed NKVD troops would immediately surround the spot and shout: "Don't you dare touch socialist property!" The spilled grain was put into new sacks, but a dozen or so grains would always be left behind in the dust. Hungry children would throw themselves onto the dust, trying to scrape up as much of it as possible. But in that "battle" those children would be beaten and crushed. Weak from hunger, they never got up from the ground."⁴⁷

Sometimes the theft was on a much larger scale. In January 1933 an inspection of bread factories and bakeries in Ukraine revealed that workers all across the republic were hoarding bread and flour on a massive scale, either for personal use or to sell on the black market. As a result, virtually all of the bread available for sale in the official shops was "of bad quality," containing excessive amounts of air and water, as well as fillers sawdust, other grains—instead of wheat. In some cases the factories were controlled by "criminal organizations" that bartered the bread in exchange for other kinds of food products. Account books were also massaged on a massive scale to hide these trades.⁴⁸

This transformation of honest people into thieves was only the beginning. As the weeks passed, the famine literally drove people crazy, provoking irrational anger and more extraordinary acts of aggression. "The famine was horrible, but that was not the only thing, people became so angry and wild, it was scary to go outside," recalled one survivor. A boy at the time, he remembered that a neighbour's son teased other children with a loaf of bread and jam that his family had procured. The other children began throwing stones at him, eventually beating him to death. Another boy died in the ensuing battle for the loaf of bread.⁴⁹ Adults were no better equipped to cope with the rage brought on by hunger: one survivor remembered that a neighbour became so angered by the sounds of his own children crying for food that he smothered his baby in its cradle, and killed two of his other children by slamming their heads against a wall. Only one of his sons managed to escape.⁵⁰

A similar story was recorded by the secret police in Vinnytsia province, where one farmer, unable to bear the thought of his children starving to death, "lit a fire in the stove and closed the chimney" in order to kill them: "The children began to suffocate and cry for help because of the fumes, then he strangled them with his own hands, after which he went to the village council and confessed ." The farmer said he had committed the murders because "there was nothing to eat."⁵¹

Vigilantism became widespread. Armed guards would shoot gleaners on sight, and anyone who tried to steal from a warehouse met with the same fate. As the famine worsened, ordinary people also took vengeance on those who stole. Oleksii Lytvynskyi remembered seeing a collective farm boss pick up a boy who had stolen bread and slam his head against a tree—a murder for which he was never held responsible.⁵² Hanna Tsvika knew of a woman who killed her niece for stealing a loaf of bread.⁵³ Mykola Basha's older brother was caught looking for spoiled potatoes in the kitchen garden of a neighbour, who then grabbed him and put him in a cellar filled with waist-high water.⁵⁴ Another survivor's aunt was stabbed to death with a pitchfork for stealing scallions from a neighbour's yard.⁵⁵



Sometimes the vigilantism took hold of a whole group. At the "New Union" collective farm in Dnipropetrovsk province a mob—including the farm chairman, the local veterinarian and the accountant—beat a collective farmer to death for stealing a jug of milk and a few biscuits.⁵⁶ When peasants from a nearby village stole a sheep from the collective farm in Rashkova Sloboda, Chernihiv province, a hunt was organized. The farmers from Rashkova Sloboda found the four culprits, surrounded them—and shot them on the spot. Mykola Opanasenko was a witness to this attack as a child. Later, he had another reflection: "A bitter question arises: who imbued the peasants' soul with so much animal ferocity that they dealt so mercilessly with people?"⁵⁷

Sometimes the lynch mobs tortured their victims. In Vinnytsia province a mob kept a woman suspected of theft without food and water in a barn for two days before burying her alive. In another Vinnytsia district a twelve-year-old girl, Mariia Sokyрко, was murdered for stealing onions. In Kyiv province the head of a village council "arrested" two teenage girls accused of theft and burned their arms with matches, stabbed them with needles, and beat them so badly that one died and the other was hospitalized.⁵⁸ So common was this kind of behaviour that in June 1933 the Ukrainian government ordered prosecutors to prevent "mob law" by putting the perpetrators on public trial. Dozens of small-scale "show trials" took place across Ukraine in June and July, but lynch mobs nevertheless continued to be reported across Ukraine in 1934 and even 1935.⁵⁹

"Animal ferocity" could evolve further. Real insanity of various kinds—hallucinations, psychosis, depression—soon resulted from hunger. A woman whose six children died over three days in May 1933 lost her mind, stopped wearing clothes, unbraided her hair, and told everyone that the "red broom" had taken her family away.⁶⁰ One survivor recalled the horrific story of Varvara, a neighbour who was left alone with two children. At the beginning of 1933, Varvara took her remaining clothes and travelled to a nearby city in the hope of exchanging them for bread. She succeeded, and returned home with a whole loaf. But when she cut the bread, she began to scream: the bread was not a whole loaf, it was stuffed with a paper sack—which meant that once again there was nothing to eat. She took the knife, turned around, stuck it into her son's back and began laughing hysterically; her daughter saw what was happening, and ran for her life.⁶¹

In time, all of these emotions subsided—to be replaced by complete indifference. Sooner or later, hunger made everyone listless, unable to move or think. People sat on benches in their farmyards, beside the roadside, in their houses—and didn't move. Bustling villages grew quiet, recalled Mykola Proskovchenko, who survived the famine in Odessa province. "It was a strange silence everywhere. Nobody cried, moaned, complained . . . Indifference was everywhere: people were either swollen or completely exhausted . . . Even a kind of envy was felt toward the dead."⁶² In the spring of 1933, Oleksandra Radchenko wrote in her diary in the middle of the night: "It is already three o'clock in the morning, meaning that today is 27 April. I am not sleeping. The last days have been filled with a terrible apathy. . . ."⁶³

"No one feels sorry for anyone," wrote another survivor, Hal-yna Budantseva: "nothing is wished, no one even wants to eat. You wander with no goal in the yard, on the street. After a while, you don't want to walk, there is no strength for that. You lie and wait for death." She recovered because an uncle came to rescue her. But her sister Tania died on the way to the uncle's village.⁶⁴

Petro Hryhorenko, at that time a student at a military academy, witnessed this indifference when in December 1931 he received an odd letter from his stepmother, alluding to his father's ill health. Alarmed, Petro returned to his village. There he discovered that his father, an enthusiastic proponent of collectivization, was now starving. Petro walked into the office of the local collective farm to inform the officials that he would take his parents away:



"The accountant was a friend of mine from our Komsomol days. He was sitting there alone. 'Good day, Kolia!' I said in greeting. He just sat there, staring at the table. Without even raising his head he said, as if we'd parted five minutes earlier, 'Ah, Petro.' He was completely apathetic. 'So you've come for your father? Now, take him away. Maybe he'll survive. We won't.'"65

Vasily Grossman described this stage of hunger in *Forever Flowing*:

"In the beginning, starvation drives a person out of the house. In its first stage, he is tormented and driven as though by fire and torn both in the guts and in the soul. And so he tries to escape from this home. People dig up worms, collect grass, and even make the effort to break through and get to the city. Away from home, away from home! And then a day comes when the starving person crawls back into his house. And the meaning of this is that famine, starvation, has won. The human being cannot be saved. He lies down on his bed and stays there. Not just because he has no strength, but because he has no interest in life and no longer cares about living. He lies there quietly and does not want to be touched. And he does not even want to eat . . . all he wants is to be left alone and for things to be quiet..."66

Public officials were also shocked by the general indifference. As early as August 1932 a police informer told his contacts that a colleague, a bank employee, had confided in him his "complete collapse of faith in a better future." He explained: "Deep hopelessness can be felt by all urban and rural dwellers, both old and young, party members and non-members of the party. Both intellectuals and the representatives of physical work lose muscle strength and intellectual energy because they think only about how to stop the feeling of hunger in themselves and their children."67

In an extensive report sent to Kaganovich and Kosior in June 1933, a party official working at a machine tractor station in Kamianskyi district reported that in his area people were dying of hunger in the thousands. He listed example after example of people dying in the fields during work, people dying on the way home, people unable even to leave their homes at all. But he too observed the growing indifference. "People have grown dull, they absolutely do not react," he wrote. "Not to mortality, not to cannibalism, not to anything."68

Indifference soon spread to death itself. Traditional Ukrainian funerals had combined church and folk traditions, and included a choir, a meal, the singing of psalms, readings from the Bible, sometimes professional mourners. Now all such rites were banned.⁶⁹ Nobody had the strength anymore to dig a grave, hold a ceremony, or play music. Religious practices disappeared along with churches and priests. For a culture that had valued its rituals highly, the impossibility of saying a proper farewell to the dead became another source of trauma: "There were no funerals," re-called called Kateryna Marchenko. "There were no priests, requiems, tears. There was no strength to cry."70

One woman remembered her grandfather being buried without a coffin. He was placed in a hole in the ground together with a neighbour and her two sons: "His children did not cry over him and did not sing, according to a Christian tradition, 'Eternal remembrance.'"71 Another man recalled how his friends treated their dying father: "We children went to the fields in 1933 and looked for frozen potatoes. Those frozen potatoes we brought home and made 'cookies' from them . . . Once I called on my friends who were just waiting for their 'cookies' [to be ready]. Their father was lying on a bench swollen and unable to get up. He asked his children to give him only one piece and they refused. 'Go and find potatoes for yourself,' they answered." The man died that evening!⁷²

Another boy was simply rendered helpless:



"Mother had gone away, I was sleeping atop of our stove, and woke before sunrise. 'Dad, I want to eat, Dad!' The house was cold. Dad was not answering. I started to shout. Dawn broke; my father had some foam under his nose. I touched his head—cold. Then a cart arrived, there were corpses in it, lying like sheaves. Two men entered the house, put father on a burlap sack, threw his body on a cart with a swing . . . After that I could not sleep in the house, I slept in stables and haystacks, I was swollen and ragged."⁷³

In many cases there were no family members either to care for the dying or to bury the dead at all. Public buildings were quickly turned into primitive mortuaries. In March 1933, Anna S. learned that her school was to be closed due to an "epidemic of dysentery and typhoid fever." Desks were removed from the classrooms, hay was strewn on the floor, and the starving were brought in to die, parents and children lying alongside one another.⁷⁴ Individual homes sometimes served the same purpose. In Zhytomyr province local authorities broke into two houses when neighbours reported that there had been no smoke from the chimneys for several days. Inside they found the elderly, the adults, the children: "Dead bodies laid on a stove, on the bench beside, on the bed." All the corpses were thrown into a well, and dirt was poured in on top of them.⁷⁵ Bodies were sometimes not discovered right away. The winter of 1933 was bitter cold, and in many places it was only possible to bury the dead after the ground began to thaw. Dogs and wolves attacked the bodies.⁷⁶ That spring, "the air was filled with the ubiquitous odour of decomposing bodies. The wind carried this odour far and wide, all across Ukraine."⁷⁷

Train stations, railway tracks and roads also began to accumulate corpses. Peasants who had attempted to escape died where they sat or stood, and were then "collected as firewood and carried away."⁷⁸ One eyewitness travelled through a region laid waste by famine with her mother in March 1933 and remembered seeing corpses lying or sometimes sitting along the route. "The coach-man tore a piece of burlap he had with him and covered the faces of these dead people."⁷⁹

Others did not even bother with that. One railway employee, Oleksandr Honcharenko, remembered "walking along the rail-road tracks every morning on the way to work, I would come upon two or three corpses daily, but I would step over them and continue walking. The famine had robbed me of my conscience, human soul and feelings. Stepping over corpses I felt absolutely nothing, as if I were stepping over logs."⁸⁰ Petro Mostovyi remembered the beggars who came to his village seemed "like ghosts," sat down beside roads or under fences—and died. "Nobody buried them, our own grief was enough." To add to the horror, wild cats and dogs gnawed their bodies. A child at the time, Mostovyi was afraid to go to a hamlet near his village because all of its inhabitants had died, and no one was left to bury them. They were left as they were, inside their houses and barns, for many weeks.⁸¹ The result was epidemics of typhus and other diseases.⁸²

In the cities where the authorities still wanted to conceal the horror occurring in the countryside, the men of the OGPU often collected bodies at night and buried them in secret. Between February and June 1933, for example, the OGPU in Kharkiv recorded that it had surreptitiously buried 2,785 corpses.⁸³ A few years later, during the Great Terror of 1937-8, this secrecy was enforced even further. Mass graves of famine victims were covered up and hidden, and it became dangerous even to know where they were located. In 1938 all the staff of the Lukianivske cemetery in Kyiv were arrested, tried and shot as counter-revolutionary insurgents, probably to prevent them from revealing what they knew.⁸⁴

In larger towns and villages local officials organized teams to collect corpses. Sometimes these teams consisted of Komsomol members.⁸⁵ In the late spring of 1933 some were soldiers, sent from outside, who ordered local people to cooperate and keep silent about it.⁸⁶ Others were simply able-bodied enough to dig mass graves, and willing to work in exchange for food. One survivor reckoned that she lived through the famine because she had been appointed as a gravedigger and thus received half a loaf of bread and one herring every day.⁸⁷ Another recalled that these brigades received



bread in exchange for corpses. "When 40 people died during the day, they received a good fee."⁸⁸ Often, especially in cities such as Kyiv and Kharkiv, the corpse collection teams worked at night, the better to conceal the scale of their task.⁸⁹

Group burials, hastily arranged, occurred without any ceremony at all. "People were buried without coffins, were simply thrown into the pits and pelted with earth," recalled one witness.⁹⁰ Alternatively, the local burial team dug a grave on the spot where a corpse was lying without trying to identify the person or mark the spot. "The small hill quickly disappeared after a few heavy rains, overgrew with grass, and no traces were left."⁹¹ One survivor's grandmother drove a cattle cart from house to house. If she saw ravens, "that meant there were dead bodies." When she found individuals not quite dead, she pulled them closer to the door "so that it would be easier to carry them out" later on.⁹² The mass grave sites were often not marked. In some places younger generations, a few years later, could no longer locate them.⁹³

Some burial teams may have stretched indifference to the point of cruelty. Many survivors, from various parts of Ukraine, repeat stories of very ill people being buried alive. "There were cases when they buried half-living people: 'Good people, leave me alone. I am not dead,' the 'corpses' used to cry. 'Go to hell! You want us to come tomorrow again?' was the reply."⁹⁴ Another team also took away still-living people, arguing that the next day they would be on another street, so they might as well take their body now, get the payment for each "corpse" and eat more themselves.⁹⁵ Many felt that once they had dug the mass graves it didn't matter how they were filled. "They didn't even shoot, they economized on bullets and pulled living people into the hole."⁹⁶ Even families treated their dying members the same. One grandmother fell ill and lost consciousness. "When she fell into a sleep-like state, everyone at home thought she was dead. When they came to bury her, however, they noticed that she was still breathing, but they buried her anyway because they said she was going to die anyway. No one was sorry."⁹⁷

Some, however, managed to escape. One man, Denys Lebid, has described being thrown into a mass grave himself. He tried to get out, but discovered he was too weak. He sat there and waited for death, or for another corpse to fall on top of him. He was eventually rescued by a tractor driver who had come to bulldoze earth over the pit.⁹⁸ His story was echoed by that of a woman who was rescued from a mass grave by another woman passing by who heard her screams.⁹⁹ Similar stories originate from Cher Kyiv, Zhytomyr and Vinnytsia provinces, among others.¹⁰⁰

Anyone who had ever witnessed such a thing—or, worse, experienced it—never forgot. "I was so frightened by what had happened that I could not talk for several days. I saw dead bodies in my dreams. And I screamed a lot ..."¹⁰¹

The horror, the exhaustion, the inhuman indifference to life and constant exposure to the language of hatred left their mark. Combined with the complete absence of food they also produced, in the Ukrainian countryside, a very rare form of madness: by the late spring and summer, cannibalism was widespread. Even more extraordinarily, its existence was no secret, not in Kharkiv, Kyiv, or Moscow.¹⁰²

Many survivors witnessed either cannibalism or, far more often, necrophagy, the consumption of corpses of people who had died of starvation. But although the phenomenon was wide-spread, it never became "normal," and—despite the assertion by the machine tractor station official that people were unaffected by cannibalism—it was rarely treated with indifference. Memories of cannibalism often divide between those who heard stories of it having taken place in other distant villages and those who recall actual incidents. The former, distant in either time or space, do sometimes describe cannibalism as having become "ordinary." Ten years after the famine, a traveller in Nazi-occupied Ukraine claimed to have met "men and women who were openly said to have eaten people . . . the population considers such cases the result of extreme need, without condemning them."¹⁰³ A report from the head of the OGPU in Kyiv province to his superiors in the Ukrainian OGPU



also mentions cannibalism becoming a "habit." In some villages, "the view that it is possible to consume human meat grows stronger every day. This opinion spreads especially among hungry and swollen children."¹⁰⁴

But those who did actually witness an incident of cannibalism almost always remembered it much differently. Both memoir and documents from the time confirm that cannibalism caused shock and horror, and sometimes led to the intervention of the police or village council.

Larysa Venzhyk, from Kyiv province, remembered that at first there were just rumours, stories "that children disappear somewhere, that degenerate parents eat their children. It turned out not to be rumours but horrible truth." On her street two girls, the daughters of neighbours, disappeared. Their brother Misha, aged six, ran away from home. He roamed the village, begging and stealing. When asked why he had left home he said he was afraid: "Father will cut me up." The police searched the house, found the evidence, and arrested the parents. As for their remaining son, "Misha was left to his fate."¹⁰⁵

Police also arrested a man in Mariia Davydenko's village in Sumy province. After his wife died, he had gone mad from hunger and eaten first his daughter and then his son. A neighbour noticed that the father was less swollen from hunger than others, and asked him why. "I have eaten my children," he replied, "and if you talk too much, I will eat you." Backing away, shouting that he was a monster, the neighbour went to the police, who arrested and sentenced the father.¹⁰⁶

In Vinnytsia province survivors also recalled the fate of laryna, who had butchered her own child. She told the story herself: "Something happened to me. I put the child in a small basin, and he asked: 'What are you going to do, Mummy?' I replied: 'Nothing, nothing.'" But a neighbour who was standing guard over his potatoes outside her window somehow saw what was happening and reported her to the village council. She served a three-year sentence but eventually returned home. Eventually she remarried but when she told her husband what she had done during the famine, he turned against her.¹⁰⁷ Even many years later, the stigma remained.

Mykola Moskalenko also remembered the horror his own family felt when learning that the children of a neighbour had disappeared. He told his mother about it, and she told the local authorities. Together, a group of villagers gathered around the neighbor's farm: "We entered her house and asked here where her children were. She said that they died and she had buried them in the field. We went to the field but found nothing. They started a search of her home: the children had been cut up . . . they asked why she had done this, and she answered that her children would not survive anyway, but this way she would." She was taken away, presumably sentenced.¹⁰⁸

Stories such as that one spread rapidly and enhanced the atmosphere of threat. Even in the cities, people repeated stories of children being hunted down as food. Sergio Gradenigo, the Italian consul, reported that in Kharkiv parents all brought their children personally to school, and accompanied them at all times, out of fear that starving people were hunting them: "Children of party leaders and OGPU are especially targeted because they have better clothes than other children. Trade of human meat be-comes more active."¹⁰⁹

Ukrainian authorities knew about many of the incidents: police reports contained great detail. But Balytsky made special efforts to prevent the stories from spreading. Ukraine's secret police boss warned his subordinates against putting too much information about the famine into writing: "provide information on the food problems solely to the First Secretaries of the Party Provincial Committees and only orally . . . This is to ensure that written notes on the subject do not circulate among the officials where they might cause rumours . . ."¹¹⁰

Nevertheless, the secret police, the ordinary criminal police and other local officials did keep records. One police report from Kyiv province in April 1933 began with "We have an extraordinary case of cannibalism in the Petrovskiy district":



"A kulak woman, aged fifty, from the Zelenky, Bohuslayskyi district, hiding in Kuban since 1932, returned to her home town with her (adult) daughter. Along the road from Horodyschenska station to Korsun, she lured a passing twelve-year-old boy and slit his throat. The organs and other parts of the body she placed in a bag. In the village of Horodyshe, citizen Sherstiuk, an inhabitant of that place, allowed the woman to spend the night. In a dishonest manner, she pretended that the organs came from a calf, and gave it to the old man to boil and to roast the heart. It was used to feed his whole family, and he ate it too. In the night, intending to use some of the meat which was in the bag, the old man discovered the chopped-up parts of the boy's body. The criminals have been arrested."¹¹¹

Alongside the moral horror, many of the reports also reflect police concern that the stories could spread and have a political impact. In Dnipropetrovsk province the OGPU reported the story of a collective farm member, Ivan Dudnyk, who killed his son with an axe. "The family is big, it is difficult to stay alive, so I murdered him," the killer declared. But the police report noted, with approval, that the collective farm members met and adopted a group decision to hold a public trial and "give Dudnyk capital punishment."¹¹² It also noted, with satisfaction, that the villagers had decided to double down on their sowing campaign and increase their output in light of the incident.

Similarly, when a fourteen-year-old boy who murdered his sister for food in the village of Novooleksandrivka, in southeast Ukraine, the OGPU reported with satisfaction that the incident had sparked no "unhealthy chatter." All the neighbours believed the boy to be mentally ill, and only feared that he would be returned to the village.¹¹³ In Dnipropetrovsk province a woman who murdered her daughter for food was, the OGPU noted, the wife of a man who had been arrested for refusing to give up his grain. Given that the woman showed signs of being a "social danger," the police recommended execution.¹¹⁴

The real cause of this "mental illness," or these sudden attacks of "socially dangerous" emotions, was perfectly obvious to the police as well: people were starving. In Penkivka, the Vinnytsia OGPU reported, a collective farmer had killed two of his daughters and used their flesh for food: "K. blamed the murder of his children on a long period of starvation. No foodstuffs were found during the search." In the village of Dubyny another farmer killed both of his daughters too, and "blamed the famine for committing the murders." There were, the policemen stated, "other analogous incidents."¹¹⁵

Throughout the spring of 1933 the numbers of such cases grew. In Kharkiv province the OGPU reported multiple incidents where parents had eaten the flesh of children who had died from starvation, as well as cases where "starving family members had killed weaker ones, usually children, and used their flesh as food." Nine such cases were reported in March, fifty-eight in April, 132 in May and 221 in June.¹¹⁶ In Donetsk province multiple incidents were also observed, again starting in March. "Iryna Khrypunova strangled her nine-year-old granddaughter and cooked her internal organs. Anton Khrypunov removed his dead eight-year-old sister's internal organs and ate them." That report concluded almost politely: "By bringing this to your attention I request you provide appropriate instructions."¹¹⁷

In March the OGPU in Kyiv province were receiving ten or more reports of cannibalism every day.¹¹⁸ In that month their counterparts in Vinnytsia province reported six incidents in the previous month of "cannibalism caused by famine, in which parents killed their children and used their flesh for food." But these may have been serious underestimates. In one report the OGPU boss of Kyiv province wrote that there were sixty-nine cases of cannibalism between 9 January and 12 March. However, "these numbers are, obviously, not exact, because in reality there are many more such incidents."¹¹⁹

Certainly, the authorities treated this as a crime, sometimes giving cannibals "enemy" labels as well. Hanna Bilorus was convicted both of cannibalism and of spreading Polish propaganda, for example; she died in prison in 1933.¹²⁰ Secret police files contain multiple records of cannibals who were subsequently imprisoned, executed, or lynched. One very unusual



Gulag memoirist has even described an encounter in 1935 with cannibals at the Solovetsky Island prison camp, in the White Sea. Olga Mane was a young Polish woman, arrested crossing the border into the Soviet Union in 1935 (she wanted to study medicine in Moscow) and sentenced for spying. After some time in the camp, she was sent to Muksalma, one of the islands in the Solovetsky archipelago. She resisted, because she had heard there were "Ukrainian cannibals," some three hundred of them, on the island. But when she finally met them, she felt differently:

"Shock and horror of the cannibals quickly passed; it was enough to see these unhappy, barefoot, half-naked Ukrainians. They were kept in old monastery buildings: many of them had stomachs swollen from hunger, and most of them were mentally ill. I took care of them, listened to their reminiscences and confidences. They described how their children died of hunger, and how they themselves, very close to starvation, cooked the corpses of their own children and ate them. This happened when they were in a state of shock caused by hunger. Later, when they came to understand what had happened, they lost their minds.

I felt sympathy for them, I tried to be kind, I found warm words for them when they were overcome by attacks of remorse. This helped for some time. They calmed down, started to cry and I cried along with them...¹²¹

Stories of cannibalism were known to the Ukrainian leadership, and to the Moscow leadership too. Kaganovich was as noted, certainly informed; a Ukrainian Central Committee working group responsible for the spring sowing campaign in 1933 reported back to the party that their work was especially difficult in regions with "cannibalism" and "homeless children."¹²² The OGPU continued to report cases of cannibalism well into 1934.¹²³

But if either Kharkiv or Moscow ever provided instructions on how to deal with cannibalism, or ever reflected more deeply on its causes, they haven't yet been uncovered. There is no evidence that any action was taken at all. The reports were made, the officials received them, and then they were filed away and forgotten.



© Family of Alexander Wienerberger



Four Points of Discussion - Historical Examples of Starvation

Four points necessary to consider after reading these historical accounts of human desperation while living through starvation.



What sobering accounts of horrific atrocities these people suffered. While difficult to discuss, there are four things that EVERYONE must consider after reading these historical accounts of human desperation and starvation. Make sure to keep these in mind as you read through the list of books I recommend.

1.) The historical examples provided prove there are similar physical and psychological human responses to starvation even in different locations around the world, different historical periods, and different cultures.

The horrific results of starvation transcended all of those outside factors. The assertion that, "it won't be that bad" or "it won't happen like that in America" is fundamentally flawed. Today's average American psyche is FAR more fragile than the robust societies and overall "hardiness" of the populace in the examples provided. Most Americans alive today have never truly struggled to meet their basic survival needs like previous cultures throughout world history.



Today's American psyche is very self-oriented, relativistic in nature, increasingly resistant to the idea of absolute truths, and individualizes morality separating it from structured morality anchored to various faiths or religions. Perhaps the largest misconception is that most Americans believe that mankind is generally "good" or "benevolent" if left alone from outside legal forces. That is all they have ever experienced.

In contrast, the societies in the examples shared embodied most of the following characteristics prior to the starvation period:

- family-oriented societies
- strong work ethics
- self-reliant
- resilient at surviving with extremely minimalistic resources
- experienced previous periods of extreme struggle
- most were devoutly religious,
- had life survival skills that most Americans have lost over the last century

The last characteristic brings me to my next point.

2.) The people living through the examples I provided had life and basic survival skills that are quite rare in America and quickly disappearing.

- How many Americans know they need to boil outside water before drinking it, let alone know how to start a fire in the rain to boil the water?
- How many Americans could forage in the forest for food and identify edible plants as opposed to poisonous ones?
- How many Americans know how to grow their own food, let alone store or root cellar it through the winter, or even have the seed and basic supplies and hand tools needed to do so?
- How many people have a large enough pantry (food storage) to survive up to a year until their gardens began to flourish?
- How many people know what size garden they'll need to feed their entire family until the following harvest season?

There are thousands of "basic" life skills that our ancestors, the American pioneers who crossed the Great Divide, possessed that only a few Americans possess today. Even if you consider yourself to be accomplished in survival and resiliency skills, do you have a safe location hidden away from the other 300+ million Americans to implement those skills to keep your family fed? Or do you intend to work together with your neighbors to survive? Which leads me to my third point.

Most Americans alive today have never truly struggled to meet their basic survival needs like previous cultures throughout world history.



3.) Can you trust the people around you when the entire country begins to starve? Are they going to run out of food before you do?

Do you seriously believe that if everyone on your block is starving and you still have food, they won't eventually take it by force? In the examples provided, those societies were FAR more community oriented and many had deep connections through their faith. While I will concede that many worked together in small groups for a short time (and I expect the same to hold true in America), after multiple weeks or months with no relief, even the strongest bonds of community (and even family) can be broken once deep starvation sets in.



Many examples showed the sheer psychological insanity that starvation brings. Stories of total isolation under stress, stealing and cheating others for resources, assaulting others (even murdering them) for food, paranoia over your neighbors, mistrust of anyone outside your family or group finding out you might have a few morsels of food remaining, prostituting oneself for food, eating cadavers, even parents eating their own dead children when things grew extreme.

Everyone in these historical accounts were pushed beyond their psychological limits and all would have

STAUNCHLY denied they would EVER participate in such actions before being thrust into that life scenario.

This is why I recommend reading these historical examples of starvation.

That is also why I am sharing a list of books I believe EVERY American, especially government officials and utility executives, needs to read, most importantly *SHTF Survival Stories* by Selco Begovich and *The Lucifer Effect* by Philip Zimbardo.

If you hope to survive such a scenario, your best chance is to understand the reality of what America will look like a month after a national grid down event and have a plan to survive and deal with the psychological effects of starvation in your surrounding community and even your own family. Do not let yourself be deluded into believing "it's not going to get that bad in America." I believe the suffering will be far worse than the historical examples I provided.





4.) Why would a mass starvation scenario be worse in America then the examples provided?

There have been MANY catastrophic famines throughout world history. Aside from, and combined with the three previous points, an extended, national grid-down event will surely combine the three main subjects of this report, Starvation, Human Desperation, and Living Without Rule of Law, in such a catastrophic way as has never been seen in world history.

Let me explain.

In the Holodomor, the Holocaust ghettos, and Great Chinese Famine you had the most extreme levels of Starvation and Human Desperation, However... there was not a lack of Law and Order. In those scenarios, Stalin, Hitler (the Nazis), and Mao imposed extreme and draconian rule over those societies that punished stealing food and other crimes by death. There continued to be "law enforcement" and judicial proceedings throughout those famines causing a general fear of "being caught and punished or put to death" and preventing *some* of the more atrocious crimes that likely would have occurred absent that threat of punishment or death. In other words, there was severe starvation and human desperation but there was still an active Rule of Law.

In the Balkan War examples by Selco Begovich, you had less severe Human Desperation and a far lower level of starvation, yet virtually zero Rule of Law (outside those



unsystematic rules imposed by the various warlords). While the survivors in his modern city where extremely food deprived, they still had the occasional food drops, scavenged rotten foodstuffs from various buildings, and the ability to barter with warlords for food "from outside the enemy blockade of the city." This is why the levels and types of atrocities were different in Selco's scenario. I'm unaware of people being pushed to eating cadavers or cannibalism during the Balkan Wars.



The violence during the Balkan War wasn't purely "food procurement" based crimes of desperation like those committed in previous historical famines, they were more seditious acts of violence against their fellow man for ethnic reasons and because there was no chance of reprisals or punishment from their non-existent government oversight or judicial proceedings. Rape, torture, indiscriminate killings, and other horrific abuses were all rampant in that scenario. Again, in this scenario, you had zero Rule of Law, and medium-levels of starvation and Human Desperation.

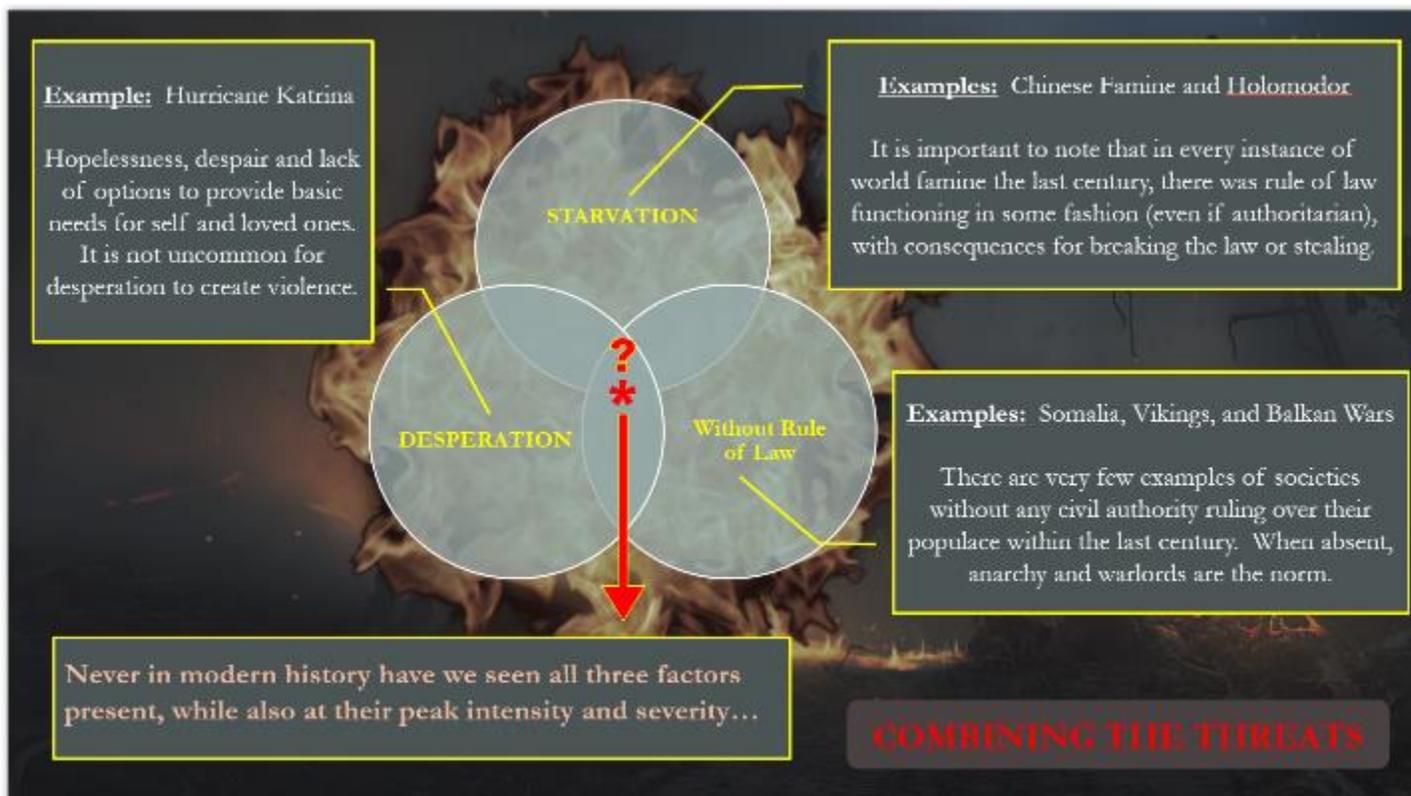
What happens when you have the most severe Starvation, utter Human Desperation with no hope, AND zero Rule of Law or oversight... all at their most extreme levels... all at the exact same time... with no one coming to help and no end to the devastation in sight?



This is why a famine in 21st century America will be far worse than historical famines.

1. The mass population does not have the basic life skills and tools to live without electricity that the other societies had.
2. There is not the same level of moral integrity, work ethic, and self-reliance of previous societies.

With our country's extreme dependence on electricity for EVERY aspect of human life, there will be no life-sustaining infrastructure to meet the most basic needs of our population today. Much of the American population now live near urban centers and cities with no functioning facilities or internal means of food production. No interstate trucking or food processing and production means the U.S. would experience a famine of biblical proportions.



With this grid-down induced famine, our culture does not have the life skills to feed itself. We aren't going to have any warning that the grid is coming down to make last minute preparations (maybe a very short time if it's a Solar Flare).

There is zero plan of action at any level of government from the federal, state, or local level. FEMA also has made no plans to prepare for a nationwide grid-down event. Law enforcement will be unable to do their job for long without the rest of the judicial system in operation, gridlocked traffic conditions, and no functioning prisons or phone/radio communication systems.

Ninety-nine percent of the US military is dependent on the civilian electric grid for its own life-sustaining infrastructure on its military bases. The military has no plans for a massive grid down scenario and has already warned Congress that a loss of the civilian electric grid would prevent them from being able to provide ANY response to the inevitable social unrest. No help is coming. It is not remotely possible to rely on "outside" assistance with America's geographical size, population density, and lack of rail and interstate trucking to disperse any UN food relief that may arrive at the coasts.



Concerned yet?

There will be mass starvation, death and destruction on a level that has never been seen before in world history. No electricity in America will utterly collapse our country.

So, if my assertions in this report are accurate (or even partly correct), why has nothing been done? Why has the bulk electric distribution system in this country not been hardened yet? Some have estimated that it would cost as little as 10-20 billion dollars. If the devastating result of inaction is so severe, why hasn't anything been done to prevent this type of scenario from unfolding?

The emergency planners, electric utility executives, and the politicians do not understand the gravity of their inaction.

Every civilian and government event on grid security I have been invited to has been a "no fear-mongering" event. The topics I discuss are virtually off limits. "We don't want to scare people," they say. I don't want to scare people either, but they need to understand the massive amount of American blood that will be on their hands if they refuse to act. It's their families too. It's their child that will starve in front of them. They just don't understand the ramifications of their failure to act.

I just hope they figure it out before it's too late, for all our sakes...





Recommended Reading List – Historical Starvation

- Selco Begovich, [*SHTF Survival Stories: Memories from the Balkan War*](#), Independently Published, 2020
- Anne Applebaum, [*Red Famine: Stalin's War on Ukraine*](#), Knopf Doubleday Publishing Group, 2018
- Frank Dikötter, [*Mao's Great Famine*](#), Bloomsbury Paperbacks, 2018
- Miron Dolot, [*Execution by Hunger: The Hidden Holocaust*](#), W. W. Norton & Company, 1987
- Mary Berg, [*The Diary of Mary Berg: Growing Up in the Warsaw Ghetto*](#), Oneworld Publications, 2018
- Emmanuel Ringelblum, [*Notes from the Warsaw Ghetto*](#), Ibooks, Inc., 2006
- Jasper Becker, [*Hungry Ghosts: Mao's Secret Famine*](#), eBookPartnership.com, 2013
- Myron Winick, [*Final Stamp: The Jewish Doctors in the Warsaw Ghetto*](#), Authorhouse, 2007
- Maria Ciesielska, [*The Doctors of the Warsaw Ghetto*](#), Academic Studies Press, 2022
- Matthew McAllester, [*Beyond the Mountains of the Damned: The War inside Kosovo*](#), NYU Press, 2003
- Aleksandr Solzhenitsyn, [*The Gulag Archipelago*](#), Editions du Seuil, 1974
- Peter Mass, [*Love Thy Neighbor: A Story of War*](#), Vintage, 1997
- Iris Chang, [*The Rape of Nanking*](#), Basic Books, 1997
- Primo Levi, [*Survival in Auschwitz*](#), The Orion Press, 1959
- Christopher Browning, [*Ordinary Men: Reserve Battalion 101*](#), Harper Perennial, 1998



Other recommended books on starvation and the grid-down threat:

- Todd Tucker, [*The Great Starvation Experiment*](#), University of Minnesota Press, 2007
- Jonathan Hollerman, [*Survival Theory*](#), Apoc Publishing, 2016
- Philip Zimbardo, [*The Lucifer Effect: Understanding How Good People Turn Evil*](#), Random House, 2008
- Hannah Arendt, [*Eichmann in Jerusalem: A Report on the Banality of Evil*](#), Penguins Classics, 2006
- Ancel Keys, [*The Biology of Human Starvation*](#) (Volumes I and II), University of Minnesota Press, 1950
- Dr. Peter Vincent Pry, [*Blackout Warfare*](#), Independently Published, 2021
- Dr. Peter Vincent Pry, [*The Power and the Light*](#), Independently Published, 2020
- William R. Forstchen, [*One Second After*](#), Forge Books, 2011
- Jonathan Hollerman, [*A Story of Survival*](#), Apoc Publishing, 2013
- William Golding, [*Lord of the Flies*](#), Faber and Faber, 1954
- Pat Frank, [*Alas Babylon*](#), Harper Perennial Classics, reissue edition (2005)



Conclusion

So, what is the point of all this information? Am I just fearmongering? Maybe I'm just being pessimistic or a Negative Nelly. I've spent many years researching the various grid down scenarios. I've read hundreds (likely thousands) of reports, articles, and books looking at a grid down scenario from every angle you can possibly study it. I've had personal experience dealing with hunger as a SERE Instructor. Throughout my journey over the last two decades, I am continually astounded by the absolute and complete lack of understanding that many of the preparedness experts and emergency planners have when discussing a grid down event. Recently, a leader in one of the largest EMP preparedness organizations actually told me they thought it was important to develop a nationwide plan to keep the grade schools up and running after an EMP attack so the young children would have a safe place to go to and acquire food to eat during the extended crisis. The mere premise that an important decision-maker in the EMP preparedness community believes this to be a good idea and even a possibility... it literally blew my mind! I was speechless and it took me a few awkward moments to even figure out how to politely respond to the statement. I do not tell that story to disparage the person that made the recommendation, I am positive it came from the person's heart and their care for the poor children who will be suffering through this terrible scenario. I tell the story to show a single example of an important figure in the EMP protection community who literally has no earthly idea about the chaos that is coming in a post-EMP environment or how to effectively deal with it. From my personal experience with other experts in the field of preparedness and emergency planners, sadly, these types of illogical ideas are very typical of what I see when discussing long-term grid-down scenarios. Very few people seem to have the ability to effectively think outside the box, remove themselves from the environment they currently live in, and place themselves in a world of human desperation and starvation.

If you can't accurately envision the numerous obstacles that you'll face in the most chaotic operating environment imaginable, your action plan is destined to fail.

Most experts in emergency management and emergency planning departments usually have some type of experience dealing with at least one of the three critical factors discussed herein. However, their experience with those factors will be at a significantly lower degree of severity and never more than one, maybe two factors at the same time... and never for an entire year. **No one has ever dealt with a massive tragedy without some sort of electricity, open communication channels, assistance from FEMA and the Red Cross, and without hundreds of civilian charities and government assistance coming to their aid.** I think that is part of the problem with these same organizations being involved in the post-EMP planning process. All of their previous experience in disaster preparedness is based on things working a certain way, coordinating with willing volunteers, applying certain mindsets, and then experiencing certain levels of success from those efforts. A nationwide grid-down event will be such a radically different animal than anything they've ever experienced. If you can't accurately envision the numerous obstacles that you'll face in the most chaotic operating environment imaginable, your action plan is destined to fail.



So how do these concepts transition from first responders to the military, post-collapse? Many are now aware that the US military receives 99% of its electricity from the civilian electric grid¹⁶. While the previous statement is a largely known fact among those planning for a grid down event, many of the same planners have never considered that nearly every US military dining facility is now under civilian contract and the military is wholly reliant on civilian trucking infrastructure to deliver their food resupply¹⁷. While many experts see the risk and threat of losing electricity to the bases and they are quickly trying to brainstorm and come up with a solution to harden or isolate military bases into micro-grids or similar ideas... they always seem to forget that soldiers need to eat too. Maybe the experts just assume someone else is taking care of that problem. If there is a plan for that, I've never heard of it and neither has anyone I've ever reached out to.



In basic training, the military takes young enlisted men and women and partially strips them of their individuality so they can be molded into a collective group and operate as a cohesive unit. The Military then trains its officers to move those cohesive units around on a chess board. While my American perspective may be jaded, I believe our military brass to be some of the best chess players in the world. But these aren't chess pieces we speak of, they're people: often just teenage kids. They are individuals with mothers and fathers, sisters, girlfriends, wives, and young children. One of the best aspects of the military is that we take care of our own. If we send young men to fight a war on the other side of the world, they can rest assured that their wives, children, and family will be taken care of and kept safe regardless of what happens to them.



In a grid down scenario, the situation will be reversed. In the early weeks, the troops on base may feel safe while their families are the ones in harm's way. When the troops start to get word of the chaos, panic, starvation, and destruction happening throughout the country, I can assure you that a good portion of your troops **WILL** desert their post to go home and check on their immediate family members. How can I be so certain? How many of you have studied the desertion rates for the duration of General Sherman's March¹⁸ during the Civil War? Many know that Sherman's march helped end the war but often people don't know why. When the Confederate soldiers from Georgia heard that Sherman had burned Atlanta and was destroying every farm along his path of destruction towards Savannah, they deserted their posts en masse to go home and check on their families and their farms.



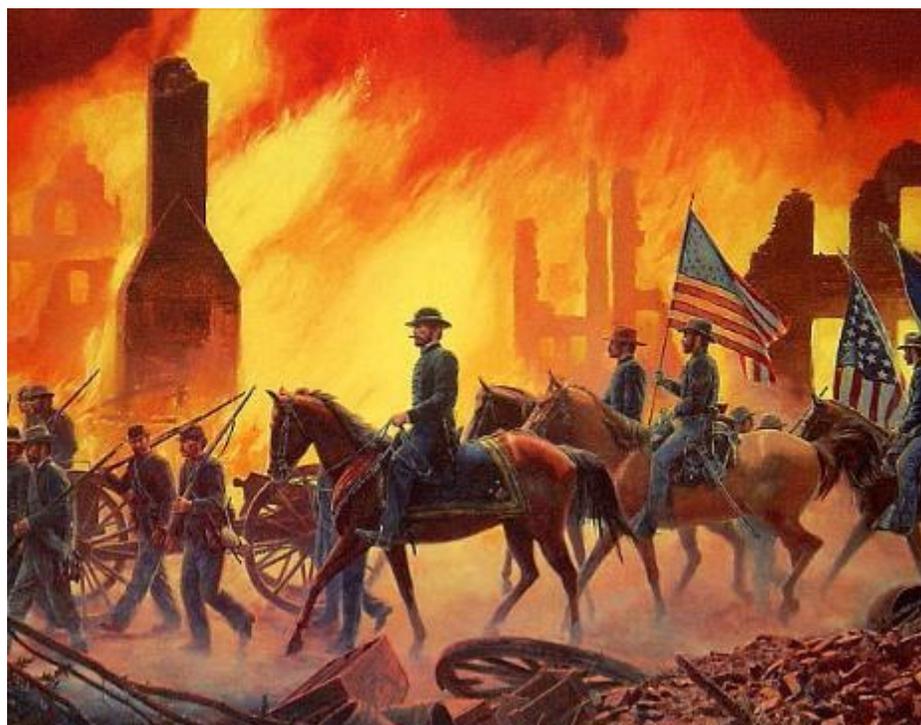
Per the NY Times titled, *Re-thinking Sherman's March*¹⁹:

"By waging war against the minds of his opponents, Sherman's march achieved its creator's goal of hastening an end to the conflict: the wives of Confederate soldiers along the route of the march or who feared they lay in the path of Sherman's advancing legions begged their husbands to come home, and desertions increased significantly during the fall and winter of 1864-65. This hemorrhaging from Gen. Robert E. Lee's army in Virginia further depleted his already thin ranks and allowed Gen. Ulysses S. Grant to deliver the knockout blow in the spring of 1865."

Desertion is not a subject the military studies at length today, especially in the historical context. Understandably, there really isn't a reason for them to study it because it hasn't been a major problem for over one hundred and fifty years. The three factors of human desperation, starvation, and living WROL will certainly affect soldiers every bit as dramatically as



it will their civilian counterparts. As things start to fall apart throughout the country, they will become desperate for news of home and extended family. Military troops may begin to question the “rule-of-law” on base if communications networks are down and there is no clearly defined response plan and their leaders aren’t responding effectively to the crisis (at least in the perspective of the troops). A couple of days later when the MRE’s run out and there is no more food on base... the base perimeter fence may begin to look like swiss cheese. If you can’t provide the basic needs to your own troops, or ensure their families’ safety, or maintain their faith in the bedrock of the chain of command and their belief that there is a plan [somewhere], and if you can’t feed everyone involved...you **will** lose the bulk of your personnel to desertion. This goes for the military, first responder, electric grid employees, employees at the nuclear facilities, etc... If you can’t take care of, feed, and protect your personnel **and** their families, they are going to leave!



So, what now? I assume I will be donned with the crown of *Fearmonger in Chief*. I often hear that my writing depresses some people and makes them feel hopeless. That’s alright. I’d prefer that someone faces the dark truth and the reality of the situation than continue to ignore the facts of living without electricity in a modern world. I would prefer that the experts err on the side of caution while making plans for a long-term grid-down event than continue to stay ignorant of how radically the operating environment will change when human desperation, starvation, and living WROL are factored in. What happened to the idea of “readiness” in the emergency planning realms? How can you prepare or be ready for a threat you’ve never researched and a threat you don’t fully understand? If anything, I hope this paper fosters more discussion on the topics of human desperation, starvation, and living WROL. Maybe another professional or social psychologist will pick up where I left off and perform some more research into this oddball topic.

I regularly speak out against making plans or operating your preparedness from a mindset of fear or panic. These are complicated times, and this is a complicated subject with many opinions and perspectives. It’s important to keep a level head when considering plans for disaster preparedness even if the future looks dark So, let’s explore how an extended grid down event would affect the military and first responders at their current state of readiness.



GRID DOWN: DEATH OF A NATION

Thought Exercises





Thought Exercises

Feeding the Troops: A Mental Exercise

Today, because of the beauty of modern technology and electricity, the average active-duty soldier can stroll through a buffet line and eat three squares a day at our military's state-of-the-art dining facilities. Has anyone ever stopped to wonder whether or not that food would continue to be delivered to the base each day after a grid-down event?

Like all food distribution networks in the US today, the military's civilian contractors organize and operate their chow halls and commissaries with POS-style computers perfectly synced with precision food management software, distribution center networks, shipping coordinators, trucking companies, and delivery personnel. All of the base's food is dependent on a complex matrix of tens of thousands of electrical signals bouncing around the country on a daily basis. This complex food infrastructure is contracted out so the soldiers' food can be delivered fresh on multiple truck deliveries each and every week and the military can focus on its war-fighting and defense missions. The computers and networks for the chow hall manager, cash registers, trucking, delivery companies, food distribution centers, food canning facilities and twenty other steps in between are not going to function without electricity. Even if you could harden or replace their computers, they surely aren't going to be synced up with the nation's food distribution network with the entirety of the American electric grid down.

Military Mental Exercise

America was just struck by a high-altitude nuclear weapon specifically designed to create a Super EMP...

You are a military base commander and an effective leader. You assign someone you trust to oversee it and pick

some random soldiers to coordinate the cooking of food. What about the appliances in your modern chow hall kitchen? Will any of them function without electricity? Probably not. How will the men you assigned cook the food? If your first instinct is with a "field kitchen" or Mobile Kitchen Trailer, please note that these operate off diesel generators and propane cooktops. Both fuels needed for those kitchens to function will be in extremely limited supply the longer the event continues. Right now, it's estimated that Military bases have enough diesel fuel for backup generation to last 2-3 days at most. How will you maintain the food items that require refrigeration to prevent spoiling? Eat the refrigerated items first, right? Will the future recipes still be the same when you remove any items requiring refrigeration? Would the meals even be edible if you removed those ingredients? Speaking of meals and recipes, I bet every one of those recipes is kept on a computer. A computer that is now fried because it was plugged in when the EMP hit. The civilian chow hall manager only shows up for a day or two. Who figures out how to cook the remaining and rapidly dwindling food stores?

Those are minor issues. Where will you get clean and purified water to cook with since the base or neighboring town's water supply is surely not functioning (at least for very long)? Is there an active water source like a stream or river that runs through the middle of the base? Likely not. How do you mass purify water for consumption, cooking, cleaning, and bathing, by boiling it? How many [dead] trees do you have on base and how many cords of firewood will it produce? How long will it last with the dozens of cook fires you'll need each day, not to mention the never-ending fire to purify the water for the base's consumption?



What happens when you run out of dead trees? Do you send troops into the neighboring forests to cut firewood? How many chainsaws does the base have? How many spare chainsaw blades do you have? Will they stand up to the long-term abuse? What happens when you run out of gas for the chainsaws? How many axes do you have on base? How do you transport all those logs back to the base when you run out of diesel for the trucks? What happens when it becomes too overwhelming to boil water and people start drinking water from unclean sources. **Dysentery alone killed 1/6th of the soldiers that died during the civil war²⁰.**

How do you wash all those dirty dishes each day when you run out of soap? You do realize that you HAVE TO thoroughly wash and disinfect every dish and fork or foodborne illness and disease will spread like wildfire through the base. Where does ALL that clean water come from? Where does the massive amount of anti-bacterial dish soap you'll need come from? What about disinfectants like bleach?

On a side note, and speaking of foodborne illness: the most likely culprit leading to foodborne illness throughout history is cooking with dirty hands, typically hands with fecal matter on them. What do you do when the septic system on base backs up and everyone starts to defecate outside their back door in random locations because they don't want to



walk to the open pit toilets you dug sporadically throughout the base. What happens after a week or two, when the toilet

paper runs out and there is no more anti-bacterial hand soap to be had to clean your cook's hands?

Okay, back on point. So, maybe you plan to feed the entire US military fighting force on MREs? Has anyone ever tallied up the total amount of MREs currently stored by the US military and crunched the numbers on how long that will sustain the entire US fighting force? Oh, wait... you are forgetting their families! Are you going to feed just the military personnel and not the other civilian men and women under your control that live on base? That would go badly, so you need to count on feeding the civilians as well. How long can you feed them under that premise? It's no secret how soldiers dislike being put on rations during a field exercise especially if there were other perceived food options available to them. Nobody "enjoys" eating MREs for more than a day or two. But again, I'd bet there aren't enough MREs in the entire military to feed EVERY single soldier and their families for even an entire week.

So MREs are not a viable, long-term option. **The current food on base will run out in days, or a single week at best.** What do you feed to the thousands of people on base, living under your care after the MREs are gone? I should say, how do you feed them after that? What type of food will you be able to feed them? Where will it come from? How will it be delivered from various distances? What about six months down the road? Will you be feeding them whole wheat berries, dried corn, and mixed bean soup from raw supplies flown in from the large grain bins in the Midwest? How will you cook that raw grain without functional commercial grain mills? Will your troops receive one meal of tasteless boiled mush per day or two? Does the military have massive stores of multivitamins to supplement your soldier's limited diet? Did you perceive in losing some of the grain shipments due to the civilian ambushes along the distribution routes trying to steal food from the food delivery convoys? What are the rules of engagement against hungry and starving civilians... American men and women who look like they just stepped out of a scene from *Schindler's List*? How will taking the lives of fellow Americans (even in self-defense) affect your troops?



How will the lack of food and basic nutrition affect your men's morale and their ability to perform their duties?

With experience in this area as a former USAF SERE Instructor, I can assure you that, over time, most of your troops are going to turn into a pile of pudding in uniform when it comes to decision making and hard work when you limit their basic caloric needs on a daily basis.

Do you seriously think all these obstacles can be overcome while making decisions on the fly? If the simple task of feeding the military is not thoroughly planned out before a long-term grid-down event and you believe you can just "wing it" when the time comes... well...



This isn't even an exhaustive list of questions on a single, but very serious, subject of feeding your men. Every single task you need to perform in a world without electricity should be pre-planned with the same (or more) scrutiny. I actually shortened this section and the number of questions I could have asked on the subject because I didn't want to lose the reader.

The Point:

All of your other post-EMP/CME planning will be for naught if you don't adequately perform this single task:

You Must Keep Your Troops and Their Families Fed!



Feeding the Troops: **By the Numbers**

Assuming an EMP hit tomorrow...

The average American eats 2,000 pounds of food each year²¹. Today, you have 1.4 million active duty members and 900k Guard/Reservists (who would likely be called up to assist in this catastrophic emergency). **The two equate to 2.3 million tons of food needed to feed your men and women in uniform for the next year.** Since there is currently no realistic or effective plan in place beforehand: within three days (the time until current food runs out), you will need to find a way to provide 42,000+ metric tons of food to your troops, each and every week! Somehow, you will need to locate 42,000+ tons of food in a world where the civilians are killing each other over the last can of spam at their local grocery store. After you locate the food, you'll need to figure out how to subdivide, catalog, and coordinate transportation to each military base sprinkled throughout this massive country without computers, commercial interstate trucking or civilian air transport.

You may be considering right now that, "you would need to appoint the perfect person for the task..." Remember, you have to do this without a cell phone or calling someone else for assistance, without using a computer or email, without civilian contracts, and without the aid of Google or asking the internet. Basically, you'd have to brainstorm the problem, figure it all out, hand write your plan of action on paper, somehow contact the appropriate people with the food (who also won't have functioning communication or data networks), somehow convince them to actually give you the precious food, and make this all happen using only military personnel and transportation (military personnel you can't reach by phone, and the limited transportation remaining that wasn't damaged or destroyed by the EMP, and without using precious diesel fuel which you ran out of after day three). **That was just the food for the next seven days - the food for a single week.** Immediately, you'll need to try and locate another 42,000+

tons of food for the next week, and the next week, and then the week after that. You'll be performing this impossible task every single week for the foreseeable future in a country with finite food resources that are rapidly disappearing at an astonishing rate.

Oh, and I forgot to add, it will be impossible to maintain morale if you allow your troops to literally watch as their spouse and children slowly and painfully starve to death over a period of time while they are being fed themselves. If you desire to have any hopes of keeping your men on base, you must bring their families out of the chaos, looting, and rioting in the neighboring civilian towns and protect their loved ones by billeting them on base. Has anyone crunched the numbers on this and figured out if this is even possible with current base housing availability? Maybe one military family per bedroom? How will those living conditions without sewer and running water affect morale? The point is, you will need to find a way to feed the civilians on base as well. This adds an additional 1.3 million military spouses and 1.93 million children²² to the 2.3 million military personnel I mentioned earlier. You now need to find, procure and distribute across country-- are you ready for this?-- roughly 100,000+ metric tons of food each week, not the 42,000+ tons I mentioned earlier.

"The EMP just hit! You need to get started fixing the problem right now!" Ready...Set...Good luck with that!





Feeding the Troops: **The Wrong Answer to a Tough Problem - Partnership**

In the previous exercise, I discussed numerous logistical issues with providing food to our military personnel after a grid-down event. Without having a very specific plan of action in place before the grid-down event: can we all admit that a single person (or team of people) tasked with locating, acquiring, distributing, and transporting 100k+ metric tons of food around the entire United States each and every week to various military installations is clearly not going to happen? If you are going to struggle to feed your own military personnel living on base, how does this affect the civilians living right next the base? The better question is, how are those civilians going to affect you?

Recently, I've been hearing about possible military plans for a base to partner with a neighboring city to try and

create a small, hardened "micro-grid" that could supply electricity, water, and sewage to both the military base and the town after a grid down event. Currently, 99% of the military's electricity is supplied by the civilian electric grid. The idea of partnering with the public to tackle this tough problem seems to be the logical solution and something that seems to be gaining traction in various circles. **But, is it such a great idea?**

Let's assume that the plan of creating this partnership is even possible and an EMP-hardened microgrid is created. Let's just use Lackland AFB and the town of San Antonio, Texas as a random test subject for the partnership premise. Let's also assume that the leadership at Lackland AFB has been forward-thinking and had an emergency plan of action in place to feed their troops in a grid down event. Shortly after the EMP event, they start flying cargo planes to [somewhere] for food. For the sake of argument, let's ignore the logistical arguments like, do the





cargo planes even function? Is there enough jet fuel to sustain the weekly food delivery operation long-term? If using a neighboring country for food, what are we trading them if the US Dollar has collapsed and isn't worth anything on the world market? For now, let's just assume that everything in the plan works out perfectly. Forced to bring in all military personnel and their families that are currently living off-base, Lackland AFB has now grown from a population of 7,000 to over 10,000 men, women, and children... overnight.



Those 10,000 people will require about 200+ metric tons of food each week to feed everyone. Without the use of civilian trucking, I imagine that there will be a steady stream of cargo planes taking off and landing at the base to re-supply it. Do you think the civilians in San Antonio aren't going to notice those cargo planes taking off and landing? What happens after the first few days when the rioting and panic in San Antonio really ramps up and all the grocery stores are looted? What happens after the second week when all the looted food has been eaten and people are starting to go hungry? What happens after 30 days when most people have been without ANY food for a week or

longer? If the logistics of feeding the 10,000 people on base is daunting, how do you think the Mayor of San Antonio is doing acquiring food for the 2.5 million people that live in the SA metro area? Even if the hardened electric grid was up and running in that town, San Antonio is not an agricultural town. Where is all that food coming from? At some point in the very near future, those millions of people are going to be hungry. Where do you think they are going to show up begging, pleading, and demanding food?

What happens when only 1% of the San Antonio population shows up at the front gates of Lackland AFB demanding food. That's 25,000 people at your gates. Even if it's only a couple thousand people at first, what are the rules of engagement for the security forces guarding the gate? Lackland AFB encompasses 7,000 acres of land, that's 70,000 linear feet of fence line to protect. How is that accomplished... by placing third-week basic trainees on the fence line with a weapon? Do you have enough weapons to go around? Again, what are the rules of engagement? What happens when you explain to the Mayor of San Antonio that you only have enough food to feed your own personnel when in truth, you are struggling just to keep those 10,000 people fed? Did you forget that the City of San Antonio is supplying your electricity, water, and sewage in that partnership of yours? What happens when they don't like your end of the partnership anymore? What happens when the mayor threatens to shut everything off if you don't help them feed the civilians and help maintain order in the city of 2.5 million? How far do you think the food supplies for 10,000 people will stretch when considering 2.5 million people are starving? Is that problem even possible to contain with only a couple thousand troops? Do you confiscate the local civilian critical infrastructure to maintain your electric, water, and sewer needs? What are the rules of engagement to do so?

Even if you were able to take over those facilities peacefully, how do you maintain all the electrical engineers, linemen, and all the other employees at the various utility companies? Those civilian button pushers and mechanical and electrical engineers are the only ones who know how to



fix and operate those civilian facilities. How do you keep them at their post? You'll likely need to offer them, and their families, food and security. You'll surely need to move them out of the chaos of downtown and onto Lackland AFB to achieve their food and security needs. Will they agree to come? Do you have the authority to demand they come? What percentage of that workforce do you need to secure to keep all that infrastructure functioning? Now you've just grown your base population by a couple hundred more mouths to feed. How do you get each of those button pushers to their position each and every day, a military escort for each group to each facility? What if you run out of fuel? What if the base is surrounded by thousands of people demanding food? How do you get through the picket lines and get those workers safely to and from their jobs? **What are the rules of engagement for the escort squads?** How do you protect the critical infrastructure throughout the city to prevent angry civilians from taking over a facility or taking military hostages in trade for food? Do you give in to their demands knowing that word will spread and hostage-taking could become a serious problem in trade for food? Is it even possible to protect all the infrastructure throughout the city that supplies the base with electricity, water, and sewage? What happens when someone shoots up one of the HV transformers in town with Pappy's deer rifle because they are so angry that you won't feed them and their family is starving to death? Is any of this even possible or feasible? How is this partnership going to work in the long-term?

What happens when, during the first few days of the collapse, the Governor of Texas and the Mayor of San Antonio insist that you send in some National Guard elements to help quell the rioting, looting, and panic downtown? How do you send troops into the midst of boiling cauldron of 2.5 million confused, hungry and angry people in town? How many troops do you send? Are active military troops allowed to help or assist with the National Guard mission inside the CONUS? Again, what are the rules of engagement in this situation? If you were able to get inside the city within the first few days of the event, install martial law, and enforce a strict curfew, you might be successful in stopping the majority of social unrest. **But, for**

how long? We already established that you can't feed the 2.5 million residents of San Antonio. It is just a matter of time until things get way out of hand.



When hunger and desperation set-in to the populace, your measly force of a couple of thousand troops will not be able to stem the tide of 2.5 million angry and well-armed Texans. Instead of the populace fighting amongst themselves, you've now provided a uniformed representative of the government for them to direct their anger and rage towards. If you send National Guard Troops into any major city in the US and you don't fix the grid within a couple of days, you better get them out of there or things are going to go VERY badly for them! What are the rules of engagement when you initially send your troops into the town? Do those rules of engagement change a week later when things get totally out of hand and the first bullets start to fly? How long do you wait to get your men and women out of that untenable situation? Until after the first major engagement resulting in casualties on both sides? I'm sure you're familiar with "the shot heard 'round the world" and it's historical significance in this type of situation? How are a bunch of angry Texans going to react to civilians being killed in this type of situation (even if your men were acting in self-defense)? You will not be able to control the messaging and how the story spreads. You will not be able to stem the tide of the coming chaos and destruction. Your best option is to keep uniformed troops out of the fray.

So, for the sake of argument, let's assume you were able to harden the San Antonio metro area (including Lackland AFB) into its own EMP-proof microgrid. Even if you



could save the HV transformers and quickly reboot the overall electrical grid, what about all the actual electronics, equipment, factories and infrastructure that was destroyed by the E1 and E3 portions of the pulse? Even with a functioning electric grid, what percentage of the electronics inside the city and other critical infrastructure were destroyed? If there was a plan in place, these challenges might be overcome quickly. We already postulated that Lackland AFB leadership had a plan to supply food to its troops in a grid down event. Now, let's speculate that San Antonio had a similar plan in place to provide immediate and long-term food for its 2.5 million residents. Without interstate trucking and access to food deliveries from outside of San Antonio, I don't believe the logistics of that are even possible, but we'll pretend it is. The country is hit by an EMP. After a few days of chaos, San Antonio and Lackland AFB have a functioning electric grid, water supply, and sewage system.

Next, let's suspend reality again and pretend that before the national electric grid came down, San Antonio had a barter agreement with the Country of [Costa Rica for example] to purchase grain and food in trade for [some asset or resource that San Antonio owns or has access to]. The (surprisingly EMP-proof) C-5 and C-17 transports are flying day and night to transport the supplies back and forth and you somehow never run out of fuel to keep those planes operational. Hooray for public/private partnership. What could possibly go wrong?

There are 7 million people living in Houston to your east, 2 million people in Austin just north of you, and a million or so people to your south living in Corpus Christi and Laredo. We might as well add the 7 million people in the Dallas/Fort Worth area because it's only a four-hour drive from San Antonio. What do you think is going to happen when all those people start to catch wind that you have food, fresh water, electricity and don't forget air conditioning in South Texas? Where do you think all those other hungry and starving Texans are going to migrate? There are easily over 30 million people that live within a six-hour drive (or a couple day's walk) of San Antonio and Lackland AFB. In a dark world,

do you think the shining beacon of lights from your town will be ignored? Word will spread like wildfire.

After a time, you could start to see refugees from all corners of the US. What happens when hundreds, thousands, or after a short time, likely tens of thousands of starving and desperate new people show up at the city gates every day? Oh yeah, San Antonio doesn't have gates... or a perimeter fence for that matter. How do you keep millions of people from just walking into town and eating your townspeople's food? You only have enough resources coming in to feed 2.5 million people. The San Antonio city center (not metro) is 298,000 square acres. That is equivalent to 450,000 linear feet of perimeter to guard, without a fence or wall, with potentially millions of people trying to sneak in. How is it even logistically possible to guard that perimeter? Again... what are the rules of engagement? What happens when the governor of Texas wants to take over and utilize your town's finite resources to assist the rest of the state? Does the town of San Antonio declare its own sovereignty and independence from the State of Texas? What happens when the Federal government wants to move in and use your "Shining City on the Hill" as the new central operations center for the entire United States and run its military operations from there?

I realize we are now entering the territory of the absurd. But are we? What are the ramifications of having a





military base partner with a neighboring town to create a hardened microgrid? I realize that the idea might have been just theoretical, but before we start moving in that direction, shouldn't we at least question and address some of these issues? Even if you were to duplicate this type of military/civilian partnership in a dozen different CONUS locations, you'd still have the same major problems. Mainly, the bulk of the 300+ million Americans that will quickly begin to starve to death and take every opportunity to gain access to food. Shouldn't these same types of questions be broached for any type of post-collapse planning? Unfortunately, I fear this is a short-term solution to a grid down problem that is demonstrably long-term!

In closing: should we pump the brakes on the San Antonio/Lackland Air Force Base partnership that is currently

underway? Absolutely not! While some may take what I write as disparaging towards the incredible research and the work that is happening in Texas, I am not. I fully support their mission. I know they are working tirelessly to demonstrate the ability to harden a grid for a major metropolitan area. If successful, they could provide a blueprint for other communities, states, and possibly even the federal government. We just need to be realistic about how Human Desperation and Starvation will affect this endeavor in the event of a long-term grid-down event. **If we can't harden the HV transformers and critical components of the electric grid on a national level before we are attacked, enabling a piecemeal recovery to begin within a week or two, I'm not so sure a feasible plan for continuity of government is even possible.**





A Thought Exercise for Civilian Emergency Planners:

Who is even going to show up for work in a nationwide grid down event?

I've seen a certain large utilities company's Emergency Planning Report for "catastrophic events" where their first step on day one was(paraphrased):

Step 1. Initiate emergency phone roster – Instruct all senior management to meet at [their headquarters] Conference Room B. Immediately contact all personnel and inform them to initiate the response plan.

Step one is making a huge assumption that cell phones and the landline phone networks will be operable at the time. If so, who is the person responsible for performing all the calls? What if it happened in non-business

hours and no one was at the office? Does the responsible party have every employee's phone number programmed into their own personal cell phone? I'd be willing to bet that agency's emergency call roster is on someone's computer at the office and can't be accessed without electricity or the computer could be fried. But let's assume the phones aren't fried, the cell networks were still functioning and the phone networks were not overloaded with emergency calls... and they had paper copies of everyone's employment forms (not likely as this is all kept electronically now, and not in a metal file cabinet like twenty years ago), and then we'll postulate that the employees actually answered their phone at 2 am





and are able to receive their instructions to come in to work... (I think we better just hope we get lucky and the EMP event happens in the middle of the afternoon while everyone is already at work.)

How many personnel do they believe are realistically going to show up where and when needed? This organization's headquarters was located in a major metropolitan city. Some of their personnel may not be home at the time of the event. They may be walking home because of inoperable and abandoned vehicles blocking roadways, non-functioning streetlights, and a general grid-lock of traffic in their large city. **The leadership likely wouldn't be able to make it into their headquarter's "Conference Room B".** If they work for the said emergency planning department at the utility company, the senior management and head engineers will likely have a fairly good idea of what's really going on or at least a general idea of the severity of the situation. Do you really think those individuals are going to immediately head into work when called? More than likely they'll start thinking about their immediate and extended family members and put their personal needs before the company's needs. That's just human nature.

They will start asking themselves the following questions. "My small child could be (is likely) stuck at their elementary school without transportation home. My wife works twenty miles outside of town. Is she going to stay there or is she going to try and walk home? What if she doesn't show up or I can't find her? My elderly father is in a nursing home and needs his ventilator. How is he doing? Has my father died already? Where should I go and who should I check on first?" There will be a million questions, concerns, and fears running through that employee's mind. There will be a million personal tasks that the employee will likely feel are more important to accomplish than immediately going in to work to help "other" people and abandon his wife, kids, and extended family to fend for themselves. This is the "Human Factor" that most EMP/CME planning fails to take into consideration.

I'm not just hypothesizing. I've never done a formal poll, but over the years, I have asked hundreds of healthcare workers, policemen, military members, firefighters, and other first responders "What would you do if the electric grid was destroyed and chaos ensued?" Most of them stated they would finish their shift and go home. Some would leave immediately. Most said they would have reservations about showing up the next day for their shift. Most cited their reasoning that they wouldn't be able to perform their job effectively without electricity.

I always follow that up with "What if things really started to fall apart after day two or three and there was some rioting and looting beginning to take place. Would you still consider going in to work?" EVERY single person that I have ever asked that question has responded with an emphatic, "No!" They would stay home with their family, and if things got worse, some would leave town to stay with extended family in a rural area. I have never, not once, been told they would put their critical job as a first responder (or National Guardsman) before their family's safety and leave them unprotected at home.



Now I understand this is not a scientific poll. I couldn't provide a number to the people I've asked these questions, but it's been a lot. I am still waiting to meet that most-honorable, self-sacrificing employee who is willing to put his family's safety at risk in order to show up for their shift at work.



How Would a Grid-Down Scenario Affect You Personally?

Excerpt from Jonathan Hollerman's book, *Survival Theory*.²³

How long do you suppose the food in your pantry will last? Most Americans go to the grocery store every three days. Let's assume you eventually eat the boxes of uncooked food raw (you will once you're hungry enough). With rationing, most households might have enough food for one to two weeks. A tiny minority may have canned food to last them a bit longer or have looted their local grocery store before the masses arrived (within 48-72 hours) to clean it out. Only ma and pa stores may open their doors and then they will only take cash (for a few days, or until they realize the power isn't coming back on). Unlike some popular post-apocalypse books on the subject, major supermarket chains will not be open for business. The managers have no vested interest in the stores, which are owned by some vast, faceless corporation in another state. Employees aren't going to show up for work without lighting in the windowless stores and the cash registers not functioning. Once the food is looted, there is no resupply coming.

Most people don't realize how the food supply in this country has radically changed over the last 100 years (especially in the last 10 years). A century ago, most people, even "city folk," grew and preserved a good portion of their daily food. Today, very few people garden and the ones who do consume it as it grows. Very few Americans know how to can or preserve fruits and vegetables to last through winter. With the introduction of electricity and food on demand at your supermarket, the skills needed to live without electricity have been completely lost to 99.9% of Americans. Even most of today's older generations grew up with electricity. With the help of computers, we now have a "just in time" delivery system. In other words, food is grown, canned, and resupplied to the grocery shelves as fast as it is taken off. There are no great towers of grain like in ancient Egyptian

days. If you stop the growth, canning, and resupply, it won't be long till ALL the food in this country is completely gone.

Most supermarkets don't operate storerooms anymore or stock much in the back room like they did 20 years ago. Have you ever asked your local supermarket employee to check the back room for something they are out of? They look at you like you're stupid and then pretend to go in the back only to return a minute later and tell you "it's all out on the shelves." Most supermarkets get two to three truck deliveries per week to keep their shelves stocked. In the modern world (with electricity and computers), when you buy a can of beans at your local store, the checkout computer tells the warehouse to put another can of beans on the next truck. The warehouse's computer then tells the distribution center's computer that they need another can of beans on the next truck. The distribution center's computer tells the canning factory's computer they need another can of beans to be sent on the next truck delivery. The canning facility computer then emails the farm in Mexico that it needs more raw beans on the next available truck. What are the two common denominators in all those steps? The computers can't communicate with each other and the trucks can't drive across the country because of traffic jams and the gas stations don't have electricity to run their pumps. This is true with every item you buy at every store you visit. Interstate commerce completely shuts down and you will not be able to buy ANYTHING you need to survive once the store's current supply runs out or gets looted.





You would have no money outside of what is in your wallet or safe. Our entire finance industry is run by electricity. Most people have no clue that the average bank branch has less than \$10,000 on hand at a given time. I wanted to pay cash (\$9,000) for an older EMP-proof Jeep a while back and my bank told me I would have to schedule that size withdrawal in advance, and it would take the bank three days to get it. If you can't get quick access to your money at the bank pre-SHTF, what makes you think you're going to get your money out after things have fallen apart? My bet is that the banks aren't even going to open their doors once the grid goes down. They know people are panicking and they don't have the cash on hand to give to them (most of whom will want to drain their accounts). Besides, every bank I know of uses computers and electricity to perform bank transactions. There is no electricity, remember? You were a millionaire before the crash? Not anymore. Don't bet on a single bank opening its doors for business. Also, don't rely on storing up large amounts of gold and silver for a grid-down scenario. No one is going to trade your precious food for your gold or silver coins. It will be years before there is any

semblance of normal commerce where you can use precious metals to barter for tools or food. I would recommend spending whatever cash on hand you have in the first few days getting as much food as possible. Within a week, once store owners (the very few with heavy security that hasn't been looted already) figure out that the power isn't coming back on, your money is worthless. A hungry person isn't going to trade you a can of beans for a thousand dollars.

There would be no communication with those who live farther away from you than earshot. In other words: no phones, no emails, no mail delivery, no Facebook, and no Twitter. Are you getting the picture? Think about all the family and loved ones that have moved away. Do you have a sibling in California? Do you have a son or daughter at college in Texas? You'll probably never see them or speak to them again. If someone breaks into your house looking for food, how are you going to call for help (not that the police would be able to respond anyway)?





There will be no emergency services. Police, firefighters, and the National Guard will all be in the same scenario as you are. There will be no way to contact them, their vehicles will quickly run out of fuel and the traffic jams will pen them in just like you. They are just everyday people like you and me. Once the looting begins, most will rush home to be with their families and protect them from the rioters and home invasions. Very few will show up to work on day three. Some of the more honorable, single men may stay at their post for a while and try to help out, but within days of the grid going down, don't expect to see any emergency services. You will likely see the same result with National Guardsmen who are typically activated via a phone roster. Most will not be reached and most will not report for duty or will go AWOL to protect their family once things go south. Again, in a crisis situation, they will put the safety of their family before orders from their superiors. Even active duty military will experience a huge amount of AWOL soldiers heading home to protect loved ones and family. However, a good portion of their families live on base and they will be available for duty. Even so, as I explained earlier, the military bases WILL NOT be able to perform disaster relief because the military is dependent on the civilian electric grid. While they may have a few thousand MRE's on hand, their food situation is the same as yours. It's eventually going to run out. Law and order may last a while longer on military bases with possible C130 shipments of food from international aid, but eventually, the big bases will dissolve into rioting and looting just like the big cities.

There are no hospitals or medicine. Most hospitals are only required to have a one or two day supply of backup electricity. Once they run out, loved ones on life support will die. Hospitals will be flooded with emergencies and injuries related to people doing stupid things out of their normal routine. How many nurses and doctors will stay more than a few days without going home to check on their families and protect them from the looters? Without the ability to get resupplied, the hospitals will soon run out of bandages and the like. How long before the doctors and nurses throw up their hands in despair with their inability to help an ever-increasing number of patients and head home?

You need a prescription to survive? Guess what, almost twenty percent of America's population do as well. This includes everyone who suffers from asthma to diabetes. The drug stores will be closed because they have no way to verify prescriptions or check you out with non-functioning cash registers. How long before the tweakers and heroin addicts raid your local pharmacy because there are no security cameras and no way for the police to respond? How long will the vials of medicine you so desperately need last without refrigeration once the electric grid goes down? If your child requires medication and you haven't stockpiled or are unwilling to risk looting your local pharmacy, then you will know exactly when that child will die... shortly after his or her current supply of medicine runs out.



Your house will not protect you as it has in the past. There will be no A/C or heat in your home. If you live in an area of the country that has cold winters or hot summers, life will become very uncomfortable and deadly in some cases. A lot of malnourished people, not thinking clearly, will resort



to doing incredibly stupid things to get warm, like start a fire in their house or burn a charcoal grill indoors. In urban areas with row houses and large apartment buildings, you will likely see large out-of-control fires burning whole city blocks because one person does something dumb and there are no fire trucks (out of gas) to come and put the fires out. Besides, there's going to be no water pressure at the fire hydrants even if they could get there. You could actually see whole sections of large cities burn to the ground with no way to stop the flames. Do you know how to stay warm in your home once the thermostat drops below freezing? Many people will go to bed and not wake up the next morning. Also, a lot of people watch action movies and think they can hide behind a door or wall to be protected from someone who is shooting at them. This is not accurate. Most bullets will travel through multiple walls until they hit a stud or two. Your home is NOT bulletproof! Ducking down below your window in a firefight with your starving neighbors will not protect you from their bullets.

If you rely on city sewage, it will likely back up into your home over time. Raw sewage could start bubbling out of

your sinks and tubs as people continue to use toilets and sinks even though the sewage facility isn't operating. This will create dangerously high levels of methane in your home that could make you very sick. Because of poor sanitary conditions around the country and most people not cleaning their hands properly before cooking due to lack of water, Dysentery and Cholera will become major pandemics in this country with a lot of people getting sick and dying. Regular baths will become a thing of the past, and many people will start bathing in their local creek or water source, causing dangerous bacteria to float downstream where other families rely on the same water source for drinking.

Don't rely on your vehicle getting you out of Dodge. In the event of a Super-EMP, a large number of cars will come to a stop in the middle of the street. Even if they don't, a lot of people will try to flee the cities on empty gas tanks causing massive traffic jams. It only takes a handful of cars to run out of gas on the roadways to completely block traffic. If you do not flee town within 24 hours of the grid going down, you are likely to find yourself penned in. If you have a vehicle that is running, it will only run if you can get fuel for it. Most gas





stations don't have back-up generators. The ones that do will be quickly overrun and emptied. There is no way to resupply them because the trucks rely on the gas stations to get the fuel to other gas stations. Even if they could be rigged to resupply from their own tanks, don't forget that there are massive traffic jams all over the country. Even if they could work out the details, very few truckers are going to leave their families behind unprotected while they travel across the country with rioters and looters everywhere. Oil refineries take massive amounts of electricity to operate and will not be operational any time soon. What about the nation's precious fuel reserves? If you don't think the government is going to confiscate that for military and government use, I have oceanfront property in Arizona I'd like to sell you. There will be no refueling shortly after the grid goes down. If you were a forward thinker and have a large supply of fuel for your vehicle, I would only recommend using it for the first few days. After a week, most cars will be out of gas and people will be desperate for a running vehicle to get them where they need to go. If you are driving one of the few cars on the roadways, YOU ARE A TARGET. I wouldn't start using the vehicle again for a full year (after most of the starving masses are dead).

You will not have lights once it grows dark outside. I understand that you may have a flashlight and some candles at your house, but honestly, how long will your batteries and candles last? I would use them very sparingly for a couple of reasons. With no streetlights or ambient light in the cities, nighttime will become a very dark and dangerous place to find yourself outdoors, and light attracts attention. If you do have a large supply of batteries or candles, use them very carefully. Two weeks in, once people start getting hungry and desperate, lights coming from a house will be a huge beacon for looters and home invaders who will use the cover of darkness for their nefarious activities. Most people have never been to the mountains on a backpacking trip. On a cloudy dark night, you can see someone smoking a cigarette on the next mountain over. In a perfectly dark city, light escaping from around the edge of your blinds or curtains will be seen from a long way off. In a grid-down situation, you want to rise with the sun and go to bed once it gets dark,

utilizing natural light and conserving flashlights and candles for emergencies.

These are just a FEW of the ways your life would be impacted by the electric grid going dark.

Next, let me paint a picture for you on how difficult it would be to just procure water.

For the last seventy-five years, you turn a faucet and a seemingly endless supply of crystal clear water comes pouring out to drink, cook, and bath with. It's always been that way and that's all contemporary Americans have ever known. Most Americans don't even realize that half of the world's population will never enjoy that luxury...but I digress. That endless water supply stops within hours of the grid going down, and I'd guess many of you've probably never pondered the logistics behind gathering and purifying your own water. Please don't get lazy when it comes to purifying your water. If you do, you will eventually get sick or die from waterborne viruses, bacteria, or parasites. It's only a matter of time.

Depending on your home's location in relevance to your local water tower, your house could lose water pressure within minutes or hours. Due to the extreme amounts of electricity used to process and pump water into the water tower for the average town, most cities do not have backup generators for this. The ones that do will only last for a few hours to a day at most. If you live in the country and have a well, did you know that typically your well pump operates on 220 volts of electricity? Your water stops instantly unless you are one of the lucky few who have a backup diesel generator or similar power source.

Now, how much fuel do you have stored? FEMA estimates that the average person with a backup generator has less than 5 gallons of fuel on hand at a given time. Even



if you have more, you're going to run out at some point. Also, gas and diesel generators are extremely noisy, letting every starving person within a mile know you have electricity. What if you live in the Southwest? To put it politely, you're probably going to be dead soon. Deserts were never meant to be inhabited for obvious reasons and only electricity and our modern infrastructure allowed us to live there in comfort. The Nomads throughout the centuries who traveled the world's deserts had life skills available to them that we both know you don't possess.



For those of you who live in areas where you have nearby streams or other water sources, do you know how to purify your water? Let's assume you do. You are going to

soon run out of bleach drops and iodine tablets or your purification cartridge will eventually get clogged. You are now a week or more into a grid-down situation and you are going to have to boil your water just like everyone else did for the last 3,000 years. How far away do you think starving and desperate people can see and smell your fire? Farther than you think. On the plus side, your shoulder muscles are going to be huge from carrying five-gallon buckets of water from the nearest stream back to your home. Sounds like fun, right? You are eventually going to need to take a bath. How many five gallon buckets does it take to fill up a bath for each member of your family? Think about it.

Next, do you know how to start a fire in the rain to boil the water? You do... great! How much firewood do you need to have on hand to build a fire and boil water twice each day? If you have any firewood at all, it will probably be gone faster than you think. Do you have a large saw or ax to cut down a dead tree and how many dead trees do you think you have close by your home? How far will you eventually have to travel to find firewood? Can you physically cut the tree down and then bolt it up into six-foot sections and then carry the logs long distances back to your house only to cut the long logs into sixteen-inch lengths? You are still not done. Have you ever split wood before? Are you proficient enough to do it without sticking the ax in your shin when you miss the log you are aiming at because you are physically exhausted and weak from hunger? Hospitals will be overrun and most won't be operating without electricity or supplies after day five or six. I hope that deep cut doesn't get infected or you'll lose the leg and you'll probably die from the infection. But again, I digress...

So far, we have only been discussing water. Let's add in the fact that you were a bargain shopper and have a stockpile of canned goods from Costco in your basement. Maybe you were really prepared and had some long-term food storage for your family. What happens when you spend a lot of time being noisy and walking around your neighborhood procuring firewood to boil your water and cook your food? What happens when your sick neighbors see you and show up for some heat by your fire and begging



for water because they don't have the tools, energy, or ability to purify it on their own? Okay, it's only water, so you help them out and give them some because you are a nice human. Good for you; you have now guaranteed that they will be back the next day probably with a couple other loved ones or neighbors from down the street who saw the smoke plume from your fire. I'm also willing to bet those same people weren't forward thinkers like yourself and they have long ago run out of food. They are literally eating pine cones from their driveway at this point (no joke).

With no chances of getting resupplied, are you going to give your hungry neighbor some of your child's food? That was nice of you. I guarantee they are coming back for more water and food every single day until you run out of supplies or the energy to help them. If you refuse them from the get-go, they will probably beg and cry for help. They will even use their sick baby or elderly mother to play on your heartstrings. How heartless are you? If you still refuse, that neighbor (who you've had a beer with on multiple occasions and borrowed a mower from a time or two) with a hungry and thirsty family down the street will get mad and demand you help them. He may even try to fight you. So, you scare or beat him off with a piece of log you were just splitting.

How long do you think it will be until your neighbor is sick and desperate enough to return with his Pappy's shotgun to take your water and food by force because his kids are literally starving and dying before his eyes? In his weak mental state, he will resent you for not suffering like he is and would rather kill you than watch his family starve to death. Oh...so you have a battle rifle and you defend yourself, killing your neighbor and leaving his sick and starving wife and kids (your son's best friend) without someone to protect them. It was justified. He pointed the gun at you first...I understand. Good luck sleeping for the next month with those images floating around in your head.

Now the rest of your neighbors are ticked off at your "selfishness" and gang up on you with multiple handguns and rifles. Okay, so you are John Rambo incarnate with an arsenal that would make a militia proud and you fight them all off without getting shot a single time. Good for you. More

sleepless nights full of nightmares (ask any soldier). How many people do you think heard that gunfire? Take out a map and make a one-mile circle around your location point. What percentage of those starving people might think that someone with a gun has something that is valuable and worth protecting? How many of those starving people will eventually come for your stuff hoping to take you off guard at some point? Can you stay awake every waking hour to protect your family? You have to sleep sometime or you won't have the energy to chop more wood tomorrow.



What happens when the bad guys show up while you are out cutting wood? Is your wife just as John Rambo as you are with an AR-15? Did you ever buy her the Tacticool plate carrier with ballistic plates that you wear when you are out of the house? Could she fight off a dozen rednecks with deer rifles without getting shot in the melee? Let's be honest, probably not. Instead of killing your wife, maybe they just watch you each morning till you head down to the creek for more water. Maybe they post up in your dead neighbor's house waiting for you to step outside and weed your garden in the back yard. You are hungry, sore, and exhausted at this point. Are you alert enough to see that man with the deer rifle a hundred yards away hidden under some garbage bags? Probably not. What becomes of your beautiful wife and daughter then? What will their life resort to after their food is gone? What will they have to do to survive? Do you think I'm being vulgar or gross? If so, I'd say you are being



naive. Outside of the GI Jane types, most women without protection in this type of society will use what they have to survive. Look at history and some of the horrific things done to women by the Russians and Germans during World War II. Those are events that people don't usually discuss in history class or make movies about, but they still happened.

What I'm trying to show you here is how impossible it will be to survive in a suburban area after the grid goes down. Even if you are in a smaller suburb of thirty thousand upscale people, how many rounds of ammunition do you have? Ninety-five percent of the country will soon be starving, sick, and desperate. They will resent anybody who is not suffering with them. It's just human nature. PLEASE do not listen to the survival experts who will try and help you "fortify" your home or apartment and show you how to successfully ride out the storm in town. If you follow their advice, I can almost guarantee you will be dead within a month. I would also be very leery of the same type of survival experts who recommend you band together with your neighbors and

fortify your cul-de-sac. Here is why. Most likely, even with all their big talk, your neighbors haven't taken the threat nearly as serious as you have. Most of them won't have nearly the supplies and long term food that they brag about.

What about all the other neighbors who weren't part of your planning group but live on your street? You're going to need their help to protect the cul-de-sac and work together for food gathering missions, growing crops, security, wood gathering, etc. Guess what? You are feeding them now as well. If you have \$100k in long-term food reserves, then this scenario may work out for you. But in all likelihood, your neighbors will help you eat your family's food supply in a month and then you will starve to death through the first winter just like they do. Do you seriously think you are going to keep your food from them because it's "yours" and you paid for it before the collapse? You may for a short while. Eventually, they will be starving and your family won't be. THEY WILL NOTICE AND THEY WILL COME FOR YOUR FOOD EVENTUALLY. I don't care how close you are to them or what



kind of “agreements” your little band of survivors has in place. All that goes out the window when blue-collar Jerry watches one of his little girls die of starvation. Blue-collar, church elder, and your fun-loving neighbor, Jerry has just become a starving, desperate, irrational, natural born killer and you are going to take the brunt of his anger before he watches his other child die a slow and painful death. DO NOT underestimate a starving and desperate person regardless of his personality before the collapse. Hungry people make absolutely crazy and uncharacteristic choices. I’ve personally seen it firsthand with highly-trained soldiers in the field who have gone only days without food. We are talking about

don’t care if they fix the electric grid a year later. Most Americans will be dead and the only ones left will be the survivalists, the extremely lucky, the larger well-organized gangs of looters, and the strongest and most brutal of men who left their souls at the gate and did horrible things to survive. Who are they going to fix the grid for? Are we all going to forget what has transpired and go back to driving our Priuses to work at Starbucks? Are you going to get the warlords to give up their positions of power among their men and their harems of sexual slave girls? The day the electric grid goes down, America as a civilized nation ceases to exist.

THE AVERAGE DESPERATE AND STARVING AMERICAN WILL KILL YOU IF YOU HAVE FOOD AND THEY FIND YOU. I don’t care how protected you think your home is. You’ll eventually be overrun!

civilians with no training and no food for weeks or months. Most will literally become half-crazed walking zombies with only one mission...food.

A lot of the “experts” will say I am fearmongering or exaggerating how bad it will be. They say Americans will work together and will get through it. They do not understand human suffering and have no experience in dealing with starving people. Starving Americans will act no different than starving people in the Congo or Mogadishu. In fact, they will likely act much worse. Americans (even the poor) have never seen true hunger or been actively starving regardless of how the media portray them. America’s “poor” eat better than 80% of the world’s population. They didn’t grow up without food like people in certain parts of Africa or China. Americans and their entitlement mentalities will be VICIOUSLY ANGRY when they get hungry. They will have no experience or idea how to deal with the mental hallucinations brought on by hunger pains and most will resort to anger and violence. Looting, raping, and pillaging will become the norm. It will be straight *Mad Max: Beyond Thunderdome* and eventually like the movie *The Postman*. I

You need to understand that life after the grid going dark will probably be ten times worse than I am describing. There will be 300+ million Americans facing the same horrific questions as you. Where do I go? What do I do? It is vital that you understand and accept that the following is true: A few weeks after a grid-down scenario, there will be hundreds of millions of starving people wandering around the country desperately fighting over every last scrap of food. A month or two after the grid going down, most Americans will be violently sick from food deprivation and other illnesses.





Major Points to Consider

These are the authors recommendations following his invitation to the Electromagnetic Defense Task Force 2.0 at the Lemay Wargaming Institute – Maxwell AFB, LA, 2019.

1. Before making any plans, COG planners must know and understand the grid-down operating environment. Researching the psychology of human desperation, starvation, and living WROL is vital to every emergency planner especially when planning for a long-term grid-down scenario.
2. If you don't feed and provide a relatively safe environment for the people in your plan of action, including their immediate families, your plan has ZERO chance of success! A long-term plan to keep personnel fed is vital to every plan of action. I would also consider developing a housing plan and where you plan to billet all your personnel. Do you have the space for everyone including their families?
3. While I agree the main focus of a grid-down emergency plan must revolve around the first week or two when the operating environment is the least dangerous, you can't ignore the impending chaos coming in the near future when building those plans. Don't put your organization in a situation to lose resources or personnel or make decisions you can't reverse once things have fallen apart beyond your control.
4. I've heard discussions and read reports about potential "Black Start Teams" that will assist civilian companies in restarting certain power facilities that power critical bases. While I think that is a logical and wise idea, I think those plans should include three additional teams (East Coast, West Coast, and Texas) with access to EMP-proof helicopters. The three teams should include HV transformer engineers and a small security team. Each team should have a plan to fly between 5-10 pre-determined HV transformers in critical locations and inspect them for damage. This has been a major point of contention between the EMP commission and EPRI. It is absolutely VITAL to know within a day or two whether or not we are talking about a short-term grid-down event that can be repaired in a few weeks or we suffered massive losses to our HV transformers and it's going to be a long-term grid down event. I'm not sure there is a more critical piece of information the government/military must know within a day or two of a national grid down event!
5. Based on the information the teams from the previous point provide – I think it is imperative that our military and government have two plans of response. If it is discovered that the damage will result in a short-term grid-down event, treat it like any other natural disaster and continue in your current planning. If it's going to be a long-term event, you need to have a TS "Plan B" to maintain continuity of government and military. This plan must have presidential authority and military backing behind it. It must use traditional triage techniques to save what American resources can be saved and abandon those that can't realistically be saved. Massive furloughs of uncritical military and responder personnel should be considered. Immediately relocating critical personnel to rural military bases away from large population areas would also be important. Control of large grain bins and other mass food infrastructure should be considered.
6. Congress needs to light a fire under the Nuclear Regulatory Commission and get these problems resolved or none of these other plans matter. The backup diesel generators need to be EMP-tested and hardened immediately. They need to have a plan to safeguard their critical employees (and their immediate families), house them, feed and protect them on location. The critical "button-pushers" and "lever-pullers" at the nuclear facilities are NOT going to stay at the facility



in perpetuity without their families present. I realize that requires a large number of background checks for family members, but it needs to happen.

7. Especially on the civilian government side, better vetting needs to be done at the various “grid down” conferences that happen regularly throughout the country. Some of the subject matter experts on preparedness that are brought in to discuss the threat and the aftermath, don’t have the valid credentials or life experience to speak on the topic. They regularly offer very bad and oftentimes deadly preparedness advice and planning ideas to those in attendance.
8. Short of the military writing a blank check to the electric utility companies to fix this problem, what is the plan to raise awareness or the funds to pay for hardening the grid? One realistic way to get the American people educated on the threat and push their representatives to act is via a major motion picture with a big budget cast. It needs to be truly shocking in nature and show in living color some of the atrocities that will happen in a modern technology-dependent country when it loses electricity. I think the more disturbing and “fearmongering” the better (without sacrificing accurate realism or ruining your credibility). With Americans’ short attention span for information these days, I am convinced that this is the ONLY way you will ever raise enough public awareness to the nationwide grid down threat and get this problem resolved from the politicians in government to write the check to fix it. Right now, they have no urgency to act as the American people don’t even realize a year without electricity is even a possibility. The electric utility industry has proven, especially with the 2019 EPRI EMP document, that they have ZERO intention of doing this themselves or raising electric rates to pay for hardening the grid.
9. Conduct a blind and anonymous poll to discover what percentage of troops or emergency personnel may desert. How can you make an effective plan if you don’t know how many of your personnel will stay at their position?



Appendix



Disaster Response Survey:

* The following section was written in 2019 BEFORE the recent COVID outbreak.

How many troops or emergency personnel will your organization be able to retain during a long-term grid down scenario? For how long? In truth, you don't know because you've likely never asked your personnel or polled them on it. Even if you have, you likely didn't do it correctly. When the CDC and DHS conducted surveys of their personnel in reference to personnel absenteeism during a pandemic, they found the following:



Per the DHS own "Pandemic Influenza Preparedness, Response, and Recovery" plan²⁴: [emphasis added]

"Rates of absenteeism will depend on the severity of the pandemic. In a severe pandemic, absenteeism attributable to illness, the need to care for ill family members, and fear of infection may reach 40 percent during the peak weeks of a community outbreak, with lower rates of absenteeism during the weeks before and after the peak. Certain public health measures (closing schools, quarantining household contacts of infected individuals, "snow days") are likely to increase rates of absenteeism."

"**Workforce Absenteeism:** Whether the actual workforce absenteeism number is 30 or 40 percent during a severe pandemic wave, this is your 'best case' for planning purposes. To complicate matters, the disease may appear randomly among employees striking anywhere from the CEO to the front-line worker. **Adding significantly to the total number or workers absent** will be those dual-income and single-parent families required to care for children at home when schools are closed for extended periods."



The above DHS survey results indicating 40% of employees (minimum) not showing up for work during a pandemic is low in my opinion. First, the DHS poll appears to infer that the study didn't ask if the employees had dependent children and family members as part of the survey and "inferred" that absenteeism "may" be higher because of that fact. Employees with children are likely a fair percentage of your personnel that will have to stay home with their dependents when the schools close. Second, the timeframe estimate for the pandemic was two weeks at peak. They are assuming there won't be secondary factors that extend that timeframe. The longer the pandemic wears on, the more absenteeism you should expect. Third, and most important, is the fact that the survey is surely skewed because of normalcy bias (see pg. 5). The respondents were all surveyed during normal, safe conditions. They were not watching escalating and sensationalized media reports at the time of the survey. They were not being faced with the potential reality of taking a deadly virus home and infecting loved ones or family members after their shift. They weren't surveyed when there was mayhem in the streets with possible quarantines or martial law in place. In short, they were not actively experiencing the "real-life" stress and the real-life danger that would be present at the peak of a major pandemic. I often wonder how skewed these polls are because a lack of imagination. I believe far more first responders will stay home to protect and care for loved ones than the various surveys suggest (and understandably so).

So how can you really know for sure how many of your emergency personnel or troops would show up? How can you possibly begin to formulate any response plans if you don't know how many personnel you can expect to show up on day 3, on week 3, or on month 3. I would recommend every emergency response agency conduct a blind (anonymous) poll on this serious topic. If you want accurate answers to the poll, it's imperative that you lay out realistic and detailed parameters and really encourage your employees not to just check a box, but to try and envision themselves living in the scenario they are being polled about. Explain each situation and scenario in detail before taking the poll. Last, I feel it is vital that this be a blind survey. If you require your employees to sign their name to the survey, the numbers will surely be skewed.

On the following page, you will find an example of a survey you may use for your agency or organization. It is just an example and you may wish to tailor it to your own organization's needs. The EMP Task Force would humbly request that you share the results with us if possible. It is understandable if you would like to keep your agency name or specific unit private. You can just let us know the numbers and tell us if it was a civilian company, emergency management group, military unit, healthcare organization, first responder group, or government agency.



Disaster Survey

- Take your time, use your imagination, and try to insert yourself into the following disaster scenarios.
- Please, answer each question as truthfully as you can.

Do you have any dependents (children or other) that depend upon you to provide for their needs?

Yes No

How important do you consider your job function in your organization to the overall success of the mission?

1 2 3 4 5

Unimportant Very Important

Scenario 1: A major bird flu pandemic has been underway for two weeks. It is not a localized event but national. It has a Case Fatality Rate of 40% across all age groups. Most businesses have shut down, schools are closed, and all large events cancelled. Besides nighttime looting, few are venturing outside, and your neighborhood is beginning to look like a ghost town.

Do you?

- Go to work if most co-workers are showing up too
- Go to work even if most co-workers **do not** show up
- Stay home or go home to take care of loved ones

Scenario 2: A national grid-down event happened two days ago. No one really seems to know what's going on. No phones, TV, internet or radios are functioning. Very little of your agency's equipment works. Your agency is running out of fuel for the generators and quickly running out of food. There are no reports of re-supply as HQ can't be reached. Many of your peers are grumbling about the leadership. You received info that the nearby city where your extended family lives has experienced massive fires which are spreading.

Do you?

- Go to work if most co-workers are showing up too
- Go to work even if most co-workers **do not** show up
- Stay home or go home to take care of loved ones

Regardless of the scenario, if you believe a child, parent, or loved one is in a dangerous area or needs your assistance/protection, do you stay at your position, or sneak away to check on them?

Stay Leave

Disaster Survey

- Take your time, use your imagination, and try to insert yourself into the following disaster scenarios.
- Please, answer each question as truthfully as you can.

Do you have any dependents (children or other) that depend upon you to provide for their needs?

Yes No

How important do you consider your job function in your organization to the overall success of the mission?

1 2 3 4 5

Unimportant Very Important

Scenario 1: A major bird flu pandemic has been underway for two weeks. It is not a localized event but national. It has a Case Fatality Rate of 40% across all age groups. Most businesses have shut down, schools are closed, and all large events cancelled. Besides nighttime looting, few are venturing outside, and your neighborhood is beginning to look like a ghost town.

Do you?

- Go to work if most co-workers are showing up too
- Go to work even if most co-workers **do not** show up
- Stay home or go home to take care of loved ones

Scenario 2: A national grid-down event happened two days ago. No one really seems to know what's going on. No phones, TV, internet or radios are functioning. Very little of your agency's equipment works. Your agency is running out of fuel for the generators and quickly running out of food. There are no reports of re-supply as HQ can't be reached. Many of your peers are grumbling about the leadership. You received info that the nearby city where your extended family lives has experienced massive fires which are spreading.

Do you?

- Go to work if most co-workers are showing up too
- Go to work even if most co-workers **do not** show up
- Stay home or go home to take care of loved ones

Regardless of the scenario, if you believe a child, parent, or loved one is in a dangerous area or needs your assistance/protection, do you stay at your position, or sneak away to check on them?

Stay Leave





Jonathan Hollerman

- Deputy Director – US Task Force on National and Homeland Security
- President and CEO – Grid Down Consulting
- Board of Advisors – EMPact America
- Participating Member – Electromagnetic Defense Task Force, Lemay Wargaming Institute
- Participating Member – Secure the Grid Coalition
- #1 Bestselling Author on Amazon in Experimental Psychology and in Survival and Emergency Preparedness genres
- Former US Air Force – S.E.R.E. Specialist (Survival, Evasion, Resistance, Escape)



Jonathan Hollerman is the founder and CEO of Grid Down Consulting. GDC specializes in security-driven off-grid structural design, land evaluation, bunker design, strategic site security, and extraction planning for high-net worth clients and continuity of operations for large corporate interests. GDC has consulted with over 500 clients worldwide over the last decade.

Jonathan is a #1 Bestselling Author on Amazon in the Experimental Psychology and Survival and Emergency Preparedness genres. He is the author of two emergency preparedness guides and three instructional-fiction novels. In 2019, at the behest of the joint-services Electromagnetic Defense Task Force (EDTF), Hollerman authored a white paper for military education and training on the psychological effects of human desperation and starvation on military personnel after a long-term grid down event. Jonathan has numerous published articles and been a guest on various shows like NTD News, Man in America, Warrior Life, the Hagmann Report and others.

WEB: www.EMPtaskforce.us

EMAIL: JonathanHollerman@Protonmail.com

PATREON: [@JonathanHollerman](https://www.patreon.com/JonathanHollerman)



Endnotes

- ¹ [https://www.lloyds.com/~media/lloyds/reports/emerging-risk-reports/solar-storm-risk-to-the-north-american-electric-grid.pdf](https://www.lloyds.com/~/media/lloyds/reports/emerging-risk-reports/solar-storm-risk-to-the-north-american-electric-grid.pdf)
- ² https://en.wikipedia.org/wiki/List_of_famines
- ³ <https://www.today.com/popculture/tv-loosens-restrictions-airing-9-11-images-wbna14769404>
- ⁴ Hannah Arendt, *Eichmann in Jerusalem: A Report on the Banality of Evil*, Viking Press, 1963
- ⁵ <https://www.washingtonexaminer.com/congress-warned-north-korean-emp-attack-would-kill-90-of-all-americans>
- ⁶ https://en.wikipedia.org/wiki/Normalcy_bias
- ⁷ <https://www.nytimes.com/1988/07/20/us/farm-population-lowest-since-1850-s.html>
- ⁸ https://en.wikipedia.org/wiki/Minnesota_Starvation_Experiment
- ⁹ Ancel Keys, *The Biology of Human Starvation* (Volumes I and II), University of Minnesota Press, 1950
- ¹⁰ <https://www.madinamerica.com/2013/05/starvation-what-does-it-do-to-the-brain/>
- ¹¹ <https://archive.wphna.org/wp-content/uploads/2016/01/2005-Mad-Science-Museum-Ancel-Keys-Starvation.pdf>
- ¹² Philip Zimbardo, *The Lucifer Effect: Understanding How Good People Turn Evil*, Random House, 2008
- ¹³ Hannah Arendt, *Eichmann in Jerusalem: A Report on the Banality of Evil*, Penguins Classics, 2006
- ¹⁴ https://en.wikipedia.org/wiki/Hannah_Arendt
- ¹⁵ https://en.wikipedia.org/wiki/Milgram_experiment
- ¹⁶ <https://www.forbes.com/sites/lorenthompson/2018/05/18/critical-u-s-military-sites-cant-cope-with-a-prolonged-power-outage/>
- ¹⁷ <https://www.thebalancecareers.com/what-the-recruiter-never-told-you-3332717>
- ¹⁸ Michael Jason Spurr, *The Latent Enmity of Georgia: Sherman's March and its effects on the social division of Georgia*. 2009 UNLV Theses, Dissertations, Professional Papers, and Capstones. 53. <https://digitalscholarship.unlv.edu/thesesdissertations/53>
- ¹⁹ <https://opinionator.blogs.nytimes.com/2014/11/17/rethinking-shermans-march/>
- ²⁰ https://www.answers.com/Q/What_disease_killed_the_most_soldiers_during_the_Civil_War
- ²¹ <https://www.inverse.com/article/38623-pounds-of-food-united-states-calories>
- ²² <https://ivmf.syracuse.edu/article/the-demographics-of-military-children-and-families/>
- ²³ Jonathan Hollerman, *Survival Theory: A Preparedness Guide*, Apoc Publishing, 2016
- ²⁴ <https://www.dhs.gov/sites/default/files/publications/cikrpandemicinfluenzaqguide.pdf>

For more information on the various threats, please visit the following organizations...



Griddownconsulting.com



securethegrid.com



gridsecuritynow.org



emptaskforce.us