

Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

By Brad Nietfeldt, [CivilDispatch.com](http://CivilDispatch.com)

February 12, 2015

Revised: March 18, 2023

# Table of Contents

**Table of Contents.....2**  
**Abstract:.....3**  
**Introduction..... 4**  
**The Fragile Tapestry of Modern Society.....6**  
**Mechanics of an EMP Event..... 8**  
**Immediate Effects: The First Seconds and Minutes..... 10**  
**The 90-Hour Threshold: A Countdown to Chaos..... 12**  
**Mitigation and Preparedness Strategies.....14**  
**Case Studies: Learning from History and Near-Misses..... 17**  
**The Role of Leadership and Governance.....20**  
**Community Action and Individual Preparedness.....23**  
**Technology and Innovation: The Vanguard of Defense.....26**  
**Conclusion and Call to Action..... 28**  
**Conclusion..... 30**  
**About the Author - Brad Nietfeldt..... 31**  
**Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event.....2**

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## Abstract:

The Ominous Concept of a society teetering on the edge of collapse within mere hours of an Electromagnetic Pulse (EMP) attack is not the premise of a dystopian novel; it's a stark reality that a single, well-placed EMP event could trigger. This white paper rigorously examines the precarious web of dependencies that sustains our modern lifestyle, the immediate and devastating impacts of an EMP strike, and the rapid disintegration of societal order that could follow. It lays bare the anatomy of EMP phenomena, encompassing both natural and man-made origins, and articulates a multi-tiered contingency framework to navigate the chaos of the initial 90-hour post-incident period. By dissecting the complex vulnerabilities of our technological infrastructure, this paper positions itself as an essential primer for decision-makers, emergency services, and citizens, outlining preparatory and responsive strategies to counteract the dire consequences of an EMP event. This narrative is a clarion call for proactive defense measures, proactive community planning, and robust infrastructural fortifications to shield against the profound threat of an EMP-induced cataclysm. It is a roadmap to survive the initial aftermath and establish the pillars for a resilient recovery in the face of one of the 21st century's most formidable challenges.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## Introduction

In an instant, the lights go out. An eerie silence follows the hum of electronics, now rendered lifeless by an invisible force. This is the immediate reality of an Electromagnetic Pulse (EMP) event, a phenomenon capable of dismantling the electronic foundations of our society. The "90-hour collapse" concept postulates that within just over three days, the absence of electricity and functioning digital infrastructure could precipitate a rapid descent into chaos. This paper dissects this scenario, exploring the before, during, and after of an EMP event, and offers insights into how we, as a civilian defense community, can fortify against such a formidable adversary.

The prospect of civilization's abrupt return to a pre-industrial state is not merely a speculative exercise; it is a potential reality that could manifest in the wake of an Electromagnetic Pulse (EMP) event. Such an occurrence would plunge our technologically dependent world into darkness, stripping away the electronic conveniences that underpin every facet of modern life. The "90-hour collapse" hypothesis presents a grim timeline: within three and a half days following an EMP event, the complex systems that sustain daily life could fail, instigating a domino effect of catastrophic proportions.

An EMP is a sudden burst of electromagnetic energy that can devastate electronic systems. Whether arising from natural occurrences like solar flares or man-made events, including nuclear explosions or specialized EMP weaponry, the threat is substantial and multifaceted. An EMP's capacity to permanently damage electronics and critical infrastructures could incapacitate power generation, telecommunications, transportation, and water supply systems. This would lead to an inconvenience and a full-scale operational breakdown of services and resources vital for survival in today's interconnected world.

The conceptualization of a "90-hour collapse" is predicated on the understanding that modern society operates on a just-in-time delivery system. Supermarkets, pharmacies, hospitals, and fuel stations depend on a continuous flow of goods and services. An EMP event would interrupt this flow, leading to immediate shortages and potential societal panic. The absence of electricity and the subsequent disruption of communication networks would prevent the dissemination of information, leading to uncertainty and fear. Within hours, the public would exhaust available resources, escalating the situation as emergency services became overwhelmed.

This paper will explore the preconditions that make such a swift collapse plausible. It will discuss the societal over-reliance on digital systems and the need for robust manual alternatives. We will examine the vulnerabilities inherent in our national grid, communication networks, and supply chains, all susceptible to the high-altitude detonation of a nuclear device or the capricious whims of solar weather.

As we venture into this exploration, we aim to awaken a sense of urgency within the civilian defense community. This paper is a call to arms to strengthen our societal resilience against such a formidable threat. We must recognize that the difference between recovery and ruin lies in our preparedness and adaptation capacity. By harnessing the collective expertise of cybersecurity professionals, electrical

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

engineers, urban planners, and policy-makers, we can devise strategies to shield our infrastructure, safeguard our resources, and maintain civil order during an EMP disaster.

This journey through potential darkness is not one of despair but of empowerment. The knowledge and strategies shared herein are the beacons that can guide us through the perilous aftermath of an EMP event. It is a testament to human ingenuity and resolve that, even when faced with the prospect of a return to a pre-digital era, we have the tools and the tenacity to persevere and rebuild. This paper is both a warning and a blueprint for action: a comprehensive guide to navigating the 90-hour precipice post-EMP event, ensuring that, should the lights go out, we will not be left in the dark.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## The Fragile Tapestry of Modern Society

In the modern epoch, society is a complex network akin to a tightly woven tapestry, each thread a critical component of a more extensive, interdependent system. This delicate fabric, comprised of countless technological advancements and interconnected services, is the bedrock upon which our daily lives are built. We rely on robust power grids for electricity, sophisticated water purification systems for clean drinking water, global financial networks for economic stability, and comprehensive supply chains for our food security. Yet, this intricate mosaic is perilously susceptible to the whims of nature and man's designs, particularly to the silent and invisible threat of an Electromagnetic Pulse (EMP).

An EMP event possesses the catastrophic potential to cripple our societal framework. The consequences of such an attack would be immediate and far-reaching. Within seconds, the pulsing electromagnetic wave could dismantle the electronic foundations that support our power infrastructure, leaving communities in darkness and silence. The first few hours post-EMP are pivotal; they signify the onset of a critical countdown to salvage the semblance of order before the societal fabric begins to tear at the seams.

The fragility of our technologically driven society cannot be overstated. Modern civilization has become so reliant on electronics and digital systems that a sudden and comprehensive shutdown would send shockwaves across all human existence. Financial systems would freeze, communication networks would fall silent, transportation would grind to a halt, and essential services that rely on electronic control systems, such as water and food distribution, would fail. The ripple effects would be swift and merciless, leading to immediate shortages and a breakdown in civil order.

This tapestry, once vibrant and functional, would face an unprecedented threat. The complex machinery of logistics and supply that ensures the delivery of goods would collapse without the electronic heartbeat that keeps it alive. ATMs would cease dispensing cash, refrigeration units would fail, preserving food would become a distant memory, and the essential utilities that maintain hygiene and health standards would become past luxuries.

As the hours ticked by, the societal unraveling would become more pronounced. Despite their best efforts to maintain backup generators, hospitals would need help to cope with the influx of patients and dwindling supplies. Hampered by the loss of communication and navigation tools, law enforcement and emergency services would find their capacity to maintain public order severely compromised.

In this precarious scenario, the social order we take for granted could falter under the weight of the ensuing chaos. Public morale would likely plummet as the reality of the situation becomes clear. Without a functioning digital network to convey information and instructions, misinformation could spread as rapidly as the search for necessities becomes desperate.

This paper posits that the 90-hour mark post-EMP could represent a tipping point at which the societal structure might collapse under the strain unless significant and effective countermeasures are in place.

## Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

The need for a resilient infrastructure, comprehensive emergency plans, and a well-informed public prepared to respond to such a crisis has never been more critical. As we dissect the threats and delve into the strategies to fortify against this form of electronic apocalypse, we illuminate the path to surviving the initial impact and weaving a more robust societal tapestry that can withstand the aftershocks of an EMP event.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## Mechanics of an EMP Event

Understanding an EMP's nature is key to grasping its potential impact. Whether from a high-altitude nuclear detonation, a geomagnetic storm, or a focused military attack, EMPs have the power to induce electrical currents capable of burning out circuits and rendering electronic devices useless.

### Mechanics of an EMP Event

An Electromagnetic Pulse (EMP) event is akin to an invisible tidal wave of energy that, upon its arrival, has the power to silently infiltrate and disrupt the electrical and electronic systems that underpin our modern existence. To understand the mechanics of an EMP and its profound potential impact on society, it is essential to delve into its various forms and the fundamental principles that govern its effects.

At its core, an EMP is a burst of electromagnetic energy. This energy can be released by various occurrences, most notably by nuclear explosions at high altitudes, geomagnetic storms caused by solar flares, or specialized military equipment designed to unleash a targeted electromagnetic attack. Regardless of its origin, the resulting wave of energy can generate rapid and intense electrical currents and voltage surges, which can overwhelm and destroy the delicate circuits within electronic devices.

The EMP phenomenon can be categorized into three distinct components, known as E1, E2, and E3 pulses, each differing in their source and impact. The E1 pulse is the quickest and most destructive, a high-intensity burst within nanoseconds, capable of inducing very high voltages in electronic systems. It is primarily associated with nuclear EMPs and can collapse the critical infrastructure of a region in the blink of an eye.

The E2 component is similar to the electrical pulses from lightning strikes and is somewhat less powerful than the E1. However, it follows closely on the heels of the E1 pulse, often arriving while systems are still reeling from the initial shock, and can compound the damage already inflicted.

The E3 component is a longer-lasting pulse that can persist for seconds to minutes and is akin to a geomagnetic storm. It can induce currents in long conductive lines, affecting power lines, telecommunications, and pipeline systems. This type of pulse is closely related to solar flares and can have a global impact, disrupting not just individual devices but the grid that powers entire nations.

Each type of pulse poses a unique threat to our electronic infrastructure. The E1 pulse, with its ability to induce extremely high voltages, can instantly fry small electronic devices and is devastating to critical infrastructures that rely on microelectronics. The E2 component can exacerbate the damage done by E1, particularly because it can pass through protections that typically safeguard against lightning strikes. The E3, while less intense in terms of voltage, affects a broader area and can take down the power grid, leading to long-term outages and a cascade of failures across different sectors of society.



## Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

Understanding the distinct nature of these pulses is crucial, as each requires different protective measures. The high-speed E1 pulse can be shielded against with robust, fast-acting surge protectors and Faraday cages. The E2 component, while typically less powerful, requires similar protections already in place against lightning—a familiar foe. The E3 pulse, with its long duration and high energy, presents a significant challenge to the power industry and requires more sophisticated solutions, such as grid-level surge protectors, to mitigate its effects.

The threat of an EMP event is not simply a theoretical concern. Historical precedents, such as the Starfish Prime nuclear test in 1962, have shown the reality of EMP effects, as it led to electrical damage and malfunctions over 1,400 kilometers away from the detonation site. More recently, societies have become even more vulnerable due to the proliferation of digital technology and the Internet of Things (IoT), increasing the number of potential points of failure.

Moreover, the potential sources of EMPs are not limited to adversarial military actions. Nature can unleash EMPs through solar flares, such as the Carrington Event of 1859, which induced telegraph malfunctions and fires due to the geomagnetic storm it caused. With the sun's activity in an ever-changing cycle, the possibility of a similar event is not a question of if but when.

The mechanics of an EMP are thus a complex interplay of natural and man-made phenomena, each with the capacity to unsettle the electronic underpinnings of our civilization. Our vulnerability to these pulses escalates as we depend more on technology, from smart devices in our homes to sophisticated control systems in industrial settings.

The reality of the EMP threat is a clarion call to action for the civilian defense community, policymakers, and individuals. It necessitates a comprehensive understanding of the mechanics behind EMPs and a proactive approach to developing resilient systems. This includes implementing protective technologies, establishing robust protocols for response and recovery, and ongoing research into more advanced protection methods. With the potential for cascading failures across our societal systems, the mechanics of an EMP event must be at the forefront of our strategic planning to safeguard our way of life against this formidable, invisible adversary.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## Immediate Effects: The First Seconds and Minutes

In the first moments post-EMP, the most noticeable effect is the cessation of electrical power. This blackout, while not unfamiliar to any who have experienced power outages, carries a sinister permanence. Without immediate restoration, society's momentum begins to wane.

The detonation of an EMP, whether from a high-altitude nuclear explosion or a sudden geomagnetic storm, sends an immediate shockwave of electromagnetic energy cascading across the affected area. The effects are profound and immediate in the initial seconds and minutes following this event, with a breadth of impact that can stretch over continental expanses.

At the moment of an EMP strike, the most instantaneous and perceptible outcome is the sudden and comprehensive loss of electrical power. This blackout extends far beyond the usual experience of a power outage caused by a storm or a localized system failure. It is the kind of darkness that is total, a cessation of all powered devices and systems that society has come to rely on. Streetlights wink out, homes and offices are plunged into darkness, and the electronic hum that underscores modern life falls silent.

The silence, however, is not just a lack of noise; it signifies the abrupt end of the information flow. Communication systems fail almost simultaneously. Televisions and radios cease to broadcast, the internet becomes inaccessible, and cell phones become nothing more than inert plastic and metal in our hands. The immediacy with which this information blackout occurs can create a sense of isolation and confusion that is as debilitating as losing power.

In these first minutes, transportation systems come to a grinding halt. Vehicles with electronic ignition systems and advanced computer controls stall on highways; trains guided by electronic signals stop on their tracks. Even aircraft in flight are at risk, with potential failure of navigation and control systems that rely on delicate electronic components.

Hospitals, which depend on electricity to power lifesaving equipment, face an immediate crisis. Backup generators, if shielded from the EMP effects, may kick in, but the functionality of the equipment and the pulse could still compromise their power. This presents an alarming scenario in critical care units and operating theatres where seconds can mean the difference between life and death.

Financial systems are not spared. The immediate effects of an EMP on banking and commerce are debilitating. ATMs, point-of-sale terminals, and online transaction systems cease to function, grinding to a halt the very movement of money that fuels the economy. The implications are far-reaching, from individuals unable to purchase necessities to corporations that cannot conduct daily operations.

Utilities such as water and gas also face immediate disruption. Modern water treatment facilities and pumping stations that rely on electrical systems can cease to function, halting the flow of clean water and

## Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

waste processing. If the control systems fail, gas lines with electrically controlled safety systems may become hazards.

The dependency on electronic gadgets and appliances becomes painfully apparent at a domestic level. Refrigerators stop cooling, causing concerns over food preservation. Heating and cooling systems become inoperative, which can be immediately life-threatening in extreme weather conditions. Every household appliance that contributes to a modern home's comfort and functionality becomes obsolete instantly.

The cumulative effect of these immediate disruptions is the onset of a rapid breakdown in social order. With information scarce and misinformation likely to spread, panic can set in quickly. Emergency services, if not EMP-hardened, may be unable to respond to calls for help, compounding the sense of chaos. Public safety becomes an immediate concern as security systems fail and darkness provides cover for opportunistic criminal activities.

Therefore, the first seconds and minutes post-EMP are characterized by a cascade of failures that affect every aspect of life. The interconnectedness of our systems means that the failure of one can lead to the collapse of others in a domino effect of unprecedented scale. As power, communication, transportation, healthcare, financial, and domestic systems falter, the fabric of society is tested to its limits.

The critical nature of these immediate effects underscores the need for resilience planning at all levels of society. It highlights the importance of designing systems with fail-safes and redundancies, creating EMP-resistant infrastructure, and fostering a culture of preparedness among the population.

The stark reality is that the world post-EMP is a different place altogether, and the first seconds and minutes are just the beginning of a new, uncertain chapter in the story of human civilization.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## The 90-Hour Threshold: A Countdown to Chaos

As the sun rises on a world muted by the aftermath of an Electromagnetic Pulse (EMP) event, the first 24 hours pass with a deceiving calm. Citizens initially treat the blackout as a temporary inconvenience, reminiscent of storms past that momentarily disrupted the rhythm of everyday life. However, as hours stretch into a day without any sign of power restoration, the grim reality dawns: this is no ordinary outage.

The initial period of disorientation gives way to a creeping sense of urgency. Communication breakdowns have rendered cell phones, radios, and televisions silent, leaving communities starved for information. Misinformation and rumors proliferate, sowing confusion and fear. The lack of contact with loved ones, especially those who might be vulnerable or in transit at the time of the EMP, adds a layer of personal desperation to the unfolding crisis.

Transportation systems remain paralyzed. Vehicles disabled by the EMP clog the roads, preventing movement and impeding any response efforts. Losing traffic control systems leads to street chaos, with accidents and gridlocks becoming widespread. Public transportation is halted, stranding commuters and cutting off access to essential services.

By the 48-hour mark, water scarcity begins to be felt acutely. Without electricity, water treatment plants cannot function, and the flow of clean water ceases. Households that fail to store potable water face imminent dehydration, a condition exacerbated by the absence of functioning sanitation systems, which leads to a heightened risk of disease.

The disruption of food supply chains becomes increasingly apparent. Grocery stores, unable to conduct transactions electronically or preserve perishable goods, close their doors. The just-in-time delivery model sustains food availability collapses, and panic buying exacerbates the shortages. With refrigeration units inoperative, food spoils, and the specter of hunger looms large.

Medical care facilities, operating on limited backup power, struggle to provide services. The cold chain for medication breaks down, particularly for life-saving vaccines and treatments. Hospitals overrun with patients suffering from injuries related to the blackout and lacking in essential supplies face the grim task of rationing care.

As the 72-hour mark approaches, the strain on law enforcement and emergency services is at a breaking point. Calls for help go unanswered as communication systems fail. The thin blue line that separates civility from anarchy is stretched to its limits, with reports of looting and violence beginning to surface. The absence of a functioning judicial system emboldens criminal elements, further endangering public safety.

## Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

With the passing of each hour, the financial sector's paralysis solidifies into a long-term economic crisis. Banks and ATMs remain inaccessible, credit and debit cards are useless, and the currency flow grinds to a halt. The impact on trade, commerce, and livelihoods is catastrophic, with no immediate solution.

By the time the 90th-hour ticks by, society teeters on the brink of a humanitarian crisis. The lack of basic utilities, the absence of law and order, and the growing desperation among the population set the stage for widespread civil unrest. Communities that once thrived on cooperation and shared goals now face the ultimate test of survival as individuals and groups make critical choices in the face of scarcity and fear.

The timeline outlined in this paper is not just a hypothetical scenario; it is a structured projection based on the interconnected nature of our modern infrastructure. The loss of power and communications, the paralysis of transportation, the disruption of water and food supplies, the breakdown of medical and emergency services, and the collapse of law and order—all within the span of 90 hours—create a domino effect that can lead to societal collapse.

This dire prediction is a call to action for governments, organizations, and individuals. It underscores the necessity for robust EMP resilience and preparedness strategies. Investments in EMP-hardened infrastructure, community education programs, emergency stockpiles, and decentralized support systems could mitigate the cascade of failures that lead to chaos.

The "90-Hour Threshold: A Countdown to Chaos" serves as a sobering reminder of our vulnerabilities and the need for proactive measures to ensure that, even in the face of an EMP or similar catastrophic event, the fabric of society holds strong against the forces of disorder and entropy. It is a rallying cry for vigilance, preparedness, and the indomitable human spirit that has always risen to meet the challenges of its time.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## Mitigation and Preparedness Strategies

While the scenario is dire, it is not insurmountable. Strategies for strengthening the resilience of critical infrastructure, enhancing community preparedness, and developing EMP-proof technologies are discussed, focusing on actionable steps that can be implemented at various federal and local levels.

The grim tableau of a society teetering on the brink of chaos within 90 hours of an EMP strike underscores the urgency of robust mitigation and preparedness strategies. Yet, despite the potential for wide-scale disruption, proactive measures exist that can significantly mitigate the risks and enhance societal resilience. This section explores the strategies that can fortify our infrastructure, communities, and personal lives against the cataclysmic effects of an EMP event.

### Fortifying Critical Infrastructure

Central to any mitigation strategy is hardening critical infrastructure. Power grids, communication networks, and transportation systems form the backbone of our society and must be the priority in any EMP preparedness plan. Implementing EMP-resistant technologies, such as Faraday cages, shielded electronics, and surge protectors, can safeguard vital components from EMP-induced currents. Moreover, alternative energy sources like solar, wind, and hydro, paired with battery storage systems, should be engineered to withstand EMP events, ensuring a continual power supply.

Investment in decentralized power systems can reduce the vulnerability of the national grid. Microgrids, for example, can operate independently of the main grid and provide localized energy resilience. Similarly, adopting EMP-resistant transformers and stockpiling critical spare parts will enable quicker restoration of services post-EMP.

### Enhancing Community Preparedness

At the community level, preparedness is pivotal. Public education campaigns can inform citizens about the nature of EMP threats and guide them in creating personal and family emergency plans. Communities should conduct regular drills simulating EMP scenarios to test the effectiveness of their response protocols and refine them accordingly.

Emergency services must have EMP-hardened communication equipment to coordinate response efforts effectively. Establishing EMP-proof community centers with emergency supplies, communication systems, and backup power can serve as coordination hubs and shelters during post-EMP recovery operations.

Local governments should work with utility companies to develop contingency plans for water delivery and waste management without power. Such initiatives could include manual pump installations at key water distribution points and promoting composting toilets to manage waste.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## Developing EMP-Proof Technologies

On the technological front, research and development into EMP-proof technologies must continue apace. Funding for projects exploring new materials, circuit designs, and shielding methods should be prioritized. The private sector, encouraged by government incentives, can significantly advance EMP-resistant consumer electronics and industrial machinery.

The automotive industry, for instance, can be incentivized to produce vehicles with critical EMP-proof components, ensuring at least a portion of transportation means remain operational post-EMP. Meanwhile, advancements in nano-materials and conductive polymers promise to create future generations of EMP-immune devices.

## Policy and Legislation

At the federal level, policy, and legislative frameworks are necessary to establish standards for EMP resilience. This includes mandating the protection of critical infrastructure and incentivizing private sector compliance. Public-private partnerships can be pivotal in pooling resources and expertise to tackle the EMP threat.

## International Collaboration and Intelligence Sharing

Given the global implications of EMP events, international collaboration is essential. Intelligence sharing about threats, joint research into protective technologies, and coordinated response drills can enhance global preparedness. Diplomatic efforts aimed at the non-proliferation of EMP weapons and promoting international treaties to regulate their use are equally important.

## Individual Actions

Lastly, individual action is the most granular layer of preparedness. Citizens can create "EMP emergency kits," including non-electronic essentials such as manual can openers, mechanical clocks, and battery-operated radios with spare batteries protected in Faraday pouches. Traditional skills like orienteering, first aid, and food preservation can equip individuals to adapt to a post-EMP environment.

While an EMP event presents a formidable challenge, it is not impossible. Through a combination of infrastructure hardening, community preparedness, technological innovation, sensible policy, international cooperation, and individual initiative, we can create a resilient society capable of withstanding and recovering from the repercussions of an EMP strike. These strategies must be coordinated and comprehensive to ensure that the clock on societal collapse never reaches its final countdown.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event



# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## Case Studies: Learning from History and Near-Misses

Historical events such as the 1859 Carrington Event and modern near-misses provide context and underscore the urgency of preparedness efforts. These examples serve as both warnings and learning opportunities.

Studying historical EMP events and near-misses offers invaluable lessons for preparedness and resilience strategies. By examining the past, we can extrapolate potential outcomes and engineer safeguards to prevent or mitigate future occurrences. This section presents a detailed examination of historical case studies, highlighting the key learnings and action points.

### The Carrington Event: A Solar Wake-Up Call

In 1859, a massive solar storm known as the Carrington Event released a coronal mass ejection (CME) that collided with Earth's magnetosphere, creating intense auroras and disrupting telegraph systems worldwide. While the societal reliance on electronics was minimal then, the event provides a benchmark for the scale of natural EMP disturbances that our sun can produce.

#### Key Learnings:

- The need for robust monitoring systems to detect and predict solar activity.
- The importance of designing electronics with inherent resistance to geomagnetic disturbances.
- The value of backup communication systems operating independently of the power grid.

#### Action Points:

- Enhancing space weather forecasting capabilities and integrating them into national warning systems.
- Retrofitting critical infrastructure with protection against geomagnetic induced currents (GICs).
- Establishing EMP-resistant lines of communication for emergency services and government authorities.

### The Quebec Blackout of 1989: Modern Vulnerability Exposed

In March 1989, a less intense geomagnetic storm, compared to the Carrington Event, caused a widespread power blackout in Quebec, Canada. This event disrupted the electricity supply for approximately six million people and had significant economic repercussions.

#### Key Learnings:

- Even relatively moderate solar events can profoundly impact modern power grids.

## Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

- The necessity of proactive grid management and rapid response protocols during geomagnetic disturbances.
- The economic cost of unpreparedness can be staggering.

### Action Points:

- Upgrading grid infrastructure to isolate affected components and prevent cascading failures automatically.
- Developing rapid restoration plans and pre-deploying resources for quick recovery.
- Incorporating EMP considerations into the economic planning and insurance frameworks to manage financial risks.

### High-Altitude Nuclear Tests: The Starfish Prime Experiment

The 1962 Starfish Prime high-altitude nuclear test demonstrated the potential for man-made EMP events. The detonation, 250 miles above the Pacific Ocean, caused electrical damage and auroras as far away as Hawaii, illuminating the destructive reach of high-altitude EMPs (HEMPs).

### Key Learnings:

- The recognition that HEMPs can impact a much wider area than the blast zone.
- The imperative to monitor rogue states and groups that may acquire EMP-capable technology.
- The strategic importance of hardening military assets against EMP effects.

### Action Points:

- Implementing international surveillance and intelligence-gathering to detect preparatory moves towards EMP attacks.
- Engaging in diplomatic efforts to control and reduce the proliferation of EMP-capable weaponry.
- Hardening military and strategic assets to ensure operational capability post-EMP event.

### The 2012 India Blackout: A Cautionary Tale of Complex Systems

In 2012, the world's largest blackout affected over 600 million people in India. While not caused by an EMP, the event illustrates the complexities and vulnerabilities inherent in vast interconnected systems.

### Key Learnings:

- The ripple effects in one part of a network can lead to widespread systemic failures.
- The need for robust inter-regional coordination and contingency planning.
- The criticality of maintaining essential services and public order during large-scale blackouts.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## Action Points:

- Enhancing grid flexibility and implementing smart grid technologies to manage load better and prevent outages.
- Establishing clear protocols for inter-agency cooperation in times of crisis.
- Prioritizing the continuity of essential services through backup power systems and alternate operational plans.

## The 2015 Norwegian GPS Jamming Incident: Disruption of Navigation Systems

In 2015, GPS signals were disrupted during NATO exercises in Norway. Suspected jamming by foreign entities demonstrated the susceptibility of satellite-based navigation and communication systems to targeted interference.

## Key Learnings:

- The essential nature of GPS and similar systems for civilian and military operations.
- The potential for targeted disruptions as a form of asymmetric warfare.
- The importance of having alternative navigation and communication methods.

## Action Points:

- Developing and deploying GPS alternatives such as eLORAN or other terrestrial-based navigation systems.
- Enhancing anti-jamming capabilities for critical communication and navigation equipment.
- Investing in satellite infrastructure resilience against cyber and physical threats.

These historical instances and near-misses serve as a clarion call for adopting comprehensive EMP preparedness and mitigation measures. Each case study presents unique insights into the multifaceted nature of EMP threats and underscores the imperative for a preemptive stance against the potentially catastrophic effects of such events. By learning from history, we can anticipate future challenges and equip our society with the knowledge and tools to withstand and recover from an EMP-induced disruption.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## The Role of Leadership and Governance

The role of leaders in an EMP scenario is multifaceted, extending from the immediate crisis response to the stewardship of recovery and rebuilding efforts. The paper argues for a proactive rather than reactive stance, with leaders at all levels fostering a culture of resilience.

In the event of an EMP attack or natural EMP occurrence, the burden of leadership weighs heavily across all echelons of governance, from local municipalities to the highest federal offices. This section explores leaders' multifaceted roles before, during, and after an EMP event and how their actions can significantly alter the course of recovery and rehabilitation for society.

### Pre-Event: Fostering a Culture of Preparedness

Leadership begins long before an EMP event strikes. It starts with the recognition of the threat and the development of strategic frameworks to counter potential risks. Leaders must work to foster a culture of preparedness within the government and among the populace.

#### Key Responsibilities:

- **Risk Assessment:** Leaders must identify vulnerabilities within the national infrastructure, prioritize them, and create mitigation strategies.
- **Resource Allocation:** Investing in infrastructure hardening, research into EMP-resistant technologies, and the stockpiling of critical supplies is essential.
- **Education and Training:** Implementing educational programs to inform the public and train emergency responders is crucial for building an informed and prepared society.
- **Policy Development:** Crafting and enacting policies encouraging private and public sectors to adopt EMP resilience measures.

#### Action Points:

- Establishing dedicated EMP preparedness and response teams within government agencies.
- Conducting regular EMP simulation drills to test and refine response strategies.
- Providing incentives for businesses to adopt EMP-resistant designs and operations.

### During Event: Crisis Management and Communication

In the immediate aftermath of an EMP event, the ability of leaders to manage the crisis effectively is tested. Decisions made in the first few hours are critical and can impact recovery efforts.

#### Key Responsibilities:

## Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

- **Rapid Response:** Activating emergency response protocols and mobilizing resources swiftly to maintain order and provide assistance.
- **Clear Communication:** Ensuring accurate information reaches the public, even when conventional means of communication are down.
- **Decision-making:** Assessing the situation continuously and making critical decisions that will affect the safety and security of the population.

### Action Points:

- Utilizing EMP-resistant communication devices to coordinate between government entities.
- Deploying emergency services equipped with hardened electronics capable of operating in a post-EMP environment.
- Establish predetermined communication channels for support and collaboration with international and regional partners.

### Post-Event: Recovery and Rebuilding

The aftermath of an EMP event presents a long road to recovery. Leaders must guide the transition from immediate disaster response to long-term rebuilding and resilience.

### Key Responsibilities:

- **Restoration of Services:** Overseeing the restoration of critical infrastructure, such as power, water, and medical services.
- **Economic Recovery:** Implementing measures to stabilize the economy and mitigate the financial impact of the EMP event.
- **Public Morale and Cohesion:** Maintaining public confidence and preventing social unrest through transparent and ongoing engagement.

### Action Points:

- Prioritizing power restoration to critical infrastructure and coordinating with private sector utilities.
- Introducing economic policies and aid packages to support affected businesses and individuals.
- Organizing community rebuilding initiatives to foster a sense of solidarity and shared purpose.

### Long-Term: Building Resilience

The true measure of leadership is how well a crisis is managed and how well a society is positioned to withstand future shocks.

### Key Responsibilities:

## Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

- Infrastructure Revitalization: Encouraging infrastructure redesign with EMP resilience in mind.
- Technological Innovation: Supporting research into new technologies that provide better protection against EMP events.
- Global Cooperation: Engaging with international bodies to develop a coordinated approach to EMP threats.

### Action Points:

- Implementing standards for EMP-resistant construction in future infrastructure projects.
- Funding research initiatives and fostering public-private partnerships to advance EMP protection technology.
- Participating in global dialogues to share best practices and develop international response protocols.

Leadership in the context of an EMP event encompasses a broad spectrum of activities, each interlinked and vital to successfully navigating the crisis. It requires foresight, decisive action, and the ability to inspire and unite people under a common goal: the resilience and recovery of society. This paper posits that by understanding the critical role of leadership in an EMP scenario, we can better prepare for and respond to such an existential threat.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## Community Action and Individual Preparedness

Empowering communities and individuals is a cornerstone of survival in the first 90 hours post-EMP. Steps for personal preparedness and community action plans are outlined, emphasizing the importance of grassroots initiatives in the larger defense strategy.

The dire consequences of an Electromagnetic Pulse (EMP) event underscore the essential role of community action and individual preparedness. A comprehensive defense strategy against such a high-impact scenario must prioritize grassroots initiatives that empower local communities and individuals. This section delineates the practical steps and measures that can be adopted to enhance resilience and readiness at the most fundamental levels of society.

### Grassroots Initiatives: Mobilizing Community Action

The ability of a community to withstand and bounce back from an EMP event is largely determined by the strength and preparedness of its individual members and local organizations. Communities must develop localized action plans that address the unique challenges they may face in the wake of an EMP strike.

#### Key Focus Areas:

- **Local Infrastructure Audit:** Communities should assess their infrastructure to identify critical vulnerabilities and devise mitigation strategies.
- **Community Response Teams:** Establish and train volunteer groups to handle emergencies, including medical response, communication relay, and supply distribution.
- **Resource Stockpiling:** Accumulate and manage stores of essential supplies such as water, food, medical kits, and tools, ensuring they are accessible to the entire community.

#### Action Points:

- Conducting workshops and seminars to educate residents on EMP risks and personal preparedness.
- Organizing neighborhood drills to practice emergency response protocols and evacuation plans.
- Setting up local communication networks using EMP-protected equipment to maintain information flow during a blackout.

### Individual Preparedness: Empowering Citizens

Individuals are the bedrock of community resilience. Educating citizens on the risks associated with EMPs and the best practices for preparedness can significantly reduce the vulnerability of the larger community.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## Key Focus Areas:

- Personal Emergency Kits: Encourage households to maintain an EMP emergency kit containing non-electric tools, first-aid supplies, and enough food and water to last several days.
- Skills Development: Promote learning basic survival skills such as first aid, fire-making, and water purification among community members.
- Home Hardening: Guide individuals on protecting their homes and electronic devices, including DIY methods like creating Faraday cages to shield electronics from EMP effects.

## Action Points:

- Initiating community-sponsored classes on survival skills and preparedness.
- Encouraging the development of neighborhood support networks to check on and aid vulnerable individuals post-EMP.
- Creating and distributing informational material on home hardening techniques and constructing simple protective measures for electronics.

## Promoting Self-Sufficiency

In the post-EMP environment, reliance on external aid may not be feasible. Promoting self-sufficiency among community members will be essential to weather the initial chaos following an EMP event.

## Key Focus Areas:

- Food Security: Encourage the cultivation of home gardens and support local agriculture to reduce dependence on external food sources.
- Energy Independence: Promote using alternative energy sources such as solar panels, which can be shielded from EMP effects and provide a sustainable power supply.
- Local Manufacturing: Support the establishment of local workshops capable of producing or repairing essential items without relying on electronic machinery.

## Action Points:

- Facilitating community garden projects and local farmers' markets.
- Providing incentives and assistance for installing off-grid, EMP-protected power systems.
- Organizing skill-share events where community members can exchange knowledge on crafting, repairing, and building necessary items post-EMP.

## Enhancing Community Cohesion



# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

A community's strength in facing an EMP event is greatly amplified by its unity and shared purpose. Strengthening social bonds and fostering a cooperative spirit can be one of the most potent forms of preparedness.

## Key Focus Areas:

- **Community Events:** Regular social gatherings, festivals, and town meetings can reinforce communal ties and provide platforms for sharing information on preparedness.
- **Collaborative Planning:** Involve community members in emergency planning, ensuring that diverse perspectives are included, and plans represent the whole community.
- **Mental Health Support:** Recognize the psychological impact of an EMP event and establish support systems to address the mental well-being of community members.

## Action Points:

- Establishing regular community-building events and open forums for discussion on local issues.
- Creating inclusive planning committees for emergency preparedness that reflect the community's demographics.
- Setting up peer-support networks and facilitating access to mental health resources.

Community action and individual preparedness form a robust defense network against an EMP event's aftermath. This white paper asserts that by investing in local initiatives and fostering a culture of self-reliance and cooperation, communities can significantly enhance their resilience and stand a greater chance of surviving and thriving in the critical first 90 hours and beyond.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## Technology and Innovation: The Vanguard of Defense

The advancement of EMP-resistant technologies and innovative protective measures is highlighted as a critical frontier. Investment in research and development and adopting best practices in infrastructure design is advocated.

In the face of an EMP event, technology and innovation serve as the first line of defense. As we delve deeper into the 21st century, our reliance on electronic systems and digital infrastructure continues to escalate, making the potential impact of an EMP increasingly significant. This section emphasizes the importance of advancing EMP-resistant technologies and calls for a proactive stance in developing and implementing innovative protective measures.

### Forging the Shield: Advancements in EMP-Resistant Technologies

Our modern world, laced with intricate electronic networks, necessitates the development of technologies capable of withstanding the catastrophic effects of an EMP. The need for resilient systems spans from the household level to the national infrastructure scale.

- **Research and Development:** A robust investment in R&D is vital for uncovering new materials and methods to protect against EMPs. This includes pursuing cutting-edge discoveries in electromagnetic shielding and developing electronic components that are inherently resistant to EMP-induced currents.
- **Standardization of Best Practices:** As technologies emerge, it is crucial to establish industry-wide best practices for their implementation. This ensures the optimal use of protective technologies and fosters a uniform approach to EMP preparedness across different sectors.

### Innovative Infrastructure Design: Building for Resilience

Our infrastructure design must incorporate considerations for EMP resilience. From the architecture of buildings to the construction of power grids, a forward-thinking approach to design can significantly reduce the potential damage from an EMP strike.

- **EMP-Proof Architecture:** Encourage the integration of EMP shielding into the design of new buildings, especially for critical facilities like hospitals, data centers, and emergency response headquarters.
- **Redundant Power Systems:** Advocate for including redundant power systems and offline backups in essential services, ensuring that critical functions can continue even without the main power grid.

### Protective Measures for Existing Systems

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

While developing new, EMP-resistant technology is crucial, we must also address the vulnerabilities in our existing systems. Retrofitting current infrastructure with protective measures can offer a more immediate safeguard against potential EMP events.

- **Surge Protection and Isolation:** Implement surge protectors and isolation transformers in critical power and communication network nodes to prevent EMP-induced surges' cascading effect.
- **Shielding of Critical Components:** Identify and shield existing systems' most vulnerable components, such as power grid transformers and communication satellites in orbit.

## Cultivating a Culture of Preparedness Through Innovation

The challenge of EMP protection is technical and cultural. Building a society that values and invests in resilience is as important as the technologies.

- **Public-Private Partnerships:** Foster collaborations between government agencies and private companies to promote sharing of knowledge and resources in EMP protection technology.
- **Incentivization Programs:** Establish incentive programs for businesses and homeowners to adopt EMP-protective technologies, including tax breaks, grants, and rebates.

The continuous evolution of EMP-resistant technologies and the embrace of innovative design principles are essential to safeguarding our way of life against the threat of EMP. This white paper champions the cause of technological advancement and infrastructural innovation as pivotal components in the broader strategy to defend against the potentially devastating effects of an EMP event. It is through persistent innovation and the widespread adoption of resilient technologies that we can aspire to maintain the integrity of our society in the face of such formidable challenges.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## Conclusion and Call to Action

This white paper concludes with a call for immediate and sustained action to address the EMP threat. It posits that with informed awareness, rigorous planning, and dedicated effort, the "90-hour collapse" can be averted, ensuring the continuity of our society and way of life.

As we conclude this exploration into the "90-hour collapse" scenario precipitated by an EMP event, it is imperative to recognize the gravity of the threat and the necessity for action. The potential for an Electromagnetic Pulse to disrupt and possibly dismantle the essential systems our society relies on is not science fiction—it is a stark reality that demands attention and preparation.

This white paper has traversed the landscape of EMP threats, from the intricate vulnerabilities of our modern civilization to the mechanics of EMP events and through the immediate and long-term ramifications such an event would entail. We have dissected the potential for societal degradation without our electronic lifelines and presented a compendium of strategies designed to mitigate the risks and bolster our resilience.

### The Call for Informed Awareness

Awareness is the foundation for preparedness. Every stakeholder, from government officials and industry leaders to individual citizens, must be informed about the nature of EMP threats and the profound impacts they can have. Education campaigns, public briefings, and integrating EMP risks into planning and policy-making are essential steps to ensure that this awareness is widespread and deeply ingrained within the societal consciousness.

### The Imperative for Rigorous Planning

Planning is the bridge between awareness and action. It is not enough to understand the threat of an EMP; we must also have detailed and practiced plans to respond effectively. This includes the development of robust emergency response strategies, the implementation of infrastructure protection protocols, and the establishment of community preparedness programs. These plans must be continually reviewed and revised in light of new information and technological advancements, ensuring they remain relevant and effective.

### The Necessity for Dedicated Effort

Effort translates plans into reality. It encompasses allocating resources to protect critical infrastructure, researching and developing EMP-resistant technologies, and committing to community training and personal preparedness. It also involves the cultivation of international cooperation to mitigate the threat of man-made EMPs and the implementation of regulatory frameworks to ensure that EMP preparedness is not just recommended but required.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## The Role of Each Individual

Every individual has a role to play. Personal preparedness can have a ripple effect, contributing to the resilience of the wider community. By educating themselves and others, building personal and family emergency kits, and advocating for preparedness within their communities, individuals can make a tangible difference in the collective capacity to withstand and recover from an EMP event.

## The Time to Act Is Now.

The specter of a “90-hour collapse” is a stark reminder of the precariousness of our reliance on electronic systems. The time to act is now—before such an event occurs—not in its aftermath. Procrastination or complacency in the face of this threat is not an option. We must take proactive steps to secure our electronic infrastructure, to develop and deploy protective technologies, and to educate and prepare our populace.

## A Call to Unity

Finally, this paper calls for unity in the face of the EMP threat. In a world often divided by borders and beliefs, the challenge posed by an EMP event is universal. It transcends nationality, politics, and ideology. It requires a collaborative, coordinated, and comprehensive approach that leverages the strengths and resources of all sectors of society.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## Conclusion

In closing, this white paper stands as a call to action—a manifesto for preparedness that urges immediate and sustained effort to protect against the EMP threat. By embracing the call for informed awareness, rigorous planning, and dedicated action, we can secure the continuity of our society. The “90-hour collapse” is not inevitable; it is preventable. Together, we can ensure that the fabric of our civilization—woven together by the threads of our electronic age—remains strong and resilient in the face of any challenge.

# Countdown to Resilience: Navigating the 90-Hour Precipice Post-EMP Event

## About the Author - Brad Nietfeldt

Brad Nietfeldt stands at the forefront of civilian defense strategy and emergency preparedness, epitomizing the confluence of technical expertise and visionary leadership. As the founder of CivilDispatch, an innovative platform designed to streamline communication and coordination in emergency situations, Brad has cemented his reputation as a pioneer in the field of digital emergency management and response.

Brad's journey began at PayPal in its early days, where he was among the first wave of IT professionals shaping the future of online transactions. His experience in the crucible of a burgeoning tech giant endowed him with a keen insight into the power and vulnerability of digital infrastructures—an insight that would guide his future endeavors.

Transitioning from the world of financial technology to the broader domain of digital marketing, Brad established himself as one of the industry's most sought-after gurus. His work with Fortune 500 C-suites and the world's most prominent family offices reflects a breadth of influence and a capacity to drive innovation and growth.

At the helm of Monstrous Media Group, LLC, Brad's strategic acumen has catapulted the firm into the ranks of INC 5000 America's fastest-growing companies. His approach—blending technological savvy with a keen understanding of market dynamics—has set a new standard in digital marketing, earning him the title of a leading AI guru.

Based in Omaha, NE, with satellite offices nationwide, Brad's leadership extends beyond the corporate realm. His engagement with national defense focus, community preparedness, and resilience initiatives speaks to his commitment to leveraging technology for the greater good, fostering environments where safety and readiness are paramount.

In drafting this white paper, Brad draws upon his extensive background in technology, his entrepreneurial spirit, and his passion for community defense to outline a roadmap for survival and resilience in the face of EMP events. His advocacy for preparedness is not merely professional; it is deeply personal, driven by a dedication to safeguarding the fabric of society against emerging threats.

Brad Nietfeldt's expertise and efforts epitomize the synergy of technology and preparedness. His work, both as an author and as a pioneer in digital emergency management, underscores a vital message: with the right tools and the will to act, society can not only anticipate and mitigate threats but also emerge stronger and more united in the aftermath.

[www.civildispatch.com](http://www.civildispatch.com)