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INFRASTRUCTURE VULNERABILITY



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Contact your elected officials! Tell them your emphatic desire to have an official Civil Defense Program for our citizens, no matter the cost.

Our United States government currently:

- Has NO Department of Civil Defense
- Does NOT educate our children about the effects of nuclear weapons
- Has NO fallout shelters for the general public
- Has NO directives on how to build hardened fallout shelters
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WARNING:

When building a shelter, seek a professional design from appropriate, certified professionals, including electrical and civil engineers and ask to see the appropriate credentials from your builder and installer. Secure your area while under construction. Consult a geotechnical engineer to test your water table and soil type, and do not place your shelter in an area that could flood or accumulate water. Wet shelters could destroy and contaminate your supplies. You must keep entrances securely covered at all times. A poorly built or flooded shelter could result in death or injury from structure failure or dangerous levels of CO or CO_2 or other chemicals. TACDA and the authors of JCD journal entries offer this material as conceptual ideas, only, and cannot legally design your shelter, nor can it ensure it has been safely constructed.

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PRESIDENT'S MESSAGE



The world is constantly changing, and certainty is often an illusion. For many years, our nation has enjoyed relative peace and prosperity. Those favorable conditions can quietly foster complacency. History reminds us, however, that circumstances do shift - sometimes gradually, sometimes suddenly - and those shifts can affect our way of life.

The more confident we become that things will never change, the less prepared we may be when they do. Awareness and preparation are not acts of fear; they are acts of responsibility.

Each day we make choices about how we will live. We can remain comfortable in complacency, or we can strengthen our resilience by learning new skills, gaining knowledge, and taking thoughtful steps to prepare. The information in this publication is designed to help you do exactly that.

Thank you for being part of TACDA and for your commitment to preparedness.

Sincerely,

Jay Whimpey, PE
TACDA President

FROM THE DIRECTOR

Preparedness in an Uncertain World

By Roseanne Hassett, Executive Director

During the past several years our nation has experienced a wide range of threats, including cybersecurity risks, natural disasters, civil unrest, and global tensions. These events continue to demonstrate that the need for individual preparedness is more important than ever.

According to the Cybersecurity and Infrastructure Security Agency (CISA) 2025 Year in Review, 371 million malicious connections were blocked within critical infrastructure environments. Our nation faces constant cyber threats, and it may only be a matter of time before another cyberattack affects one of the nation's sixteen critical infrastructure sectors. Modern life depends on complex systems that most people rarely think about until they fail.

In this issue, our contributors explore several aspects of practical preparedness, including the importance of the electrical grid and how disruptions can cascade and multiply, affecting everyday life. You will also learn about situational awareness and simple tools such as fire extinguishers and emergency planning that make a significant difference during a crisis.

Planning should not focus on one item or idea. It should be a well thought out process that combines knowledge, planning, and practical tools. We encourage you to use the educational materials we provide on our website, TACDA Academy, and Journals to build knowledge and develop a plan to secure your household that goes beyond the basic 72-hour kit.

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AMERICA'S THREAT ENVIRONMENT IN 2025:
THE CASE FOR MODERN CIVIL DEFENSE

By Jim Stephens, MSN, RN

For much of the Cold War, American civil defense planning revolved around one overriding concern: nuclear war. Fallout shelters, air raid sirens, and public preparedness campaigns were common because the threat was clear and immediate. Two superpowers possessed the ability to destroy one another, and the public understood that survival required preparation.

Today's threat environment is more complex. Nuclear weapons remain part of the strategic landscape, but they are joined by cyber operations, infrastructure disruption, biological risk, and natural disasters. Civil defense has not become obsolete; it has expanded.

For organizations such as the American Civil Defense Association (TACDA), this broader threat environment reinforces a foundational principle: preparedness must address both the most probable disruptions and the most severe consequences.

According to the 2025 Annual Threat Assessment of the U.S. Intelligence Community, the United States faces a wide range of persistent and evolving threats. Many extend beyond traditional nuclear scenarios and include hostile nation-states, criminal networks, nonstate actors, cyber disruptions, biological risks, and natural disasters (Office of the Director of National Intelligence [ODNI], 2025).

Civil defense, often associated primarily with the Cold War era, is once again recognized as essential, though its scope has broadened.

THREAT ASSESSMENTS ARE NECESSARY BUT NEVER COMPLETE

The Annual Threat Assessment is a serious and credible document. It identifies the threats U.S. intelligence agencies judge most immediate and consequential in the near term. However, even the authors acknowledge that it is not an all-inclusive list (ODNI, 2025).

History shows why that limitation matters.

Prior to September 11, 2001, few planners imagined that commercial airliners could be used as manned guided missiles. That scenario was largely absent from threat models, yet it proved devastating. The lesson of 9/11 is not simply about terrorism; it is about the danger of assuming future threats will resemble past ones.

Civil defense planning must accept that adversaries exploit gaps in imagination, planning, and preparedness.

NUCLEAR WAR: LOW PROBABILITY, HIGH CONSEQUENCE

Nuclear weapons remain central to global deterrence strategy. While a deliberate large-scale nuclear exchange may be assessed as less likely than many other near-term threats, it cannot be dismissed.

Deterrence reduces risk; it does not eliminate it. History demonstrates that strategic miscalculation, escalation, or technological surprise can occur with little warning. Civil defense planning does not rest solely on probability. It evaluates consequence. Even a limited nuclear detonation, whether strategic, tactical, or electromagnetic in nature, would produce severe regional disruption and cascading infrastructure failure.

At TACDA, we recognize that survivability is not theoretical. Nuclear effects can be mitigated. Fallout exposure

can be reduced. Infrastructure failure can be planned for. Communities can endure.

Comprehensive civil defense must therefore include nuclear contingencies alongside cyber, biological, and natural hazards. Preparedness transforms catastrophic risk into survivable challenge.

NONSTATE ACTORS AND MASS HARM

The 2025 threat assessment highlights the impact of transnational criminal organizations and synthetic opioid distribution (ODNI, 2025). Public health data confirms the scale of this crisis (CDC, 2024).

While distinct from traditional warfare, large-scale societal degradation weakens national resilience. Civil defense is not solely about military attack; it is about maintaining community strength under stress.

CYBERATTACKS AND INFRASTRUCTURE VULNERABILITY

Cyber operations now represent one of the most significant threats to civil defense.

Cyberattacks increasingly target hospitals, water systems, power grids, telecommunications, and local government systems. The ODNI assessment warns that hostile cyber and intelligence actors are actively targeting U.S. critical infrastructure and essential services (ODNI, 2025).

Recent incidents have disrupted healthcare payment systems, delayed prescriptions, interfered with medical records, and forced ambulance diversions - exactly the type of disruption that creates secondary casualties even without direct physical violence (ODNI, 2025).

These attacks require no explosives and no troop movements, yet they place lives at risk. From a civil defense perspective, prolonged infrastructure disruption can produce casualties comparable to those caused by overt physical attacks.

NATURAL DISASTERS: A CONSTANT AND INEVITABLE THREAT

Not all threats to the American people originate from hostile actors.

Natural disasters will always be part of the national threat environment. Hurricanes, tornadoes, floods, wildfires, earthquakes, blizzards, and extreme heat events routinely kill Americans and devastate communities. These events overwhelm hospitals, destroy infrastructure, disrupt supply chains, and strain emergency response capabilities.

Less frequent but potentially catastrophic natural hazards such as major solar storms also pose systemic risk by threatening electrical grids and communications.

This raises a fundamental civil defense question:

Can Americans sustain themselves, even temporarily, without outside assistance?

Welcome to our new Board Member!



Jim Stephens, MSN, RN

Jim is a national emergency responder, nursing professional, and public service leader with more than 20 years of experience in healthcare, disaster response, and operational field support. He has served in multiple uniformed and federal service roles, including as a U.S. Marine, federal law enforcement officer, wildland firefighter, paramedic, and Nurse Officer in the U.S. Public Health Service. He has participated in major emergency operations, including hurricane response and large-scale public health deployments.

Jim serves as the National Administrator of the U.S. Army Auxiliary Activation Project, a grassroots initiative advocating for the creation of a congressionally authorized volunteer auxiliary to support homeland defense, civil defense, and national emergency preparedness modeled after the Civil Air Patrol and Coast Guard Auxiliary.

With a strong background in leadership, training, and field operations, he remains committed to strengthening America's readiness through civic engagement, civil defense education, and volunteer mobilization.

For many communities today, the answer is no. Limited food, limited water, minimal medical supplies, and little contingency planning leave populations vulnerable when infrastructure fails. Civil defense exists to reduce that vulnerability.

BIOLOGICAL RISK AND CIVIL DEFENSE PLANNING

Biological threats should also figure into civil defense planning, not merely as abstract possibilities, but as realistic risk categories.

Recent law enforcement investigations uncovered unauthorized biological laboratory operations in California and Nevada. The Associated Press reported that the Reedley, California case involved thousands of vials and laboratory materials, with subsequent reporting identifying similar biological sample activity tied to a Las Vegas residence (Associated Press, 2023, 2024).

These cases demonstrate that biological materials - potentially including infectious agents - may exist outside regulated institutional environments. They underscore the importance of vigilance and regulatory oversight in protecting public health.

Civil defense planning must therefore account for biological hazards regardless of origin: accidental, criminal, or deliberate. Public health resilience, early detection systems, medical surge capacity, and community preparedness remain essential components of comprehensive civil defense.

STATE ADVERSARIES AND LONG-TERM PRESSURE

China is identified as the most capable long-term strategic competitor to U.S. global interests (ODNI, 2025), emphasizing leverage through supply chains, cyber access, and influence operations. Russia retains significant cyber and information capabilities, while Iran and North Korea continue to rely on asymmetric tactics and proxy activity. Increased overlap among these actors raises the possibility that future crises may compound and intersect.

CIVIL DEFENSE: A CRITICAL GAP

One of the most serious vulnerabilities facing the United States today is the decline of civil defense education.

Over the past several decades, public preparedness training has largely disappeared. Many Americans lack basic knowledge of emergency readiness, including water storage, sheltering, medical self-care, and contingency planning for extended systems failures. The assumption that emergency services will always arrive quickly is unrealistic during large-scale disasters.

In the early stages of major emergencies, civilians are



Photo by Julia Zyablova on Unsplash

effectively their own first responders. Whether communities endure or fail often depends on prior education and preparation.

Restoring civil defense education for the general public is not alarmist. It is prudent risk management.

A prepared population is more resilient, less vulnerable to disruption, and better able to support emergency responders when crises occur.

CONCLUSION

The 2025 Annual Threat Assessment makes clear that the dangers facing the United States are real, persistent, and evolving (ODNI, 2025). Nuclear war remains possible. Cyber disruptions, infrastructure failures, biological incidents, and natural disasters are ongoing realities. Civil defense is not obsolete. It is essential.

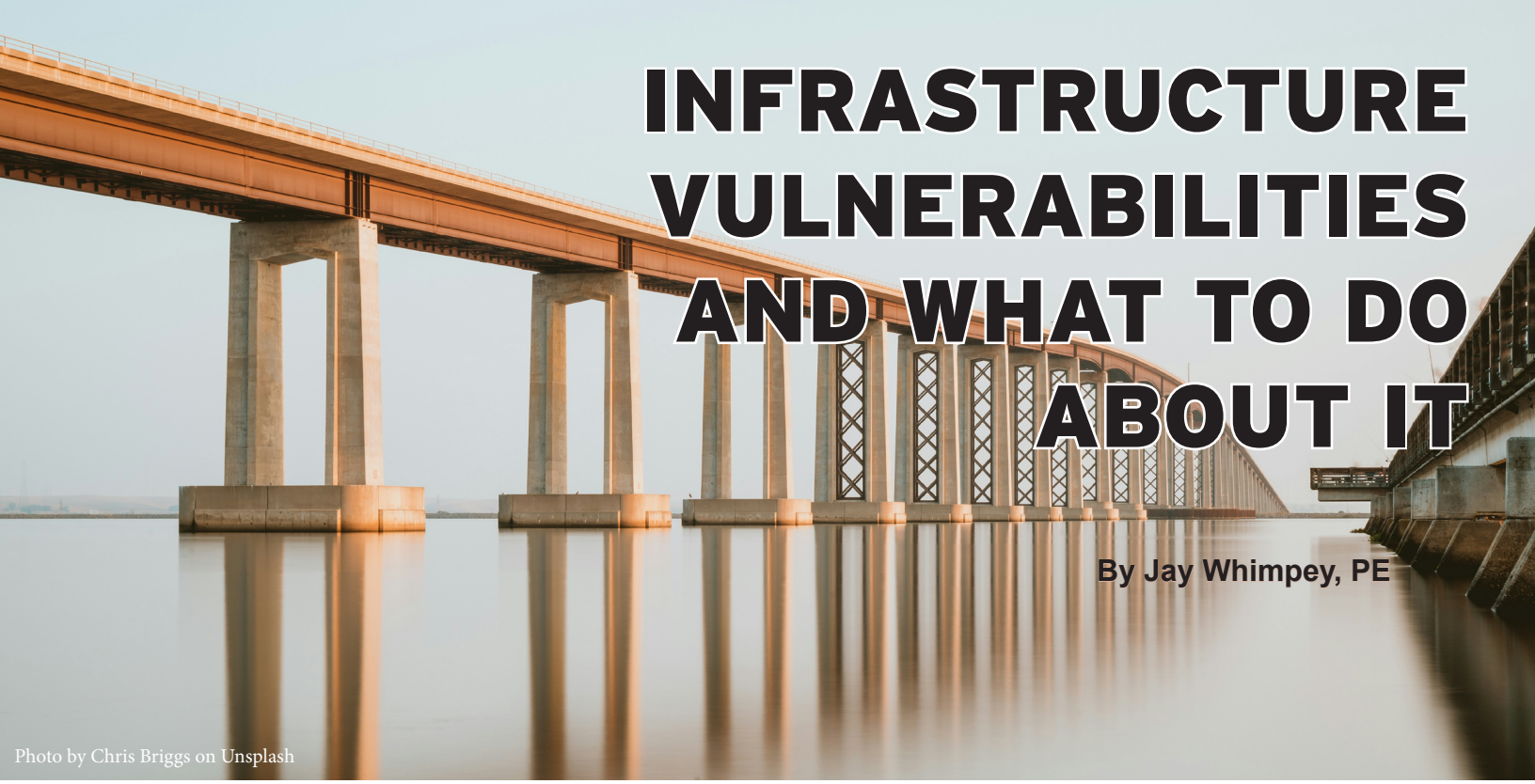
Preparedness must begin at the community level before crisis strikes. A resilient population reduces casualties, strengthens national stability, and supports professional responders.

At TACDA, we emphasize that survival is achievable. The question is not whether threats exist, but whether citizens are prepared to endure them.

The next crisis may not resemble the last. Comprehensive preparedness ensures that, whatever form it takes, it is survivable.

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INFRASTRUCTURE VULNERABILITIES AND WHAT TO DO ABOUT IT

By Jay Whimpey, PE

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The United States and much of the developed world enjoy a comfortable lifestyle supported by extensive infrastructure systems. These systems provide food distribution, water supply, waste disposal, electricity, and climate control. Because they function reliably most of the time, many citizens have become highly dependent upon them. That dependence creates vulnerability if those systems fail.

We are very dependent on the electrical grid to provide heat, light, refrigeration, and food preparation. It can be life-threatening to be deprived of electrical power for more than a few days.

We rely on natural gas or propane delivered to our homes to provide heat and allow for cooking.

We have water delivered to our homes through distribution systems to provide drinking water, support washing and cooking, and provide for some small agricultural uses.

We also have waste collection systems that provide for the safe disposal of human and other solid and liquid wastes.

We have telecommunication, broadcasting, and electronic information systems available to communicate our needs and possible emergencies to those who can assist us and to inform us of potential emergencies in other areas. They also provide a connection to friends and family.

These systems are closely interdependent. The electrical grid depends on control systems to generate and distribute power. Water and wastewater facilities depend on electricity for pumping and treatment. All of them depend on telecommunications and information systems to coordinate operations, materials, and labor. Disruption in one sector can quickly affect the others.

There are many threats to these systems. Natural disasters such as wind, flooding, ice and snowstorms, and earthquakes have all affected infrastructure in the recent past. There are cyber security issues that have been discovered with foreign states and individuals trying to disrupt the communications and controls systems. Trojan horse software and communication devices have been discovered in solar power inverters, storage batteries, and seaport loading cranes that could disrupt vital operations and, in some cases, affect the broader electrical grid. There are also individuals within our own societies who have tried to disrupt these systems. Electrical substations and other facilities have, in some cases, been vulnerable to sabotage. Damage to specialized equipment can result in outages affecting thousands of customers, and replacement timelines may extend for months depending on component availability. We also have risks associated with systems aging, delayed maintenance, and lack of adequate resources that may threaten system operations.

There are efforts underway to improve reliability and security by the local utilities and private companies that operate these systems, but progress is often slow and uneven. Utilities and private operators continue working to improve reliability and security; however, infrastructure upgrades often require substantial investment and long timelines. As a result, certain vulnerabilities may remain for extended periods.

PRACTICAL HOUSEHOLD RESILIENCE

An individual who understands the vulnerabilities of these systems would naturally want to reduce dependence on them by preparing to survive whether the infrastructure is operating normally or not. The well-being of your family and friends may depend on your preparations.

Each household must evaluate its level of dependence on critical infrastructure and consider reasonable steps to reduce vulnerability. Even modest improvements in preparedness can significantly enhance resilience during disruptions.

We have provided the information; now is the time to make the decision. It is not hard but requires some sustained attention, modest investment of time and money, and consistent effort.

FOOD AND WATER

Food and water preparedness is one of the simplest vulnerabilities to address. A rotating supply of non-perishable foods and an adequate reserve of stored water can be established with modest planning and cost.

Households should also consider simple water treatment options to ensure safe drinking water if municipal systems are interrupted. The equipment and materials required for treating surface water are relatively inexpensive compared to the value they provide in an emergency.

COMMUNICATIONS

Households should consider alternative communication options in the event cellular networks fail. Amateur radio, GMRS, or other local communication systems can provide resilience during extended outages. Even basic familiarity with these tools can significantly improve situational awareness when normal communication channels are unavailable.

BACKUP POWER AND HEAT

In colder climates, households should plan for the possibility of extended heating outages. Appropriate cold-weather clothing, layered insulation, and safe alternative heating methods can substantially reduce risk during winter power interruptions.

A small portable generator capable of producing one to two kilowatts of power is sufficient for lighting, refrigeration, and basic communications during an outage. Many systems can be supplemented or recharged using solar panels or conventional line power when available.

A small rocket stove can serve as an efficient cooking heat source fueled by stored firewood, charcoal briquettes, or another biomass. Rocket stoves can be purchased or fabricated at reasonable cost. When combined with a thermal cooker, fuel usage can be significantly reduced.

SHELTER

If an underground shelter is constructed, survival during winter and summer in most parts of the world can be significantly more comfortable. Such a shelter would also provide protection in the event of a nuclear weapons exchange. In some cases, individuals may consider hardened shelter options as part of long-term preparedness planning, depending on regional risks and personal circumstances.

SANITATION

Human waste can be collected in a bucket toilet and then buried or composted to produce usable fertilizer. A bucket toilet can be purchased for less than $20 or made for less than that.

The challenges associated with infrastructure disruption are manageable with preparation. The tools and knowledge required are readily available. The decision to prepare rests with each household.

Jay Whimpey is the president of The American Civil Defense Association and the president of The Civil Defense Volunteers of Utah. He is a licensed chemical engineer with a vast amount of knowledge and experience in civil defense, developing new techniques and teaching preparedness skills.



TACDA would not exist without the generous donations and support of its members. Because of you, TACDA can continue its mission to educate and empower Americans to survive any disaster or emergency.

All donations given to The American Civil Defense Association are tax deductible. Save your receipts!

THE 72-HOUR MYTH:

MOVING BEYOND A 3-DAY EMERGENCY PACK

By Parker Twiss

The 72-hour (3-day) emergency pack is often portrayed as the final step in personal preparedness. From official guidance and repeated news coverage, the 3-day limit has been presented as the primary goal and standard, highlighted especially during the "bug out" phase that coincided with a societal focus on survival and prepping (e.g., Doomsday Preppers). Unfortunately, it's easy to get tunnel-visioned with a checklist. In this case, marking the 72-hour pack off your list and forgetting about it in a closet until a crisis strikes.

With nations preparing for conflict across the globe and weather-related disasters becoming more frequent and destructive, the 72-hour kit should no longer be seen as anything more than a starting point toward personal preparedness and a tool in an otherwise wide array of options.

THE 72-HOUR KIT SHOULD BE SEEN AS NOTHING MORE THAN A STARTING POINT

The Federal Emergency Management Agency (FEMA) suggests storing supplies for weeks, especially for events such as hurricanes. Should a significant disruption occur, whether from nature or a hostile actor, basic essentials will quickly become unavailable. Restoring basic infrastructure will likely take longer than the supplies in a 72-hour pack. This is not to dismiss the idea of having such an emergency bag; indeed, having one for evacuation is highly recommended. Whether for a hurricane or wildfire, having a go-bag is part of essential preparations for those likelihoods. But as a solution to extended outages, such a kit is likely to be inadequate.

For example, when the Texas power grid failed in February 2021, it took days for power to be restored - over a week for complete restoration. At best, a 72-hour kit would have been a good supplement to existing supplies just as power was restored. At worst, it wouldn't have been enough.



Photo by Luis Quintero on Unsplash

Due to aging infrastructure within the United States, power outages are becoming more frequent, compounding vulnerabilities from internal system failures and hostile attacks. When a major power outage occurs, our existing systems become paralyzed. This requires individuals, families, and communities to rely on themselves until power is restored. It is no longer sufficient to rely entirely on existing systems. Indeed, that's the entire foundation of personal preparedness: being self-sufficient when the core systems we enjoy day to day fail us.

A long-term infrastructure failure, whatever the cause, far exceeds what a normal 3-day kit can provide. Within a 72-hour pack, usually only the absolute basics of survival are found, not the items necessary for a longer scenario. Instead, as a stronger baseline, individuals and families should prepare for two weeks or more of self-sustainability.

Should the power fail for an extended period, the following areas of essential infrastructure will be impacted, including but not limited to:

1. Food production and transportation of goods stop. (Gas stations rely on power to supply delivery trucks.)
2. Water systems stop working. This includes treatment

plants and water pumps without backup power.
3. Communications networks could be overloaded. Cell towers only have limited backup power and are easily overwhelmed in an emergency.
4. Medical and emergency response systems become overburdened. While hospitals have backup generators, they are dependent on systems that may be limited or inoperable during a long-term power outage. Health risks during power outages rise, and with them, the chance of needing specialized medical care.

While unaffected areas of a long-term power outage (or general disaster) may be able to help, that assistance takes time while you and your family are still on your own. This has been shown many times throughout recent history during widespread disasters ranging from wildfires to hurricanes. Systems take time to return to normal after a period of stress, and ensuring you have a surplus of supplies and knowledge can keep you from having to rely on those systems during a period of insecurity. The restoration period will take even longer if the disaster damages or destroys the infrastructure of an area (such as during a severe wildfire).

For a two-week kit, consider building upon the official recommendations for a 72-hour kit and increasing appropriate supplies to two weeks or more. The TACDA site resource page provides multiple checklists and guides, and Ready.gov additionally hosts a basic list for a starter bag.

1. Food: Stock a rotating pantry with non-perishables for two weeks. If buying one can of chili, for example, purchase two and rotate as needed. Stockpiling fun foods such as candy can be extremely useful for keeping up morale, especially if your family has children.
2. Water: Store at least 1 gallon per person per day. Additionally, secure a way to boil or filter water without power. During a scenario where water pumps fail, water may still flow from the taps but become contaminated and either be unusable or require boiling for safety.
3. Communications: Ensure you have enough backup batteries for a standard radio and consider backup power banks for cell phones.
4. First Aid: Stock additional adhesive bandages and over-the-counter medications for common ailments (e.g., heartburn, gastrointestinal issues) and consider obtaining a supply of essential prescription medications. This can be done by switching to a 90-day supply (with a doctor's permission) or through vendors such as Jase Medical, which offer a year's supply of common prescription medications (a discount link is available in the TACDA store).
5. Entertainment: Books, card games, board games, hard candy; enduring hard times is stressful enough. Ensure you have some way to occupy yourself in moments when usual forms of entertainment aren't available.

With global tensions rising, a 3-day emergency pack is no longer sufficient on its own. It's a fantastic start, but having multiple weeks of supplies has become the safest and most reassuring approach. It's simple to build up day by day at minimal cost. With both the supplies and knowledge at your disposal, you and your family can rest a bit easier as you continue your journey of personal preparedness with a solid foundation.

Parker Twiss holds an M.S. in Emergency Management & Disaster Preparedness and has worked in roles including Wildland Fire Dispatch, Fire Lookout, and Emergency Planning Specialist. He is a certified Wilderness First Responder, firearms instructor, and HAM radio operator, and currently serves as the Nuclear Disaster Subject Matter Expert for HazAdapt.

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Available in the TACDA SURVIVAL STORE

2-WEEK BUG OUT BAG CHECKLIST

Scan here for Ready.gov checklist!

WATER (Top Priority)

- ☐ 3-4 liters of water (to start)
- ☐ Portable water filter (Sawyer/LifeStraw type)
- ☐ Water purification tablets
- ☐ Collapsible water bottles
- ☐ Metal cup (for boiling)

FOOD (Lightweight + High Calories)

- ☐ 10-14 days of freeze-dried meals
- ☐ Energy bars / protein bars
- ☐ Trail mix / nuts
- ☐ Instant oatmeal packets
- ☐ Peanut butter packets
- ☐ Electrolyte drink mix
- ☐ Lightweight camp stove + fuel
- ☐ Spork

SHELTER & WARMTH

- ☐ Lightweight tent or tarp
- ☐ Emergency bivvy or sleeping bag
- ☐ Compact sleeping pad
- ☐ Emergency blanket (Mylar)
- ☐ 50 ft paracord
- ☐ Duct tape (wrapped on card)

CLOTHING (Weather-Appropriate)

- ☐ 2-3 pairs wool socks
- ☐ 2 extra underwear
- ☐ Moisture-wicking base layer
- ☐ Weatherproof jacket
- ☐ Hat (warm or sun)
- ☐ Gloves (work + cold if needed)
- ☐ Sturdy boots (worn, not packed)

FIRE & LIGHT

- ☐ 2 lighters
- ☐ Waterproof matches
- ☐ Ferro rod
- ☐ Headlamp
- ☐ Extra batteries
- ☐ Small flashlight

TOOLS & GEAR

- ☐ Multi-tool (Leatherman style)
- ☐ Fixed-blade knife
- ☐ Compact first aid kit
- ☐ N95 masks
- ☐ Whistle
- ☐ Local map (paper)
- ☐ Compass
- ☐ Notepad + pencil
- ☐ Zip ties

MEDICAL & HYGIENE

- ☐ Personal medications (2+ weeks)
- ☐ Pain relievers
- ☐ Blister care
- ☐ Toothbrush + toothpaste
- ☐ Wet wipes
- ☐ Hand sanitizer
- ☐ Travel soap
- ☐ Toilet paper (compressed)
- ☐ Feminine hygiene items (if needed)

COMMUNICATION & POWER

- ☐ Battery or hand-crank radio
- ☐ Phone charger cable
- ☐ Power bank
- ☐ Solar charger (optional but helpful)
- ☐ Emergency contact list (printed)

IMPORTANT DOCUMENTS (Waterproofed)

- ☐ ID copy
- ☐ Insurance info
- ☐ Emergency contacts
- ☐ Medical info
- ☐ Cash (small bills)

PERSONAL SAFETY (Legal & Responsible)

- ☐ Work gloves
- ☐ Eye protection
- ☐ Pepper spray (if legal in your area)
- ☐ Reflective vest



Photo by Moses Vega on Unsplash

GOT KIDS?

Check out these additional tips!

KIDS' COMFORT & MORALE

- ☐ Small stuffed animal
- ☐ Deck of cards / small game
- ☐ Coloring book + crayons
- ☐ Family photo
- ☐ Snacks reserved just for kids

Morale is survival. Calm kids = calmer decisions.

RECOMMENDATION FOR FAMILIES

If possible, plan for vehicle-based evacuation first. A 2-week walking evacuation with children is extremely demanding. Consider:

- Extra water stored in vehicle
- Extra food bins
- Blankets
- Larger medical kit

WEIGHT RULE

Try to keep total bag weight under 25–30% of your body weight.



Photo by Kacper G on Unsplash

SITUATIONAL AGILITY AND MENTAL AWARENESS

How leaders and households can adapt when plans fail and conditions change.

By Colonel Jim Smith, NRP, FABCHS, CPC, CLEE

In any emergency, whether a localized incident or a large-scale disaster, situational awareness and mental agility are not optional skills. They are the difference between orderly response and cascading failure.

Situational awareness is more than simply knowing what is happening. It is the continuous process of observing current conditions, understanding their significance, and anticipating how those conditions may change. Mental agility is the ability to adapt quickly: adjusting plans, reallocating resources, and solving problems that were not anticipated.

During a crisis, leaders must often manage issues far beyond the immediate emergency. Temporary facilities, damaged vehicles, communications failures, material donations, and resource shortages can quickly compete for attention. The ability to think clearly in the midst of these pressures is the hallmark of effective leadership.

The principles remain the same whether the event is small or catastrophic. Only the scale and volume of information change.

WHEN THE PLAN DOESN'T EXIST

In 1993, during what became known as the "Storm of the Century," a Gulf Coast community experienced a situation for which it had no formal plan. Forecasts predicted limited impact. Instead, the area was struck by heavy snowfall, sustained 45 mph winds, subfreezing temperatures, widespread power outages, downed trees, and a major industrial fire, all within hours.

For this semitropical region, blizzard conditions were unprecedented. There was no cold-weather emergency operations plan.

The incident commander faced blocked roads, loss of power, and vulnerable populations at risk of hypothermia. Rather than pause for a plan to be written, he adapted an existing hurricane emergency plan. The logistics were different, but the framework - resource mobilization, sheltering, evacuation, and chain-of-command structure - remained applicable.

Chain saws were deployed to clear roads. High-clearance four-wheel-drive vehicles transported residents to shelters with generator power. Personnel were recalled to respond to the surge in service calls.

The lesson was clear: when a specific plan does not exist, adaptable leadership can repurpose an existing framework. Since that time, the jurisdiction developed a formal cold-weather plan which was later used successfully during a 2025 snow event. Plans matter. But flexibility matters more.

WHEN BACKUP SYSTEMS FAIL

In a separate incident, a Category Five hurricane struck the same region. The community had prepared for hurricanes before. Category Three storms were common and plans had worked well.

What had not occurred before was a complete failure of layered communications. Within hours of landfall:

- Primary UHF dispatch systems failed.
- Fire and EMS shifted to a legacy analog system, which then failed.
- Law enforcement moved to an 800 MHz system, which became overloaded and crashed.
- Commercial push-to-talk systems failed.
- Cellular networks collapsed roughly 12 hours into the event.
- Landline telephones eventually failed as well.

For a period of time, a 120-square-mile area with roughly 8,000 residents had no communication with the outside world.

Roads were blocked. Power lines were down. Outside assistance could not be summoned until heavy equipment cleared a route the following day.

During this period, radio-to-radio communication between responders was the only reliable method. No

amateur radio operators were active locally. No satellite phones were available. County-level emergency managers did not initially realize communications had collapsed because no 9-1-1 calls were being received.

While no fatalities occurred, fires went unreported and one individual required prolonged EMS care following a venomous snakebite.

The response led to changes:

- Identification of local amateur radio operators.
- Arrangements for satellite communications.
- Expanded redundancy planning.

The lesson is not that three layers of backup are insufficient. The lesson is that even multiple backups may fail under extreme stress.

Resilience requires planning beyond what appears reasonable.

WHEN INFRASTRUCTURE AND FACILITIES ARE LOST

A strong EF2 tornado later struck the same area, directly damaging every municipal building. Fire stations were rendered unusable. Equipment was trapped inside damaged structures. City hall was destroyed. Only a local high school remained viable as a temporary operations site.

Without power, the incident commander initially operated from a damaged patrol vehicle until a mobile command unit arrived.

Mutual aid came from more than ten miles away, with specialty units traveling up to fifty miles. More than 400 damaged structures required search operations. Energized power lines complicated rescue efforts for nearly 72 hours. All municipal vehicles were damaged or destroyed.

Operational challenges extended beyond immediate rescue:

- Billing systems were disrupted.
- Cash flow was interrupted.
- Donations overwhelmed existing processes.
- Temporary banking arrangements had to be created.
- Storage and distribution of donated goods required coordination.

One unexpected issue involved tire damage. Debris-covered roads destroyed more than 100 tires during the response phase. A local vendor provided mobile repair service onsite for 72 hours - an operational detail not included in any emergency plan. Recovery planning proved just as critical as emergency response.

WHAT APPLIES TO TACDA MEMBERS

While these examples involve public safety leadership, the principles apply equally to households and communities.

Emergencies rarely unfold according to written plans. Communications may fail. Backup systems may collapse. Facilities assumed to be secure may become unusable. Access routes may be blocked.

<u>For the individual or family, situational awareness means:</u>

- Recognizing changing conditions.
- Monitoring reliable information sources.
- Anticipating secondary effects such as loss of utilities or access.

<u>Mental agility means:</u>

- Adjusting shelter plans when one location becomes unsafe.
- Reallocating stored supplies if resupply is delayed.
- Improvising communication methods when primary systems fail.
- Avoiding fixation on a single plan when circumstances shift.

Preparedness is not simply stockpiling supplies. It is cultivating the ability to adapt when assumptions prove incorrect.

LESSONS LEARNED

The repeated themes across these events are consistent:

- Communications remain fragile during crises.
- Events can occur that were previously considered improbable.
- Multiple layers of backup may still fail.
- Physical proximity of facilities can reduce survivability.
- Lack of foresight and mitigation funding directly affects functionality.
- The mindset of "it cannot happen here" must be actively resisted.

Perhaps the most important lesson is this: there are few true surprises, only events that were not anticipated, planned for, or mitigated.

Situational awareness allows leaders and citizens alike to recognize emerging risks. Mental agility allows them to respond effectively when plans must change.

In both professional emergency management and personal preparedness, these qualities are not optional. They are essential.

Colonel Jim Smith is the public safety director for a rural Alabama town. He holds a master's degree in safety from the University of Southern California and undergraduate degrees in chemistry-biology and emergency medical technology. He is the coauthor of Tactical Medicine Essentials and several other textbooks, including Crisis Management. Smith serves as a peer reviewer for multiple journals and frequently authors articles. He teaches graduate and undergraduate courses in public administration and criminal justice and has more than 50 years of public safety experience.



FIRE EXTINGUISHERS: A CRITICAL TOOL IN HOUSEHOLD PREPAREDNESS

By Benjamin Blodgett and Michael Frado, TACDA Members

Photo by Dave Hoefler on Unsplash

Understanding fire classes, proper placement, and maintenance to prevent small fires from becoming catastrophic.

Fire safety is crucial in every home and public space. Fires can break out unexpectedly and escalate quickly, leading to significant property damage or even loss of life. While fire prevention is essential, preparation is equally important. One of the most effective tools for controlling a fire before it becomes catastrophic is the fire extinguisher. Owning the correct type of extinguisher, and knowing how to maintain it, is vital to ensuring safety during an emergency. This article explores the different types of extinguishers, their applications based on fire class, and the importance of selecting and maintaining the proper extinguisher for your environment.

The first step in ensuring fire safety is understanding that not all fires are the same. Fires are classified based on the materials involved and how they behave. Each class requires a specific extinguishing agent to be controlled effectively. The five primary classes of fire are:

Class A Fires: These involve ordinary combustible materials such as paper, wood, cloth, rubber, and many plastics. They are typically extinguished with water or other agents that cool the burning material.

Class B Fires: These involve flammable liquids and gases, including oil, grease, paint, and solvents. They require extinguishing agents that smother the fire by removing oxygen or forming a barrier to prevent vapors from reigniting.

Class C Fires: These involve energized electrical equipment, including wiring, appliances, circuit boards, and computers. Water should never be used, as it can conduct electricity and worsen the situation. Non-conductive extinguishing agents are required.

Class D Fires: These involve combustible metals such as magnesium, sodium, potassium, or titanium. Though less common, they are extremely hazardous and require specialized extinguishers designed specifically for metal fires.

Class K Fires: Common in kitchens, these involve cooking oils and fats such as animal or vegetable oils. They burn at very high temperatures and require wet chemical extinguishers that cool the fire and form a protective barrier to prevent re-ignition.

A fire extinguisher is not a one-size-fits-all tool. Its design and contents depend on the type of fire it is intended to extinguish. Below are the most common types of extinguishers and their primary uses:

WATER FIRE EXTINGUISHERS

These are the most basic type of extinguisher and are suitable for Class A fires involving paper, wood, or fabric. They work by cooling the burning material below its ignition point. However, they are ineffective and potentially dangerous when used on flammable liquid, electrical, or grease fires, as water can spread the fire or cause electrical shock.



Figure 1: A stainless steel pressurized water extinguisher rated for Class A fires involving ordinary combustibles.

QUICK READINESS CHECKLIST

- ☐ Do I have at least one ABC extinguisher in the home?
- ☐ Is there one accessible near the kitchen?
- ☐ Is there protection in the garage or workshop?
- ☐ Are pressure gauges in the green zone?
- ☐ Are extinguishers mounted and visible?
- ☐ Does every adult household member know the P.A.S.S. method?
- ☐ Have extinguishers been serviced according to manufacturer guidelines?

If you cannot check every box, now is the time to address the gaps.

FOAM FIRE EXTINGUISHERS

These are versatile and effective on both Class A and Class B fires. They work by forming a blanket of foam over the fuel source, smothering the flames and reducing the risk of re-ignition. They are commonly used in areas where both solid materials and flammable liquids may be present, such as kitchens and garages.

DRY CHEMICAL FIRE EXTINGUISHERS



These are among the most common and versatile types and are rated for Class A, B, and C fires. They work by interrupting the chemical reaction that fuels combustion. While highly effective, they leave a residue that can be corrosive and damaging to electronics or delicate machinery. Prompt cleanup after use is essential.

Figure 2 (left): A common ABC dry chemical fire extinguisher suitable for Class A, B, and C fires in homes and garages.

CO_2 FIRE EXTINGUISHERS

These are typically used for electrical fires and Class B liquid fires. They work by displacing oxygen and cooling the fire area. Because they leave no residue, CO_2 extinguishers are often preferred in offices, laboratories, and server rooms where sensitive equipment could be damaged by other agents.



WET CHEMICAL FIRE EXTINGUISHERS

Specifically designed for Class K fires, these are essential in commercial kitchens where deep fryers and high-heat cooking oils are present. The wet chemical agent cools the fire and forms a protective barrier that prevents re-ignition. Unlike other extinguishers, they are formulated specifically for grease and oil fires.

Having the correct fire extinguisher for each area of your home is essential to preventing the spread of small fires. Consider a kitchen fire caused by oil splatter near the stove. Using the wrong extinguisher, such as water could intensify the situation by spreading burning grease. Selecting appropriate extinguishers and placing them in key locations, such as the kitchen and garage, allows you to control a small fire before it grows out of control.

Each class of fire presents its own hazards, which is why owning only one type of extinguisher may not be sufficient. A general-purpose foam or dry chemical extinguisher works well for many household situations. However, kitchens benefit from wet chemical extinguishers designed for grease fires, and garages may require both foam and dry chemical units due to the presence of flammable liquids and electrical equipment.

SAFETY WARNING SECTION

When NOT to Use a Fire Extinguisher

Fire extinguishers are intended for small, contained fires only. Do NOT attempt to fight a fire if:

- ☐ Flames are taller than you are
- ☐ The fire is spreading rapidly
- ☐ Smoke is filling the room
- ☐ You do not have a clear escape route behind you
- ☐ The fire involves structural components of the building
- ☐ You are unsure of the fire's source

If in doubt, evacuate and call emergency services. Remember: property can be replaced. Lives cannot.

It is not enough to own the right fire extinguishers; they must also be properly maintained. An extinguisher that fails during an emergency can be as dangerous as not having one at all. Proper maintenance includes:

1. **Regular Inspections:** Check extinguishers monthly to ensure the pressure gauge remains in the green zone. If it falls outside that range, the unit should be serviced or replaced according to manufacturer guidelines.

Figure 3 (left): A carbon dioxide (CO_2) extinguisher commonly used for electrical and Class B liquid fires.

2. **Recharge or Replace After Use:** Even if the extinguisher was only partially discharged, it should be recharged immediately to ensure it is fully operational for future emergencies.
3. **Professional Servicing:** Most extinguishers require professional servicing at intervals ranging from several years to over a decade, depending on the type. Professional inspection ensures that hoses, seals, valves, and internal components remain in proper working condition.
4. **Training:** Proper instruction on extinguisher use is essential. The P.A.S.S. technique - Pull, Aim, Squeeze, and Sweep - provides a simple method that anyone can learn and apply under pressure.

Fire extinguishers are among the most important tools for protecting lives and property from unexpected fires. By understanding fire classifications and selecting the proper extinguisher for each environment, individuals can address emergencies before they escalate into catastrophic events. Maintenance, inspection, and training are equally critical to ensuring these devices function as intended. Whether in a small home or a commercial kitchen, keeping the right extinguisher accessible and ready for use may mean the difference between a contained incident and a devastating loss.

Benjamin Blodgett has served in the fire service since 2008 and holds certifications as a wilderness paramedic and search and rescue technician. He earned degrees in Fire Science and Emergency Management from Columbia Southern University.

Michael Frado has been in the fire service since 2013 and is also a certified wilderness paramedic and search and rescue technician. He holds a degree in Fire Science from Hocking College.

Both authors are based in Northern Ohio and bring practical field experience in fire response, emergency medicine, and technical rescue operations.

TACDA RECOMMENDED MINIMUM FOR PREPARED HOUSEHOLDS

At minimum, TACDA recommends that prepared households maintain:

- At least one multipurpose (ABC) fire extinguisher on each level of the home
- A dedicated extinguisher within quick reach of the kitchen (Class K or ABC rated)
- An extinguisher in the garage or workshop area
- Monthly inspection of all units
- Basic training for all capable household members

Fire extinguishers should be mounted in visible, accessible locations - not hidden in cabinets or storage closets. Quick access is critical during the first seconds of a fire.

Preparedness means planning for small, controllable incidents before they escalate beyond control.

Welcome to our new Board Member!

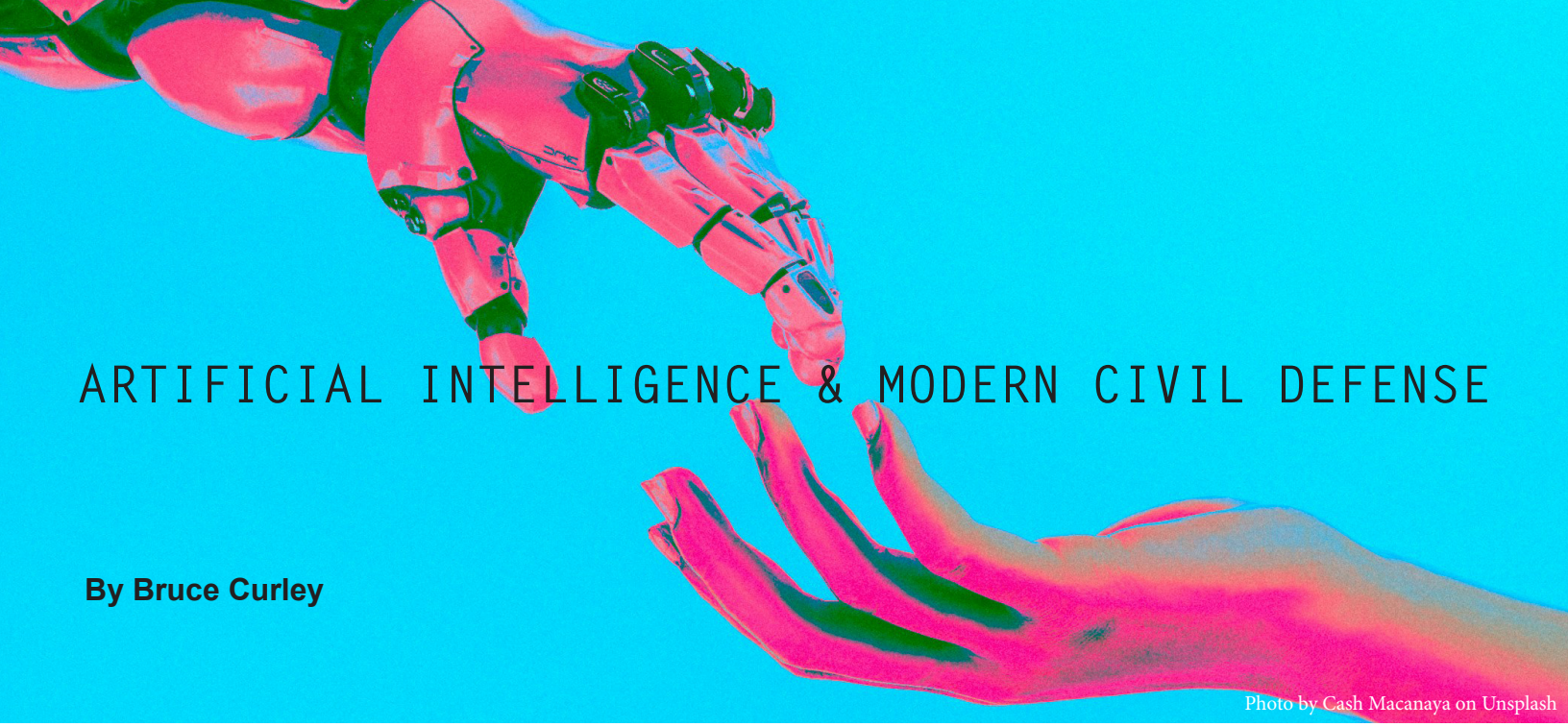
Logan VanLeigh

Logan's commitment to emergency preparedness began early. Born in Atlanta, Georgia, he vividly remembers the tension of the Cuban Missile Crisis as a first grader - an experience that sparked a lifelong interest in readiness and resilience. Growing up on a small cattle farm in northwest Georgia further reinforced the importance of preparation, whether facing ice storms, tornadoes, or lean financial seasons.

Logan earned a Bachelor of Science in Chemical Engineering from Brigham Young University and a Master of Science in Sanitary Engineering from Virginia Tech. He then entered the United States Air Force, serving four years in California and Guam as a health physicist, industrial hygienist, and emergency planner and responder. He completed his active duty service as a traveling environmental engineer based in San Antonio, Texas.

Following active duty, Logan worked as a consulting environmental engineer and educator, earning an additional Master of Science in Secondary Education. He continued his military service in the Air Force Reserve before serving as an Army Combat Medic with the 278th Armored Cavalry Regiment of the Tennessee Army National Guard. He concluded his distinguished military career with a deployment to Iraq, where he spent the final four months flying MEDEVAC missions over Mesopotamia.

Now retired, Logan lives on a wooded property on Tennessee's Cumberland Plateau, where he is enthusiastically working to develop a small homestead - continuing a lifetime of practical self-reliance and preparedness.



ARTIFICIAL INTELLIGENCE & MODERN CIVIL DEFENSE

By Bruce Curley

Photo by Cash Macanaya on Unsplash

Artificial Intelligence (AI) can play a constructive role in American civil defense planning. It enhances predictive capability, optimizes resource allocation, and improves resilience against natural and manmade disasters.

In the planning phase, traditional, generative, and agentic AI systems analyze vast datasets - environmental, hydrologic, economic, social, and geospatial - to accelerate policy processing and decision-making.

Traditional AI (also called narrow or rule-based AI) focuses on performing specific, well-defined tasks by following pre-programmed rules or learning patterns from data to make predictions, classifications, or decisions. Examples include spam filters and recommendations when you use search engines. It excels at analysis and optimization but doesn't create new content.

Generative AI (GenAI) creates new original content, such as text, images, code, audio, or video, based on patterns learned from vast training data. It responds to prompts by generating human-like outputs. Popular examples include ChatGPT, DALL·E, and Midjourney. It's reactive and excels at creativity but typically requires user input for each output.

Agentic AI builds on generative AI to create autonomous systems (AI agents) that pursue complex goals with minimal supervision. Detailed prompts are the key to getting the most out of Agentic AI. These systems can plan, reason, make decisions, use tools, adapt to changes, and execute multi-step tasks independently. Examples include AI that automates workflows, manages projects, or handles customer service end-to-end. It's proactive and goal-oriented, going beyond creation to action.

HOW AI ENHANCES CIVIL DEFENSE PLANNING

Predictive modeling powered by traditional, generative, or agentic AI can simulate risk scenarios, assess potential impacts, and assist planners in developing mitigation strategies, thereby reducing deaths and economic losses from disasters.

This includes mapping hazards, vulnerabilities, and civilian infrastructure to better prepare for events like floods, fires, snow and ice storms, hurricanes, supply line shortages, economic dislocations, crime, terrorist attacks, and other hazards evident in any disaster planning matrix.

AI also integrates into modeling and can optimize traffic flows for evacuations and update civil defense policy planning in real-time. In disasters, AI can forecast events with great precision. It does so by using machine learning on historical data, satellite imagery, and sensors. This capability enables proactive infrastructure hardening and civilian and government response coordination. Overall, these applications make civil defense more data-driven and efficient. By doing so, it shifts civil defense planning and execution from reactive to anticipatory strategies.

PRACTICAL AI TOOLS FOR INDIVIDUALS AND FAMILIES

Individuals and families can leverage AI-powered tools and applications for personal preparedness, real-time alerts, evacuation planning, and recovery from natural disasters such as hurricanes, floods, wildfires, and earthquakes, as well as from complex emergencies including infrastructure failures, cyber disruptions, and other large-scale crises.

These tools often use machine learning for predictions, natural language processing for personalized advice, and data integration for situational awareness. Below is a list of accessible tools, focusing on those suitable for individuals and families.

USEFUL AI CIVIL DEFENSE APPS FOR HOUSEHOLDS

Each of these tools and apps have clear traditional, generative, or agentic AI components, such as predictive analytics. Most are free.

- AI Chat Platforms (such as Grok, ChatGPT, Claude, and similar tools): AI resources using natural language processing to create custom emergency plans, communication templates, and rumor verification guidance when used carefully and cross-checked against official sources. You can query for personalized advice, such as "Generate a family evacuation plan for a wildfire." Useful for quick, tailored preparedness planning.
- Life360: Family locator app with AI-driven crash detection, emergency alerts, and location sharing. Tracks loved ones during disasters, sends SOS with location, and integrates with roadside assistance. Useful for coordination in evacuations before, during, and after disasters.
- Zesty.ai: Uses machine learning to assess property-level risks from weather events like wildfires, hurricanes, and floods by analyzing satellite imagery, building data, and geospatial info. Provides vulnerability insights and risk scores. Helps homeowners evaluate their property's risks, take preemptive actions like reinforcing structures, or adjusting insurance coverage. Accessible via web or partner apps for personal use.
- Preppr.ai: An AI-driven platform that generates customized disaster plans and exercises through guided questions and collaborative planning tools. Plans can be saved in the cloud or downloaded. It can assist families in developing step-by-step emergency plans and discussing potential scenarios. Originally developed for organizational use, but adaptable for household preparedness.
- DisasterAWARE: An AI-based risk intelligence platform that analyzes historical data, geography, and real-time alerts to identify natural and manmade threats. The public version allows individuals to monitor hazards affecting their location and receive alerts to support planning and evacuation decisions.
- Emergency (American Red Cross): An app providing disaster checklists, preparation tips, first-aid guidance, and real-time alerts. Uses data analytics to deliver location-based notifications and preparedness resources. Free and accessible for households.
- Waze: A navigation app using real-time traffic data and AI-based routing to identify hazards and suggest alternate routes. Can assist drivers in avoiding flooded roads, blocked highways, or high-traffic evacuation corridors during emergencies.
- FEMA App: The official Federal Emergency Management Agency app providing disaster alerts, preparedness guidance, recovery resources, and location-based notifications. Includes maps, checklists, and assistance information for affected individuals.
- Tomorrow.io: A hyperlocal weather application using AI-driven forecasting models to provide precise weather predictions, including severe storm tracking. Offers personalized alerts to assist with evacuation and preparedness decisions.

WHY USE THESE AI CIVIL DEFENSE TOOLS

These tools empower individuals by providing actionable insights without requiring technical expertise. For best results, combine multiple sources of information. Risk assessment tools, planning platforms, navigation systems, and official alert applications each serve different functions during an emergency.

Always cross-check with official emergency management sources and download apps in advance since the internet may be unreliable during disasters. Like many emergency management resources, traditional, generative, and agentic AI can help reduce loss of life and property damage during natural or manmade disasters. However, these tools must be understood and practiced before an event occurs.

These AI civil defense tools can help you begin integrating AI into your overall civil defense strategy. As with any preparedness resource, familiarity and training determine effectiveness.

Bruce Curley is the volunteer Vice President of TACDA. He has done professional and volunteer civil defense work for over 40 years. You can find 25 years of his civil defense strategies on https://poetslife.blogspot.com/ and more recently on Substack at https://poetslife.substack.com/.

BUILDING FAMILY SELF-RELIANCE IN UNCERTAIN TIMES

By Logan VanLeigh, MS, Sanitary Engineering



Photo by Kyle Glenn on Unsplash

Many of you are just beginning your preparedness journey. Perhaps events like Hurricane Helene's floods in North Carolina and Tennessee have reminded you how important it is to be your family's bulwark against natural disaster. Or perhaps you've simply looked around at the world and seen things that trouble you - things that make you want to protect your family from difficulties far beyond your control. If so, congratulations. You are taking responsibility.

This journey is not merely one of storing food, nor solely of developing a local water source, and certainly not exclusively one of developing means to protect your family. It is best considered part of a broader perspective of self-reliance: taking responsibility for your well-being and for those in your circle. Consider this as a spoke in a wheel that includes health, education, employment, home production and storage, finances, and spiritual strength. Viewed in that perspective, preparing for troubled times becomes a natural part of daily life; a life fulfilled by exercising responsibility and helping others.

I grew up in and near Atlanta, GA. In fact, I was in first grade there during the Cuban Missile Crisis. We faced things I didn't fully understand, bombs I imagined so large they would require two or three airplanes just to carry one. Later in life, my wife and I worked our way through college, often dipping into our meager stock of supplies when paychecks ran low. Afterwards I was stationed on a U.S. Air Force SAC base (right back on the bullseye of those incredibly big bombs) and later fought through years of layoffs, again dipping into food stocks to make short paychecks stretch just a little bit more.

From that background, may I offer you a starting point for this journey. This is not a complete guide to all the many things you'll realize you need to do, but more like a few tips to get you going and maybe a few to keep you from going down some common unfruitful roads. I can't go deeply into all the implied topics. Each paragraph might be worth an article. But I hope to get you started. This overall picture I want to help you draw is one of family self-reliance. Look at this as a journey of developing a more resilient lifestyle. Parallels exist with the permaculture approach to agriculture and a stewardship view of our bodies and our families. This is not preparation against some vision like the Mad Max movies, nor some collapse back to the Middle Ages. It's being ready for the types of things most likely to occur where you live.

KEEP IT SIMPLE

The temptation to run out and buy the latest, coolest gear is strong. I know. I like my toys as much as any American male, especially the Southern variety. But start slow and simple. Look at the most common two or three things which might disrupt your daily life. Now make some simple starting point preparations against them. Buy a bale of bottled water and slip it under your bed. Buy an extra can or two of things you commonly eat each time you go to the store. Nothing fancy, nothing expensive, but a great start to being better prepared for whatever might come.

Continued on page 23.

PRACTICAL PREPAREDNESS TRAINING

Online Courses | 20% Supports TACDA





ACTIVE THREAT
SURVIVAL ESSENTIALS

TACTICAL
HOME DEFENSE

Preparedness isn't theoretical. It's practical.

ironsurvival.com

The American Civil Defense Association has partnered with IronSurvival.com to share two civilian-focused online preparedness courses. Purchases made through TACDA's links return 20% to support the Association's mission.

The courses are designed for ordinary citizens who want **realistic, responsible training** for **real-world situations**.

- ✓ Online & self-paced
- ✓ Designed for any age and skill level
- ✓ Practical, scenario-based instruction

Active Threat Survival Essentials - $19

A clear, easy-to-follow course on what to do (and what not to do) during an active threat situation.

You'll learn:

- Why your first decisions matter most
- How to safely escape when possible
- How to hide or barricade effectively
- What "last resort" defense really means

Scan here!



Clear. Calm. Practical.



Tactical Home Defense - $40

Helps families build a thoughtful home security and response plan that fits their specific living situation.

You'll learn:

- Threat assessment and deterrence
- Neighborhood-level planning
- Home security systems & coordination
- Realistic defensive planning principles

Scan here!

At this point in your journey I recommend against buying a large, pre-planned food stock. Aim for a couple weeks of food and water and a few other basic preparations. You know what easy-to-fix foods your family eats: buy those. Keep it simple.

KEEP IT BALANCED

If you have six months of water stored and no food, you've missed a valuable point. A balanced approach carries you further and better than any long hard foray into one aspect of this journey while you ignore others. A real danger here is spending a few thousand dollars on expensive gear before you have even a few weeks' worth of food. Don't get me wrong: I am a bona fide gun nut. But that is part of my preparations against difficult times, not the kingpin of all I do. Similarly, a year's supply of food with no preparation for a long-term water supply is a recipe for disaster. Keep it balanced.

THINK IT OVER AND TALK IT OVER

Whatever you do has to match your needs. Not what I think I need. Not even what your cousin across town thinks they need. What you feel you need! Let me speak personally for a moment. My family are religious people; what in the South we call Prayin' People. And Prayin' People always better be Listenin' People as well. If, likewise, you are, this is a great time to meet as a family (even a family of one) and think and talk and consider and talk some more, and then offer those plans up in prayer for guidance. Even without the religious aspect, preparing for troubles in life is a process that takes time to think through and digest. Listen to all family members. Encourage input from all. If your plan for a 72-hour kit doesn't include a toddler's favorite stuffed toy, you didn't get enough input from that toddler.

KEEP IT PLANNED

Earlier I mentioned thinking about the 2-3 things most likely to disrupt your daily life. Now, sit down and seriously look at this list. If you're in Miami and list a blizzard, please go back a step or two and take a hard look. If you don't include a financial upset, like a short paycheck or an unexpected car repair, please add that now. For every blizzard that's hit me, I've faced a dozen sharp financial blips. And don't worry too much if your plan and the reality of what hits you aren't a perfect match! From my 26 years of military active duty and reserve service, I have concluded that a plan, any plan, is a better starting point when facing troubles than "Oh Crap!" ever could be. On the other hand, don't overplan everything; what the military calls 'Analysis Paralysis'. Make a few simple plans at this stage and you'll be far ahead.

Now what are you planning against? One way to tackle this is to list a few events that you consider common to your area. Then for each of those, look for the things each event can disrupt. For example: an ice storm can disrupt electrical power, transportation, and communications. After doing this you'll notice that some of the things disrupted are common across many events. Focus your early efforts on those commonly disrupted elements of your life. Most events disrupt your access to food, water, and shelter. Those make great starting points. I've often counseled (somewhat jokingly) that a good preparedness plan can cover a spectrum of events from a short paycheck or unexpected car repair up to the impact of a small asteroid 100 miles from your house. The latter is a stretch for any newly minted plan, but you'll notice fairly soon in this process that the early food preps you accumulate do cover that whole spectrum. Three days - or better yet - ten days' worth of food works wonderfully to stretch that paycheck, or feed you when some major event hits. The same applies to water and basic shelter preparations.

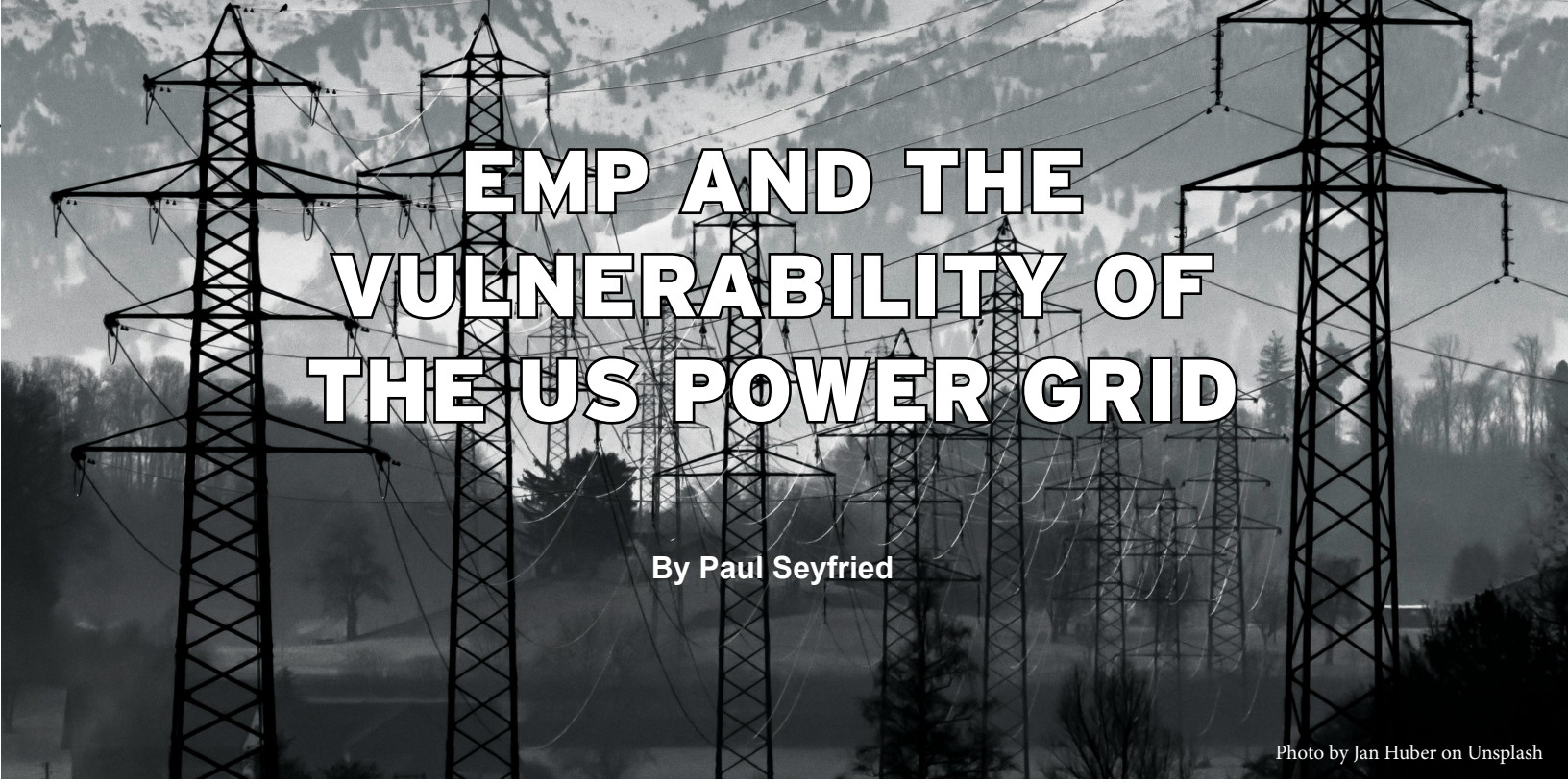
Family self-reliance is not a race, and it is not a competition. It is not measured by how much gear you own or how many buckets of food are stacked in the garage. It is measured by the quiet confidence that comes from knowing you have taken reasonable, thoughtful steps to care for those entrusted to you.

You will not get everything right. None of us do. Plans will need adjusting. Supplies will need rotating. Circumstances will change. That is part of the process.

But each simple step - an extra case of water, a written plan, a family discussion, a modest food reserve - strengthens your household in ways that extend far beyond emergency situations. It builds habits of responsibility, discipline, and calm decision-making.

Preparedness is not about fear. It is about stewardship. Start small. Stay balanced. Think it through. Make a plan. Then live your life well.

Logan VanLeigh developed an interest in preparedness during the Cuban Missile Crisis and was raised on a small cattle farm in northwest Georgia, where he learned the value of self-reliance. He holds degrees in Chemical Engineering and Sanitary Engineering and served on active duty in the U.S. Air Force as a Health Physicist, Industrial Hygienist, and emergency planner. He later continued his military service as an Air Force Reservist and Army Combat Medic, deploying to Iraq for MEDEVAC missions. Logan now lives on the Cumberland Plateau of Tennessee, where he is building a small homestead.



EMP AND THE VULNERABILITY OF THE US POWER GRID

By Paul Seyfried

Photo by Jan Huber on Unsplash

The grid powers nearly every essential facet of modern life. Included in that list are safe drinking water systems, communications, petroleum refineries, fuel distribution networks for transportation and heating, and the manufacture of thousands of products. Financial services, inventory control (the beep you hear when groceries are scanned at checkout triggers automated inventory systems that request replacements that may arrive within hours), pharmaceuticals, food production, processing, packaging, and distribution all depend on reliable electricity.

The atomic clock, located in Fort Collins, Colorado, calibrates millions of computers and data processing systems that control virtually everything mentioned above. Most importantly, the atomic clock helps synchronize the sine waves of interconnected power providers so the grid functions smoothly. Even small deviations can trigger cascading shutdowns involving multiple states.

> THE GRID POWERS NEARLY EVERY ESSENTIAL FACET OF MODERN LIFE

Several nations possess the capability to launch a nuclear device to very high altitude over the United States. If such a weapon were detonated at extreme altitude (often cited as around 350 miles), the resulting electromagnetic surge on the ground could be collected by metallic conductors such as power lines, railroad tracks, metal fencing, and appliances connected to the electrical grid, producing potentially catastrophic effects.

UNDERSTANDING ELECTROMAGNETIC PULSE (EMP)

Let's take a look at what EMP is and the three phases involved. EMP is essentially a burst of extremely intense electrical energy occurring almost instantly over everything within line of sight of the detonation.

E1 – INITIAL PULSE

E1 is the first effect, a high-voltage, low-amperage, short-duration component with a rise time of just one to five nanoseconds (billionths of a second). The surge expected at the weather head of a home may reach roughly 3 million volts at 45,000 amps. E1 can flash over approximately 22 inches to ground from a conductor in dry air, completely bypassing breakers and lightning surge arrestors. The good news is that E1 dies off quickly, transitioning into the E2 phase.

E2 – SECONDARY PULSE

E2 behaves much like lightning with regard to rise time and duration. However, by this point E1 has already compromised many system protection devices, allowing E2 to damage solid-state circuitry with severe consequences. Since microchips and circuit boards are found throughout modern infrastructure — including power tools, generators, healthcare equipment, manufacturing systems, and more; the potential disruption is extensive. Of particular concern is the effect on water treatment

plants, where each phase of the treatment process is controlled by computers.

E3 – LONG-DURATION PULSE

E3, the low-voltage, high-amperage, long-duration component, causes severe heating of power lines, extra-high-voltage transformers at power plants, and electrical wiring in buildings, including homes. Experts have indicated that E3 can result in tens of volts but thousands of amps accumulating along each mile of power line. Practically speaking, the wires in a home could glow like toaster elements for up to 20 minutes as the disturbed magnetic field surrounding the Earth gradually returns to alignment.

The closest historical event that mimics this effect was the 1859 Carrington Event, a severe solar storm that caused telegraph lines to melt and hundreds of telegraph offices to burn. Consider this: the only buildings in 1859 to have any sort of electrical lines installed were telegraph offices.

EVEN SMALL DEVIATIONS CAN TRIGGER CASCADING SHUTDOWNS

The following excerpt comes from the open testimony of Dr. Lowell Wood before the House Armed Services Committee in 1998 regarding high-altitude nuclear electromagnetic pulse:

"The EMP robustness of the civilian infrastructure of the United States can be summarized far less equivocally: It is entirely non-existent. Our telephony, electricity, broadband communications and electronics plants are all naked to our nuclear-armed enemies. They were neither designed, nor engineered, nor constructed nor are they operated so as to survive nuclear explosion events, even at very great distances - for the invisible hand of the marketplace provides no incentives for EMP robustness, nor penalties for failing to so prepare. Large electric power and telephony systems are known to fail under the stress of solar storms, which impose far smaller electromagnetic stresses than are known to arise from high-altitude nuclear explosions of even modest scales. Consequently, even a modest, single explosion EMP attack on the U.S. might well devastate us as a modern, post-industrial nation."

The main point to understand is that during a large-scale grid failure, outside assistance may be extremely delayed or limited to only certain areas. Individuals and families may need to rely on their own food supplies, sustainable water sources, and energy for an extended period of time. For most Americans, this would present serious challenges, as municipal water delivery systems could cease functioning within hours. Electrical damage from E3 effects could also create potential fire hazards in buildings. For this reason, some people choose to store non-perishable food and equipment in a separate outbuilding or storage structure as an added precaution.

It is possible to reduce severe EMP effects on a building by installing an isolation transformer between the breaker panel and the grid connection. These systems are expensive, but they can provide a measure of protection. Off-grid solar systems may also reduce vulnerability to the E3 component because there are fewer long runs of wire available to collect significant energy.

WATER AND LONG-TERM SURVIVAL

Stored water is a very short-term solution because it eventually runs out. You'll need a stream or well from which to secure long-term water security. These sources must be properly treated and filtered.

PHASE	DURATION	MAIN DAMAGE
E1	Nanoseconds	High voltage spike; destroys electronics
E2	Milliseconds	Similar to lightning; damages systems already weakened by E1
E3	Minutes	Long-duration surge; overheats transformers and power lines

Simple one- or two-stage "emergency" filters may not address the full range of hazards present in surface water, particularly over long periods of use. Multi-stage filtration systems provide more comprehensive treatment.

Larger filtration housings and cartridge systems are also available from Water Pure Technologies in Sandy, Utah. The Lake Water System features a large carbon filter to capture a wide spectrum of chemicals, solvents, pesticides, and nitrates that may pass through simpler single-stage filters. Water Pure Technologies offers filters that capture viruses with 99.9999% efficiency, and a UV reactor to add redundancy.

RELIABLE POWER FOR CRITICAL SYSTEMS

To run a serious water processing system to support a family or group, you'll need a long-term, reliable source of power. Generators have many moving parts and may fail due to mechanical problems or fuel shortages. Off-grid solar systems may represent one of the more reliable options for providing power to critical systems over long periods of time.

Solar panels themselves are generally resistant to EMP effects as long as they are not connected to long, unshielded wiring runs or stored with long connecting cables attached. Hardened solar components, including panels, inverters, and charge controllers are available from some manufacturers. One example is Sol Ark in Texas.

Food is a whole other topic that requires more space than we have here. Good luck!

Paul Seyfried has been interested in national security affairs since his enrollment at Missouri Military Academy and later New Mexico Military Institute. His interest in self-help civil defense intensified during the late Cold War. After building his first shelter with Sharon Packer, he became acquainted with several nuclear-weapons physicists involved in the creation of the nuclear age - including Edwin York and Dr. Conrad Chester - who had hands-on experience with field testing and with the effects of nuclear detonations on buried shelter structures.

Paul's primary focus is the development and construction of cost-effective blast and fallout shelters within reach of middle-class Americans. As co-owner of Utah Shelter Systems, he designs and builds all-hazard NBC/CBRN shelters nationwide. His broader civil defense work includes practical guidance on emergency sanitation, water purification and storage, EMP resilience and hardening, family communications and power backup, firearms safety and secure storage. He serves on the Board of Directors for The American Civil Defense Association (TACDA).



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