

Community Resilience Issue Paper

America's constitutional foundations of federalism and limited government place significant trust and responsibility in the capabilities of State and local governments to help protect the American people. State, local, and Tribal governments, which best understand their communities and the unique requirements of their citizens, provide our first response to incidents through law enforcement, fire, public health, and emergency medical services. They will always play a prominent, frontline role in helping to prevent terrorist attacks as well as in preparing for and responding to a range of natural and man-made emergencies.

National Strategy for Homeland Security, October 2007

Issue Statement: The increased complexity of modern society makes it harder for individual communities to sustain themselves during a time of manmade and/ or natural disaster (MND). The interlocking, complex systems, such as communications, transportation and food distribution are susceptible to interruption by MND.

Background: Communities must be able to respond to MND without relying on external support since State and Federal capability may or may not be adequate to address the needs of all communities affected. If there is a disruption of the various networks that support current levels of civilization there are long and short term issues that must be addressed without over reaction or panic. Preparation is the key to maintaining any semblance of a functioning community.

Nature of the Challenge: Federal, state and local documents, starting with the National Security Strategy¹ and National Response Framework², lay out the skeleton of the requirements for response to MND. At the federal level, the challenge is coordination between various agencies and departments (Department of Homeland Security (DHS), Department of Defense (DOD), Department of Justice (DOJ), etc) and the individual states, territories, local governments and tribal nations. At the other end of the spectrum of response are the local or first responders.

It falls to the first responders, for at least the first seventy two hours, to address fundamental resource requirements:

1. Water – potable and accessible
2. Food – edible and accessible
3. Emergency Response – fire, police, and emergency medical response
4. Power – continuous and reliable
5. Communications – continuous, reliable, and compatible

These requirements may shift in priority due to the nature of the emergency and the duration with or without state and federal support.

Discussion: With six years of post 911 experience, it has become apparent that the emergency response resource requirements cannot or will not always be met by a responsive federal government as the result of federally mandated programs. This will be especially true if the federal government is trying to allocate limited resources across multiple regions as a result of simultaneous MNDs. We must create mechanisms for developing local responses to MNDs that permit communities to react to the

MNDs and continue to function; meeting the resource requirements with flexibility and reliability may require long term answers as national networks adjust to disruption.

As the United States transitioned from an agrarian society during the industrial revolution it increased reliance on networks, systems of systems, including transportation, food distribution, power, and communications. Information technology has enabled the logistical magic of Just-In-Time Inventory³ and the ability to shift power loads across the nation; just two examples of the complexity of our civilization that work for us. Unfortunately, such capabilities may also work against us. In examining the place of individual communities within the vast networks we are confronted by the desire to maintain the community even when MND disrupt the networks. As national networks degrade, local capabilities will increase in importance and its back to basics in maintaining the community.

The answers to key questions in four main areas will be crucial to understanding the state of the community, for example:

Water

- Where does the community's water come from and how is it delivered?
- Is waste system management tied to water delivery?

Food

- How is food distribution organized? Are there several grocery stores or just one?
- How does food arrive in the community?
- Are there local sources of agricultural products?
- Is there a slaughter house/meat packing plant in the community and can it handle wild as well as domestic game?
- Can food be stored for any length of time if electrical power is interrupted?

Emergency Response

- Individuals must be aware of medical needs and requirements and plan ahead with a minimum stockpile of essential products.
- Community leaders should remember that individual fire, police, and emergency medical personnel are also members of the community with families and responsibilities outside of their critical role as first responders.
 - A system of community support with trained volunteers assisting in times of emergency can extend limited first responder resources.
- Are there any non-government organizations that can contribute to MND response; e.g. a local chapter of the American Red Cross?

Power

- Individuals can acquire energy sources that are alternatives to the power grid.
 - Solar panels and wind mills are possibilities although they can be expensive for single family houses.
- Locally generated power can feed the power grid if/when the national grid fails as long as power comes from locally generated and/or alternate sources of power.
 - Community wind farms and individual solar cells can provide power to the local grid.

Communications

- Effective communications are important on several levels. Individuals who are informed are generally less likely to panic. But, they must have the means to receive information even if the power grid and/or telephone networks fail.
- Community leaders must have a system to communicate not just with the community at large, but with critical personnel, fire, police, and emergency medical responders, even if primary networks fail.

Information

Information technology and connectivity have made even rural communities aware of vast amounts of information. Electronic information will be available as long as there is access to the data bases. But, an essential backup will be a well stocked library.

- In the long term, this knowledge base should be able to provide information on how to fabricate local alternatives to manufactured items that are deemed essential. For example: naturally occurring flora that can substitute for pharmaceuticals.
- Communities could produce locally focused handbooks on topics such as edible and medical flora, hunting, fishing and trapping, and water purification,
- Use of ancient techniques to achieve modern goals; some ancient techniques of beer production result in gruel with therapeutic levels of tetracycline.

Education

Locally sponsored education programs should focus on preventive health as well as basic first aid and common sense activities that can mitigate natural and manmade disasters. Preparation measures should include:

- Individuals may equip themselves with hand or solar powered flashlights, lamps, radios, and generators. These items are currently on the market and available in a wide range of capabilities and prices.
- Using water frugally

Course of Action: While the examples listed above provide an idea of areas for further research a proposed course of action is to create a comprehensive analysis of how the state of Colorado and Colorado Springs can become the acknowledged center for collection of best practices as well as research and development for community resilience. Areas of research and development include but are not limited to:

- alternative energy sources independent of the national power grid
- securing long term water sources through conservation or other means

¹ The National Security Strategy of the United States of America, March 2009, pp 43-46.

² National Response Framework, January 2008, Department of Homeland Security, Washington, DC, pp. 15-45.

³ Demand driven inventory system in which materials, parts, sub-assemblies, and support items are delivered just when needed and neither sooner nor later. Its objective is to eliminate product inventories from the supply chain., <http://www.businessdictionary.com/definition/just-in-time-JIT-inventory.html>