



# Domestic Preparedness

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### The Friendly Neighborhood Chemical Weapons Store

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The devastating hurricane seasons of 2004, 2005, and 2008, the Tsunami in Southeast Asia, flooding in India and Pakistan, the recent earthquakes in China, and the very real threat of pandemic influenza – all of these mass-casualty incidents, and others, demonstrate that the United States and its allies have as much or more to be concerned about from destructive acts of nature, and the overwhelming number of victims they produce, as from terrorist attacks, including those in which weapons of mass destruction (WMDs) are used. According to Pietro (Peter) Marghella, the former chief medical planner for the U.S. Department of Defense, "a pandemic influenza outbreak alone has the potential to produce casualty totals that would far exceed the combined casualties of every war fought globally since the late years of the 19th century."

Nonetheless, terrorist events and incidents over the last decade, particularly those launched against the United States itself on 11 September, have made it abundantly clear to everyone inside and outside the traditional U.S. national-security structure that the "battlefield" is no longer a distant foreign land – overseas. The United States is no longer insulated by its land borders and the Atlantic and Pacific Oceans. The events of 9/11 underscore the grim fact that it is now entirely reasonable to expect additional such attacks – including some in which chemical, biological, radiological, nuclear, and/or high-explosive (CBRNE) weapons are used against the U.S. homeland itself.

There already have been, of course, a few dark chapters in American history when biological and chemical weapons have been employed: During the French and Indian War, to cite but one pre-Revolution conflict, British soldiers gave infected blankets, taken from smallpox patients, to Native Americans. And in World War I, chemical weapons – built from such industrial chemicals as chlorine and phosgene – were used by combat forces, including U.S. troops, on both sides of the so-called "War to end all wars."

#### ***For Deterrence Only – But If Deterrence Fails ...***

Also, and not incidentally, it is known today that the U.S. government itself has possessed three types of weapons of mass destruction: nuclear weapons, chemical weapons, and biological weapons. The United States is the only country to have used nuclear weapons in combat – against Hiroshima and Nagasaki. However, even though U.S. forces used chemical weapons in World War I, they have not done so since the 1925 Geneva Protocol – despite reports that both Germany and Japan were using both chemical and biological weapons (but not on the battlefield) in World War II.

According to Wikipedia, "The United States' biological weapons program officially began in the spring of 1943 on orders from U.S. President Franklin Roosevelt. Research continued following World War II as the U.S. built up a large stockpile of biological agents and weapons."

The official position of the United States in building those weapons, though, it should be noted, was: first, to deter the use of bio-weapons against U.S. forces; and, second, to be able to retaliate if deterrence failed. In fact, President Roosevelt himself stated during World War II that "Use of such [biological and chemical] weapons has been outlawed by the general opinion of mankind. This country has not used them," he continued, "and I hope we never will be compelled to use them. I state categorically that we shall under no circumstances resort to the use of such weapons unless they are first used by our enemies. "

#### ***A Long and Fearful Destructive Process***

In the more than six decades that have passed since the end of World War II the United States has destroyed its biological weapons and has started to destroy its chemical weapons as well (in accordance with a phased-reduction schedule expected to be completed by 2012). The United States also is a signatory to both the Biological Weapons Convention and the Chemical Weapons Convention – which ban the production, possession, and/or use of those classes of weapons.

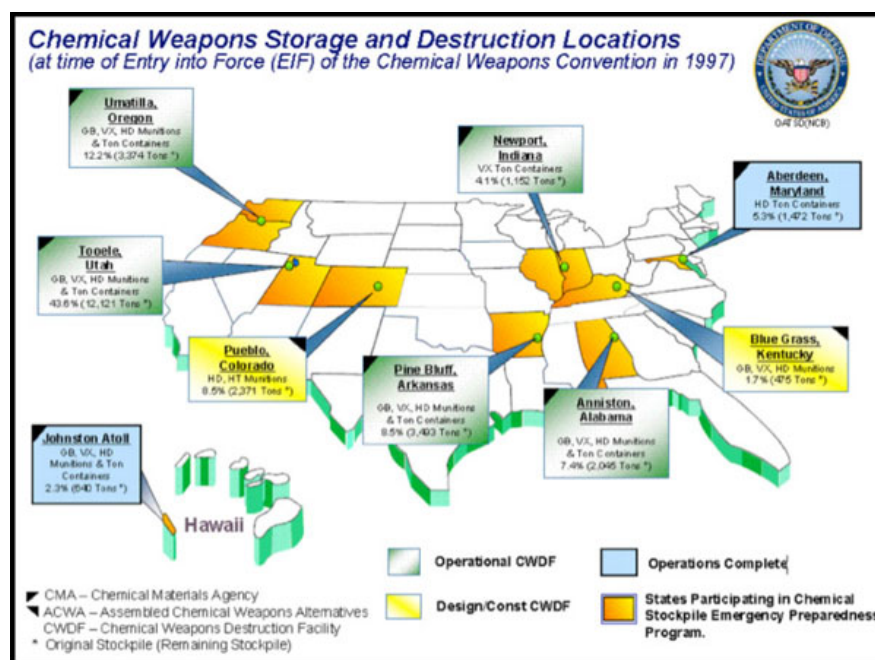
It was not until 1969 that then-President Richard Nixon ended all offensive aspects of the U.S. bio-weapons program. In 1975 the United States finally ratified both the 1925 Geneva Protocol and the 1972 Biological Weapons Convention (BWC). It was not until 1992, however, that the U.S. Army established a "Non-Stockpile Chemical Materiel Program" to dispose of the U.S. chemical arsenal. In 1993, the United States signed the UN-sponsored Chemical Weapons Convention. The Department of Defense chart shown here identifies the U.S. chemical-weapons storage and destruction facilities and reveals just how large (27,143 tons) the U.S. stockpile of chemical weapons was at its peak.



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***It is not only traditional chemical weapons that pose a major threat; it is far more likely, in fact, that toxic industrial and commercial chemicals also could be used***



In the 20th and 21st centuries, more than 70 chemicals have been stockpiled globally in state-sponsored chemical weapons programs. The most notable and most recent uses of chemical weapons have been by Israel and Iraq. However, even though the treaties previously mentioned have greatly curbed the global use of *state-sponsored* chemical weapons, at least some terrorist groups have turned to the use of chemicals as their own new weapon of choice. This evolution came about not only because chemical weapons provide the most “bang for the buck” in terms of casualty production, but also because they are comparatively cheap, usually safer to acquire (or produce), and relatively easy to deploy as a weapon. A recent example is the 1995 Sarin (GB) attack on the Tokyo subway by the cult Aum Shinrikyo – which, if nothing else, proved that the fabrication and use of chemical weapons by non-state groups is possible.

#### Readily Available and Low in Cost

But it is not only traditional chemical weapons that pose a major threat. It is far more likely, in fact, that toxic industrial and commercial chemicals also could be used. Many tons of such chemicals are produced, transported, and stored every day for use in the production of petroleum, textiles, plastics, fertilizers, paper, foods, pesticides, household cleaners, and many other products. The same chemicals are available in relatively large quantities from wholesalers and retailers throughout the country. The chemicals themselves, and the products built from them, are stored in warehouses and on farms – in the latter they often are kept in rickety old wooden sheds protected by rusty old locks. More importantly, they are easy to deploy.

The results of a terrorist attack using weapons built from such chemicals would be a mixed bag. The release of toxic chemicals in closed spaces – e.g., in subways, airports, financial centers, and malls – could deliver doses high enough to injure or kill a large number of people. However, in open areas, a chemical plume would become increasingly less concentrated as it spreads, so would have to be released in very large quantities to produce a significant number of casualties. According to Kyle Olson, a well-known terrorism expert, the methods of delivering such weapons would necessarily vary, but almost certainly would include:

- The use of building ventilation systems.** The 1993 World Trade Center bombing – in which a 1,500-pound urea nitrate-hydrogen gas enhanced device was intended to knock the North Tower (Tower One) into the South Tower (Tower Two), bringing both towers down and killing thousands of people – was a colossal disaster for the terrorists themselves. The device failed to do what it was specifically intended to do, but it did kill six people and injured another 1,042.
- The use of misting, aerosolizing devices, or sprayers.** In 1994, in the Japanese City of Matsumoto, Aum Shinrikyo used a specially designed vehicle to aerosolize Sarin, killing seven people and injuring 300.
- Passive releases – achieved by, for example, intentionally leaving a chemical container open** - e.g., the 1995 Sarin attack on the Tokyo subway in which twelve people died and more than 5,000 were injured.
- The use of bombs, mines, or other explosive devices that contain chemicals other than those used to create the explosion itself.** During Operation Desert Storm in Iraq, U.S. troops encountered mines and shells containing the nerve agent VX.
- The use of improvised chemical devices that combine readily available chemicals to produce a much more dangerous chemical.** During the second invasion of Iraq, U.S. forces found Al Qaeda video tapes showing the effects of cyanide gas on animals. (It also has been reported that Saddam Hussein used chemicals against his own people.)
- The sabotage of plants or vehicles in which chemicals are produced, transported, or stored.** In 1984, in an apparent act of sabotage, a disgruntled worker in Bhopal, India, tried to ruin a tank of chemicals with a water hose; his criminal attack did not go exactly as planned, but it did produce some devastating albeit unintended consequences. The incident at the chemical plant released 42 tons of toxic methyl isocyanate (MIC) gas, exposing more than 500,000 people to the lethal fumes created. The Indian government's first “official” death toll was 2,259 victims. Outside experts say, though, that a more probable figure is 16,000 people dead within two weeks after the incident, and that an additional 8,000 probably died

later.

***The Grim But Unwelcome Advance of Technology***

To briefly summarize: Chemical and biological weapons have been used throughout history. The first recorded use of chemical weapons dates back more than 2400 years to a war fought between Sparta and Athens. It is only in recent times, though, that these weapons have been developed to the point of being considered weapons of mass destruction. The rapid advance of technology in general, combined with global access to massive volumes of scientific information on the internet and the world-wide web, has moved these weapons from being the sole possession of legitimate governments and state-sponsored organizations to being the new tools of the trade of terrorist organizations and individuals.

These changes, which have taken place over many centuries, have greatly increased the possibility that the everyday citizen – of almost any country in the world, but particularly the United States – may now be the target of such weapons.

Which is a fact worth remembering the next time one goes to his or her local warehouse club and passes so many pallets of ammonia and bleach for cleaning, chlorine tablets for the home or neighborhood pool, or bags of fertilizer for the lawn. There may be someone standing next to the pallet who possesses not only the will and intent but also the knowledge and resources needed to create and deploy the next chemical weapon used against the U.S. homeland.

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