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## Feds should lead states to prepare for EMP threat

*By Mead Treadwell and Jeremy Thompson, editors*

When Janet Napolitano took charge of the homeland security department, she issued a number of directives in order to learn the policies that are in force, and the status of their implementation. History will ultimately judge how well the previous administration handled homeland security after 9/11, but we can make this preliminary judgment now. Currently, the nation is not prepared for an attack with Electromagnetic Pulse (EMP) weapons. But, while effective preparation will require both federal and state cooperation, the Department of Homeland Security should lead the way by making preparation a priority. It is justified for the following reasons:

First, the scope of an EMP attack is national, given the wide area that could be attacked. Since EMP travels in waves, vulnerability falls within the line of sight of the blast. This can yield a very wide circle of vulnerability. In a hearing before Congress, Gary Smith of Johns Hopkins University revealed the range of EMP waves.

“The area of the earth's surface directly illuminated by EMP is determined entirely by the height of the burst: all points on the earth's surface within the horizon as seen from the burst point will experience EMP effects...Note that a burst on the order of 500 km can cover the entire continental United States,” Smith said.

A single burst that can affect all of the continental United States is a threat that certainly requires federal attention dedicated to planning and coordination of state preparedness to practically map out strategic concerns.

Second, an important piece of national homeland security policy is predicated on a specific relationship with states and localities. The National Response Framework from the Federal Emergency Management Agency lays down a response doctrine that includes “engaged partnership” because “layered, mutually supporting capabilities at Federal, State, tribal, and local levels allow for planning together in times of calm and responding together effectively in times of need.” This response doctrine alludes to the role that the federal government can play with regard to planning and preparation.

This role is relevant for EMP attack readiness because planning for its possibility is more than the sum of the threats to the states. The final report by the U.S. Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack addressed the need to consider “the whole” and its vulnerabilities.

“To set the stage for understanding the potential threat under conditions in which all infrastructures are under simultaneous attack, it is important to realize that the vulnerability of the whole— of all the highly interlocked critical infrastructures— may be greater than the sum of the vulnerability of its parts,” the report stated. The report addresses the difficulty of each isolated infrastructure seeking to mitigate the risks on its own.

The same is true for state preparedness. Each state should be concerned with its own infrastructure, but because of the “interlocked” nature of the infrastructure of the nation as a whole, federal leadership is needed to connect the dots. No one state can put all the pieces together, even if they were facilitating “engaged partnerships” with the other 50 states.

Third, an EMP attack affects all sectors of Critical Infrastructure and Key Resources (CI/KR) and, therefore, the ability of a community to recover after any disaster. The National Strategy for Homeland Security lists 17 sectors of CI/KR: Agriculture and Food, Banking and Finance, Chemical, Commercial Facilities, Commercial Nuclear Reactors, Materials and Waste, Dams, Defense Industrial Base, Drinking Water and Water Treatment Systems, Emergency Services, Energy, Government Facilities, Information Technology, National Monuments and Icons, Postal and Shipping, Public Health and Health Care, Telecommunications and Transportation Systems. While the disruption of one of these sectors may be an inconvenience, a disruption of most or all of them would be catastrophic.

The integrity of all of the sectors, according to the EMP commission report, is directly threatened because of the vulnerability of the widely-used Supervisory Control and Data Acquisition (SCADA) systems.

“SCADAs are electronic control systems that may be used for data acquisition and control over large and geographically distributed infrastructure systems,” the commission writes. “They find extensive use in critical infrastructure applications such as electrical transmission and distribution, water management, and oil and gas pipelines.”

The report discusses in detail the pervasive use of SCADA systems across all sectors of critical infrastructure. When the commission tested the systems to see if they were vulnerable to EMP, they found “that every system tested failed when exposed to the simulated EMP environment.” In order to fulfill its National Strategy for Homeland Security, the federal government must help the states plan for an EMP attack.

Fourth, the potential for EMP attacks exists. The proliferation of the technology is trickling down from more stable traditional competitors to rogue states like Iran. William Graham, chair of the EMP commission, in an interview with World Net Daily, said that Iran has “tested high-altitude explosions

of the Shahab-III, a test mode consistent with EMP attack, and described the tests as successful. Iranian military writings explicitly discuss a nuclear EMP attack that would gravely harm the United States. While the commission does not know the intention of Iran in conducting these activities, we are disturbed by the capability that emerges when we connect the dots.”

Graham is alluding to the fact that when it comes to measuring threats, it is important to take into account capability rather than attempting to judge intentions or the likelihood that the weapons will be used. The capability exists. Attempting to judge likelihood should play a role in our diplomacy, but not in our preparedness.

It is possible that the source of an attack cannot be traced, and therefore retaliation, if our capability permits, will not be an effective deterrent. Graham also notes that rogue states may be more willing to sell these capabilities to terrorists, making it more difficult to trace the source of EMP attacks.

“A determined adversary can achieve an EMP attack capability without having a high level of sophistication,” Graham says. “For example, an adversary would not have to have long-range ballistic missiles to conduct an EMP attack against the United States. Such an attack could be launched from a freighter off the U.S. coast using a short- or medium-range missile to loft a nuclear warhead to high altitude. Terrorists sponsored by a rogue state could attempt to execute such an attack without revealing the identity of the perpetrators. Iran, the world's leading sponsor of international terrorism, has practiced launching a mobile ballistic missile from a vessel in the Caspian Sea.”

Finally, DHS should help prepare for an EMP attack because a federal body is the best way to ensure continuity of awareness and action. The development of an effective national homeland security policy throughout the previous presidential administration led to the formation of numerous plans and frameworks attempting to anticipate, mitigate and respond to a wide range of potential threats by planning ahead. One of those documents, the National Response Framework by the Federal Emergency Management Agency, identifies the challenge of continuity of leadership in state and local response to national incidents. The challenge to effective response is “the relatively high turnover and short tenure among elected and appointed officials responsible for response at all levels.” Awareness of and preparation for these possibilities needs a federal body to assure continuity of planning and awareness of these threats.

Part of the genius of American Federalism is its recognition of the fact that state governments are capable of things that federal governments are not. A security policy with no state input is irresponsible because it is less likely that a federal body can effectively execute good policy within its limited role. A security policy that has no federal input will be scattered, and make the lack of preparation of some states a vulnerability to others. Also, it will take federal leadership to simply round up all the relevant people in the same place. The threat of EMP attacks necessitates the need for these qualitatively different bodies to work together to address a common goal.

[Testimony of Gary Smith before congress](#)

[Report: U.S. Commission to Assess the Threat to the United States from Electromagnetic Pulse \(EMP\) Attacks](#)

[The National Strategy for Homeland Security](#)  
[FEMA: National Response Framework \(NRF\)](#)  
[U.S. still naked to EMP threat](#)

## News Highlight

**Japan to deploy “Son of Star Wars”** (UPI, 03/04/09)

[http://www.upi.com/Top\\_News/2009/03/03/Japan\\_to\\_deploy\\_Son\\_of\\_Star\\_Wars/UPI-20211236117963/](http://www.upi.com/Top_News/2009/03/03/Japan_to_deploy_Son_of_Star_Wars/UPI-20211236117963/)

Japan is preparing to become the first country to deploy a ship-based, long-range missile defense system as North Korea apparently readies a missile test. The controversial system, dubbed "Son of Star Wars," has been installed aboard Japanese naval destroyers that are set to be dispatched to areas off North Korea should Pyongyang move ahead with an anticipated rocket launch, Japanese officials told The Times of London. Japanese Defense Minister Yasukazu Hamada said the anti-missile missiles could be fired if the North Korean rocket, instead of soaring high over Japan as expected, malfunctions and threatens any of Japan's islands.

"If it is capable of reaching Japan then it goes without saying that we will react," Hamada told The Times. "We have been making preparations, including BMD (ballistic missile defense), for any incident which could affect Japan. If it will affect Japan then it will be our target."

The Kyodo news agency reported that two destroyers equipped with SM-3 missiles— designed to intercept an incoming ballistic missile midway through its course— will be sent to the Sea of Japan.

## From the Wires this Week

### **Emergency Management/Homeland Security**

**Texas city mayor says FEMA needs to be revamped** (AP, 03/04/09)

<http://www.chron.com/disp/story.mpl/ap/tx/6292835.html>

The Federal Emergency Management Agency's disaster assistance protocols should be revamped so areas suffering as a result of Hurricane Ike can get the aid they need faster, Galveston Mayor Lyda Ann Thomas told a House Homeland Security subcommittee. Thomas told Congress that applications for aid had accumulated at FEMA without action and that the agency had demanded documents to support claims from people who had lost everything. Thomas asked Congress to cut red tape and speed federal assistance to thousands of people who lost their homes to Hurricane Ike nearly six months ago.

**Florida's Fugate is Obama's pick for FEMA director** (Fox News, 03/04/09)

<http://www.foxnews.com/politics/first100days/2009/03/04/official-floridas-fugate-obamas-pick-fema-director/>

Florida emergency management director Craig Fugate is President Barack Obama's choice to lead the Federal Emergency Management Agency. An official close to the announcement said on condition of anonymity that the appointment would be made public March 4. Fugate was named director of Florida's Division of Emergency Management in 2001 by former Gov. Jeb Bush and retained by the current governor, Charlie Crist. He previously served as the assistant director for nearly five years.

**13 contaminated FEMA trailers turn up in Missouri** (Kansas City Star, 03/03/09)

<http://www.kansascity.com/440/story/1065829.html>

Thirteen former FEMA trailers deemed unlivable and set for the scrap heap somehow ended up in a mobile home park near St. Louis, where they were close to being offered as housing, a state official said. The trailers, which had been issued after Gulf Coast hurricanes, had high levels of formaldehyde and were to be sold only for scrap, said Missouri Public Service Chairman Robert Clayton. Prolonged exposure to formaldehyde, a preservative commonly used in building materials, can lead to breathing problems and is also believed to cause cancer.

**FEMA expects to have continued presence in Iowa** (Radio Iowa News, 03/03/09)

<http://www.radioiowa.com/gestalt/go.cfm?objectid=CCC30A21-5056-B82A-3786196993D13063>

A top official with the Federal Emergency Management Agency says his agency will be a significant employer in Iowa for months and even years to come. FEMA's coordinating officer for Iowa, Mike Parker, says there are currently 500 FEMA workers in the state - 350 in Urbandale and 150 in Cedar Rapids. He believes those numbers will persist for a while. Parker says normally, with the expense of maintaining a staff that large, they would have closed down shop by now and moved operations to regional offices in Kansas City. But, because of the size and scope of the Iowa storms and floods, Parker says the employees will stay in the state for as much as two years longer.

**Little-known agency hunts down radioactive castoffs** (LA Times, 03/03/09)

<http://www.latimes.com/news/local/politics/cal/la-me-plutonium3-2009mar03,0,3333339.story?track=rss>

Radioactive materials are used widely in hospitals, oil fields, manufacturing and research centers across the United States. But in the wrong hands, federal officials say, these materials could pose a serious threat to public safety and conceivably provide terrorists with material for a dirty bomb. One of the responsibilities of the National Nuclear Security Administration is to recover abandoned or unused isotopes from these facilities.

**Bill to separate FEMA from DHS introduced by congressman** (Homeland Security Today, 02/27/09)

<http://www.hstoday.us/content/view/7401/128/>

The bill would require the executive branch to install leadership with extensive experience in emergency management at the agency. It places emphasis on the regional structure of FEMA, authorizing the agency's 10 regional offices and three area offices. FEMA would retain emergency management programs and functions including disaster assistance under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, the National Flood Insurance Program, the Earthquake Hazards Reduction Program, the National Dam Safety Program, the US Fire Administration, the Emergency Food and Shelter Program; and continuity of operations and continuity of government programs. *Related article: [Opinion: Stand-alone FEMA would not make cents.](#)*

**DHS gets new acting CIO** (Federal Computer Week, 02/27/09)

<http://fcw.com/Articles/2009/02/27/DHS-gets-new-acting-CIO.aspx>

Margaret Graves took over management of the Homeland Security Department's information technology programs as the department's new acting chief information officer. Graves, previously DHS' deputy CIO, takes over from Richard Mangogna, a Bush administration appointee, who served in that role since last April. Graves was appointed deputy CIO last September and previously served as deputy program manager for the DHS Border and Transportation Security IT Integration Program.

**Technology urged to stop tunnels at borders** (Federal Computer Week, 02/24/09)

<http://fcw.com/Articles/2009/02/24/Tunnels-p-roliferating-at-borders.aspx>

Ninety-three tunnels were discovered from 1990 to 2008, according to a new briefing report by a U.S. Northern Command Task Force. Portions of the report were posted on the web by the Federation of American Scientists. The command warned that the tunnels could become a prime entry point for threats and recommended increased use of tunnel detection technologies as well as focused intelligence gathering and information sharing to counteract the problem.

## **Communications and Information Security**

**Administration to request more for cybersecurity** (02/26/09)

<http://fcw.com/Articles/2009/02/26/2010-budget-cybersecurity.aspx>

President Barack Obama wants \$355 million for the Homeland Security Department's cybersecurity efforts in fiscal 2010, according to an overview of his budget proposal. The document states that Obama wants the \$355 million to support DHS' National Cybersecurity Division and the department's role in the Comprehensive National Cybersecurity Initiative (CNCI). The money would be "targeted to make private- and public-sector cyber infrastructure more resilient and secure," the document states.

**Feds need to define cyber goals, official says** (Federal Computer Week, 02/25/09)

<http://fcw.com/Articles/2009/02/25/Feds-need-to-define-cyber-goals.aspx>

The federal government would be more successful in its cybersecurity efforts if it fully defined its goals, a Homeland Security Department official said. "The end state is not adequately discussed," said Rod Beckström, director of DHS' National Cybersecurity Center, at AFCEA International's Homeland Security Conference. With millions of cyber attacks occurring daily, it is unrealistic to hope for an end to all attacks, he said, adding that it would be better if the federal government set specific goals.

## **National Guard**

**Ohio National Guard gets \$8.5M in stimulus funds** (Ohio Business Courier, 03/04/09)

<http://www.bizjournals.com/cincinnati/stories/2009/03/02/daily41.html>

Middletown will benefit from \$8.5 million the Ohio National Guard is receiving thanks to the American Recovery and Reinvestment Act, the latest federal stimulus package. About 14 guard stations will receive funds, including the Middletown armory, officials announced. The armory will

receive \$125,000 to overhaul its plumbing system, and save energy. The group expects to receive the money in four to six weeks.

**Army, Air Guard at full strength, directors tell congress** (National Guard Bureau, 03/04/09)

[http://www.dvidshub.net/?script=news/news\\_show.php&id=30727](http://www.dvidshub.net/?script=news/news_show.php&id=30727)

The Army National Guard is over strength and the Air National Guard has met its end strength for the first time since 2002, the directors told Congress. "This is a new era for us," said Lt. Gen. Clyde Vaughn, the director of the Army National Guard. "We've never been in this position with this kind of strength. This is the strongest Army Guard we've ever had."

**Guard needs full spectrum of capabilities, general says** (American Forces Press Service, 03/03/09)

<http://www.globalsecurity.org/military/library/news/2009/03/mil-090303-afps02.htm>

Living up to the National Guard's motto of "Always Ready, Always There" requires a full spectrum of capabilities, a senior National Guard official told an audience at the Domestic Operations Conference. In addition to its traditional role responding to natural disasters, the Guard must be flexible enough to respond to threats such as weapons of mass destruction. And being flexible, he added, is key to fighting an enemy that fights unconventionally.

## **Missile Defense/Satellite Technology/EMP**

**Opinion: Is Obama's missile defense bargain with Russia another Yalta?** (Foreign Policy, 03/03/09)

[http://shadow.foreignpolicy.com/posts/2009/03/03/is\\_this\\_yalta\\_all\\_over\\_again](http://shadow.foreignpolicy.com/posts/2009/03/03/is_this_yalta_all_over_again)

A Russian newspaper leaked the contents of a letter sent from President Obama to President Medvedev of Russia in which a trade was offered: The United States would abandon its deployment of a NATO missile defense site and radar placement in Poland and the Czech Republic respectively if Iran's nuclear weapons program were ended. Since the entire purpose of the NATO missile defense system in Central Europe, as conceived by the Bush administration and approved by the full NATO Alliance, is to counter a rapidly advancing Iranian nuclear and missile threat, this grand bargain looks on its face to be eminently reasonable. But depending on the fine print of this agreement, it could also turn out to be a second coming of Yalta— a sell-out of America's eastern European allies of epic proportions.

**U.S. missile defense to complete test review by May** (Reuters, 02/26/09)

<http://armoredd.com/home/us-missile-defense-to-complete-test-review-by-may/2009/02/26/>

After years of criticism that it was spending billions on an anti-missile defense system without adequate testing, the U.S. Missile Defense Agency said it had launched a comprehensive review of its testing plans and would complete it by May 2009. Lt. Gen. Patrick O'Reilly, who took over as director of the Pentagon agency in November, told lawmakers he thought it was important to carefully map out a long-term plan for testing the various weapons involved in missile defense, rather than just providing those details on a two-year basis.

**Missile defense capable, but needs more testing, pentagon official says** (American Forces Press Service, 02/26/09)

<http://www.globalsecurity.org/space/library/news/2009/space-090226-afps01.htm>

U.S. missile defense is prepared to defend against North Korean threats, but the system needs more testing before the Pentagon can endorse its capabilities with “high confidence,” the top Defense Department tester said. In three test scenarios, the missile defense system successfully destroyed threats emanating from North Korea, Dr. Charles E. McQueary, the director of Operational Test and Evaluation, told a congressional panel.

**Poland sticking to U.S. missile shield commitments** (RIA Novosti, 02/25/09)

<http://www.globalsecurity.org/space/library/news/2009/space-090225-rianovosti01.htm>

Poland is sticking to its commitments on the deployment of U.S. missile shield elements on its territory, but the U.S. administration has to decide on the timeframe, a senior Polish military official said. Washington has agreed plans with Warsaw and Prague to deploy 10 interceptor missiles in Poland and a radar in the Czech Republic by 2013. The United States says the defenses are needed to deter possible strikes from "rogue states" such as Iran. *Related article:* [Poland confirms plans to deploy U.S. Patriot missile systems](#).

**Study: Options for deploying missile defenses in Europe** (Congressional Budget Office, February 2009)

<http://www.cbo.gov/ftpdocs/100xx/doc10013/02-27-MissileDefense.pdf>

In this study, the Congressional Budget Office (CBO) compares the potential cost and performance of MDA’s proposed European system with the cost and performance of three other options for deploying missile defenses in Europe: Standard Missile-3 Block IIA, Ground-based SM-3 Block IIA and the Ground-based Kinetic Energy Interceptors.

**Report: Charting a course for improved missile defense testing** (GAO, February 2009)

<http://www.gao.gov/new.items/d09403t.pdf>

MDA has undertaken a three-phase review of the entire BMDS test program that involves identifying critical variables that have not been proven to date, determining what test scenarios are needed to collect the data, and developing an affordable, prioritized schedule of flight and ground tests. This review, as long as it continues to involve test and evaluation organizations, appears to offer a sound approach for closing the gaps that exist between testing, modeling, and simulation. Critical to being able to implement the approach will be addressing the factors that have limited the productivity of the current test approach, such as the availability and performance of targets.

## **Energy/Transportation Security**

**DHS: More agents needed to secure mass transit** (AP, 03/02/09)

<http://www.securityinfowatch.com/online/The-Latest-for-Security-Executives/DHS--More-agents-needed-to-secure-mass-transit/20253SIW305>

The agency responsible for transportation security has too few inspectors to make sure rail and mass transit employees are doing enough to guard against terrorists, a government report says. The report by the Homeland Security Department’s inspector general says the Transportation Security Administration's request for 102 more inspectors is insufficient to get the job done right.

**DHS to miss cargo screening deadline** (AP, 02/27/09)

<http://www.securityinfowatch.com/online/The-Latest-for-Security-Executives/DHS-to-miss-cargo-screening-deadline/20226SIW305>

Homeland Security Secretary Janet Napolitano told lawmakers that the agency cannot meet its 2012 deadline for radiological and nuclear screening of all cargos coming into the United States. At her first hearing before the House of Representatives Homeland Security Committee, Napolitano said the 2012 deadline set by Congress is not going to work. "To do 100 percent screening requires agreements with many countries," Napolitano said, echoing a position taken by officials in the former Bush administration.

## Announcements

### **To receive an EMP briefing**

The Institute of the North and the Claremont Institute in Claremont, California support state legislators and emergency management groups by providing briefings on electromagnetic pulse (EMP) attack scenarios and preparedness. If you would like your committee or organization to receive one of these briefings, please contact [Jeremy Thompson](mailto:jeremy@institutenorth.org) by email or call 907.771.2446.

### **To receive a copy of *Missile Defense and the Role of the States***

In February 2007, the Institute of the North and the Claremont Institute published a report on *Missile Defense and the Role of the States*, a survey of Adjutants General on questions regarding missile defense and electromagnetic pulse. To receive a hard copy of the report, please contact [Jeremy Thompson](mailto:jeremy@institutenorth.org). You can also view the report online at: <http://www.institutenorth.org/servlet/download?id=304>.

### **To view the IWG report**

The Institute of the North's Defense and Security program is a member of the Independent Working Group on Missile Defense, the Space Relationship, & the Twenty-First Century, a non-partisan group of defense experts who meet regularly to discuss issues and projects related to missile defense. To view the 2009 report online, please visit: <http://www.institutenorth.org/servlet/download?id=564>

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The Security and Defense program at the Institute of the North conducts research and educates policymakers on strategic issues relating to the defense of the United States that particularly concern decision makers in Alaska and at the state and local level throughout the nation.

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*The Institute of the North, based in Anchorage, Alaska, is a non-profit educational and research organization founded in 1994 by former Secretary of the Interior and twice Governor of Alaska Walter J. Hickel, focusing on strategic and natural resource issues.*

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