



United States Senate Committee on Governmental Affairs

Senator Joseph I. Lieberman

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October 08, 2003

LIEBERMAN, JEFFORDS SEEK PLANS FOR PROTECTION OF WATER, OTHER VITAL SERVICES

WASHINGTON - Governmental Affairs Committee Ranking Member Joe Lieberman, D-Conn., and Environment and Public Works Ranking Member James Jeffords, I-Vt., urged Administration officials Wednesday to improve the security of our water delivery and supply system and to develop emergency plans for a catastrophic event - to avoid the kind of service interruptions, or worse, that occurred following September's Hurricane Isabel and August's widespread power outage.

In a letter to Homeland Security Secretary Tom Ridge, Lieberman and Jeffords wrote "these two crises provided only a glimpse of the problems citizens could face after a truly catastrophic event."

The two Senators rebuked the Department for failing to assess many infrastructure vulnerabilities - including the centrally important water supply - much less devise protective measures and develop emergency response plans necessary to ensure vital services for hundreds of thousands or maybe millions of citizens following a catastrophic terrorist attack or cataclysmic natural disaster.

Lieberman also wrote to Ridge August 15, shortly after the blackout that struck a good portion of the northeastern United States, asking that steps be taken to secure the power grid.

The nation's drinking water storage and delivery systems could be easily penetrated and serious public health risks could arise if water treatment plants fail, the Senators told Ridge.

"The stress that Hurricane Isabel and the August 2003 blackout placed on water supplies provides an indication of the kind of challenges we must be prepared to overcome in a truly catastrophic disaster," the Senators wrote in their letter.

The nation has about 160,000 public drinking water systems and over 16,000 wastewater treatment works. These industrial facilities use large quantities of toxic chemicals in their treatment and disinfection processes.

Following is text of the letter:

October 8, 2003

Secretary Tom Ridge
Department of Homeland Security

Dear Secretary Ridge:

Two recent emergencies, the blackout in the northeast and Hurricane Isabel, dramatically demonstrated vulnerabilities to our critical infrastructure and raise serious questions about our preparedness to respond to far worse natural disasters or a catastrophic terrorist attack.

We are particularly concerned that the Department of Homeland Security has not adequately assessed the specific shortcomings of our power and water infrastructure, much less implemented protective measures, and developed the kind of catastrophic emergency response plans necessary to ensure vital services are available following a major disaster or catastrophic terrorist attack. We strongly urge the Department to strengthen its critical infrastructure protection and emergency planning efforts to address these and other vulnerabilities.

In a letter dated August 15, immediately following the blackout that President Bush referred to as a wake-up call to modernize the power grid, Senator Lieberman urged you to act quickly to take the steps necessary to protect the electric power grid from physical or cyber-attacks. The effects of Hurricane Isabel should further awaken the Administration to action to ensure adequate plans for providing food, shelter, medical care, and water for hundreds of thousands or even millions of citizens in the aftermath of a catastrophe.

The Department of Homeland Security (DHS), working with the Environmental Protection Agency and other agencies, has responsibility for ensuring that our nation's water infrastructure is both hardened against potential terrorist attack or natural disaster and for ensuring that the nation's emergency response is adequate. The Homeland Security Act of 2002 (P.L. 107-296) requires the Directorate for Information Analysis and Infrastructure Protection of the Department to develop a comprehensive national plan for securing critical infrastructure of the United States. The President's Homeland Security Strategy identifies the Environmental Protection Agency (EPA) as the lead agency for water infrastructure protection. The Homeland Security Act also requires the Emergency Preparedness and Response Directorate (EPR) of DHS to coordinate federal emergency management activities.

There are about 160,000 public drinking water systems in the United States. Each supplies water to a minimum of 25 people or 15 service connections. About 3500 systems serve 81 percent of the people in the United States. Most people are served by a smaller drinking water system, often located in an isolated area. There are over 16,000 wastewater treatment works in the United States, serving almost 190 million people. These industrial facilities use large quantities of toxic chemicals in their treatment and disinfection processes. Wastewater collection systems run beneath every city and town in America, creating potential corridors for travel or opportunities for access. Drinking water surface storage sites and distribution systems also are not fortified against intrusion.

There are serious public health risks associated with a disruption or service failure at a wastewater treatment plant. Treatment plants clean wastewater that comes from our toilets, showers, and sewers and send it back into our rivers, streams, lakes, and oceans. Those same bodies of water are also our drinking water sources. Without proper treatment, water-borne disease outbreaks such as cholera would seriously threaten public health.

The stress that Hurricane Isabel and the August 2003 blackout placed on water supplies provides an indication of the kind of challenges we must be prepared to overcome in a truly catastrophic disaster. According to the American Water Works Association (AWWA), the blackout caused severe water disruptions in Cleveland, Ohio and Detroit, Michigan, while New York, Toronto, and other smaller cities and towns in the region were affected to a lesser degree.

In Cleveland, because the plants have no back-up power systems, the power outage caused several sewage treatment plants to discharge at least 60 million gallons of raw, untreated sewage into the Cuyahoga River, Lake Erie, and their tributaries. Five Cleveland beaches were closed to swimming to protect against water-borne disease. Additionally, 1.5 million Cleveland residents lost water or pressure due to power failures at four water plants. The city was under a boil water notice for four days, and the National Guard tanked in 7,600 gallons of drinking water during what was described as the worst water crisis in the city's history.

The city of Detroit was under a boil-water advisory for almost a week after the blackout caused the city's water treatment plants to cease operations. The Detroit Water and Sewerage Department also lost water pressure during the blackout when its pumps stopped working, disrupting service to the system's 4.3 million customers. The city imposed a water ban during which all restaurants in one Michigan County reportedly were ordered to close. Detroit and other cities in southeastern Michigan instructed residents to boil water. Full water services were not restored throughout the region until four days after the blackout.

The effects of Hurricane Isabel on water supplies caused even greater damage. By 11 p.m. on September 18, all four of the Fairfax County, Virginia Water Authority's purifying plants lost power leaving 1.2 million customers "helpless" in the words of the Washington Post. The utility had only four hours of reserve water, which was quickly used. By 4 a.m. the gauges at storage tanks were recording troubling low pressure, and a half hour later there was no water pressure at all. The Post reported that none of the large utilities in the Washington area keep more than 24 hours of reserve water, and the newspaper noted that a significant portion of the water in this area comes from gravity-fed systems that are less dependent on electricity for pumping. Even so, the region's largest suppliers do not have enough emergency backup power to continue full service without electricity. In northern Virginia, power was restored to the water system by 4 p.m. the next day, but citizens were instructed to boil water for drinking and cooking until quality tests could be completed on September 21.

These two crises provided only a glimpse of the problems citizens could face in after a truly catastrophic event. As the Carnegie Mellon Electricity Industry Center recently put it, the problem during the August 14 blackout (and, we might add, in the wake of hurricane Isabel) was not simply that the lights went out. Rather, it was that other critical missions - especially providing safe water - "could not be accomplished." The longer the power outage, the more citizens who will be affected, and the more difficult it will be to fulfill other vital and dependent missions.

To ensure that we are adequately prepared, we would appreciate your response to the following questions:

1. What is the extent of the Department's current efforts to plan for a catastrophic or cataclysmic event in which, among other things, power and water would be disrupted for indefinite periods of time perhaps leaving millions of citizens without vital services? Who is involved and how much time and resources are being devoted to this effort?
2. How is the Department coordinating its infrastructure efforts with those occurring in the water sector at the Environmental Protection Agency?
3. What is the estimated completion date for the National Response Plan? Who is working on this project? Will this address catastrophic disasters? How will DHS ensure that the National Response Plan builds upon existing emergency response capacity within the Federal Emergency Management Agency and the EPA?
4. How is the Department ensuring that vulnerability assessment completion and implementation and emergency response planning being conducted by the water and wastewater industry is comprehensively addressing all levels of catastrophic events?
5. How is DHS ensuring that these plans are adequate so that critical functions continue even in times of major disasters, and integrated into the National Response Plan? Does the Department plan to use vulnerability assessments completed by various infrastructure sectors to develop a comprehensive plan?

6. How do you define a truly catastrophic event? Have you determined what operational readiness, resources and

capabilities would be required to respond to such an event? Do you believe that planning for such an event would simultaneously improve our capacity to respond to less severe disasters?

7. What role does industry play in ensuring that critical infrastructure will be available to perform vital functions in the event of a catastrophic event? Who does the Department believe should bear the responsibility and cost for ensuring that vital functions can be completed in case of a catastrophic event?

8. Are you aware of concerns within the emergency management community that our existing policies, plans, procedures and resources are not adequate to cope with the aftermaths of a truly extraordinary disaster? If so, what have you done to help address these issues?

9. How much funding is being devoted to developing the kinds of plans necessary to ensure that the federal government can adequately respond to a catastrophic event? Is the amount sufficient? If not, does the Administration plan to request additional resources?

10. Is first responder training for water system contamination events being incorporated into water system operator and first responder training protocols? Please provide a complete description of what is being done to ensure that the initial response to contamination of a water system is effective.

Thank you for your attention to these issues. We look forward to receiving your response.

Sincerely,

Joseph. I. Lieberman
Ranking Member
Senate Committee on Governmental Affairs

James Jeffords
Ranking Member
Senate Committee on Environment and Public Works

cc: Marianne Horinko

Acting Administrator of the Environmental Protection Agency

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