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# Sandy's Environmental Impacts: Cleanup Has Just Begun

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*Law360, New York (December 07, 2012, 1:29 PM ET)* -- The serious environmental damage from recent natural disasters such as Superstorm Sandy has yet to be fully documented or addressed. This kind of damage is not always readily apparent and is often overshadowed in the rush to address more immediate concerns — but it is likely to have serious long-term consequences. Many see Sandy and Katrina as harbingers of the impact of human-induced global climate change with more environmental damage to come.

How can the environmental risks and consequences of climate change, including more severe weather, be managed effectively? In addition to basic recognition of the problem, property and casualty insurance has an important role to play in managing all sorts of climate change risks and off-setting losses, including environmental risks and losses.

Insurance notwithstanding, climate change — and lack of attention to it — will almost certainly lead to increasing environmental losses from severe weather and to related litigation. Effectively dealing with weather-related contaminant releases and lawsuits in this new reality will place greater burdens on the planning and management of corporate insurance programs.

The environmental hazards associated with severe weather can give rise to all kinds of covered losses, which generally fall into four broad categories. Unfortunately, successfully obtaining coverage for damage that can be characterized as "environmental" can be particularly problematic, even where specialty environmental insurance is involved.

The insurance industry's history in handling environmental and asbestos liabilities is checkered at best. Nonetheless, whether or not the policyholder has purchased specialty environmental insurance, at least four types of coverage may come into play.

First, alleged property damage and bodily or personal injury may give rise to lawsuits, which must be defended under most liability insurance whenever "any possibility" of coverage exists. Second, environmental hazards associated with natural (and man-made) disasters inevitably give rise to so-called time element losses for business interruption or contingent business interruption (e.g., supply interruption). Policyholders that suffer interference with business operations and that purchased appropriate coverage should give notice and preserve evidence of the scope of any loss.

Third, traditional property coverage may be implicated to off-set losses for damage to one's own property. Fourth, directors and officers may find themselves the targets of lawsuits arising out of

managerial decisions involving the management or cleanup of hazardous materials before, during and after a disaster. These environmental matters can give rise to allegations that managerial decisions caused shareholder losses and, hence, covered D&O claims.

This article discusses some of the often overlooked environmental damage associated with disasters such as Superstorm Sandy and those types of business operations most prone to potential environmental losses. Stakeholders of all stripes charged with managing risk, now more than ever, need to be aware of potential environmental hazards.

Managing these risks necessarily includes identifying them before the worst happens. Once aware, managing them effectively entails being prepared to immediately and persistently pursue and secure one's insurance coverage rights.

## Types of Environmental Damage

Less readily apparent environmental damage from storms such as Katrina or Sandy includes releases of liquid fuels, solvents, cleaning fluids, anti-freeze and other toxic chemicals from damaged or crushed vehicles, including boats, or containers, including drums and tanks.

A variety of toxic chemicals also may come not just from cars and boats but also from contaminants washed from flooded subways, roads, parking lots and tunnels. These liquids can contaminate both surface and groundwater, especially where large amounts of debris pile up over large volumes of source materials or where heavy rains or storm surges cause flash flooding, fouling local waterways.

With respect to Sandy, just about any container that can float has been observed, including oil sheens and debris from 55-gallon drums and quart-sized containers of transmission fluid as well as from wrecked boats and swamped vehicles with leaking fuel tanks.

Sewage overflows have always been an issue in the Hudson River watershed, and Sandy triggered sewage overflows typical of what happens as a result of even moderate as well as heavy storms. What is different about the sewage contamination from Sandy is that as a result of the storm surge, sewage spilled back into roads and homes in many communities rather than being discharged directly to surface waters.

However, sewage contamination levels in the Hudson River Estuary likely were lower during Sandy than has been typical of other storms because of dilution by high volumes of surging ocean water. The flood levels in New York City and parts of the Hudson Valley as far north as Poughkeepsie from Sandy's storm surge are unprecedented.

On Monday night of the storm, a storage tank burst, reportedly spilling 350,000 gallons of diesel fuel into Arthur Kill, a waterway that separates Staten Island, N.Y., and New Jersey. Spills such as this are often exacerbated by the flooding of secondary containment (walls and berms) around tanks. For example, it has been estimated that 11 million gallons of oil were spilled in conjunction with Katrina.

In addition to petroleum, Sandy likely washed hazardous substances, contaminated soils and other debris into waterways from diverse sources such as industrial operations, parking lots and farms. The U.S. Geological Survey (USGS) is undertaking sampling in waters affected by Sandy to measure the presence parameters indicative of pollution such as pesticides, E. coli (sewage indicators), nutrient levels and sediment.

"We tend to think of events like Sandy in terms of the ephemeral effect of the wind, rain, waves and even snow as it swept through our communities, but, in fact, this superstorm can have a longer-term effect in the large pulse of sediment and associated pollutants swept into our waterways," USGS Director Marcia McNutt reportedly said.

"Significant high water events are important to document because a storm event like this can flush large quantities of nutrients, pesticides and sediment into rivers," Charles Crawford reportedly said, coordinator of the sampling effort.

Catastrophic events like Sandy have long been considered to have these kinds of inordinate impacts when compared to the modest day-to-day migration and deposition of these substances over time.

In addition to debris, demolished buildings also may contain asbestos or develop toxic mold, potentially damaging the health of residents as well as response personnel. Fires like the one in Breezy Point, N.Y., caused by broken gas mains or lightning can burn unabated for hours or days and may generate smoke containing particulates such as soot as well as toxic chemicals such as dioxins and other air-borne pollutants.

As we have seen, the severe weather itself may dramatically hamper response efforts. Dangerous household, industrial and medical wastes can be distributed over wide areas by high winds or flooding. In fact, research has shown that some high winds can suck up debris and deposit it more than 200 miles away.

Another potential hazard is oil spilled from downed electrical transformers, some of which, especially the older ones, may contain toxic polychlorinated biphenyls, or PCBs. As discussed further below, and according to U.S. military planners, the weather-related circumstances that create natural disasters like Katrina and Sandy are growing more common. The resulting environmental damage is also likely to increase.

## Potential Source Areas

In addition to buildings, boats and fuel tanks, residual environmental impacts may be especially acute following damage to gas stations, other petro-chemical operations, heavy industry and even hospitals. Other places that may be sources of environmental damage after disaster strikes include power generation facilities, known hazardous waste or Superfund sites, and mining operations.

Contaminants may be washed from shoreline industrial sites, as well as commercial and residential buildings. Farm-related runoff, including fertilizers, pesticides and herbicides, is another source of potentially significant contamination that can have wide-ranging impacts. The New York Times has reported that releases of such contaminants because of Mississippi River flooding were “expected to result in the largest [oxygen-free] dead zone ever in the Gulf of Mexico.”

The largest dead zone to date was 8,500 square miles in 2002 — about the size of New Jersey. Dead zones can result when nitrogen and phosphorous from crop fertilizers and animal waste cause blooms of algae that eventually starve other fish and aquatic animals of oxygen.

Though Sandy fortunately involved less flooding than expected, the storm had an impact on farms all over. For instance, agriculture in New Jersey alone remains a significant source of revenue totaling almost $1 billion annually, and many farms are located in New Jersey’s relatively low-lying coastal plane.

## Exposure During Clean-Up

Some of the greatest long-term environmental risks from hurricanes, tornadoes and other natural or man-made disasters, such as the World Trade Center attacks, arise during the cleanups. Property owners and emergency workers would be well advised to use caution when removing debris. Exposure to lead and other toxic substances can happen simply by accidental ingestion of contaminated soil from dirty hands — a particular danger for children — as well as the breathing of contaminated dust and fumes from burned plastic or cable coatings.

Environmental regulators often enact temporary waivers of some solid waste and air pollution regulations for the hardest hit areas or simply look the other way under emergency circumstances. Potentially contaminated material is simply bulldozed off of streets, and landfills may be allowed to accept contaminated debris, including former structures, sludges, brush, yard waste, appliances and other materials that normally would not be accepted.

In addition, limited burning of materials, including tree and brush waste under certain conditions, may also be permitted, as may unsupervised asbestos removal.

Relaxing these kinds of rules and regulations during an emergency often makes common sense, but improper handling or disposal of waste material can make a bad situation even worse. When plastics, asbestos material or treated wood find their way into brush fires, they can produce emissions, including toxic volatile organic compounds and heavy metals that are particularly dangerous for people with asthma or respiratory diseases.

In addition, the chaos that follows disasters of all kinds may lead to dangerous mixing of wastes and chemicals, which can cause chemical releases as well as explosions and releases of toxic gas. Segregating different types of waste so they can be disposed of properly in landfills approved for specific types of waste or incinerated is an important way to avoid exacerbating environmental degradation when the worst happens.

## Increasingly Severe Weather

Some natural disasters are simply random, but even people who deny the existence of global climate change are having trouble dismissing the evidence of more severe weather over the last few years. In addition to Sandy, in the U.S. alone, nearly 1,000 tornadoes have crisscrossed the nation's midsection, killing more than 500 people and reportedly causing $9 billion in damage.

Recently, a significant tornado occurred in Massachusetts. Other uncommon weather events appear to be on the rise as well. According to weather data, the Midwest recently suffered the wettest April in 116 years, causing serious flooding, even as parts of Texas experienced the driest month in a century. A large reinsurance company reportedly estimated losses from the severe weather on North America over the last three decades to have cost more than $34 billion.

According to Newsweek, weather extremes are on the rise worldwide. 2010 was the hottest year on earth since weather records began. The 2010 heat wave in Russia killed an estimated 15,000 people. Floods in Australia and Pakistan killed 2,000 and flooded large swaths of each country. A months-long drought in China has ruined millions of acres of farmland.

By some reported estimates, the burning of fossil fuels has raised global atmospheric levels of heat-trapping carbon dioxide by 40 percent above what they were before the Industrial Revolution. Emissions of other so-called greenhouse gases are also on the rise. The hotter atmosphere retains more moisture, changes the energy dynamics in global atmospheric and oceanic circulation systems, including the Jet Stream and El Niño and incites more severe extreme weather.

## Conclusion

Managing the risks associated with more severe weather like storms Sandy and Katrina as well as the immediate and latent pollution from these natural disasters represents a huge challenge. This challenge is made even greater when homeowner, property, casualty and liability insurance cannot be counted on to offset losses associated with valid claims.

Corporate directors and officers need to consider the potential liability and insurance coverage implications associated with these challenges as shareholders increasingly refuse to tolerate business decisions that do not properly take the environmental consequences of disasters into account. Whatever the future holds, decision and policymakers of all stripes need to better understand the potential environmental risks they may face going forward if such risks are to be managed properly.

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