

The Environmental Impact Of Hurricanes: From Sandy To Irma

By Robert Horkovich and John Nevius

This past August, Anderson Kill PC mourned the untimely passing of our colleague John Nevius, chair of the firm's environmental law group, after a long battle with cancer. An intrepid policyholder's attorney, he was also a registered professional engineer and, prior to beginning his law career, a senior project manager / hydrogeologist at the United States Environmental Protection Agency. As an attorney, he brought a wealth of technical knowledge to complex environmental insurance coverage disputes.

That expertise is reflected in his voluminous writings on environmental risks and insurance issues, and nowhere so much as in his 2012 article published in Law360, "Sandy's Environmental Impacts: Cleanup Has Just Begun," which addressed everything from major chemical discharges to exposure to asbestos and lead during cleanup. In memory of him, and to bring the benefit of his analysis to those who will be tasked with assessing and mitigating the enormous and multifaceted destruction wrought by Harvey (and threatened, at the time of writing, by Irma), I have updated his article to address the environmental hazards likely to be faced during the long, costly and sometimes doubtless dangerous recovery that will soon begin in the wake of this year's storms.



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It will be some time before the full extent of environmental damage wrought by Hurricanes Harvey and Irma is fully documented or addressed. By Aug. 31, however, Harvey had caused the release of nearly 1 million pounds of seven toxic compounds, including benzene, a carcinogenic substance, according to an analysis by the Center for Biological Diversity of 56 filings from petroleum and chemical companies, as reported in the Wall Street Journal. Numerous toxic plumes arose from explosions at the Arkema chemical plant caused by the failure of systems cooling volatile chemicals because of a loss of power. Twenty-one emergency workers were treated for exposure. Nearby residents were evacuated.

While environmental damage in the wake of natural disaster is not always readily apparent, the damage even in storms that do not cause such a large-scale release of hazardous material is likely to have long-term consequences.

How can the environmental risks and consequences of 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 offsetting losses, including environmental risks and losses. In a world of increasingly extreme weather events, effectively dealing with weather-related contaminant releases 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. Successfully obtaining coverage for damage that can be characterized as "environmental" requires care and persistence, 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 offset 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 hurricanes and superstorms 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 insurance coverage for the results of 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

The spread of chemicals from submerged or exploding chemical plants and the hazards associated with these events are obvious. Less readily apparent environmental damage from storms such as Harvey, Katrina or Sandy includes releases of liquid fuels, solvents, cleaning fluids, anti-freeze and other toxic chemicals from the thousands of crushed vehicles, boats, containers, 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.

In the wake of major storms, just about any type of container that can float is likely to leak, from 55-

gallon drums to quart-sized containers of transmission fluid. Sewage overflows also result and are an issue in water supplies and the watersheds themselves. What is different about the sewage contamination from hurricanes and superstorms is that as a result of storm surges, sewage spills back into roads and homes in many communities rather than being discharged directly to surface waters.

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 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.

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 Harvey, Katrina and Sandy are growing more common. The resulting environmental damage also is 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 reported in 2011 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 recorded this summer, at 8,776 square miles — 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.

Exposure During Cleanup

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, also may 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 2016 there were 15 weather and climate events with losses exceeding \$1 billion each across the United States — the second highest tally of billion dollar disasters ever, barely trailing the 16 billion-dollar events of 2011. This summer, in addition to the destruction wrought by Harvey and Irma, more than 1,000 people have died in floods across South Asia, with 41 million people directly affected in Bangladesh, Nepal and India, according to U.N. estimates reported in The New York Times. Bangladesh, constantly subject to devastating floods, has suffered its worst flooding in 40 years in 2017, according to the International Federation of the Red Cross and the Red Crescent.

Weather extremes are on the rise worldwide. According to NASA, 2014, 2015 and 2016 were each the hottest years on record. Deadly heat waves are on the rise globally, with India facing a wave of deadly heat this year following a 2016 summer in which temperatures reached 124 degrees Fahrenheit and drought was widespread. This year, the western U.S. is suffering one of its worst years in wildfires ever. In a Labor Day fire, nearly 1,400 homes burned in Burbank, California, outside Los Angeles.

Conclusion

Managing the risks associated with more severe weather events like Irma, Harvey, 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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