In the United States, disaster stories keep unspooling. The damage caused by cyclonic storms alone in the last five years is astounding. The damage from Hurricane Florence last September is still being tallied, but already it’s credited with long power outages, breached hog lagoons, and about 50 deaths. In 2017, Puerto Rico and the U.S. Virgin Islands were slammed by two consecutive hurricanes, Irma and Maria, the second of which left 3.5 million people in Puerto Rico “without clean water, communications, or electricity, amid damaged buildings and floodwaters, leading health experts (as of this writing) fearing a possible outbreak of water-borne disease.” The aforementioned Irma took a later “left hook” along the western coast of Florida, leaving a trail flooded streets, flattened houses, and an estimated price tag of US$100 billion.

Less than a month before, Hurricane Harvey drowned the city of Houston with 50 inches of rain (“a volume of rainwater four miles square and two miles tall”), causing an estimated US$180 billion in damage. In the West, wildfires and drought dominated the headlines. Last summer California witnessed 16 major fires, including one deemed to be the largest wildfire in the state’s recorded history.

Every year in the United States, events like these cause hundreds of deaths and cost billions of dollars in disaster aid, disruption of commerce, and destruction of homes and critical infrastructure. Although the number of lives lost to natural hazards (a misnomer because there are always human drivers too) has generally declined, the economic cost of major disaster response and recovery continues to rise. Every ten years, property damage from natural hazards in the United States doubles or triples in cost. Only Japan suffers more economic damage from natural hazards.

There are many reasons for this trend. Perhaps the most obvious is that the population is growing and expanding into areas that are more prone to natural hazards, such as open coasts,
forested areas, or scenic hillsides. Global warming also plays a role, resulting in drier, more fire-prone forests, rising sea levels, and, according to many experts, more powerful storms. As these trends continue, such events will only get worse.

Some preparatory words on the subject of climate change and disaster risk: in its Fourth National Climate Assessment (2017), the U.S. Global Change Research Program (GCRP) finds “broad agreement” among scientists that human activities have had a “measurable impact” on the observed oceanic and atmospheric variability in the North Atlantic and announces “medium confidence” that human activity “has contributed to the observed increase in hurricane activity since the 1970s.” It asserts medium to low confidence of a human contribution to extreme precipitation increases in the continental United States. There is evidence supporting a human contribution to forest fires in Alaska (medium confidence) as well as in the western United States (medium to low confidence). Further, “[h]uman activities have played a role in the observed expansion of the tropics (by 70 to 100 miles since 1979).”

Statements like these inevitably lead to questions about attribution to specific events. Can we say climate change caused this heatwave or that hurricane? The USGCRP counsels against such inquiry. The better question, it argues is “whether climate change has altered the odds of occurrence of an extreme event like the one just experienced.” The reason is that because many attribution studies use statistical analysis, their answers come in the form of probabilities, not certainties. “To our knowledge,” the authors write, “no extreme weather event observed to date has been found to have zero probability of occurrence in a preindustrial climate.”

Still, attribution science provides important information on the subject of extreme events. The USGCRP notes that an anthropogenic influence is especially strong for extreme events related to an aspect of temperature, hydrological drought (often associated with fluctuations in seasonal snowmelt), and heavy precipitation. There is, for instance, “relatively strong evidence” that human activity contributed to the European heat wave of 2003 and to the dangerous, broiling temperatures Australia experienced in 2013. In contrast, it finds “little or no confidence” in a connection between anthropological influence at “severe convective storms or extratropical storms.”

In this essay, we focus on some of the more significant issues related to disaster and environmental regulation for the purpose of pointing lawyers and their clients in the direction of legal and policy issues important to their work, public safety, and protection of the environment. This essay addresses topics related to water regulation, the regulation of hazardous substances, air regulation, and liability for offshore oil spills.

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5 Id.
6 Id.
7 Id.
8 Id.
9 Id.
10 Id.
11 Id.
A. Water Regulation

1. Municipal Storm Water Management

In short time, residents of the Carolinas, Houston, Florida and Puerto Rico all learned one lesson about hurricanes the hard way: the most dangerous part of a cyclone is water, not wind. The staggering floods from Hurricane Florence are still being measured, but it already the wettest cyclone in the Carolina record books, having crushed municipal flood control systems in routine order. In Houston, the 50 inches of water that fell over the course of a few days broke records and overwhelmed the city’s storm water controls. In Florida, Hurricane Irma’s storm surge ravaged coastal communities hundreds of miles up and down the Atlantic and Gulf coasts. And in Puerto Rico, Hurricane Maria dumped more than two feet of rain in some areas, generating floodwaters more than a dozen feet high in low-lying areas throughout the island.

The pathway of waterborne devastation was different for each of these storms. But as the waters receded, all left contaminants and poisons soaking in the iridescent mud. Each one of these storms may be unprecedented, but the type of damage caused is pretty familiar. Just a year before, hurricanes Hermine and Matthew caused more than 250 million gallons of sewage to overflow and spill into several Florida communities. There a lot of reasons for our increased vulnerability, including climate change, but we can start with the fact that we continue to allow sprawling development in flood-prone areas and, as a whole, the country’s water and sewage infrastructure is in pitiful condition.

The Clean Water Act is meant to address the second problem. The Act’s 1987 amendments required the EPA to implement a separate permitting program for municipal separate storm sewer systems (“MS4s”) as a means of reducing harmful discharges during heavy rains. Thirty years later, today’s national storm sewer system looks much as it did in the days of the hoola-hoop. That’s because EPA and state permit writers dragged their feet for a generation, municipalities fought hard against new rules, and new technologies were slow to develop. But the times are slowly changing. And clients of all kinds—shopkeepers, industries, municipalities, and so on—need to pay attention.

The first change, as the above examples suggest, is that storm precipitation has increased dramatically in many parts of the country. The U.S. Global Change Research Program last year reported that since 1958 extreme rains (that is, “the amount of precipitation falling in daily events that exceed the 99th percentile of all non-zero precipitation days”) rose 27% in the southeastern United States. In the Northeast, they jumped 55%. That brings new urgency since communities just can’t afford to proceed as they have been doing. Second, the Obama-era EPA issued guidance (still on the books) encourages state and local governments to reduce floodwaters flowing from impervious surfaces into the MS4 systems. (The guidance links storm water permits standards to Total Maximum Daily Load requirements used in watershed management plans, adding more pressure to address storm water.)

12 WUEBBLES, ET AL., supra, § 7.1.3, fig. 7.4.
Third, new storm water control methods based on “green infrastructure” (park-like holding ponds, bio-swales, rooftop gardens) are coming on line and proving to be both affordable and effective. Greening the urban landscapes not only helps relieve storm water pollution and reduce sewer overflows, it improves air quality, cuts energy use, boosts property values, provides recreational opportunities, and creates engineering and construction jobs. Finally, the above factors have encouraged permit writers in at least some states to require municipalities to improve their storm water management, perhaps by using new methods and technology.

Lawyers representing clients on storm water issues, might consider these points:

- In some jurisdictions, municipalities may come under increased pressure to control storm water as their five-year discharge permits come up for renewal.
- Increased precipitation patterns in many parts of the United States make sewer overflows more likely in urban areas, exposing municipalities to great risk of being fined the EPA for excessive violations.
- Increased interest and use of “green infrastructure” as a means of storm water management opens opportunities for engineers, urban planners, landscapers, and construction companies to expand their business operations, while improving health and environment of surrounding communities.

2. Concentrated Animal Feeding Operations

North Carolina is the second-largest pork producer in the United States.13 It is home to 3,300 hog-waste lagoons, essentially open air waste receptacles for the state’s 8.9 million swine.14 As of September 19, it is estimated that 5,500 pigs have died in the storm and 110 lagoons “ha[d] either released pig waste into the environment or [were] at imminent risk of doing so.”15 The number of lagoons breached far exceeds the 50 inundated by Hurricane Floyd in 1999, a weather event that killed 21,000 pigs.16 The record-breaking rain brought on by Hurricane Florence even has the chief executive of the North Carolina Pork Council admitting that it is “the most significant storm [North Carolina] ha[s] faced probably ever.”17 When a spill occurs, the toxic brew containing pig waste, noxious gases, and life-threatening pathogens wash over nearby land and rivers.18 Hog lagoons are Concentrated Animal Feeding Operations (CAFO) that require a NPDES permit. Reconsideration of permit regulation was proposed in 2014, but the

13 Will Doran, Flooding causes a hog lagoon to breach; others are at capacity, NEWS & OBSERVER (Sept. 20, 2018), https://www.newsobserver.com/news/local/article218535790.html
17 Maher & Kesling, supra.
EPA ultimately found through notice and comment that there is a “continued need for regulation of CAFOs . . . to manage manure effectively in order to protect the nation’s water quality and human health.” Nonetheless, the 2008 CAFO revisions only require CAFOs to apply for NPDES permits if there is known or proposed discharge. Operators of new CAFOs can bypass the traditional NPDES requirement if states are unable to prove the facility will discharge in the future. CAFOs are given extreme flexibility in creation and implementation of nutrient management plans (NMPs). These plans outline a CAFOs strategy for storing and utilizing manure. The EPA “believes that producers with well-designed NMPs should be able to implement the terms of their NMPs . . . with minimal need for state oversight and public notice of adjustments.” However, as the danger of CAFO discharge increases with each natural disaster, it is more important than ever that there is uniform regulation in obtaining NPDES permits.

For lawyers practicing water pollution law it is important to consider the following:

- Local and state government must work together to create comprehensive storm water management plans to ensure new and existing neighborhoods are not flooded with pollutants during high precipitation weather events.

- Increased precipitation patterns in many parts of the United States make lagoon breaches and overtoppings more likely, exposing communities to more danger and CAFO operators to greater risk of being fined excessive violations.

B. Regulation of Hazardous Substances

1. Superfund

The United States is home to over 1,300 Superfund sites, and it is estimated that “2 million Americans live within a mile of 327 Superfund sites located in flood-prone areas or those at risk from rising sea levels.” However, a climate change adaptation plan for Superfund sites has not been updated since 2014, and the Environmental Protection Agency’s current website does little more than provide non-binding suggestions when approaching adaptation measures. Much like the inevitable breaching of hog lagoons in North Carolina, there are more than 40 Superfund sites directly in the path of Hurricane Florence, each capable of releasing distinct hazardous substances if damaged. While damage to Superfund sites from Hurricane Florence

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19 U.S. ENVTL. PROT. AGENCY, REGULATORY FLEXIBILITY SECTION 610 REVIEW OF THE NPDES PERMIT REGULATION AND ELG STANDARDS FOR CAFOS (June 3, 2014); see https://www.regulations.gov/document?D=EPA-HQ-OW-2012-0813-0216
21 Id. at 657.
22 Graham & Nachman, supra.
23 Id.
remains to be seen, the damage to thirteen Superfund sites from Hurricane Harvey in 2017 is representative of the inevitable litigation and liability that lawyers are likely to encounter in the future.

Hurricane Harvey marked the second “once in 500-year storm” in ten years.25 Patrick Parenteau, a professor of environmental law at Vermont Law School, remarked, “[Hurricane] Katrina taught us that the petrochemical infrastructure on the Gulf Coast was particularly vulnerable to storms like Harvey [and] [s]o are all kind of hazardous waste facilities and Superfund sites.”26 Harvey related Superfund litigation will not only include toxic tort suits, but new lawsuits against facility owners and operators.27 “Responsible parties are jointly liable for Superfund cleanups,” but the narrow “Act of God” defense exists. To raise this, “a natural disaster must be ‘unanticipated’ and an ‘exceptional’ event . . . but may not qualify as unanticipated or exceptional in an area where hurricanes are common.”28 More important, an Act of God has to be the sole cause of the release of hazardous substances.29 The defense has never been successfully raised. However, it is possible that the defense will disappear altogether in the face of climate change. Greenhouse gas emissions are the result of human action and this contributes to global warming. Evidence suggests that “global warming [makes] [] storms worse by increasing ocean temperatures and raising the sea level, intensifying the impacts of its wind speed, rainfall, and storm surges.”30 Acts of God no longer exist in a world overrun by human error.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) was passed in 1980 to deal with the dangers of improper disposal of hazardous waste to land and water. As its name suggests, this statute makes past and present contributors to dangerous hazardous waste sites liable for the cost of cleanup of those sites. Cleanup must be to a standard that is necessary to protect public health and the environment. To ensure that hazardous waste sites are properly dealt with, cleanup plans under CERCLA are to prefer treatments that “permanently and significantly [reduce] the volume, toxicity, or mobility of the hazardous substances, pollutants or contaminants.”

Some experts believe that, given the rising risks of flooding, CERCLA cleanups should place more emphasis on the permanent reduction of toxicity and exposure, not simply containment. The National Contingency Plan requires that CERCLA cleanup decisions be made through a specific process that has been spelled out by the EPA. What method is chosen for a cleanup is determined during the remedial investigation and the feasibility study. As the impacts from hazardous waste sites faded from the public view in the 1990s, it became more common for the EPA to allow containment as a permanent solution to hazardous waste sites, even though containment does not meet the standard of a permanent solution. Based on the demonstrated danger from the use of capping to control hazardous wastes at the San Jacinto Waste Pits in

26 Id.
27 Id.
29 Sellers, supra.
30 Hsiao, supra.
Houston, there is reason to question a policy that allows merely the capping of hazardous waste sites in areas prone to flood.

For lawyers practicing in the area of Superfund, it is important to note:

- No updated climate change adaptation plan exists for the existing 1,300 Superfund sites. This means that there is a risk that Superfund sites will continue to fail at a higher rate as natural disasters attributable to climate change occur more often.

- Lawsuits are being brought (some for the first time) against individual owners and operators of Superfund facilities – liability and the future of CERCLA litigation is expanding.

- The “Act of God” defense may logically be eradicated altogether because human intervention strips the defense of its virtue.

- In the future (perhaps in another administration), higher flood risks could lead the EPA to demand higher and more costly clean-up standards beyond mere containment.

2. **RCRA**

Waste Disposal Act in 1976 to provide for adequate transportation, storage, and disposal of hazardous waste upon generation. This cradle-to-grave program—o be implemented, in part, by a system of documentation known as the “manifest system”—was designed to ensure that hazardous wastes are not released into the environment in the first place. Where they are released, they are to be properly classified and safely transported and disposed of. Generators, transporters, and treatment, storage, or disposal (TSD) facilities are required to secure permits to control their management of this hazardous waste.

Hazardous waste facilities are often located in “environmental justice communities.” Decades of research have “established clear patterns of racial and socioeconomic disparities in the distribution of a large variety of environmental hazards.” A study conducted by researchers at the University of Michigan and the University of Montana revealed decades of racial discrimination in zoning for hazardous waste facilities. The increase in perilous weather events due to climate change heightens the risk that these facilities will discharge an excess of toxic waste into these communities.

32 Id.
33 Id.
34 For insightful discussion about the problems of “toxic flooding” from a legal perspective, listen to Preparing for Climate Change and Toxic Floods in the Chesapeake Bay Watershed (Sept. 7, 2018), https://ctd.podbean.com/e/episode-3-preparing-for-climate-change-and-toxic-floods-in-the-chesapeake-bay-watershed/ (podcast interview).
The primary purpose of RCRA “is to reduce the generation of hazardous waste and to ensure the proper treatment, storage, and disposal of that waste which is nonetheless generated, so as to minimize the present and future threat to human health and the environment.” In addition, RCRA enables EPA to require parties to respond to spills and other exposures where there is “imminent and substantial endangerment to health or the environment.” RCRA’s citizen-suit provision also allows third parties to seek responses in similar circumstances. Using this provision, environmental justice communities can in some circumstances bring climate change adaptation suits against the facilities that “create an ‘imminent and substantial endangerment to health or the environment.’”

This provision was put to the test in 2016 when Conservation Law Foundation filed a lawsuit against ExxonMobil for endangering the public health of communities lining the Mystic River in Everett, Massachusetts. Exxon has been studying “the effects its products could have on climate as early as the 1970’s,” but has consistently made false statements to the public regarding its deleterious findings. In 2017, a federal judge held that CLF can sue ExxonMobil “for failing to protect its Everett, Massachusetts oil terminal from the impacts of climate change.” The decision is especially important because it marks the first time “current and imminent climate impacts [were considered] a legitimate claim.” A similar lawsuit was filed by CLF against Shell Oil for Shell’s coverup of an internal document titled The Greenhouse Effect. It contained information that the company has known that rising sea levels are a risk to coastal facilities. Shell’s admission “is further proof that the oil industry knew decades ago that climate change was occurring and that their facilities—and the communities around them—are at risk.”

As climate change litigation evolves, RCRA will ensure that environmental justice communities continue to have their voices heard.

For lawyers practicing within the laws of RCRA, it is important to note:

- Hazardous waste facilities that fall under the umbrella of RCRA violations are often situated in neighborhoods where redress is not readily offered.

- Litigation against major corporations like ExxonMobil is permitted under a theory of climate change for the first time in our history.

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38 RCRA as a Tool for Environmental Justice Communities and Others to Compel Climate Change Adaptation, 131 HARV. L. REV. 2409 (2018).
39 Supra note 24 at 4.
42 Id.
43 Id.
• RCRA’s unique citizen-suit provision will help environmental justice communities across the country gain access to the assistance they need to enjoy equal environmental treatment.

C. Offshore Oil Spills

About a quarter of all offshore oil produced in the United States is pumped from beneath the warm waters of the Gulf of Mexico. Thus hurricanes and oil platforms have become old friends. Hurricane preparations in the Gulf include broad and sophisticated programs to control against spills. The oil industry similarly has integrated storm risk reduction into its routine activities. Still things go wrong. In September 2005, Hurricane Rita sank several offshore platforms, some crippled rigs spilling millions of gallons of thick slurry into the deep. Storms can also interrupt oil spill clean-up efforts.\textsuperscript{45} For instance, when Hurricane Alex tore through the waters of the Deepwater Horizon Oil Spill, it delayed response efforts for several days and mangled hundreds of miles of oil booms intended to protect fragile coastline.\textsuperscript{46} Because climate change may have an effect on storm frequency and intensity, problems like these could be more common.

Offshore drilling in the nation’s Arctic waters brings a different set of hazards, also connected to climate change. Applying various models and methods to six distinct scenarios, the National Center for Biotechnology Information was able to chart the possible consequences and area distribution in the event of an Arctic oil spill.\textsuperscript{47} In the first scenario, oil was released in a well blowout off the coast of Finmark similar to the Deepwater Horizon Oil Spill. This served as the control because Finmark is an area with “fully open water through the year, in both the present climate (2009-2012) and the future (2050-2053).”\textsuperscript{48} Two scenarios were also well blowouts measured in different locations, depths, and distances from the coastline of Greenland. Two scenarios were representative of shipping accidents involving marine diesel, one occurring off the coast of Svalbard and one in the Kara Strait. The final scenario was a pipeline leak in a shallow area off the coast of Varandey. Variables considered for each scenario were ice coverage, increased ocean temperature, wind, and ocean currents.

Of all the variables looked at, ice coverage gave scientists the most insight into the consequential distribution of future oil spills. Where there is ice, there is possible protection for the sea and shore. However, our planet is getting hotter, and melting ice will result in larger distribution of oil into the ocean, and likely onto shore. Oil spills in the Arctic are predicted to increase due to a surge in transportation and exploration. The results published by NCBI “suggest that future oil spills in a warming climate will in some cases result in greater areal

\textsuperscript{45} National Oceanic & Atmospheric Administration, \textit{Like a Summer Blockbuster, Oil Spills and Hurricanes Can Take the Nation by Storm} (May 29, 2015), https://response.restoration.noaa.gov/about/media/summer-blockbuster-oil-spills-and-hurricanes-can-take-nation-storm.html. =

\textsuperscript{46} Id.

\textsuperscript{47} Tor Nordam et. al., \textit{Impact of climate change and seasonal trends on the fate of Arctic oil spills}, PUBMED (Oct. 24, 2017), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5673877/

\textsuperscript{48} Id.
coverage and increased shoreline exposure, due to reduced ice coverage . . . point[ing] towards an increase in environmental risk.”

The Oil Pollution Act of 1990 (OPA), enacted after the Exxon Valdez spill, seeks to prevent oil spills on navigable waters, the adjoining shorelines, and the nation’s exclusive economic zone. It provides for a federal response to spills, imposes liability on polluters (Responsible Parties, or RPs), and provides for compensation to those that incurred removal costs and damages as a result of these spills.

OPA holds RPs strictly liable for removal costs and damages resulting from a discharge up to statutory liability limits. For a spill from an offshore oil platform, liability is limited to less than $140 million (the exact figure is in the midst of a regulatory adjustment). Given the wealth of the oil industry and the potential for catastrophic damage, the cap is ridiculously low. BP’s costs after the Deepwater Horizon Blowout, for instance, totaled more than $60 billion. (After negotiation with the Obama administration, BP waived its protection under OPA’s liability cap.) In general, RPs are liable without limit when the discharge results from gross negligence or willful misconduct or a violation of operation, safety, or construction regulations.

There also exists the Oil Spill Liability Trust Fund (the Fund), maintained within the Department of Treasury. The Fund, which holds a current balance of $1 billion, plays a critical role in the OPA regime. It pays federal costs for oil removal when a discharge occurs and reimburses third-party claims for uncompensated removal costs and damages when a responsible party does not pay or is not identified. The types of damages compensable under OPA include damages to natural resources, loss of subsistence use of natural resources, damages to real or personal property, loss of profits or earning capacity, loss of government revenues, and increased cost of public services. In addition, the Fund is an important source of annual appropriations to various federal agencies responsible for administering and enforcing a wide range of oil pollution prevention and response programs.

OPA provides that the Fund may be used to pay claims for removal costs and damages resulting from an oil discharge that exceeds the RP’s liability limits. This includes payment of claims from RPs who pay or incur removal costs or damages in excess of their liability limits and can establish their entitlement to the limits under the circumstances of the discharge.

But, like OPA’s liability cap, the Fund seems dangerously inadequate. As portfolio-replacement policies and drilling technologies push oil producers further into deep waters (and

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49 Id.
50 See 83 F.R. 2525-2732 (Jan. 18, 2018).
52 33 U.S.C. § 2704
53 Portfolio-replacement polices, used widely in the industry, require companies to acquire new reserves as their current reserves are produced. Because replacement reserves are often in more remote places, like deep water or in the Arctic Circle (or both), development of those reserves will be both more costly and more dangerous. In an era when safer greener energy technologies are becoming more competitive and global oil consumption is predicted to peak in just a few decades, the policy seems financially misguided.
as the odds of extreme weather events increases) the risk of an expensive and catastrophic accident inches up like mercury in a thermometer.

When an oil spill occurs, OPA requires that the Coast Guard designate an RP, typically the owner of the facility which is the source of the pollution.\textsuperscript{54} If the RP denies liability, the it must give specific reasons for the denial and provide copies of all supporting documents. OPA allows for an “Act of God” defense, but the defense is intended for causative forces that are the exclusive source of damage and reasonably unforeseeable. Neither hurricanes in the Gulf nor climate change impacts seem likely to fit the bill.

Lawyers practicing in the realm of offshore oil development, might be interested in these points:

• The inadequacy of the liability cap and the Fund could lead policymakers in a future administration to seek dramatic changes. Regarding the Fund, if lawmakers increased the balance, that would probably be funded by increased taxes or fees charged to oil companies.

• As long as the liability cap and Fund remain inadequate to address catastrophic accidents, the parameters of responsibility, as a practical matter, will probably be determined through \textit{ad hoc} negotiations with the White House, as happened after the Deepwater Horizon Oil Spill. This is a poor way of managing environmental risk since it gives parties no predictability and leaves major questions of policy open. Both the oil industry and the government have incentives to have a fairer and more predicable system.

• As long as the liability cap and Fund remain inadequate to address catastrophic accidents, a prudent oil company will make sure that it has the funds to “self-insure” in case it is pressured to waive the liability cap, as happened with BP. To be prepared to pay out tens of billions of dollars in response costs is not over the top.

\textit{D. Air Regulation}

As the EPA notes:

Particulate matter (PM) levels are likely to be affected through changes in the frequency or intensity of wildfires. While the impact of climate change on ambient PM levels remains somewhat uncertain, there is evidence indicating that climate change will affect PM levels through changes in the frequency or intensity of wildfires.\textsuperscript{55}

\textsuperscript{54} Interview with Arthur Crais, Adjunct Faculty, Loyola University New Orleans College of Law, in New Orleans, LA (Sept. 25, 2018).

\textsuperscript{55} U.S. ENVTL. PROT. AGENCY, CLIMATE CHANGE ADAPTATION PLAN 22 (June 2014), available at https://semspub.epa.gov/work/HQ/189682.pdf (publication number EPA 100-K-14-001)
The expanding trend of wildfires in the West raises the possibility that State Implementation Plans under the Clean Air Act may have to control emissions of particulate matter from factories and power plants more stringently in order to meet existing ambient air quality standards.

These are just some of the issues lawyers may face in advising their clients about natural disaster and environmental regulation. As always, we think an ounce of prevention is worth a pound of cure.

Suggested Resources:


DANIEL A. FARBER, JAMES MING CHEN, LISA GROW SUN, & ROBERT R.M. VERCHICK, DISASTER LAW AND POLICY (WoltersKluwer/Aspen, 3d ed. 2015)


ROSEMARY LYSTER, CLIMATE JUSTICE AND DISASTER LAW (Cambridge University Press 2016)

U.S. ENVTL. PROT. AGENCY, CLIMATE CHANGE ADAPTATION PLAN (June 2014), available at https://semspub.epa.gov/work/HQ/189682.pdf (publication number EPA 100-K-14-001)

ROBERT R.M. VERCHICK, FACING CATASTROPHE: ENVIRONMENTAL ACTION FOR A POST-KATRINA WORLD (Harvard University Press 2010)