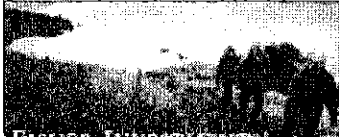


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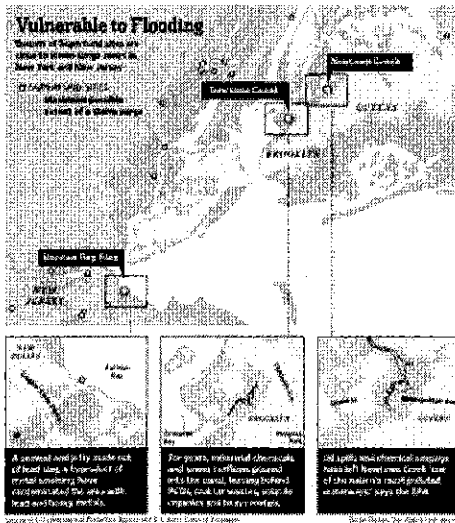
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# Sandy Stirs Toxic-Site Worry

By ROB BARRY, DIONNE SEARCEY and JOHN CARREYROU

Hurricane Sandy's environmental impact is still being assessed, but the worries for residents of New York and New Jersey are crystallized by one fact: Of the two states' 198 Superfund toxic-waste sites, 45 are within a half-mile of coastal areas vulnerable to storm surge.

The Environmental Protection Agency, which oversees cleanup of those sites, was unable to say how many of them flooded on the night of Oct. 29. But the agency said its initial appraisals show that several "were impacted by the storm," including a site contaminated by lead near Sayreville, N.J., and the Gowanus Canal and Newtown Creek sites in New York City.



The 45 Superfund sites vulnerable to coastal flooding were identified by The Wall Street Journal using data from the EPA and the U.S. Army Corps of Engineers. Many of the sites are concentrated in northern New Jersey in a blighted industrial zone west of Manhattan, 11 flank the Delaware River and a half-dozen are scattered across New York's Long Island.

Superfund sites are generally considered the most hazardous toxic-waste sites in the country. Congress established the program in 1980 following the Love Canal environmental disaster, which ravaged a community of several hundred families that had settled over a former chemical dump in Niagara Falls, N.Y.

Once the EPA has given a site the Superfund designation, the agency has the power to force the sites' polluters to pay for its cleanup costs. That process, along with the actual cleanup, often takes a decade or longer. Today, there are 1,313 active Superfund sites nationwide on the EPA's so-called National Priorities List. New Jersey has the most, at 111. New York is fourth, at 87.

The EPA said it tested water samples its workers took from Brooklyn's Gowanus Canal and nearby flooded buildings, but found only "low levels" of potentially cancer-causing pollutants, which it said may be "related to spilled fuel and runoff from asphalt." New York state officials say they think the floodwaters probably traveled over the Gowanus and Brooklyn's other Superfund site, Newtown Creek, without disturbing the pollutants that line the bottoms of both waterways.

But Thomas Burke, a professor and associate dean at Johns Hopkins School of Public Health, said the Gowanus and Newtown Creek—whose cleanups haven't begun in earnest yet—are more vulnerable to flooding risks than sites in more advanced stages of remediation, where caps and liners have already been placed over bottom-lying toxic material.

"There really has to be a careful evaluation of whether there has been any disturbing of the waste," Mr. Burke, a former director of sciences and research at the New Jersey Department of Environmental Protection, said. "Flooding moves things around much more quickly."

Hurricane Katrina in 2005 doesn't offer any clear-cut lessons. During Katrina, several Superfund sites in Louisiana flooded, including the Agriculture Street Landfill Superfund site, which was used to burn debris after Hurricane Betsy hit New Orleans in 1965. In the 1970s and 1980s, a residential development, elementary school and playground were placed atop the site. After Katrina's passage, workers found high levels of cancer-causing hydrocarbons in the courtyard of an apartment complex on the site littered with residential debris. But the ground there hadn't been disturbed by the floodwaters, says Tom Harris, administrator for the remediation division of the Louisiana Department of Environmental Quality. "We never really figured out what the heck was going on," he says.

Ground-water sample tests by the EPA also showed elevated levels of arsenic and other metals at two other sites, the Delatte Metals Superfund Site in Tangipahoa Parish and the PAB Oil Superfund Site in Abbeville, La., according to the EPA's website.

New Jersey officials downplayed any problems. "There was no major flooding in North Jersey. Superfund sites were not inundated by tidal surges," said Larry Ragonese, a spokesman for the state environmental agency.

To be sure, the area's Superfund sites are far from the only issue of concern following Sandy. State and federal work crews have been fanning out daily along shorelines and to sites of industrial spills to monitor containment efforts.

Of particular concern were fuel spills at a handful of refineries, said U.S. Coast Guard Commander Eric Doucette, who was overseeing a hurricane pollution response team made up of Coast Guard members and officials from the EPA, as well as New York and New Jersey state officials.

The surge of water that rushed over a Motiva terminal in Sewaren, N.J., dislodged fuel tanks and spilled 378,000 gallons of ultra low sulfur diesel fuel into the Arthur Kill. Crews operated vacuum trucks, skimmers and deployed boom to contain the spill, most of which had evaporated, Mr. Ragonese said.

Floodwaters at a Kinder Morgan Terminal in Carteret, N.J., sent an empty tank crashing into one filled with biodiesel, causing a spill into nearby Rum Creek, eventually flowing into the Arthur Kill, an industrial waterway. Kinder Morgan says the spill was contained within a day.

While most of the areas impacted by industrial spills were along waterways long ago polluted by factories situated on their banks, some wetlands were at risk. Fish were likely poisoned, but experts said many of the birds that normally nest near areas where the spills occurred were spooked by the storm and had already flown away in search of shelter elsewhere. Shell, which operates the Motiva terminal, said in a news release that 12 oiled birds were rescued, four of which died.

The storm also inundated numerous water treatment facilities in New York and New Jersey that were left to pump untreated sewage into area waterways. Some were still without power more than

a week after the storm and were having trouble getting up to full speed again. As of mid-week some of the facilities were still pumping water that had been only minimally treated.

In Sandy's wake, one New York neighborhood group is taking matters into its own hands. Kate Zidar, a member of the Newtown Creek Alliance, said her organization hired an independent consultant to do some testing after the EPA declined to take samples of the floodwater inside buildings close to the creek. "There's an information gap that we need to fill," she said.

Newtown Creek, a 3.8-mile stretch of water at the junction of Brooklyn and Queens, became a Superfund site in September 2010. Pesticides, metals, PCBs and volatile organic compounds have been found in its water from 150 years of industrial pollution, including numerous oil spills, making it "one of the nation's most polluted waterways," according to the EPA's website. Sandy's floodwaters extended from the creek for several blocks, submerging most of the area's industrial businesses and some residential basements. Nathan Frey, a 33-year-old contractor who sculpts plaster just feet from the creek's banks, was still dealing with the aftermath of the storm last week.

Ringed the white walls of Mr. Frey's high-ceilinged workspace was a thin brown line about five feet from the ground, marking the height the floodwaters reached. He says the water seemed clear and didn't smell like oil, but it was impossible to know just how contaminated it was. "Everybody is concerned," he said.

In the Gowanus neighborhood of Brooklyn, which lies between the gentrified enclaves of Carroll Gardens and Park Slope, residents and business owners said water overran several blocks on both sides of the canal. Ron Mehlman, a 75-year-old sculptor who owns a building on Bond Street a block from the canal, says his street-level studio was under several feet of water. When it receded, the water left some mud residue.

The Gowanus's banks were once dotted with mills, tanneries, and chemical and gas plants, which discharged waste into its waters. The pollutants present in the water and the sludge at the canal's bottom include PCBs, coal tar wastes and heavy metals. The EPA designated the canal a Superfund site in March 2010.

In New Jersey, one site may have been affected by the storm: the Raritan Bay Slag Superfund Site in Sayreville. A seawall and jetty along the bay's southern shore were contaminated with lead slag, a byproduct of metal smelting, which has tainted the surrounding area with lead and other heavy metals. On a flyover to survey damage, a U.S. Coast Guard member spotted an overturned 10,000-gallon fuel tank near the sea wall, but it didn't appear to harm it.

The EPA said it is collecting samples from the site "to determine the extent of flooding damage and its impacts on lead contamination."

**Write to** Rob Barry at [rob.barry@wsj.com](mailto:rob.barry@wsj.com), Dionne Searcey at [dionne.searcey@wsj.com](mailto:dionne.searcey@wsj.com) and John Carreyrou at [john.carreyrou@wsj.com](mailto:john.carreyrou@wsj.com)

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