

Environmental damage 'a creeping catastrophe'

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Long after murky water is pumped out of New Orleans and debris is cleared from the Gulf Coast, efforts to recover from Hurricane Katrina will be hampered by the soggy, potentially toxic mess left behind.

The longer floodwaters are trapped in New Orleans, experts said, the more likely the city will be contaminated with industrial compounds, sewage and household chemicals. Draining the water could take months, leading some researchers and government officials to conclude it could take years for the region to recover.

One called the situation "a creeping catastrophe."

The rescue effort has so overwhelmed local, state and federal authorities that it likely will take days, if not weeks, to assess the environmental damage and what it will take to restore basic services that people normally take for granted, such as drinking water and sewage treatment.

For now, environmental crews have been enlisted in the effort to move desperate residents to safety and shelter.

"This is the worst natural disaster I have ever seen and the worst our agency and government and people have had to face," Stephen Johnson, administrator of the U.S. Environmental Protection Agency, said in an interview. "It's catastrophic."

Among the questions are how and where to dispose of uprooted trees, shattered buildings and other debris floating down historic streets and covering what's left of once-stately neighborhoods. After the flood-control plumbing is fixed and the city is pumped dry, officials say many buildings will be a complete loss, too saturated to repair.

"It's worse than it looks on TV," said Rodney Mallett, spokesman for the Louisiana Department of Environmental Quality. "We're trying to figure out just where we're going to find the landfill space to get rid of all of this stuff."

Early reports suggest the storm mostly spared the massive complex of chemical plants and refineries to the south and east of New Orleans. Some forecasters had predicted that if the region's large refineries and industrial plants sustained a direct hit from Katrina, breaches in large holding tanks could spew enough chemicals to turn some flooded areas into toxic waste sites.

Federal and state environmental officials continue to survey the region using a plane and a helicopter equipped with sensors that can detect spills or airborne releases of chemicals.

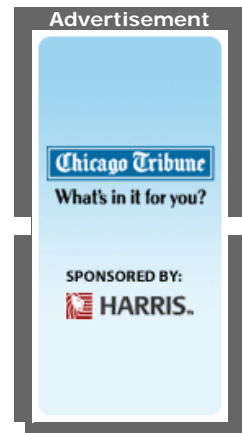
Officials are investigating a huge oil spill near two storage tanks on the Mississippi River downstream from New Orleans. A spokeswoman for the state Department of Environmental Quality said the tanks may hold as many as 80,000 barrels each.

The head of the federal Centers for Disease Control and Prevention told The Associated Press on Sunday that her biggest concerns are tetanus and childhood diseases. "Tetanus is something we'd be especially concerned about," said Dr. Julie Gerberding.

Even before the storm hit, many of the region's waterways were among the dirtiest in the nation. Louisiana ranks fourth in the nation for releases of toxic chemicals into rivers and streams, and it leads the nation in releases of chemicals that persist in the environment and build up in the human body, according to government data.

In the short term, the sheer volume of water should dilute any chemicals that leak into New Orleans. But experts say the city could face long-term problems from contaminated sediment left behind once the floodwaters are pumped away.

"There are going to be concentrations that could turn some areas into brownfields," said Thomas La Point, director of the Institute of Applied Sciences at the University of North Texas, referring to a term used to describe polluted industrial sites.



Some neighborhoods could be so contaminated that they would be unfit for building houses, he said.

Industrial waste is certain to make cleanup efforts more difficult, La Point said. So are the many cans of paints, solvents, fertilizers and pesticides stewing in flooded garages and basements. If the chemicals haven't already leaked into floodwaters, La Point said, household containers soon will rust in the warm, brackish floodwaters inundating New Orleans.

"This is a creeping catastrophe," he said. "We thought they had missed the big shot, but they could be facing very serious problems for years to come."

To speed efforts to pump floodwaters back into Lake Pontchartrain and the Mississippi River, the EPA is waiving the need for Clean Water Act permits. Some of the toxic muck will end up floating downstream or settling to the lake and river bottom.

Katrina also apparently wiped out some of what was left of the barrier islands in the Gulf of Mexico that once provided a natural defense to hurricanes. The rapid loss of marshes, islands and wetlands in the region from development and environmental degradation has led some researchers to speculate that future storms could be even more destructive.

At this point, emergency crews are concentrating on evacuating New Orleans and making sure that people aren't exposed to disease-causing bacteria and sewage. Boil water orders are in effect throughout the region.

Efforts to restore broken sewage treatment plants and drinking water systems can't start until the floodwaters are pumped away. So far nobody is willing to estimate how long it will take to purge, disinfect and test hundreds of drinking water systems across the Gulf Coast.

"They've got to get that water pumped out of there first," said Philip Bedient, a flood expert at Rice University in Houston.

Parts of the United States are flooded every year. What makes New Orleans unique, Bedient said, is that it is a low-lying city with no natural drainage. When Houston was swamped by Tropical Storm Allison in 2001, about 10,000 homes and buildings in the city were flooded. But the water quickly drained away after the storm passed.

The closest disaster to Katrina that Bedient and others could recall was the Mississippi River flood in 1993, which socked several cities in the Midwest and overwhelmed the water treatment plant in Des Moines.

But the damage from Katrina likely will be far worse, government officials and researchers quickly noted. Des Moines, for instance, had clean water flowing to household taps just 19 days after the 1993 flood.

"Nothing can compare to what we're seeing in New Orleans," said Randy Beavers, assistant director of the Des Moines Water Works. "At some point they'll have potable water again, but it will be a long time before anybody is in a building where they can use it."

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