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## Hurricane Katrina Decision Highlights Liability for Decaying Infrastructure

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ENVIRONMENTAL LAW

Expert Analysis

## Hurricane Katrina Decision Highlights Liability for Decaying Infrastructure

**A** March 2, 2012, decision from the U.S. Court of Appeals for the Fifth Circuit, little noticed outside of New Orleans, has broad implications for the liability of federal agencies for injuries caused by the decay or obsolescence of infrastructure due to erosion, sea level rise, and other ongoing conditions, whether of natural or human origin. Less directly, the decision also affects the liability of state and municipal governments, and even private entities in charge of built structures.

This article describes the underlying facts, the decision, and its implications. It also considers how governments and private parties can, to a limited extent, protect themselves from this liability.

### Mississippi River Gulf Outlet

The saga can be traced to 1956, when Congress authorized the U.S. Army Corps of Engineers to build a 76-mile channel to provide a shorter shipping route between the Gulf of Mexico and New Orleans. The channel became known as the Mississippi River Gulf Outlet or MRGO (pronounced Mr. Go).<sup>1</sup> It was cut through virgin coastal wetlands and into “fat clay,” a form of very soft soil. The channel’s designers considered and rejected lining its banks with riprap (large rocks) or other armor.

In 1965, Hurricane Betsy hit New Orleans and caused massive damage. Injured parties claimed that the MRGO—which was then nearly complete—had become a conduit that allowed the storm surge to flood eastern New Orleans and St. Bernard Parish, the county immediately southeast of New Orleans.<sup>2</sup> The channel was initially designed to be 500 feet wide, but over time the heavy traffic from ocean-going vessels caused so much turbulence that the banks continually eroded and the channel required constant dredging. The Corps finally armored the banks in the 1980s, but by then MRGO had bloated to more than triple its design width. This not only meant that it could carry much more water, but it also had more fetch (the width of open water that wind can act upon), allowing a more forceful wave attack, and the saltwater it carried killed much of the wetlands vegetation that had tamed the waters.

When Hurricane Katrina struck in 2005—just a week shy of the 40th anniversary of Hurricane

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Betsy—the storm surge roared up MRGO again, but this time it gathered so much force that it wiped out levees and floodwalls that in the meantime had been built along the way, devastating parts of New Orleans and St. Bernard Parish. (The hurricane also caused other levees to breach for other reasons.)

Over 400 plaintiffs sued in the U.S. District Court for the Eastern District of Louisiana to recover for Katrina-related damages. Seven of these plaintiffs (the “Robinson plaintiffs”) went to trial. Judge Stanwood R. Duval Jr. held a 19-day trial and on Nov. 18, 2009, issued a 156-page decision.<sup>3</sup> It was a blistering account of what he found was the “gross negligence” of the Corps in its operation of MRGO, and it awarded just under \$720,000 to five plaintiffs. It left open the possibility of trials by hundreds of additional plaintiffs and a final liability to the Corps of hundreds of millions of dollars.<sup>4</sup>

In order to prevail, the plaintiffs needed to overcome three major legal obstacles. Plaintiffs won on all three counts.

The Corps appealed. The Fifth Circuit issued its decision on March 2, 2012.<sup>5</sup> It found that the district court’s “careful attention to the law and even more cautious scrutiny of complex facts allow us to uphold its expansive ruling in full,” with one small exception.

In order to prevail, the plaintiffs needed to overcome three major legal obstacles: a defense under the Flood Control Act (FCA); the discretionary-function exception to the Federal Tort Claims Act (FTCA); and the argument that the Corps was not negligent. Plaintiffs won on all three counts. The first is of narrow application; not so the second and third.

### Flood Control Act

The FCA was enacted in 1928 in response to the catastrophic Mississippi River Valley flood of 1927.<sup>6</sup> The flood control program it launched was the largest public works project undertaken up to that time in the United States.<sup>7</sup> The FCA also pro-

vided in Section 702c that “[n]o liability of any kind shall attach to or rest upon the United States for any damage from or by floods or flood waters at any place.”<sup>8</sup> The Supreme Court has interpreted the scope of this exemption as determined not “by the character of the federal project or the purposes it serves, but by the character of the waters that cause the relevant damage and the purposes behind their release.”<sup>9</sup>

In the Hurricane Katrina case, the Fifth Circuit rejected the Corps’ defense that its decision to dredge MRGO for many years instead of armor-ing it constituted flood-control activity that qualified it for Section 702c immunity. The court also found that MRGO was not so interconnected with a separate flood control project in the vicinity as to make it part of that project. It concluded, “the flood waters that destroyed the plaintiffs’ property were not released by any flood-control activity or negligence therein.”

### Sovereign Immunity

The lawsuit was brought under the Federal Tort Claims Act, which is a limited waiver of the federal government’s sovereign immunity. This immunity is subject to the discretionary-function exception (DFE). The Corps vigorously argued that its decisions with respect to the MRGO enjoyed this exception.

The Fifth Circuit was not persuaded. It declared “the government enjoys immunity only where its discretionary judgments are susceptible to public-policy analysis. The key judgment made by the Corps, however, involved only the (mis-)application of objective scientific principles and not any public-policy considerations: The Corps misjudged the hydrological risk posed by the erosion of MRGO’s banks.”

Citing the Supreme Court’s *Berkovitz-Gaubert* test,<sup>10</sup> the appeals court stated, “the relevant question is whether the discretionary judgment at issue involved the application of objective technical principles or of policy considerations,” and that if the discretion is “grounded in the policy of the regulatory regime,” then “the decision is immune under the DFE, even if it also entails application of scientific principles. If it involves only the application of scientific principles, it is not immune.”

The Fifth Circuit found “ample record evidence indicating that policy placed no role in the government’s decision to delay armor-ing MRGO.” Rather, in the words of an amicus brief approvingly quoted by the Fifth Circuit, “the Corps labored under the mistaken scientific belief that the MRGO would not

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increase storm-surge risks. . . . And because the Corps disbelieved the scientific evidence of the MRGO's storm-surge effect, it did nothing to protect against it."

The Fifth Circuit said the plaintiffs "have mustered enough record evidence to demonstrate that the Corps' negligent decisions rested on applications of objective scientific principles and were not susceptible to policy considerations. At points where it could have mattered, the Corps did not identify MRGO's ability to aggravate the effect of a major hurricane. This is not a situation in which the Corps recognized a risk and chose not to mitigate it out of concern for some other public policy (e.g., navigation or commerce); it flatly failed to gauge the risk. Accordingly, the DFE is inapplicable. . . ."

Most states have their own rough equivalent of the FTCA and its DFE. Thus, this analysis would be relevant to state as well as federal liability. Therefore if a state ignores scientific evidence that its infrastructure is vulnerable to a known phenomenon such as sea level rise, it may be found to have waived its sovereign immunity.

### Environmental Impact

The National Environmental Policy Act (NEPA) enhanced the liability of the Corps. NEPA requires federal agencies to prepare environmental impact statements (EISs) for major federal actions that may have a significant impact on the environment. If the federal action has not been completed or is continuing, an agency may have to undertake a supplemental EIS if after the initial EIS there are "significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."<sup>11</sup>

Here, the Corps had issued an EIS for flood control activities back in 1976. Duval found it to be fatally flawed. More importantly, despite the accumulation of evidence that conditions were significantly changing (such as the degradation of MRGO from the sloughing of its banks), the Corps never prepared a supplemental EIS to inform its ongoing maintenance and operation of the channel.

Though the Fifth Circuit discussed NEPA only briefly, Duval analyzed it in detail. He found that an agency bears a continuing obligation to update its environmental evaluation in response to significant new circumstances, and that failure to do so removes the shield of the DFE. Here, Duval stated that "the Corps itself internally recognized that the MRGO was causing significant changes in the environment—that is the disappearance of the adjacent wetlands to the MRGO and the effects thereof on the human environment—which triggered reporting requirements. The Corps cannot ignore the dictates of NEPA and then claim the protection of the discretionary exception based on its own apparent self-deception."

Moreover, "the Court finds that there is the causal connection between the Corps' failures to file the proper NEPA reports and the harm which plaintiffs incurred. The loss of wetlands and widening of the channel brought about by the operation and maintenance of the MRGO clearly were a substantial cause of plaintiffs' injury. Had the Corps adequately reported under the NEPA standards, their activities and the effect on the human environment would have had a full airing."

Thus, this case supports the proposition that federal agencies that operate and maintain infrastructure or buildings have an ongoing obligation under NEPA to consider adapting to a changing envi-

ronment, or else they may be liable for resulting damages. Several states have laws that are equivalent to NEPA, so a similar obligation may apply there to state agencies and, in some states, municipalities as well.

### Negligence

In FTCA cases, the tort law of the state where the incident occurs supplies the substantive rules for determining whether there has been negligence.<sup>12</sup> Duval found, and the Court of Appeals affirmed, that the Corps was negligent under the Louisiana Civil Code.

State negligence rules vary, so each case—whether in federal court under the FTCA, or in state court—will need to be analyzed under the law of the particular state.

As noted, the FTCA is an exception to sovereign immunity, and the DFE is a limitation to that exception. None of this applies to the liability of a private entity. Thus, if a privately owned structure does not withstand a disaster of natural or human origin, a court considering liability for the loss will look at whether its construction, operation or maintenance involved negligence under the law of the state. The MRGO litigation is an example of how a property manager was found liable for ignoring scientific evidence of perils it faced; the fact that the property manager was a federal agency does not diminish the case's relevance to a negligence analysis involving private parties. There is no discretionary function exemption for private liability.

The Fifth Circuit said the plaintiffs "have mustered enough record evidence to demonstrate that the Corps' negligent decisions rested on applications of objective scientific principles and were not susceptible to policy considerations. . . ."

Indeed, Duval (referring to a levee that was breached during Hurricane Katrina) stated, "Without question, if the facts were that a non-governmental third-party had caused the same degradation of the Reach 2 Levee, which damage this Court is convinced was a substantial factor in the drowning of St. Bernard Parish, the Department of Justice would be seeking remuneration for the outlays that the Government has made in the reconstruction of the Reach 2 Levee and the expenses incurred in rebuilding the metropolitan New Orleans area."

### Protections From Liability

Had the Corps acknowledged the risks involved in its mode of operating MRGO, but explicitly justified not taking precautions because of public policy considerations, perhaps the Corps might have been able to use the DFE as a shield. For example, the Corps could have said that armoring the banks would not have been worth the cost, or would have interfered with the navigational function of the channel. Likewise, a federal agency might today, for example, declare after study that a facility for which it is responsible (such as a veterans hospital) may be vulnerable to increased coastal flooding, but that the cost of flood protection exceeds the benefit. This public policy decision could be found within the agency's discretionary power, invoking

the DFE. An after-the-fact justification is much less effective.

In a similar manner, private liability that is based on failure to disclose could be obviated at least in part by the issuance of a disclosure. But such a disclosure can itself have collateral consequences, of course. If a building owner says that the walls may collapse in a heavy but plausible storm, the owner's ability to obtain (or keep) its mortgage or its insurance policy may be seriously impaired.

### Foreseeability

An important basis for the liability of the Corps for MRGO was that scientific information was available to the Corps that revealed at least some of the dangers that were created by the failure to armor the banks.

Scientific information is now available about many emerging perils.<sup>13</sup> In this country the most authoritative source for many of these is the U.S. Global Change Research Program (USGCRP), which was mandated by Congress in the Global Change Research Act of 1990<sup>14</sup> as "a comprehensive and integrated United States research program which will assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of global change." The USGCRP prepares and periodically updates information, on a regional basis, of anticipated changes in patterns of flooding, drought, snowfall, wildfire, and other conditions. Conditions anticipated by the USGCRP would seem, under any analysis, to be foreseeable.<sup>15</sup>



1. The operations of the MRGO were described in John McPhee, "The Control of Nature: Atchafalaya," *The New Yorker*, Feb. 23, 1987.

2. *Graci v. United States*, 456 F.2d 20 (5th Cir. 1971). See also Edward P. Richards, "The Hurricane Katrina Levee Breach Litigation: Getting the First Geoeengineering Liability Case Right," 160 U. Penn. L. Rev. PENNumbra 267 (2012).

3. *In re Katrina Canal Breaches Consolidated Litigation (Robinson)*, 647 F. Supp.2d 644 (E.D. La. 2009).

4. This is completely separate from the litigation that has (so far unsuccessfully) sought to hold certain emitters of greenhouse gases liable for a portion of the damages caused by Hurricane Katrina. *Comer v. Murphy Oil USA*, Index No. 1:11CV220-LG-RHW (SD MS, March 20, 2012), appeal pending.

5. *In re Katrina Canal Breaches Consolidated Litigation (Robinson)*, 673 F.3d 381 (5th Cir. 2012).

6. See John M. Barry, "Rising Tide: The Great Mississippi Flood of 1927 and How It Changed America," (1997).

7. *United States v. James*, 478 U.S. 597, 606 (1986).

8. 33 U.S.C. §702c.

9. *Central Greene v. United States*, 531 U.S. 425, 434 (2001).

10. *United States v. Gaubert*, 499 U.S. 315 (1991); *Berkovitz v. United States*, 486 U.S. 531 (1988).

11. 40 CFR §1502.9(c)(1)(ii).

12. *Molozof v. United States*, 502 U.S. 301 (1992).

13. See also James Wilkins, "Is Sea Level Rise 'Foreseeable'? Does It Matter?" 26 J. Land Use & Envtl. L. 437 (2011).

14. P.L. 101-606. See also *Center for Biological Diversity v. Brennan*, 2007 U.S. Dist. Lexis 65456 (N.D. CA 2007) (Global Change Research Act obligates federal government to carry out USGCRP).

15. New studies are frequently released with projections of future environmental conditions at a regional or local level. One useful source to consult on an ongoing basis is the CZMA Climate Change and Coastal Hazards E-News Update from the National Oceanic and Atmospheric Administration, <http://coastalmanagement.noaa.gov/news/climatenewsletter.html>. For one prominent recent example, see Ben Strauss, "Surging Seas: Sea level rise, storms, & global warming's threat to the U.S. coast" (Climate Central, March 14, 2012), <http://sealevel.climatecentral.org/research/reports/surging-seas/>.