

Independent panel report on Hurricane Katrina

Cost-cutting and poor planning behind New Orleans levee failures

By Joe Kay
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The Independent Levee Investigation Team released a draft report Monday on the failure of the New Orleans flood protection systems during Hurricane Katrina, which struck Louisiana and Mississippi in the southern US on August 29, 2005. The report is an indictment of the American political and social system, concluding that much of the damage and loss of life caused by the hurricane could have been prevented with better planning and more resources.

Ray Seed, a geotechnical engineer at the University of California-Berkeley and head of the team, said at a press conference in New Orleans on Sunday, “People didn’t die here because the storm was bigger than the system could handle...People died because mistakes were made and because safety was exchanged for efficiency and reduced costs.”

“New Orleans flooded not so much because there was a hurricane, but because of human error, poor decisions and judgments, and failed policies,” Seed said.

The investigation team included 36 engineers, scientists and other experts from universities and private firms. Some of the funding from the panel came from the National Science Foundation, a government agency. A final version of the over 700-page report is due out by the end of June, including several additional appendices.

The conclusions of the panel differ significantly from another investigation carried out by the Army Corps of Engineers, which concluded that much of the flooding resulted from the fact that the levees were overpowered by a hurricane they were not designed to withstand. In contrast, the independent panel concludes that while the overtopping of the levees was one factor, more significant were poor construction and maintenance, and inadequate funds.

The difference is significant. Not only was New Orleans potentially left helpless in the face of a major hurricane—a Category 4 or 5 storm—that the levee systems were never designed to withstand, the city was also vulnerable to a less powerful hurricane because the levee system in place

suffered from several major flaws. According to the Independent Levee Investigation Team, the Hurricane Katrina disaster fell into the latter category. If Katrina had been a more powerful storm when it struck land, or if it had struck the city head-on, the consequences would have been even more devastating than they were.

Though it suffers from deficiencies when it comes to an explanation of the historical and political background to the Hurricane Katrina disaster, the report is well worth examining in some detail in order to understand the events leading up to the flooding of New Orleans. Among the causes of the levee failures cited by the panel were the use of poor materials, the construction of levees on unstable soils and the failure to allocate funds necessary to complete and maintain parts of the levee system.

For example, a section of the levee system protecting the St. Bernard Parish was incomplete when the hurricane struck, and “as a result large portions of this critical levee frontage were several feet below final design grade,” the panel found. In other words, the levee system was not complete to specifications, in spite of decades of warnings that a major hurricane would have devastating consequences for the city.

Approximately 30 percent of the official deaths from Hurricane Katrina in the New Orleans area occurred in St. Bernard Parish.

Some sections of the levee in this and another area (protecting the New Orleans East area) were constructed using “highly erodible sand and lightweight shell sand fill,” according to the report, severely undermining the levee’s structural integrity. These materials were taken from soil excavated in nearby locations, apparently to reduce costs.

The report asserts that the “catastrophic erosion” of these levees was avoidable if better materials had been used and the levees completed in a timely manner. While some overtopping of levees would still have occurred, the resulting damage would have been substantially reduced.

Further breaches of the levee system occurred near the Lower Ninth Ward area, one of the poorest sections of the city and an area that experienced some of the most severe damage, flooding and loss of life. While overtopping of the levees occurred here, the panel again concluded that this was not the principal problem, pointing instead to “underseepage”—the flow of water beneath the levees, eroding the soil and undermining the stability of the entire foundation. These underseepage flows resulted from the fact that sheetpiles, which are driven into the ground to prevent water from passing beneath the levees, were too shallow to perform their intended function.

The panel found that the breaches near the Lower Ninth Ward and along St. Bernard Parish actually occurred before the storm surge (the elevation of the surrounding waters as a result of the hurricane) peaked. This meant that when the surge did reach its peak, these areas were completely unprotected. Water levels in the Ninth Ward reached as high as 18 feet above ground level, completely submerging many of the one-story homes in the working class neighborhood.

Another area of the levee system was compromised because floodgates had not been installed to prevent storm surges on Lake Pontchartrain, on the northern side of the city, from raising the water levels in adjacent drainage canals. The report blamed the failure to construct these floodgates on the “dysfunctional interaction” among local government bodies.

The authors note that several of the breaches were caused by common factors: inadequate materials, underseepage and stability failures of foundation soils. The frequency of these failures suggests that the problems may be more widespread.

The panel concludes, therefore, that the catastrophic damage caused by Hurricane Katrina was not inevitable, much less an ‘act of God.’ It points to several different factors behind the failure to adequately secure the city. These include inadequate coordination and integration of local and federal agencies responsible for flood protection.

The report also notes that for many years the Army Corps of Engineers, which oversees many infrastructural projects such as the levee system around New Orleans, “has been subject to extreme pressures at the federal and state levels to do more with less; do their projects better, faster, and cheaper; and improve project management...Our study indicates that as in the case of NASA [a reference to the events leading up to the explosion of the Space Shuttle Columbia in February 2003]...technical and engineering superiority and oversight was compromised in attempts to respond to all of these constraints and pressures.”

It was well known that New Orleans would be flooded in the event of a major hurricane. Yet the levee system was not adequately maintained, let alone expanded, and procedures

to minimize the loss of life and property damage were not put in place. What explains this? The report of the independent panel fails to examine in any detail the historical and social causes of the disaster. Their ultimate source lies in the extraordinary misallocation of social resources, in which billions are spent on wars and tax cuts, while basic social needs are ignored or underfunded.

During the past three decades in particular, the American ruling class has waged a relentless attack on government regulations and social spending. Social resources have been plundered in the interests of a small layer of the population, which has accumulated unprecedented and unimaginable sums of wealth. The protection of an American city has been, under these conditions, a minor issue for the corporate elite.

More than anything else, Hurricane Katrina exposed the fundamental conflict between the basic needs of society and a system in which all decisions are made in the interests of a financial oligarchy.

According to recent figures, Hurricane Katrina led to the deaths of 1,747 people, including 281 individuals who died after being displaced but were considered to have perished from causes associated with the hurricane. Several hundred people are still listed as “missing.” Much of New Orleans was destroyed, with \$100 to \$150 billion in damages to that city alone.

This destruction was caused not only by the failure to maintain the levee system, but also by the indifferent response to the disaster by the Bush administration, which provided no resources for days to those trapped in the city. Nearly nine months after this event, no one has been held responsible for this event, a product of what can only be described as criminal negligence.

The full report of the Independent Levee Investigation Team can be accessed at: http://www.ce.berkeley.edu/~new_orleans/

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