Houston: Murderous Underfunding of Infrastructure Killed Flood Victims

by Richard Freeman

For a full week, starting June 5, tropical storm Allison stalled over the city of Houston, Texas, and parts of surrounding Harris County, drenching the area with a huge volume of rainwater, which resulted in flooding throughout Houston. The damage was enormous to America's fourth most populous city (1.82 million people). Between 21 and 25 people have died; on June 14, Mayor Lee Brown estimated the property damage to be $2 billion, the highest in Houston history—and it could go higher. Portions of the city were paralyzed.

Medical service was closed down at several hospitals, and emergency rooms were still closed at two hospitals, as of June 14; the city's downtown Medical Center, an internationally important complex of research institutions that directs some of the most advanced research in America on cancer, heart disease, and AIDS, saw years' worth of scientific work wiped out; and the library of the city's Symphony Orchestra, musical scores and manuscripts, was floating in water, and largely destroyed.

Losses in the scientific and some other fields are incalculable.

However, had the proper infrastructure and accompanying policies been in place, *it is estimated that one-half to three-quarters of the storm's damage could have been prevented*.

Allison's most intense phase occurred June 8-10, when it loosed most of its rainfall—for example, between 18 and 34 inches on sections of downtown Houston. The downtown area was the hardest-hit by the storm. Although this is a huge amount of rain—in some places, it reached 100-year flood levels—it need not have produced such a terrible disaster. Appropriate infrastructure and policy would have prevented that. Houston's flood control/drainage infrastructure consists of two parts: the city's series of six major bayous, and its system of storm drainage sewers. Each part of this infrastructure is completely inadequate; in some instances, grossly so. Under Allison's lashing, the inadequacy of each of the two parts of the flood-control infrastructure, reinforced the inadequacy of the other, producing a breakdown in the overall system. The result? Heavy rainfall became uncontrolled flooding.

But how could there be such sub-standard flood-control infrastructure in Houston, which is located on the Gulf of Mexico, where tropical storms and hurricanes of varying intensity strike every few years?

In Houston, the policy-making elite that *EIR* has identified as "Southern Strategy, Inc."—the pro-Confederate network assembled by the British oligarchy and made up of wealthy families; financiers; law firms; dirty intelligence operations like Schlumberger Co.; and oil and gas companies—has for several decades imposed a policy matrix of deregulation, no zoning, and only minimal construction of infrastructure. This is the principal reason for most of the damage attributed to Allison. Houston is an ugly example of sprawl, rambling over 598 square miles (1,549 square kilometers), a place where the Southern Strategy "free enterprise" ideologues have prevented any rational city-planning—one of whose elements is zoning regulation (Houston specifically forbids zoning, which controls the use of land, and divides a city into areas for commercial, industrial, residential, and other development). For kindred reasons, the Southern Strategy network blocked the construction of any intra-city rail transit system, despite the fact that the sprawl means long commuting distances for inhabitants.

Houston is also a power center for the national aims of Southern Strategy, Inc.; for example, installing the mentally

FIGURE 1
Houston

Houston's location on the Gulf of Mexico makes it obvious that the city has always required a robust system of flood control and sewage infrastructure—yet, Tropical Storm Allison demonstrated, that this center of the "privatizers and deregulators" has refused to build one.

unbalanced George W. Bush in the Presidency. Nor is it an accident that Houston is the headquarters for Enron, Reliant, Dynegy, El Paso, and Shell (U.S. headquarters), the energy bandits that have imposed energy deregulation upon California and the United States, and thus destroyed state and national economies.

For decades, the oligarchical networks of Houston and of Texas, and their mouthpieces in the U.S. Congress, such as Sen. Phil Gramm and Rep. Tom DeLay, have arrogantly promoted this policy—of deregulation/no regulation, minimal government-built infrastructure, and free trade—as being the epitome of success. They claimed that this approach had produced unparalleled prosperity.

Now storm waters have flattened Houston's no regulation/no infrastructure "success model." Natural law has overpowered the fantasies of the likes of Gramm and DeLay.

The Bayou System

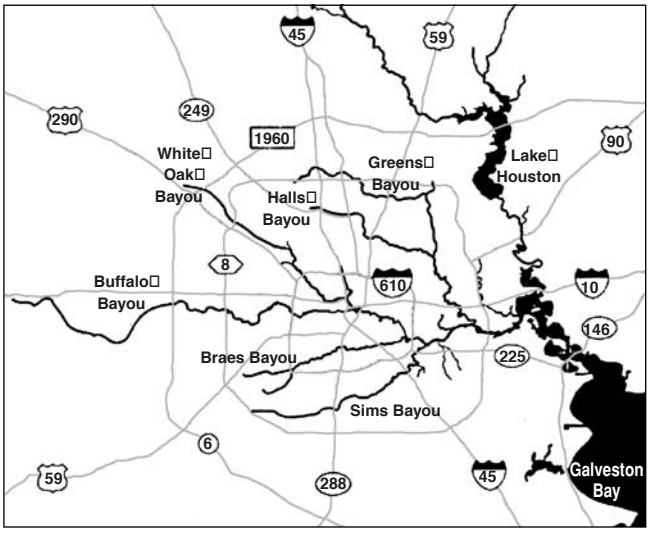
The effect of tropical storm Allison raises serious questions about the two major parts of Houston's storm flood-control/drainage system: the series of bayous that runs throughout the city, and the system of storm sewers in the city. How should each part of the system operate when functioning properly, and what was done—or not done—to raise each part to an adequate level of functioning? *EIR* has investigated each of the two parts of the system.

During the first third of the 20th Century, the U.S. Army Corps of Engineers started flood-control work in the Houston area and Harris County. In 1935, the Harris County Flood Control District (HCFCD) was established to be the local partner to the Army Corps in flood-control work. In the 1940s, the Corps, working with the HCFCD, built the Addicks Dam and Reservoir and the Barker Dam and Reservoir inside the city of Houston, 17 miles north of the downtown. The Addicks and Barker Dams regulate the flow of water down to the Buffalo Bayou, and thus prevent its overflowing (Buffalo Bayou, one of the six bayous in downtown Houston, continues eastward to become the Houston Ship Channel).

The six major bayous are: Greens, Halls, White Oak, Buffalo, Braes, and Sims (see map). A bayou is normally a marshy inlet or outlet of a lake or river. But over the years, man-made changes have changed the contours of Houston's bayous. They are now channels that vary in depth from only 15 feet to 30 feet or more. The Army Corps and the HCFCD have plans and blueprints for future changes in the six bayous, of the sort they had made in the past to deal with flooding. These changes include building levees; channelizing the bayous, which includes deepening and/or widening them and putting concrete bottoms on them (which eliminates impediment to water flow); building "detention basins," medium-sized reservoirs to receive the overflow of the bayous during storms; and so forth.

But these improvements cost money; the costs of the projects are normally split 50-50 between the Army Corps and the HCFCD. And, because they cost money, these improvements have been blocked in Houston and in the U.S. Congress by the mouthpieces of Southern Strategy, Inc., who claim that such improvements would "unbalance the budget." An engineer who worked for the HCFCD for more than 15 years, told *EIR* on June 13, "Economics [cost-cutting] prevents these changes from being made. For example, the entire capital projects budget of the HCFCD [for flood control] is only $30 million per year." This is minuscule. This engineer revealed that the HCFCD has a plan all ready to go, to considerably upgrade the Braes Bayou—it would cost $200-$300 million, but it has not been implemented, because money has not been allocated. During Allison, the cresting and overtopping of Braes Bayou caused the destruction of Houston's Medical Center (see below).

FIGURE 2
The Flooding of Houston's Bayous



Pipes Over 100 Years Old

The second part Houston's flood-control system is its network of storm sewers, and smaller and larger underground tunnels which capture the flood waters. An engineer at the Houston Department of Public Works and Engineering, which has responsibility for the storm sewer system, reported that "some of the pipes in the Houston storm sewer system have been there since the Allen brothers founded Houston [in 1836]. They need to be replaced, and some to be made larger." In Houston, there are sewers that can handle only a "one-year flood" (a very low level, essentially the average annual rainfall). In effect, a "one-year flood" means the chance is ten out of ten, that that much rain will fall during any given year. Most of the Houston sewers can handle a two-year flood, but very few can handle a five-year or ten-year flood (in effect, of course, the last means that there is a one in ten chance of such a level of rainfall during the course of a year). Very few parts of Houston's storm sewer system can handle a 25-year

Braes Bayou, one of Houston's shallow bayous which flooded the city; and Herman Memorial Hospital (left), where four patients died during the emergency evacuation, caused by failure of the hospital's electrical power.

flood, let alone a 100-year flood. The city of Houston has a $1.3 billion plan to upgrade some of its storm sewer system, but that wouldn't do enough, and as of this writing, it has not been approved.

The crucial point is that the storm sewer system is designed to flow into the six major bayous. One engineer explained, "Think of a bathtub that has a tube that permits water to go into it. When the bathtub is full, the water in the tube can't go into the bathtub. When the bayous are full of water, the water from the storm sewer system can't go into the bayous, and it backs up into the streets." Thus, the malfunctioning of the parts of the system—the bayous and the storm sewers—is self-reinforcing, and the result is disaster.

Accoutant's Mentality Cost Lives

Much of the enormous damage caused by the lack of adequate flood-control infrastructure could have been prevented—except that the ideologues of Southern Strategy, Inc. opposed this FDR-style expenditure on government-initiated infrastructure, on the grounds that "the costs are too great." What their small-minded accountant's mentality fails to grasp, is the fact that the cost of *not* building government infrastructure is far, far greater. The impact of Allison proves it:

- The city of Houston has estimated the number of deaths from this disaster at 21-25. One woman trying to retrieve her car before the flood rose, drowned in the elevator of a downtown office-building when the elevator lost power on the basement level, and gradually filled up with water. However, in addition, the June 13 *Houston Chronicle* reported that over the weekend, four critically ill patients at Memorial Hermann Hospital—three adults and one infant—died between the morning of Saturday, June 9, when the flooding caused the hospital's power system to shut down, and the evening of Sunday, June 10—during the period in which the hospital was attempting to evacuate all 540 of its patients. This was the first time since 1925 that Memorial Hermann had to be totally shut down. Memorial Hermann authorities dispute that the evacuation caused the deaths of the critically ill patients.

Further, as of June 14, the emergency rooms were still closed at Houston's Methodist Hospital and St. Luke's Episcopal Hospital, due to lack of power.

- On June 14, Mayor Lee Brown estimated the property damage to be $2 billion, saying it could go higher. Affected were over 30,000 homes and at least 526 commercial properties.
- Years of advanced scientific work was lost, with untold consequences for people all over the world. The Texas Medical Center is a complex of medical research institutions, which were ravaged by the overflowing of the Braes Bayou. At the Baylor College of Medicine, years of research work was wiped out, including 30,000 specially bred lab animals, most of them mice. These specially bred mice often take years to perfect, in order to breed specific viruses in them and their offspring—and these mice can be worth thousands of dollars apiece. The doctors were working on new treatments for cancer and heart disease. Also lost at Baylor and at the University of Texas at Houston Hospital, were special cultures, destroyed when the refrigeration went off. At facilities, "meticulously kept data were fried into electronic oblivion," and electron microscopes and radiation machines were destroyed. One doctor called the loss "incalculable."
- At the culture complex in town, including Jesse Jones Auditorium and nearby Wortham Theater Center, the flooding ravaged the Houston Symphony Orchestra, the ballet, etc. One double bass, valued at $100,000, was trapped in water. All the scores of the orchestra's musical library were floating in floodwater. HSO violinist Christine Pastorek stressed that the thousands of scores from past performances and other manuscripts in the library, had been "the lifeblood of the orchestra."