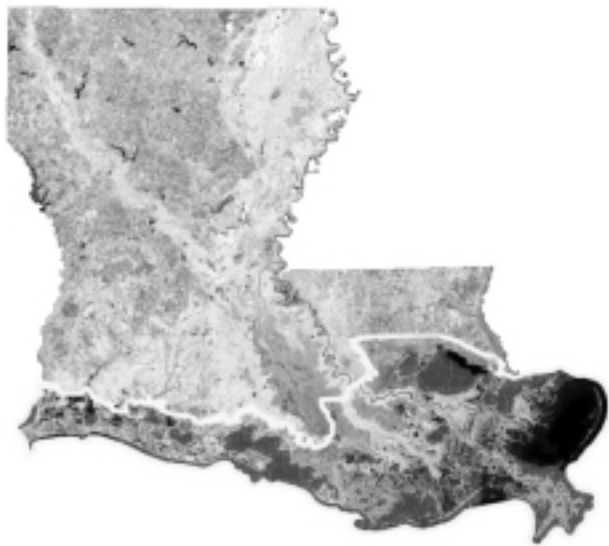


Neglected Flood-Control Plans Now Must Be Done

by Richard Freeman

By 1998, a detailed plan, Coast 2050, had been drawn up to deal with the infrastructure needs of the Louisiana Delta, including plans to shunt silt and sediment to restore and rebuild the coastal region, to act as a natural storm-breaker system; and to build a new port, 30 miles south of the city.



U.S. Army Corps of Engineers

Coast 2050 proposes to rebuild and restore the 20,000 square-mile zone of Louisiana coastal area. It can help as a natural barrier against storms.

The pricetag was \$14 billion. Overlapping this project, plans were being formulated to build an integrated flood-control system that would defend New Orleans against Category 5 hurricanes. However, only a pittance was allocated in funding after George W. Bush came into office, and the funding for the Army Corp of Engineers was systematically slashed in every annual Bush budget.

As New Orleans gathers thousands of its citizens' dead bodies, and evacuates the city for a second time because its contaminated water system and flood waters are communicating disease, the reality asserts itself that although Hurricane Katrina was a powerful natural force, catastrophic human policies made it a human catastrophe of untold dimensions. The Bush-Cheney administration cut Army Corps allocations for the New Orleans district, treating the projects with monetarist madness as if they were "pork-barrels," while seeking to route every spare nickel into bailing out the collapsing world financial system and financing the Iraq war. Bush-Cheney gave an extreme "free-market madness" characteristic to a 35-year period, in which City of London-Wall Street policy gutted every form of America's water management infrastructure, from waterways, to the provision of irrigation and clean drinking water, to ports and flood control systems. The transportation, power generation, and health and hospital systems were also stripped down.

Coast 2050

A nation guided by the General Welfare principle will spend 45-50% of its annual investment on the maintenance and upgrading of hard and soft infrastructure. We have worked-out development plans for flood control and water management for New Orleans and the entire Gulf Coast region, such as Coast 2050. They could be critical parts of recon-

struction plans for the whole nation, proposed by Lyndon LaRouche in his Sept. 3 webcast, and echoed in Sen. Harry Reid's Sept. 7 call for a new Marshall Plan.

A task force of people from every level of government issued Coast 2050, as a 161-page report in 1998. Its main objective is to restore the Mississippi River silt-fed marsh area in the delta that stretches from the Gulf of Mexico up to New Orleans' south and east (see map of flooded region in Katrina), to raise those up as a natural barrier against storm surge in severe hurricanes. Mark Fischetti, a contributing editor to *Scientific American*, who is familiar with the plan and described it in that publication in 2001, told *EIR* on Sept. 8 that some of the plan's main advocates had expanded it by 2000, adding some very useful elements. In a Sept. 5, 2005 *Houston Chronicle* article, "Flood of Regret . . . Waves of Anger: Blueprint to save New Orleans was created but never realized," Fischetti described the main elements of the enhanced plan:

"Cut several channels in the levees on the Mississippi River's southern bank (the side that doesn't abut [New Orleans]) and secure them with powerful floodgates that could be opened at certain times of the year to allow sediment and freshwater to flow down into the delta, re-establishing it.

"Build a new navigation channel from the Gulf into the Mississippi, about 40 miles south of New Orleans, so ships don't have to enter the river at its three southernmost tips 30 miles further away. For decades the Corps has dredged shipping channels along those final miles to keep them navigable, creating underwater chutes that propel river sediment out into the deep ocean. The dredging could then be stopped, the river mouth would fill in naturally, and sediment would again spill to the barrier islands, lengthening and widening them. Some planners also propose a modern port at the new access point that would replace those along the river that are too shallow to handle the huge new ships now being built worldwide.

"Erect huge seagates across the pair of narrow straits that connect the eastern edge of Lake Pontchartrain, north of the city, to the Gulf. Now, any hurricane that blows in from the south will push a wall of water through these straits into the huge lake, which in turn will threaten to overflow into the city. That is what has filled the bowl that is New Orleans this past week. But seagates at the straits can stop the wall of water from flowing in. The Netherlands has built similar gates to hold back the turbulent North Sea and they work splendidly.

"Finally, and most obviously, raise, extend and strengthen the city's existing but aging levees, canal walls, and pumping systems."

Fischetti calculated that "completing every recommended project over a decade or more would have cost an estimated \$14 billion."

Need to Restore the Coast

The prospect of building and restoring coastal wetlands and marshes must be conceived of as distinct from the ques-



U.S. Army Corps of Engineers

As part of the Army Corps' restoration projects, Louisiana coast land is here being created from dredged material.

tion of whether one is pro- or anti-environmentalist. The environment poses a legitimate question which must be approached far from the Worldwide Fund for Nature's dangerous kookery, but rather from the standpoint of science. This is a matter of real flood control.

In its natural state, the Mississippi River: a) is surrounded, especially on its lower end, by wetlands/swamps; and b) is prone to severe flooding. During the 18th Century, New Orleans residents contracted yellow fever (a viral infection, transmitted by mosquitoes): from 1817-1905, yellow fever epidemics killed 40,000 residents of New Orleans. So the swamps were drained. In 1927, the "natural" Mississippi had an enormous flood, killing 300 people and leaving 700,000 homeless along the length of the river. The Rivers and Harbor Act of 1928 authorized the Army Corps to draw up and pursue an unified flood control plan for the whole Mississippi River and tributaries. The breakthrough came in 1933, when President Franklin Roosevelt directed the Army Corps of Engineers to build a magnificent flood-control system, including levees, along the extent of the lower Mississippi, and in New Orleans.

There was an important drawback, that can be solved. During heavy rains, the "natural" Mississippi River's stream gathers and transports sediment (sand, silt, and clay) to the lower portions of the river. As the river overflows its banks, in the lower portion of the river, it deposits this sediment in the wetlands. This replaces the wetlands' sediment, which has eroded principally by the activity of the waves of storms, and longshore currents.

Under a flood-control system, the Mississippi River is transformed: It has considerably deeper river channels; the banks are higher and fortified; and the river rarely overflows its banks. The sediment, which would come into the river during heavy rains, flows clear down to the mouth of the Gulf of Mexico, and out into the ocean. The marshes which were stripped of sediment during storms, do not get replacement

(the same process affects sandbars). The freshwater wetlands and marshes subside (by 300 square miles per decade), the coast sinks, while the ocean encroaches; marsh vegetation is often killed by the incoming saline seawater. The marshes are storm-breaks: A Louisiana Department of Natural Resources study estimated that every two miles of wetlands between the Gulf and New Orleans, reduces the storm surge by half a foot.

The Coast 2050 report's first major element (above), the opening of the Mississippi River's southern bank levees with floodgates to let sediment flow out, would rebuild and restore the Louisiana coast, increasing its flood-control capacity.

The Army Corps of Engineers and environmentalists had disagreed about the approach and course of action with respect to the coast and marshes. These forces were brought together behind the "Coastal Wetlands Planning, Protection, and Restoration Act," introduced by Sen. John Breaux (D-La.) in 1990, and passed that year. The Breaux Act, gave rise to the Coast 2050 plan.

The Army Corps already had under way, the Caemarvon Freshwater Diversion pilot project, which is east of New Orleans; it is diverting sediment from a section of the Mississippi River, at certain times of the year, to rebuild a few hundreds acres of the Louisiana coast (see photo). The Corps has another, larger project of the same type, the Davis Pond Freshwater Diversion project, under way. Both are proof of principle.

However, this has been a protracted fight. As early as 1967, the Congress authorized a resolution calling for an Army Corps study to determine the "advisability of improvements or modification of existing improvements in the coastal area of Louisiana in the interest of hurricane protection, prevention of saltwater intrusion . . . [and] prevention of erosion." It has taken nearly four decades, and only two working projects are in operation, on something everyone acknowledges is extremely important. Had the coastal restoration been operating on a significant basis, it may have helped reduce the force of Hurricane Katrina.

Category 4 or 5 Protection

Critical for the successful New Orleans flood control infrastructure, whose construction must be put on a crash mobilization basis, is taking all the measures to upgrade the New Orleans system to withstand a Category 4 or 5 hurricane (the latter packing winds of 155 mph or above). Since its initial construction more than seven decades ago, the New Orleans system could withstand only a Category 3 hurricane, in a zone where the occurrence of a Category 4 or 5 is highly likely, as witnessed by Katrina.

This falls under the heading of infrastructure not merely cut, but treated as an afterthought, rather than as the highest priority. For the past 40 years, America had no forethought on this matter. This scandal is highlighted by the contrast of the Netherlands's decision to foster the General Welfare of its population, on an identical matter.

Scientists and engineers are circulating what they are call-

ing crucial components that would be in a system that would make New Orleans functional in the aftermath of a Category 4 or 5 hurricane. First, the maximum levee height in New Orleans is 23 feet, and the height of most levees is in the range of 16-18 feet. The levee height would be elevated. Second, Lake Pontchartrain sits immediately north and above New Orleans, and directly connects by a water passage to the Gulf, so that when the ocean swells in a storm, Pontchartrain's water swells. This proposal calls for driving a large seagate down into the lake on its eastern end, which could be opened and closed, thus severing the lake's connection to the ocean, immediately before, during, and after a hurricane.

Were these all implemented, they would have to be done in an integrated, coordinated plan. However, scientists and engineers may have more scientifically based plans, which they can work out in discussions with each other, and international colleagues.

But, here a scathing indictment comes to the surface. The Army Corps, which is charged with this responsibility, has had its funding even for feasibility studies kept to less than \$4 million, and the Bush Administration killed that. The Sept. 2, 2005 *National Geographic News* reported ironically, "Until the day before Katrina's arrival, New Orleans' 350 miles (580 kilometers) of levees were undergoing a feasibility study to examine the possibility of upgrading them to withstand a Category Four or Five storm." Yet, this study was started in 2000, and has never had the money to get beyond an elementary phase. Very likely, some American scientists were thinking of this in the 1980s, but there was no organized forum to pursue this matter.

Examples of Reconstruction

Some cynics have stated that New Orleans cannot be protected against a Category 5 hurricane. This would seem to be the public rhetoric for what Speaker of the House Dennis Hastert (R-Ill.) said more bluntly: New Orleans should not be rebuilt. This brings up the scandal of what other countries did in the same period of the last half century.

In the Winter of 1953, the Netherlands suffered a terrifying storm, as dikes and seawalls along its western coast gave way, and the North Sea flood killed nearly 2,000 people, destroying whole villages. Half of the Netherlands is below sea level, including Amsterdam and Rotterdam. Then, over the course of a quarter century, at the cost of \$8 billion, the Netherlands "erected a futuristic system of coastal defenses that is admired around the world today," reported the Sept. 6 *New York Times*. As well, the government increased the height of dikes to nearly 40 feet, nearly twice the height of New Orleans levees. The system was deliberately built to *withstand the kind of storm that occurs once in 10,000 years*.

In England, where a 1953 storm-induced flood killed hundreds along the raging Thames River, central London barely escaped destruction. The British then designed a system in the Thames: "Its semicircular gates lie flush to the riverbed in concrete supporting sills, creating no obstacle to river traffic.

When the need arises, the gates pivot up, rising as high as a five-story building to block rising waters," the *Times* reported. At least two decades ago, in the same spirit, the United States could have started building the appropriate, efficient system for New Orleans. An overriding issue is that the entire array of interconnected flood-control system projects for southern Louisiana and New Orleans has been put on a starvation diet for decades, relative to what it needs.

George W. Bush has intensified the crisis. The Sept. 4 *Los Angeles Times* reported that since Bush took office in 2001, Louisiana local officials, and U.S. Sen. Mary Landrieu (D-LA) have asked for just short of \$500 million for flood protection. During this period, the Bush Administration's yearly budgets have only offered \$166 million, two-thirds less than the bare minimum needed. The Congress approved about \$250 million. The July 2004 *Riverside*, the monthly publication of the Army Corps New Orleans District, reported, "Funding for Corps projects has decreased to the point that some completion dates have been pushed back three or more years."

Katrina struck a New Orleans and southern Louisiana eviscerated by decades of underfunding or blocked programs. LaRouche's mobilization, with an awakened Senate, opens the door to build on a crash mobilization these and other long-overdue infrastructure programs.