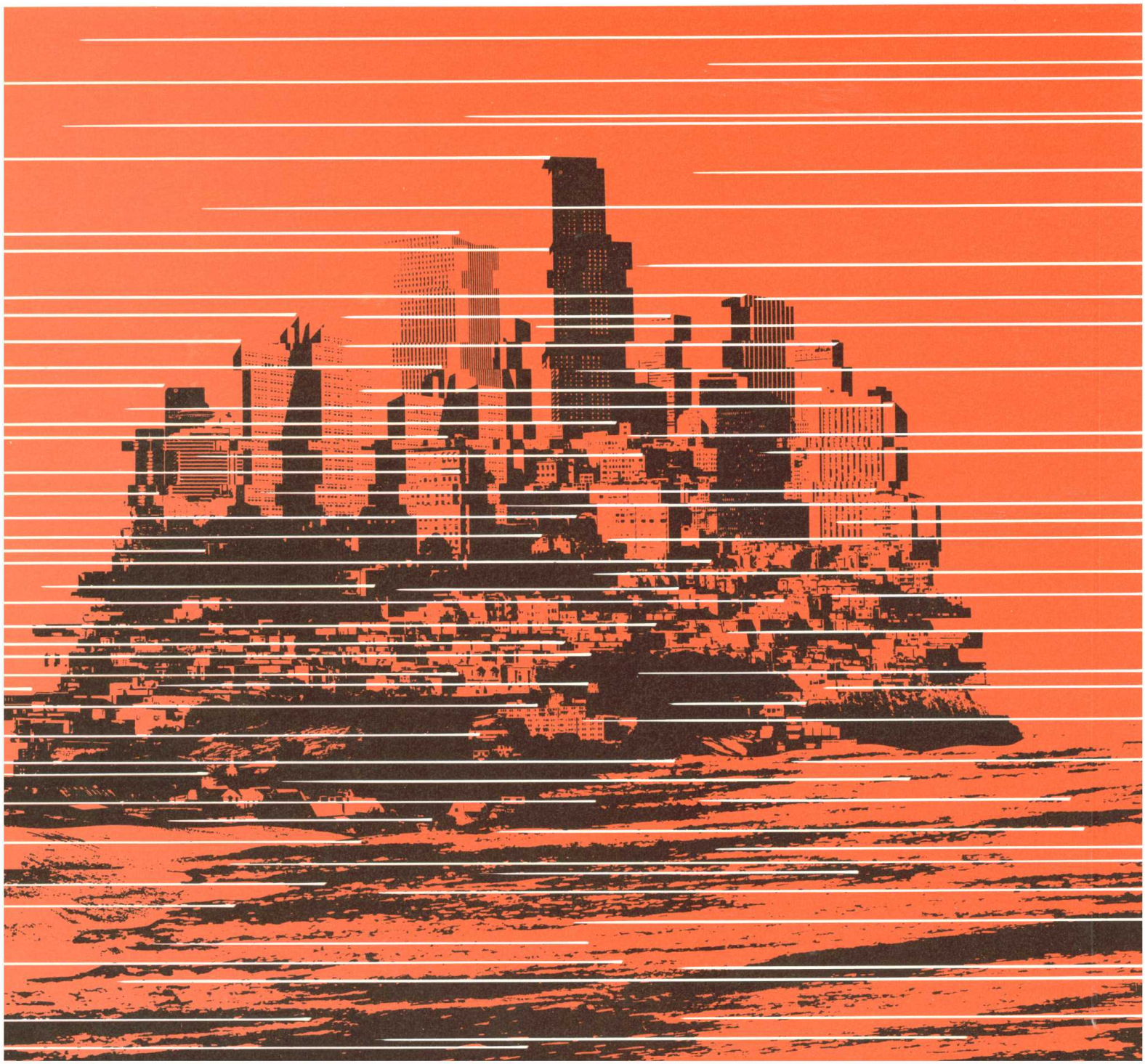
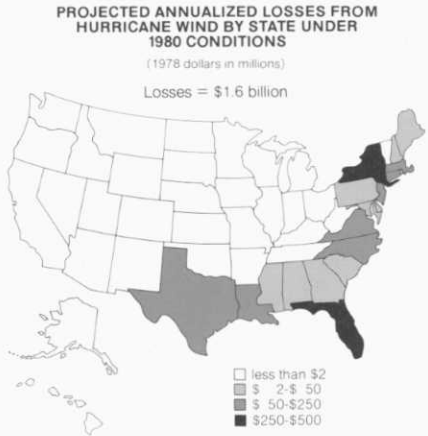
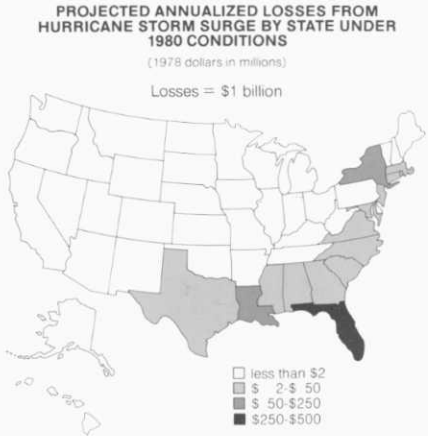
HURRICANE WIND/STORM SURGE







Unless something is done to prevent it, hurricane damage to buildings in 21 states will probably increase about 160 percent between 1970 and the year 2000.

When viewed over a typical 20-year period, the combination of storm surge and hurricane wind accounts for annual building losses of almost 2 billion 1978 dollars, under 1970 conditions. Computer models indicate that by the year 2000, hurricane wind and storm surge losses will increase over $3 billion to approximately 5 billion annually in constant dollars, easily exceeding the building damage caused by any other natural hazard

Causes Of Increase

This alarming increase will be largely due to rapidly accelerating coastal development, population movement to more hazardous areas and mounting building and replacement costs. Too little has occurred since the recent passage of the Coastal Zone Management Act to document any definitive pattern of improvement which could be programmed into the computer models

Today, almost 40 percent of all hurricane damage comes from storm surge, which strikes hardest at such low-lying coastal states as Florida, Mississippi and Louisiana Hurricane winds account for the other 60 percent. Although the winds may not be accompanied by storm surge in the District of Columbia, Pennsylvania, Vermont and New Hampshire, they *are* in most hurricane-sensitive states Damage from the combined impact of wind and sea is greatest in Florida, New York, Louisiana, Massachusetts and Texas Overall, 16 states currently suffer $20 million a year or more in building losses from hurricane

The basis of all damage estimates from hurricane winds utilized in the Wiggins studies, were provided by a panel of distinguished wind experts If all new buildings in hurricane-susceptible areas were required to be 50 percent more wind resistant and four additional counties per year were protected by sea walls for the 100 year event beginning in 1980, a computer model reveals that by 2000 it would be possible to save approximately 2 billion 1978 dollars and many lives a year Such wide-scale construction of sea walls, of course, is highly unlikely In addition, there are those who feel that if such a plan was instituted, it could conceivably create a false sense of security, causing construction to accelerate even faster in vulnerable areas Should this occur, it could sow the seeds for a more catastrophic event when the "once-every-200-year" hurricane struck

$1.5 Billion Reduction

A second mitigation forecasts annual reduction of more than 1.5 billion in constant dollars, or 35 percent a year, after the year 2000. It would require all new buildings to be 50 percent more wind resistant and that all of them in storm surge areas be elevated by four feet, beginning in 1980

By eliminating basements in all new coastal buildings and strengthening their wind resistance by 50 percent, starting in 1980, annual savings of 1 billion 1978 dollars, or 20 percent, could be realized after the year 2000, according to a third mitigation.