CHAPTER VII

SCITUATE, MASSACHUSETTS

Background

Scituate, Massachusetts is a small, quaint New England town bounded on the east and north by the Atlantic ocean, with a tidal shoreline of about 50 miles. Scituate has little commercial activity; tourism and fishing are the main industries. The population changes with the seasons--during the winter there are about 17,300 residents; the summer people double that number. In the past ten years, the number of year-round residents has been increasing at a rapid rate, yet little land use planning is accompanying this growth. The desirable exclusive shoreline has become crowded with new, expensive homes.

Scituate has a town meeting form of government, but has a full-time town manager. Although the town meeting form is the most democratic, it is also the most cumbersome. It does not lend itself to quick decisions and therefore does not fare well in negotiations with more centralized bodies. This was a frequent handicap to town officials during the recovery process.

The main actors in the disaster recovery effort were the town accountant, the public works director, and the chair of the Board of Selectmen. None of the others had administrative experience in coping with a natural disaster.

Description of Disaster

The blizzard of 1978 reached the coast of Massachusetts on February 6. Although storm warnings had been issued, the state was hit sooner and harder than the weather service had predicted. Snow began falling in the morning and by mid-afternoon the governor had declared a state of emergency and ordered workers to return home. The storm brought winds

of hurricane force, extremely high tides, and snow. The tides in Boston Harbor broke all existing records, and since the storm coincided with a perigee the tides were exceptionally brutal. More than 27 inches of snow fell in Boston before the storm headed out to sea on February 7. After the storm, temperatures remained below freezing for several days, which impeded rescue and relief operations.

Blizzards accompanied by high winds, strong tides, and severe damage are not rare events on the Massachusetts coast. The south shore has been hit by almost a dozen storms classified as "extreme" by the state climatologist, including the Great Colonial Hurricane of 1635. Scituate has a long history of sea storms and disasters, including shipwrecks off the town's coast. In 1972, a "nor'easter" destroyed 23 homes and damaged 360 structures causing $2.5 million in damage. During the 1920s and '30s, the town built sea walls and stone revetments to protect the shorefront. They have been repaired and extended, but not improved, after each storm.

The storm damage from the blizzard of 1978 was the most costly and extensive in the city's history. Scituate also sustained the most damage in the state. Destruction was everywhere. All beachfront sections were completely flooded. Areas behind the dunes that had been thought to be safe were flooded. The force of the ocean had tossed huge boulders into the streets and knocked houses off their foundations. Eighty-five houses were totally destroyed and 150 suffered structural damage of more than 50%. About 1,000 homes required some repair due to storm damage. A majority of the sea walls and riprap had to be repaired or replaced. Land forms also changed due to the wind and water action of the severe storm. The pilings in Scituate harbor suffered damage, and many fishing and pleasure boats crashed into the shoreline or were

thrown many feet inland. Commercial areas along the waterfront were flooded, but few were located where the majority of the damage occurred.

Response Phase

Rescue operations by the policy and fire departments began early in the afternoon as the town realized the severity of the storm. Employees of the Department of Public Works were sent out to keep sewer drains clear, shovel snow, plow roads, and provide services as necessary. One employee and the young girl he was trying to evacuate drowned. an ambulance, a fire truck, and many other town vehicles sustained severe damage due to salt water.

The coastal residents did not respond the way the town officials would have liked. Many stayed in their homes during the first high tide; when the storm did not affect them, the residents assumed they were safe. Unfortunately, the second high tide was more severe, which led pelple to try to evacuate at the height of the storm. Once the snow stopped, the National Guard was called in to remove debris, prevent looting, and ensure public safety.

On the evening the storm hit, the Board of Selectmen was in the process of firing the town manager, leaving the community without the services of a full-time official. In the absence of a town manager the selectmen created a response task force, headed by the town treasurer, to organize the town relief efforts. Although ad hoc, the group quickly developed an organizational structure, setting up emergency operations at the high school with the Federal Disaster Assistance Center.

The role of the business community in the long-term recovery process was very limited. Fishing people were interested in getting their boats back in the water and merchants wanted to get their stores repaired.

Although Scituate residents have seen at least two major storms batter and flood their community in the last ten years, the town has never budgeted any money for emergency preparedness or response. After the 1978 storm, the city finally enacted building codes that required measures to mitigate flood damage. The community's losses in the past illustrate the problems of living on the shore, but the short memory of federal assistance and devotion to the shorefront have reduced resident fears of severe coastal storms.

Recovery Activities

The main goal of the community was to restore the town to its prestorm condition, which meant replacing and repairing the sea walls and rebuilding the homes that had been destroyed or damaged. For the long-term recovery phase, a three-person committee consisting of the chair of the Board of Selectmen (who was also the designated federal local representative), the town accountant, and the public works director was formed.* This group met daily at first, later reduced meetings to once a week, and then met as needed. They have been responsible for applying for and monitoring all grants.

The public works director supervised the recovery of public facilities--a full-time effort that caused an 18-month delay in town improvement projects. The director was responsible for working with federal agencies, securing grants, hiring contractors, and overseeing all work. Using the Disaster Survey Reports (DSRs) prepared by the Corps of Engineers and the State Department of Environmental Quality Engineering, the town was able to secure a $7.5 million commitment from

*The current town manager has not been a member of this group because he arrived six months after the storm. His primary responsibility is to oversee the remaining recovery activities.

the FDAA to complete 248 individual projects. They applied for no other grants.

The primary project was to repair the damaged sea walls by either patching cracked areas or totally rebuilding the section. The second major project used $2 million to restore the bluffs and to rebuild a supporting wall that ran along the base of the bluffs. The third element was to construct a massive stone wall along the shoreline where sea walls had not been built.

All projects were designed to return the facilities to prestorm levels as allowed by federal regulation--a requirement that dismayed the publicworks director. As noted previously, the shore protection was built during the 1920s and '30s. Since then, stronger and more effective construction techniques have been developed. Nevertheless, few of these techniques--such as additional height, stronger footings, or reinforced concrete--could be used to their full potential because the town was unable to supply the additional funding to make major improvements.

It has taken three years to complete the sea wall construction, owing to the size of the project and the delays caused by administrative difficulties such as funding, budgeting, record keeping, and relations with the federal and state governments. For example, in the original DSRs there was no allocation for engineering costs. The Corps of Engineers had no authorization to help, and the state engineers had no funding. Although an engineer, the public works director had no expertise in sea wall construction. Instead, a friend who worked for the Corps of Engineers provided consultation services on the engineering aspects. That person was later fired because of generosity, according to one local official.

The second major concern of the town was the rebuilding of the 235 homes destroyed by the storm. The major issues were: 1) should individuals be allowed to rebuild their homes on the shorefront; 2) what stipulations, if any, were to be imposed on the design of new structures; and 3) what impact would other regulations regarding shoreline construction now in effect have on new construction.

The Conservation Commission

Most of the responsibility for overseeing the rebuilding of the residential structures fell to the Conservation Commission, which began its work immediately after the storm. The Commission is charged under state law with protecting the local wetlands and approving all structures that will be built in the flood plain. Because the majority of the houses damaged were in the flood plain, the Commission had to approve emergency building permitsthat are given to allow repairs to prevent further damage to the structure. After on-site inspections were made, 187 permits were issued.

The Commission is also responsible for approving the building plans for those structures that had suffered damage of more than 50%.* Commission members took their responsibility very seriously and tried to follow the Wetlands Protection Act to the letter. They felt it was their duty to evaluate each plan critically so that those who insisted on rebuilding along the shore would be protected. Each house plan had to be evaluated in light of recently approved state and local sanitation codes, floodplain requirements, and the state building code. The FIA required Scituate to include strict mitigation measures in the town building code or lose $2 million in individual aid. The Commission also

*The 50% rule caused some controversy. There was disagreement as to whether 50% damaged referred to structural damage or to the value of the house. The commission decided it meant structural damage.

implemented a comprehensive list of elevation, flotation, and other mitigation requirements.

The Commission was required to hold individual hearing to review the plans for each building permit. The townspeople began to resent this degree of individual scrutiny, which they perceived as excessive government. This animosity became so intense that legislation was introduced in the state legislature to ensure that homeowners would be allowed to rebuild without any interference from the town. The selectmen originally supported the Conservation Commission, but as the memory of the storm faded and citizen complaints became louder, the officials stopped endorsing the Commission publicly. Such actions gave the Commission even less credibility, even though their legislative authority continued.

Contractors

After the blizzard, every home along the water and a majority of the homes near the ocean needed some repair. Much of the work that was needed--such as electrical, plumbing, and carpentry--had to be completed quickly to allow families to return to their homes. Contractors from outside the community came to Scituate to find work. A number of them were from out of state and were not familiar with local building codes, procedures, or the effects of salt water on wiring and other materials; this caused problems regarding the appropriateness and quality of their work.

The town of Scituate employs only one building inspector, who is required to approve all building permits (about 800 of the 1,200 that were filed in 1978 were attributed to storm damage) and to help the Conservation Commission determine the 50% destruction requirement. During late 1980 and early 1981, there have been reports of shoddy work by contractors who arrived just after the storm. This has frustrated

the building inspector, who has neither enforcement power nor an adequate staff.

Federal-Local Relations

Some Scituate officials remember the recovery process after the storm of 1972. The Office of Emergency Preparedness, the federal disaster agency at the time, was responsible for repairing public facilities. It contracted with the Corps of Engineers to do all the construction; the community had only to approve the scope of the work. After the blizzard of 1978, the FDAA wanted to assume an advisory role with the state in the area of public facilities rather than maintain direct contact with the communities on a long-term basis. Federal teams came to Scituate to file DSRs for the town, but this was their only direct contact in coping with public facilities projects until the final audits.

Scituate officials would have preferred to deal with the federal government more often. Of major concern was the need to have regulations clarified, to demonstrate how inadequate regulations for rebuilding were in coastal communities, and to approve cost overruns as they accrued, rather than at the time of final audit.

The majority of the DSRs prepared during the response phase were surprisingly accurate, but they could not predict cost overruns due to necessary additional work, delays, or inflation. Scituate determined that a few projects would go above the anticipated cost, but the city did not want to spend additional dollars without receiving assurance that the federal government would reimburse the additional work. The response from the federal government was if the work was within the original scope, it would most likely be reimbursed, but the actual determination of eligibility would be made at the final audit. Scituate had no way of knowing if the overrun would be viewed aspart of the

original scope of the work because there were no regulations regarding record keeping.

City officials also resented the delays caused by FDAA. It was especially ironic that Scituate later had to petition the FDAA to extend the time frame on a project because of a delay the FDAA had caused.

State-Local Relations

Immediately after the storm, state officials established a Disaster Recovery Team (DRT) to help the towns affected by the storm cope with general long-term recovery issues. The team acted as the direct link to the federal government for the communities and helped to secure other state assistance. Scituate officials felt the DRT could not give them the two things they needed most: approval for cost overruns and technical engineering assistance. The state was viewed only as a pass-through function that hampered the city's ability to proceed with construction and general recovery.

The Conservation Commission felt that the state was more strict with Scituate than any other community. The commission maintained that other communities were not required to hold hearings or conduct on-site inspections for emergency permits. Scituate also held the unenviable position of a pacesetter--the state would not rule on the acceptability of another town's proposal until Scituate determined what it was going to do.

The DRT was not staffed by engineers or technicians. The team had no interagency agreements to allow them to tap the resources of other state agencies or financial resources to hire technical consultants. Although the head of the DRT changed three times during the first year, this did not hve a long-term impact on the team's effectiveness. With a change in governors, another new director took over, but the DRT has been all but ignored by the current administration. However, the DRT

staff believes this "benign neglect" has let them operate longer than would otherwise have been likely.

Each DRT staff member was given a case load of communities. Scituate officials felt the DRT was more effective in those communities whose leaders were not well organized when it came to state priorities, and less effective in those communities that had determined their goals, especially when answering substantive questions.

Mitigation Measures

Scituate instituted both structural and nonstructural mitigation measures in the course of recovering from the winter storm. The most extensive damage was caused by water breaching the sea walls. The rebuilding of the sea walls and stone revetments that run along the shoreline was a major structural effort due to their age and primitive engineering or construction. Despite the phenomenal cost, the sea walls protect the homes behind them only minimally. The federal government will reimburse local governments for repairing public facilities only to prestorm level. This limits towns from improving their facilities unless they will pay the difference. The sea walls that were totally rebuilt had the advantage of modern engineering in the footings and reinforced concrete; yet their height could not be raised to make them more effective because the town could not pay the additional cost.

The stone barriers are a work of art. Each side stone weighs a minimum of five tons and the top stones 15 tons. Yet their efficacy in taming a massive hurricane or flood is at best negligible.

Nonstructural measures included the addition of mitigation requirements to the building codes and the use of federal monies (under Section 1362 of the National Flood Insurance Act) to acquire beachfront property, remove structures, and maintain land as open space. Some

local officials wanted to restrict reconstruction on the oceanfront. They realized that any structure that was built would not be able to survive a major storm and that homeowners needed a monetary incentive to keep them from rebuilding. A bill was introduced in the state legislature to appropriate money to purchase waterfront land from willing sellers, but did not pass. The town then approached FEMA to determine its eligibility for the Section 1362 acquisition program. At that time, however, Congress had not appropriated any funds, and it was not until 1980 that Scituate began the Section 1362 acquisition process. Town officials contacted owners of eligible properties to determine if they were willing to sell, turned the names over to FEMA, and the formal processing began. The agreement between FEMA and Scituate was that the town would acquire the land as a gift and would be required to keep it as open space.

Before any acquisition could take place, a town meeting had to agree to accept the land that would be acquired. The measure was soundly defeated at a special meeting in June 1980 for a number of reasons. Many residents distrusted the federal government, fearing that it was not being candid about the actual costs and benefits to Scituate in accepting the parcels as gifts. Others believed that if the land were turned into open space, undesirables would take over the Scituate beaches. There also was concern over the loss of taxable property. The major reason for defeat, however, was that a number of people from the Humarock section of town, who would not have been directly affected by this action, overwhelmingly opposed it because FEMA had refused to fund a project for additional shore protection for their area.

Despite the local vote, some homeowners were still willing to sell their property. Subsequently, the federal government bought a few parcels and turned them over to the state's Coastal Zone management

Office instead of to the town. The state currently is negotiating with the town to give them the parcels as a gift on permanent lease.

Housing

Scituate's main concern during the recovery process was to get everything back to normal. The only major mitigation effort the town undertook was the creation of new building codes, which were required by the NFIP. As the memory of the storm faded, town officials and many residents forgot about the severity of the damage and lost interest in supporting the Conservation Commission and issues of mitigation and relocation. there was no commitment to long-term mitigation measures, particularly to those that would require substantial changes in residential construction. Town officials believed mitigation requirements were meaningless because they only had the promise of future federal aid, which was thought to be essential for implementing mitigation measures. Town selectmen felt a firmer stand should have been taken by the federal government.

The FIA and the Small Business Administration (SBA) spent millions of dollars in Scituate to repair and replace houses. In 1978 federal dollars were used to repair many of the same houses repaired in 1972. this time the owners rebuilt in compliance with the elevation and building standards required by the NFIP.

Many of the homes that were rebuilt are larger and have a higher assessed value than the previous structures. According to the town assessor, this is because the owners were able to get low interest loans that allowed them to build previously unaffordable luxury features. (Unfortunately, many homeowners have been shocked and in some cases almost unable to pay their increased tax bills). The worst part, according to the town engineer, is that these dream homes, despite being

built to the existing town requirements, still will not be able to withstand the force of a storm similar to the blizzard of 1978.

Interviewers' Perceptions

Small towns with few financial resources and limited staffs are likely to have more difficulty recovering from a massive disaster than larger, more sophisticated communities. Coping with a multimillion dollar project is a difficult job in its own right, but Scituate's three-person team also was faced with balancing citizen views with federal and state requirements.

Town officials noted three major impediments to full recovery:

1) Federal money can be used to restore public facilities only to their prestorm level. Scituate rebuilt sea walls that are inadequate for the needs of the town because it did not have the additional funds to upgrade the improvements. Consequently, the federal government, the town, and the homeowners will continue to make repairs to the same structures at an ever increasing cost.

2) Cost overruns cannot be approved until the final audit. Scituate has been unable to learn from FEMA whether it will be reimbursed for cost overruns incurred years before. As projects are being completed, town officials would like an intermediate inspection program to re-evaluate DSR estimates.

3) Engineering and overhead costs are not included in the DSR. A major project, such as sea wall construction, requires a significant amount of time from engineers and other specialists, as well as the attention of local staff. Not to include these costs in the DSR is not cost effective in the long run.

Although Scituate's complaints about its current recovery process seem valid, the town has done little to prepare itself for the next major coastal storm. Since the blizzard of 1978, the city has not engaged in any emergency preparedness or response planning or training. According to the former treasurer, there has never been a budget for civil defense. Some officials expressed a desire to have a plan, whereas others were complacent, saying that when a storm strikes, the town will cope. One official remarked that the state should help

them write a plan. Another said that since the state and federal officials arrive and begin to work immediately after the disaster strikes, the community does not need a plan.

This reluctance to put the town's experience into a plan is workable as long as the officials who handled the 1978 blizzard are still in office. However, the city manager--who is also the civil defense director (in title only)--has no experience with emergency management. This lack of concern over how to cope with the next event will only make it more difficult to respond and recover efficiently.