The Homeport Story

an imaginary city gets ready for a hurricane

U.S. DEPARTMENT
OF COMMERCE
National Oceanic and
Atmospheric Administration

From Am. Red Cross

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Foreword

The Homeport Story is a minor work of fiction about a major, real problem in Atlantic and Gulf coastal communities—hurricane preparedness. Homeport was invented a few years ago by the National Weather Service of the Commerce Department's National Oceanic and Atmospheric Administration, and the resemblance between our model coastal community and dozens of other American cities is strictly intentional.

Homeport is a model community because it did something about hurricanes, even though the town had not been touched by one in three generations. The citizens and leaders of Homeport read the hard lesson the hurricane teaches year in and year out: understanding and preparation increase the chances of survival; lack of preparation diminishes them. How Homeport achieved preparedness is the fictional result of educated speculation by National Weather Service personnel, and by their opposites in the Office of Emergency Preparedness, Federal Communications Commission, U.S. Army Corps of Engineers, American Red Cross, Office of Civil Defense, and other interested organizations.

Many citizens will ask why tax dollars should go to prepare for an event which has not materialized in two years, or ten, or fifty. The answer comes not from imaginary Homeport, but from real cities like Galveston, Corpus Christi, Gulfport, New Orleans, Miami, Charleston, Wilmington, and the tragedies played out there. *Anywhere* along the Atlantic and Gulf coasts is Hurricane Country.

As you read how Homeport got ready for its hurricane, think of your city, and of yourself. Could you cope with a hurricane? Could your community? Would you survive? We hope this publication helps you answer, yes.

George P. Cressman

George P. Cressman
Director, National
Weather Service

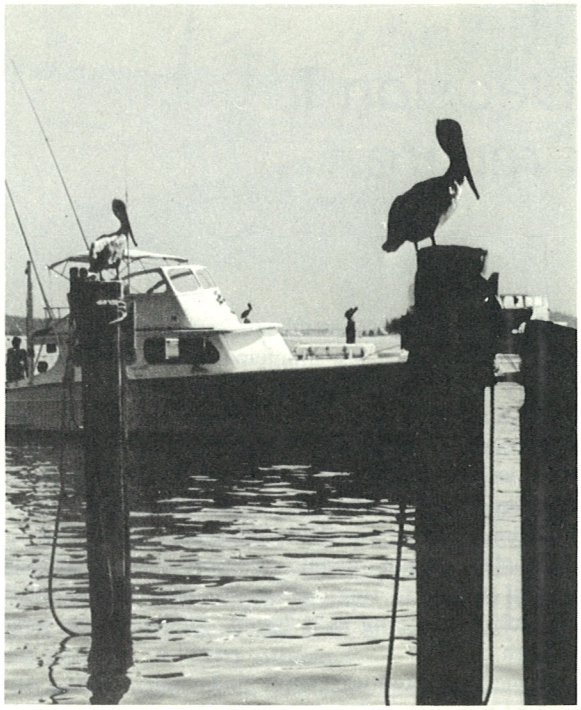
Homeport

Driving north on Route 17 you come upon Homeport suddenly, its low silhouette hidden until the last moment by moss-draped live oaks and cypress pines; then the little city is revealed. The sign tells you Homeport has about 25,000 citizens, which makes it the largest community in Achilles County. Looking seaward, you can read part of the Homeport story. From the shoreline and its grid of older one-story homes and stores, the city has developed inland. A few blocks from the Atlantic the skyline features—the new four-story Triangle Building, City Hall, the Court House, the old Adams Hotel, the Apex Building, Christ Church—mark the progress of the city. Farther inland, up an almost imperceptible rise, the city returns to neighborhoods of small brick and frame homes, with small clusters of stores here and there.

If you hit it right, there will be migratory birds hooting and howling in the swamp ponds along the shoreline, in the almost tideless waters between the mainland and a string of offshore islands. You can see the largest of these now, about a mile offshore, where the neighborhood of Homeport Beach is tucked into the dunes and pines and palmettos of the low-lying strand. Traffic gleams on the two-lane causeway linking Homeport Beach with the city. Farther out to sea, a short-hop airline jet banks into the final leg of its drop toward the airport south of town. Large sail and motor craft are tied up at ocean piers near the north end of the city; farther north, an inlet leads to Lake Marina, where boats drawing fewer than four feet are moored.

The radio station is WHPT AM and FM, located high atop the Triangle Building downtown. The newspaper is the *Homeport Herald,* with 8,000 home deliveries weekday mornings, 12,000 on Sunday. If you stop in Homeport, and if you watch television, the station is WMET-TV, out of Metropolis, a city farther from the sea.

Homeport is an old city, but there is much visible vitality here. Solid building codes are evident in the developing downtown section. Power and telephone lines, still strung overhead in the older parts of town, are going underground in the business and newer residential areas. The city is getting taller.



Its streets are clean and well maintained. The city bus system seems to work. The faces of its citizens tell you Homeport is a good place to live, work, play, raise kids. It could be almost any town along America's low, flat Atlantic and Gulf coastlines.

There is hardly a sign that Homeport is at war.

But it is, against an enemy it has not seen within the memory of its citizens. Homeport declared war on hurricanes two years ago. Perhaps you notice more hurricane safety rules posted in restaurants and stores and public buildings than you are accustomed to. You may see more shelter instructions on the major structures downtown. But the signs of Homeport's mobilization are mostly hidden. You can't see, for example, that WHPT radio is set up to operate off its own auxiliary power source during emergencies, or that the low-lying water plant has been augmented by a new plant on higher ground, or that the local Civil Defense, law enforcement, Red Cross, and government officials have begun to develop that faint, springtime tension which precedes each Atlantic hurricane season.

Why and how did this untroubled town decide to mobilize against a threat which had not materialized in nearly a century? That is the other part of the Homeport story.

The Decision To Prepare

Probably it is impossible to say, for any coastal city, exactly when the municipal and individual decisions are made that lead to hurricane preparedness—and the expenditures of time, labor, and tax money such preparedness represents. Many communities get ready right after the bitter first hand experience of a hurricane. Some are stimulated by tragedies nearby; a town narrowly missed by a destructive storm might develop some readiness against the next time, although many have relied on luck for as long as it lasted. It never lasts long enough.

Some communities simply put their abilities up against the record. That is what Homeport did, with some stimulation from National Weather Service people at the airport and the community Civil Defense director. This raised and answered some critical questions:

How bad are hurricanes? The record is succint. Hurricane Camille of August 17-20, 1969, was the worst hurricane ever to strike the United States, leaving in her wake over 6,000 homes destroyed, 14,400 homes with major damage, and 789 businesses destroyed or damaged. Camille took 255 lives, displaced 78,000 families, and caused total damage estimated to exceed $1.42 billion. Pass Christian, Mississippi, received the brunt of the hurricane with winds estimated near 190 miles per hour and a storm tide at least 24.2 feet above mean sea level.

Camille was the worst. There are innumerable runners-up: hurricane Betsy, which killed 75 and did more than $1.4 billion property damage in southeastern Florida and Louisiana in September 1965; hurricane Carla, which battered the Texas coast in 1961; hurricane Carol, which caused some $400 million destruction in New England in 1954. On the average, six hurricanes occur each year in the Atlantic, and any one of them is a prospective contender for the crown.

What is so destructive about hurricanes? People who have not experienced a hurricane sometimes think of them as just a lot of wind and rain, extremely dangerous to ships at sea, but not all that bad on solid land. Not so.

Hurricanes are tropical cyclones in which winds reach speeds of 74 miles per hour or more, and blow in a large spiral around a relatively calm center—the eye of the hurricane. The circulation is counterclockwise in the northern hemisphere. Stated very simply, hurricanes are giant whirlwinds in which air moves in a large-tightening spiral around a center of extreme low pressure (usually, the lower the pressure, the more intense the storm and the higher the storm tides), reaching maximum velocity in a circular band extending outward 20 to 30 miles from the rim of the eye, where winds may gust to more than 200 miles per hour. The entire storm dominates the ocean surface and lower atmosphere over tens of thousands of square miles.

The winds cause a barrage of debris, of sand, of shutters; they sever communications lines and the broken power lines they whip around are extremely dangerous torches. Hurricane winds also drive enormous surf before them, and help the storm tides with the work of flooding.

Storm tides are a hurricane's worst killer. As the storm approaches and moves across the coastline, it brings huge surges, raising tidal sea levels 10, 15, 20 feet or more above normal. The rise may come rapidly and produce flash tidal flooding of coastal lowlands, or may come in the form of giant waves. When Camille hit the Gulf coast, a 20-foot tide swept into Gulfport, and swept out again with people, houses, and almost everything else in its path back to sea. Hurricane storm tides do other types of damage. Flooding pollutes water supplies, cripples communications, shorts out powerlines, causes sewers to back up and overflow, undermines structures, and drastically revises ship channels and shorelines.

Tornadoes, the most violent storms on earth, are also part of the hurricane's bag of hazards. Hurricane Beulah of 1967 spawned a record 115 in Texas.

Torrential rains associated with hurricanes often cause widespread flooding, even after the storm has moved inland and has begun to die.

How often have hurricanes crossed the coast in the Homeport-Achilles County area? Homeport has been lucky. The big Atlantic storms have steered clear of the town, so much so that some citizens still believe Homeport is "immune." During the period of record (it goes back to the 1880s), the Homeport

area has come under the influence of several hurricanes; that these missed the town does not suggest immunity. This coastal city is merely overdue.

On October 2, 1898, a hurricane crossed the coast within 70 miles of Homeport. At Goodhaven, 35 miles north, high water reached 10.8 feet above mean sea level, or 7.8 feet above mean high water. Luckily, this was not a very strong hurricane. Its lowest barometric pressure was only 28.82 inches (of mercury), as contrasted with 26.35 inches for the Labor Day hurricane of September 2, 1935; 26.63 inches for Camille on August 17, 1969; 27.70 for Hazel of October 15, 1954; 27.43 and 27.61 inches, respectively, for the hurricanes of September 15-17, 1928, and September 18-20, 1926.

What can Homeport expect from a hurricane?

Unprepared, but helped by National Weather Service warnings and the town's emergency forces, Homeport can expect widespread destruction of property, some (perhaps many) deaths, and a chaotic aftermath. Prepared, both as a town and as a collection of individual citizens, Homeport would do better; the property loss might be cut slightly, the chaos of the storm and its aftermath would be ordered, and the death toll would be reduced, probably to zero.

Specifically, a hurricane coming ashore at Homeport would probably do significant wind damage in the city and on the offshore keys. Camille-strength winds would mow down many of the frame homes along the coast. As with most hurricanes, however, one at Homeport would do most of its destructive work with water.

Homeport lies on a nearly flat, nearly straight stretch of Atlantic coastal plain. Its highest point is along a "ridge" that is never more than 30 feet above mean sea level, about two miles inland. Hurricane rains alone would cause all streams in Achilles County to overflow their banks and would raise swamp levels by as much as two feet.

The highest tide of record in the Homeport area is the 10.8 foot level observed in the 1898 hurricane at Goodhaven. The comparatively short (12-year) tidal record at Homeport records a maximum tide of 5 feet above mean sea level, in connection with the October 18, 1950 hurricane.

It is estimated that a hurricane like Hazel (which passed over Myrtle Beach, South Carolina, on October 15, 1954) could produce a storm tide of 13 feet if located directly over Homeport. If this storm tide coincided with mean high water, the storm surge would reach 16 feet above mean sea level.

Waves appear to be limited in height to about three fourths of the water depth, and would probably break offshore as they approached Homeport Beach. But it is estimated that Homeport would see wave heights of the order of 12 feet at the mean shoreline, with a 16-foot storm tide.

These figures are deceptively small. Think of seawater, at about 67 pounds per cubic foot, nearly a ton per cubic yard, traveling at 50 miles an hour. Then think of the combined storm tide and waves as a waterly oblong two miles wide along the Homeport ocean front, 12 feet deep, extending a mile out to sea. You get a battering ram weighing more than 20 million tons. This is the instrument used by Camille at Gulfport, Mississippi.

Inundation maps for any coastal community bring the problem home, and Homeport proved no exception. If city leaders had not been convinced before, they would have been by a set of Homeport and area maps prepared by the City Engineer, showing what storm tides 4 to 8, 9 to 12, and 13 to 16 feet above mean sea level would do to all the progress and pride of their town.

Hurricane Preparedness Planning

One may talk of communities as though they lived and breathed, but their life derives from their people. People, not communities, make the decision to prepare. And people must meet to plan how this preparedness will develop, who must do what, what kind of resources can be allocated, how to maintain readiness once it has been achieved—the dozens of interlocking decisions affecting the people and prospects of a community, its suburbs, and its adjoining rural areas.

Homeport's permanent Hurricane Preparedness Committee met four years ago for the first time, and at weekly intervals until a working plan had been hammered out for the Homeport Hurricane Preparedness District. Now, because the nominal Atlantic Hurricane season runs from June through November, the Committee meets every year toward the end of May and once a month during the hurricane season to review and test the Homeport plan. The Committee also meets when there is a threat of hurricanes or other severe maritime weather. Two years ago the Homeport Hurricane Preparedness District was marginally included in a hurricane watch; however, the hurricane veered away from Achilles County and no emergency action was necessary. But the seasonal dry runs, which test each component of the Homeport plan, keep the system limber.

The structure of the Homeport Committee reflects the fact that a natural hazard emergency only intensifies the responsibilities of government. Authority to implement the Homeport Hurricane Preparedness Plan rests with the Mayor, who, with his department heads and the County Administrator, functions in an executive group of the Committee. This group overseees the prompt execution of evacuation plans and other emergency matters requiring immediate attention but not spelled out in the plan. They look to the National Weather Service for hurricane information and educated guidance regarding the evacuation of threatened areas.

The Hurricane Preparedness Plan itself is a composite of many smaller plans. Every agency (or sub-committee or team) on the Committee must develop its own preparedness plan, which the full Committee inspects to ensure a good mutual fit, locally and on the regional and state levels. Subcommittees are developed around subject areas. In Homeport, these include Public Education, Rescue and Shelter, Evacuation Planning, Utilities, Transportation, Communications. A damage survey team composed of representatives from the American Red Cross, and public works, public health, roads and highways, building and planning, and law enforcement agencies would survey hurricane-caused damage. Their subsequent report to the Mayor would

HOMEPORT
Hurricane Preparedness Committee Membership

The Mayor of Homeport (Chairman)
Homeport Director, Civil Defense
Achilles County Director, Civil Defense
Homeport Chapter Chairman, American Red Cross
Disaster Chairman, Homeport Chapter, American Red Cross
Manager, WHPT/WHPT-FM (or delegate)
Manager, WMET-TV (or delegate)
Publisher, Homeport Herald (or delegate)
Manager, Homeport Power & Gas Company (or delegate)
Manager, Homeport Transit Company (or delegate)
Administrator, Homeport Hospital
Official, National Defense Transportation Association

Homeport City Government:

Chief of Police
Fire Chief
City Engineer
Superintendent of Public Works
Superintendent of Streets
Superintendent of Schools
Public Health Administrator
Building/Planning Commissioner

Achilles County Government:

County Administrator
Sheriff

Available as liaison or consultant, upon request (State and area):

Governor's Representative
State Director, Civil Defense
Chairman and Vice Chairman, Federal Communications Commission, State Industry Advisory Committee
Chairman and Vice Chairman, Federal Communications Commission, Operational Area Industry Advisory Committee
Disaster Service Representative, American Red Cross
Director, State Department of Public Health
District Commissioner, State Highway Department
Commanding Officer, State National Guard, Homeport Company G

Available as liaison or consultant, upon request (Federal):

Meteorologist in Charge, National Weather Service Office, Homeport
District Engineer, U.S. Army Corps of Engineers, Homeport
Regional Liaison Officer, Federal Communications Commission
Commanding Officer, U.S. Coast Guard Station, Homeport
Commanding Officer, Inland Air Force Base

estimate funds required to meet the diaster, and would be the basis for state action in requesting Federal assistance under Public Law 91-606.*

The Homeport Committee's responsibilities are spelled out in an introduction to their Hurricane Preparedness Plan:

"1. To direct a program designed to educate the public on the hazards of hurricanes and the protective measures to be effected.
"2. To keep the city and suburbs continually prepared for a hurricane emergency.
"3. To make recommendations regarding construction projects and changes in building codes required to lessen danger and destruction from hurricanes.
"4. To maintain an inventory of equipment available for emergency usage (trucks, bulldozers, generators, etc.) and to develop a priority listing of generators required to restore power.
"5. To effect evacuation.
"6. To direct rescue work.
"7. To maintain liaison with the Federal Communications Commission Operational Area Industry Advisory Committee (FCC/OAIAC) and develop emergency communications requirements for appropriate processing by that Committee consistent with approved plans of the Federal Communication Commission State Industry Advisory Committee.**"

Homeport's Hurricane Preparedness Plan is much more than a set of good intentions. Before it could be considered fully operational, the community had to equip itself to meet the chaos, fear, and isolation of the hurricane. This meant the addition of special communication links, selection of shelter areas, development of evacuation plans and maps, and a large-scale program to acquaint the Homeport public with its role in hurricane preparedness.

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* The Office of Emergency Preparedness provided technical and training assistance to Homeport during the formative stages of its Hurricane Preparedness Committee and their hurricane plan. Liaison here relates mainly to obtaining federal disaster assistance under Public Law 91-606, as outlined in the *Federal Disaster Assistance Handbook for Government Officials,* available from the Office of Emergency Preparedness.

**This includes emergency operational coordination with OAIAC in providing live broadcasts and radio-press and wire-service releases of National Weather Service hurricane advisories and other emergency weather messages, and live broadcasts by other federal, national, state, and local authorities responsible for public well-being in the threatened area.

Communications

War has been described as an attack on communications lines. Certainly this describes one major aspect of man's battles with hazardous weather, which typically isolates its municipal and individual victims. During a hurricane emergency, which may last for many hours, communications must be maintained, for they are all that finally link the isolated individuals of a community. The alternatives are confusion, fear, and rumor, the traditional worst enemies of cities under seige.

Homeport's regular channels of communication are WHPT/WHPT-FM and Metropolis' WMET and WMET-TV, the *Homeport Herald,* and several special emergency and weather-reporting networks operated by state and federal agencies. The National Weather Service office at Homeport Municipal Airport issues all weather forecasts and warnings for Homeport and Achilles County. All weather information, particularly watches and warnings, is transmitted on the NOAA Weather Wire Service, a teletypewriter circuit with drops at local radio stations, the *Herald,* the Coast Guard Station, state Red Cross headquarters, and the state emergency operating center. An Emergency Operating Center set up by the Hurricane Preparedness Committee at Homeport's Burr High School is also on the NOAA Weather Wire circuit.

KWX-36, a NOAA VHF Radio Weather station at the airport weather facility, broadcasts continuously at 162.550 Megahertz* and can be used to demute specially tone-activated receivers with 1050-Hertz tone, permitting the listener to hear any warnings immediately. Receivers are located at schools, hospitals, and similar institutions around Homeport, and at the headquarters of Homeport's emergency forces, including the Burr High School emergency operating center.

These same weather transmissions are also broadcast by WHPT/WHPT-FM and WMET at regular intervals during the day, and would be broadcast more frequently if warnings were in effect. During a hurricane emergency, the state Emergency Broadcast System and state FM Weather Network would be activated. When a hurricane watch affects the Homeport area, an Emergency Hurricane Information Center would be activated at the National Weather Service office to supply information directly to the communications media until the emergency ended or the office had to be evacuated. To improve the efficiency of this exchange local news media representatives have agreed to operate the broadcast facilities on a "pooled" basis.

Emergency Operating Center

Communications lie at the heart of Homeport's recently completed Emergency Operating Center, in Burr High School. Direct underground telephone lines connect the Center with all agencies represented on the preparedness committee. The Emergency Operating Center is equipped with several battery-powered receivers for standard AM, FM, and television broadcasts, NOAA VHF Radio Weather tone alert receiver, two receivers adapted to monitor the Emergency Broadcasting System, and a drop for the NOAA Weather Wire. Personnel from WHPT/WHPT-FM would be stationed at the Center under hurricane watch conditions to assist emergency forces in preparing live official broadcasts, and to originate WHPT/WHPT-FM bulletins based on available information. Personnel from Metropolis' WMET radio and a mobile unit from WMET-TV would also be stationed here.

The Emergency Operating Center has remote pick-up broadcast transmitting and receiving equipment licensed to and maintained by WHPT/WHPT-FM, permitting programs to originate directly from the Center for local broadcast. In addition, Civil Defense maintains VHF transmitting and receiving facilities at the Center that provides intercommunication with police and fire department headquarters if communications fail. The Homeport Civil Defense Radio Amateur Communications Emergency System (RACES) has equipment to communicate with County and State RACES units.

The Burr High School's meteorological station, set up for instruction purposes, provides a convenient auxiliary weather station which can be activated in the event the airport facility must be evacuated.

Sufficient auxiliary emergency power-generating equipment was built into the Center to provide good lighting and to operate all communications equipment for the duration of any hurricane emergency.

*NOAA VHF Radio weather frequencies (162.550 and 162.40 MHz) lie above the commercial FM band, which ends at 108 MHz. Therefore, special receivers are required.

Operational Area Emergency Communications

Stations WHPT/WHPT-FM are the only commercial broadcast stations in Homeport. The management of these stations, in cooperation with the Federal Communications Commission's Operational Area Industry Advisory Committee (OAIAC) and state and local authorities, developed an Emergency Broadcast System primarily for use in a national emergency. During a hurricane emergency, however, these Homeport Operational Area emergency communications facilities can be used. Under such conditions, stations WHPT/WHPT-FM, which usually broadcast from 6 a.m. to midnight, would be authorized to remain on the air around the clock, from the first hurricane watch for the Homeport area onward.

Both stations are backed up by adequate auxiliary power-generating equipment to continue operations. If they could not continue, radio station WMET, a daytime-only station at Metropolis designated Alternate Broadcast Station, would come in, using information relayed via the remote pickup broadcast units installed at the National Weather Service facility and the Emergency Operating Center.

During an emergency, WMET would sign off at sunset but would remain on standby, prepared to resume extended-hours operation if the hurricane closed down WHPT/WHPT-FM. This standby status would be announced periodically by WHPT/WHPT-FM, and any changeover would be part of WHPT/WHPT-FM's last message before going off the air.

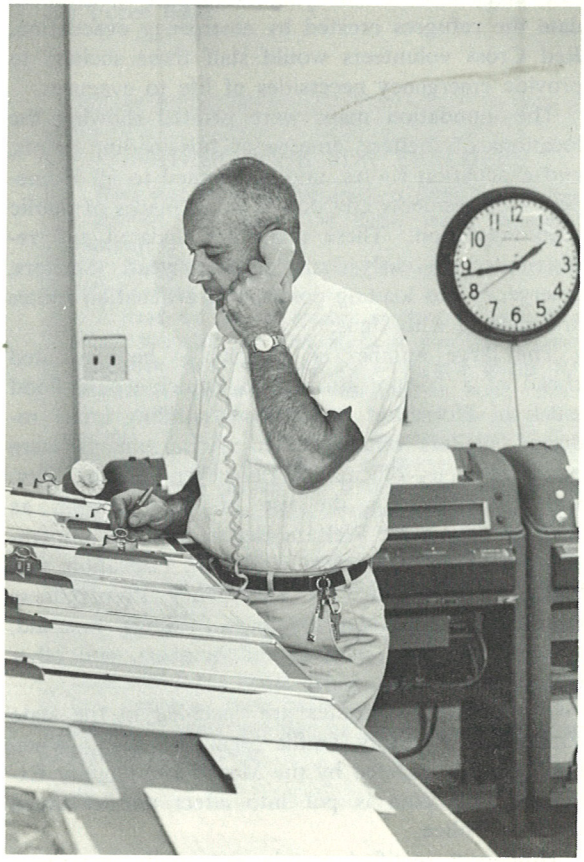
Under an emergency situation, these stations would preface all emergency weather warnings with the Emergency Action Notification Signal when requested by the National Weather Service. This signal is received on special receivers, permitting emergency forces and government officials to receive emergency information at any hour of the day or night.

Although not required by the Federal Communications Commission, Homeport and Metropolis radio stations have agreed to make tape recordings of all broadcasts and to retain them after the emergency has ended. These records serve many useful purposes, among them the resolution of post-disaster recriminations. For example, failure to transmit warnings properly is a frequent complaint; but such a complaint is usually unjustified, as indicated by taped records of messages actually broadcast.

Military Communications

During natural hazards emergencies, military communications equipment may be the best available, and is usually available through standing arrangements with commanders. At Homeport, mobile communications equipment and operating personnel are kept at a ready status at Coast Guard District Headquarters and other Coast Guard units within the district. This equipment varies in size from hand portable units to a completely self-contained communications truck. The Coast Guard District Commander would deploy this equipment and personnel to help Homeport and other communities during a hurricane emergency.

Homeport's Company G of the state National Guard is linked to an extensive statewide communications system, which would be of great assistance during an emergency. Under the area's preparedness plan, this system would be available to emergency forces during a hurricane.



Public Shelter, Public Safety

The process of achieving hurricane readiness is the process of giving real street names, elevations, time sequences, actions, evacuation routes to the more general goals initially set by the Hurricane Preparedness Committee. And this process marks the difference between intentions and a working preparedness plan.

The Homeport plan matured rapidly. The inundation maps drawn by the City Engineer, showing inundation areas for tidal heights of 4 to 8, 9 to 12, and 13 to 16 feet above mean sea level, permitted Civil Defense personnel to select certain well-built structures in the city as shelters, and designate others in safe areas outside low-lying Homeport to accomodate the refugees created by emergency evacuation. Red Cross volunteers would staff these shelters to provide emergency necessities of life to evacuees.

The inundation maps were printed showing the locations of shelters, emergency bus loading points, and evacuation routes, and distributed to all Homeport area residents and posted in all places of public accommodation. These maps are updated and redistributed in early June of each year. Shelters, emergency bus loading points, and evacuation routes are marked with signs.

The large number of persons to be evacuated ahead of a 16-foot storm tide (which would flood much of Homeport and the surrounding area) required shelters outside town. Arrangements were made with city officails of Fairhaven, Mound City, and Crossville for the use of their schools, as shelters. The State Welfare Department, in cooperation with the Department of Health, Education, and Welfare, with Office of Emergency Preparedness coordination, provides for mass feedings, first aid, and the provision of cots and blankets, and other emergency welfare service.

The evacuation routes are specified in the state Emergency Highway Traffic regulation plan. When evacuation is ordered by the Mayor and County Executive, this plan is put into effect and enforced by State Police.

Homeport rectified certain potentially hazardous situations. The old city water supply plant north of town would be contaminated by tides more than eight feet above mean sea level; a new plant built on the town's "ridge" would retain its purity even with the highest possible tides, supplying sufficient water for drinking and cooking to keep Homeport going until the old plant could be reactivated.

The city takes special pains to keep down the number of loose objects hurricane winds could transform into missiles. The Fire Department surveys the city early each year to note the condition of trees, chimneys, roofs, and other items needing attention, and notifies owners. The Tree Division of the Street Department trims or removes privately owned, potentially dangerous trees at cost. The City Engineer checks to see that gas and gasoline storage tanks and radio towers are securely anchored to prevent dislocation by wind or flood. The police department puts some muscle into City Ordinance Number 492, which obligates owners of condemned buildings to have them razed within 90 days of Condemnation Notice. The Public Works Department ensures that all drawbridges and piers are in good condition before the hurricane season begins. The Street Department schedules its maintenance so that no evacuation route has to undergo extensive repairs during the season, although priority is given to improving poor drainage spots along evacuation routes. These have been surveyed to determine the flood level which would close each route; where feasible, route elevations have been raised.

Because of the inherent danger of strong winds to mobile homes, part of Homeport's preparedness activity was to toughen the city ordinances on Mobile Home Parks. These require mobile homes to be securely anchored by cables in concrete footings, and prescribe that parks will prominently display evacuation procedures and designated shelter with the park manager responsible for evacuation when so ordered. These rules are strictly enforced at Homeport as part of the hurricane preparedness plan.

But preparedness is a long-term proposition.

Until there are enough shelters in the Homeport area to accommodate all evacuees in a hurricane emergency, future city and county buildings will be built to be suitable shelters. For example, a new one-story Junior High School in the north end of town is useless as a shelter because its floor would be under water with a tide only seven feet above mean sea level; further, the large glass panels which make up most of the walls would be a major hazard

in a high wind. New buildings are being limited to ordinary-sized windows with walls of solid construction, and all buildings on low-lying land will have at least one floor above the highest possible tide height. The City Engineer and Planning Commission have revised building codes for all types of construction, including homes. Adequate evacuation routes must be provided for in all new subdivisions along the coast.

Homeport keeps several major projects on the city's drawing boards, against the time when funds will support the change. Four-lane Route 17, for example, is bottlenecked on the north end of the city by a two-lane drawbridge across the marine inlet. This will be replaced with a raised, fixed four-lane bridge which will permit most boats to pass underneath. Boats with masts over 20 feet, however, will have to tie up at the ocean piers.

Plans are under way to ensure that the power plant be made less vulnerable when the time comes to relocate it. The Homeport Power and Gas Company estimates that larger demands will force them into a second plant, and will use a high-ground site donated by the city. All shelters, the hospital, emergency operating center, and radio stations will be supplied electricity via underground cable from the new power plant. This change would greatly reduce the possibility of power failure at these important posts during an emergency.

The city is also working on new sewer and septic tank designs, to minimize health hazards associated with their malfunctioning during high storm or hurricane tides. Wells are being designed and placed to reduce the attendant risks of pollution from malfunctioning sewers and septic tanks.

Homeport hopes to reduce its vulnerability by placing greater stress on protective measures at the shoreline. Preservation of sand dunes (including penalities for breaching dunes and removing vegetation or sand fences), beach protection and maintenance (with sand pumping, jetties, groins, and breakwaters), and stronger zoning and building codes near the beach. The city is receiving technical assistance here from the U.S. Army Corps of Engineers.

Other military assistance available to Homeport is mainly direct assistance in the face of an emergency greater than the city and county can handle alone. Liaison with military forces in the area is maintained through the Commanding Officer, Inland Air Force Base.

Evacuation Plans

Central to hurricane preparedness planning in low-lying cities like Homeport is a set of plans covering evacuation procedures, time requirements, and routes for various storm tide levels. At Homeport, three evacuation plans were developed for each of the inundation situations already described—those caused by tides 4 to 8, 9 to 12, and 13 to 16 feet above mean sea level. Homeport's Evacuation Plans A, B, and C are displayed on the next six pages.

INSTRUCTIONS FOR EVACUEES

When your Hurricane Preparedness Committee advises evacuation, keep calm, and follow these procedures promptly:

1. Shut off main gas valve and pull main power switch before leaving home.

2. Head for the designated shelters or evacuation points indicated for your area, as directed on your Evacuation Plan maps and by broadcasts during the emergency. Follow routes indicated on maps. Drive up to shelter entrance, unload, and park car as police instruct. If on foot, proceed to nearest loading station and board buses. No fare will be charged.

3. Take only clothing that is absolutely necessary; do not try to bring household equipment. Evacuated areas will be policed to prevent looting.

4. Follow instructions of Red Cross shelter personnel and volunteer to help with any tasks needed for efficient shelter operation.

5. Remain at the shelter until informed that you may leave. People will not be allowed back into evacuated areas until Public Health officials and building inspectors have completed their inspections and given their approval. Evacuees will then be given passes permitting them to return home.

EVACUATION PLAN A

(Expected storm tides: 4-8 ft. msl)

Areas to be evacuated (and time required to be evacuated and reach shelter)	Shelters	Routes
Turtle, King, Barracuda and Shark Keys (3 hrs)	Masonic Hall	Boats to Marina; bus via Marina rd to 5th; E. on 5th.
All settlements east of Rt 17, Northville to Homeport (4 hrs)	City High School	S. on Rt 17; E. on 7th.
All settlements east of Rt 17, Southville to Homeport (4 hrs)	Elementary School	N. on Rt 17; E. on 7th.
Homeport Beach (3 hrs)	Armory	Causeway; S. on A; W. on 30th; S. on R.
Area A (3 hrs)	City Auditorium	W. on 15th.

Buildings west of D Street need not be evacuated above street floor. Tenants of upper floors are asked to provide refuge for street-level and basement occupants.

First Church, at 17th and Crescent Streets, is the Emergency Hospital. All persons requiring ambulance transportation will be taken there.

EVACUATION PLAN B

(Expected storm tides: 9-12 ft msl)

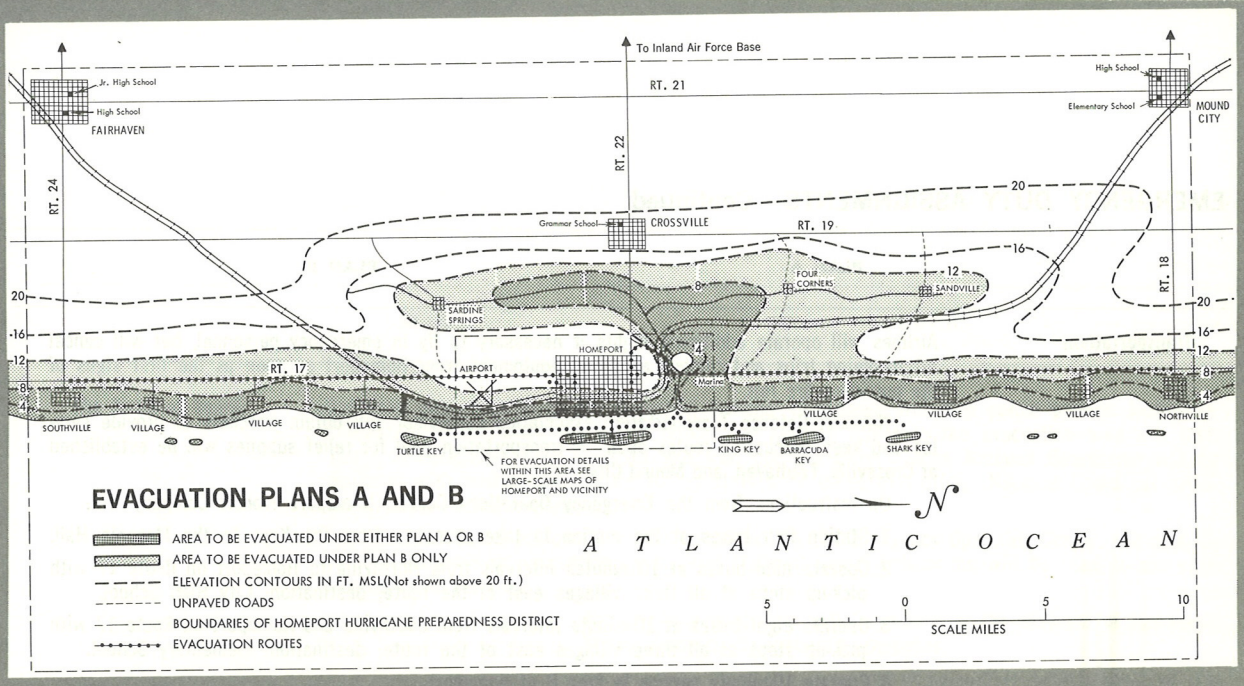
Areas to be evacuated (and time required to be evacuated and reach shelter)	Shelters	Approaches
Same as Evacuation Plan A, plus:		
Area B (3 hrs)	Court House	W. on 25th.
Area C (2 hrs)	City Hall	W. on 24th.
Area D (1 hr)	Adams Hotel	N. on H.
Area E (2 hrs)	Christ Church	S. on I.
Area F (1 hr)	Gem Theatre	W. on 5th.
Area G (3 hrs)	Primary School	W. on 10th.
Area H (3 hrs)	Burr High School	W. on 18th; N. on Denver.

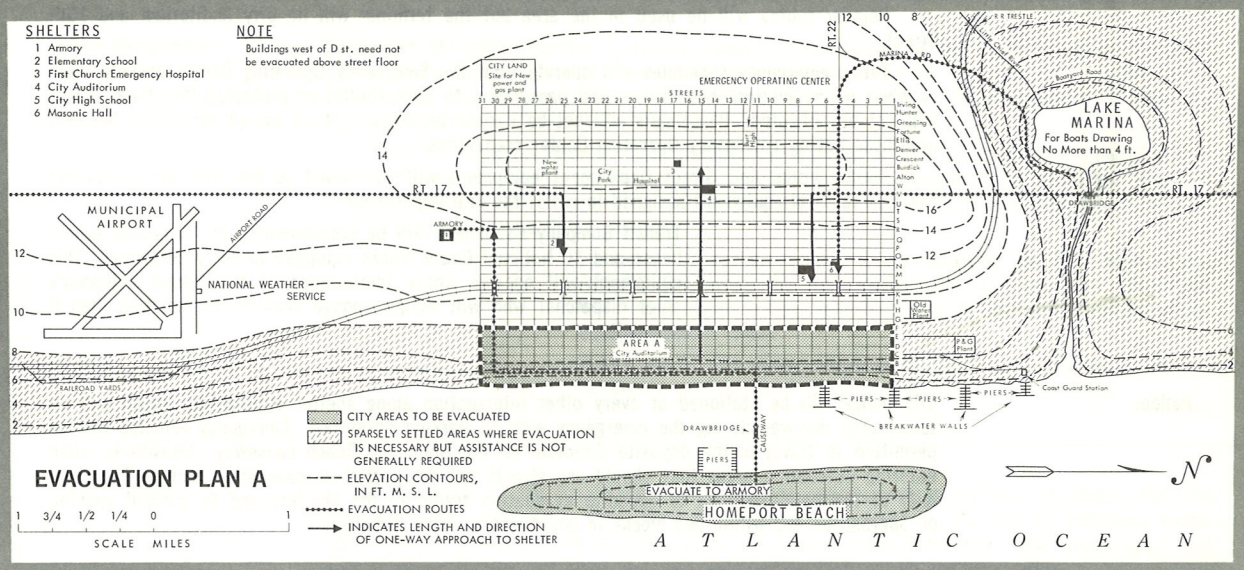
Buildings west of G Street need not be evacuated above street floor. Tenants of upper floors are asked to provide refuge for street-level and basement occupants.

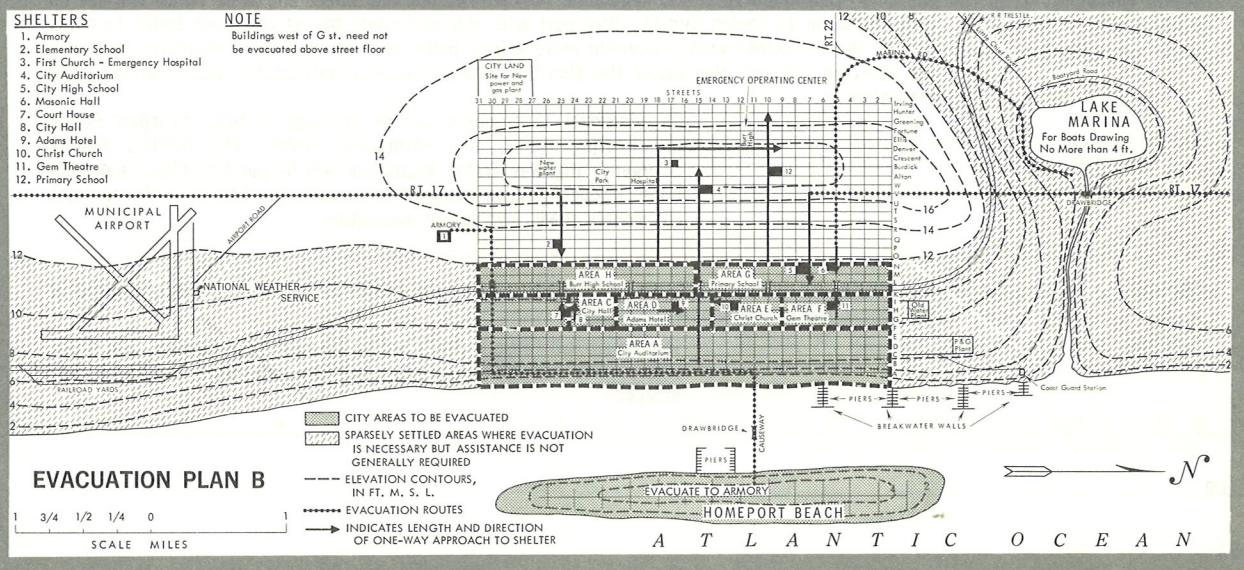
Evacuation routes will be one-way in direction indicated above.

EMERGENCY DUTY ASSIGNMENTS

	PLAN A	PLAN B
Communications:	Stations WHPT/WHPT-FM will broadcast hurricane warnings and pertinent information exclusively.	Power plant will flood. WHPT/WHPT-FM will operate from their emergency auxiliary power as Primary Station in Homeport Operational Area. If WHPT/WHPT-FM cannot continue operations Alternate Station WMET, Metropolis, will carry full emergency schedule.
National Weather Service:		Airport will flood, operations will be severely hampered by power failure; personnel to evacuate to Emergency Operating Center at Burr High School and set up emergency meteorological post there.
Air Traffic Control:		Airport will flood; personnel to evacuate to Emergency Operating Center at Burr High School and aid communications there.
Civil Defense:	As soon as warnings to evacuate are broadcast, block wardens will make door-to-door checks to ensure full warning, and will telephone EM 1-1111 if ambulance service is required. When evacuation is completed, wardens will take posts in indicated safe buildings in their area and assist in maintaining guard against fire and other hazards.	
Red Cross:	This agency will be responsible for care, including emergency clothing and feeding, at designated shelters. Ambulances will help move incapacitated persons to the Emergency Hospital in Christ Church, which will be manned by volunteer doctors and nurses. Red Cross will supplement medical and nursing staff as needed.	


To Inland Air Force Base
RT. 21
RT. 22
RT. 24
RT. 17
RT. 19
RT. 18
Jr. High School
High School
FAIRHAVEN
High School
Elementary School
MOUND CITY
Grammar School
CROSSVILLE
FOUR CORNERS
SANDVILLE
SARDINE SPRINGS
HOMEPORT
AIRPORT
Marina
SOUTHVILLE
VILLAGE
NORTHVILLE
TURTLE KEY
KING KEY
BARRACUDA KEY
SHARK KEY
FOR EVACUATION DETAILS WITHIN THIS AREA SEE LARGE-SCALE MAPS OF HOMEPORT AND VICINITY
EVACUATION PLANS A AND B
AREA TO BE EVACUATED UNDER EITHER PLAN A OR B
AREA TO BE EVACUATED UNDER PLAN B ONLY
ELEVATION CONTOURS IN FT. MSL(Not shown above 20 ft.)
UNPAVED ROADS
BOUNDARIES OF HOMEPORT HURRICANE PREPAREDNESS DISTRICT
EVACUATION ROUTES
N
ATLANTIC OCEAN
5 0 5 10
SCALE MILES


SHELTERS
1 Armory
2 Elementary School
3 First Church Emergency Hospital
4 City Auditorium
5 City High School
6 Masonic Hall
NOTE
Buildings west of D st. need not be evacuated above street floor
CITY LAND Site for New power and gas plant
EMERGENCY OPERATING CENTER
STREETS
LAKE MARINA For Boats Drawing No More than 4 ft.
MUNICIPAL AIRPORT
AIRPORT ROAD
NATIONAL WEATHER SERVICE
RT. 17
RT. 22
ARMORY
AREA A City Auditorium
RAILROAD YARDS
PIERS
BREAKWATER WALLS
Coast Guard Station
DRAWBRIDGE
CAUSEWAY
EVACUATE TO ARMORY
HOMEPORT BEACH
EVACUATION PLAN A
CITY AREAS TO BE EVACUATED
SPARSELY SETTLED AREAS WHERE EVACUATION IS NECESSARY BUT ASSISTANCE IS NOT GENERALLY REQUIRED
ELEVATION CONTOURS, IN FT. M. S. L.
EVACUATION ROUTES
INDICATES LENGTH AND DIRECTION OF ONE-WAY APPROACH TO SHELTER
1 3/4 1/2 1/4 0 1
SCALE MILES
N
ATLANTIC OCEAN


SHELTERS
1. Armory
2. Elementary School
3. First Church - Emergency Hospital
4. City Auditorium
5. City High School
6. Masonic Hall
7. Court House
8. City Hall
9. Adams Hotel
10. Christ Church
11. Gem Theatre
12. Primary School
NOTE
Buildings west of G st. need not be evacuated above street floor
CITY LAND Site for New power and gas plant
EMERGENCY OPERATING CENTER
STREETS
LAKE MARINA For Boats Drawing No More than 4 ft.
MUNICIPAL AIRPORT
AIRPORT ROAD
NATIONAL WEATHER SERVICE
RT. 17
RT. 22
ARMORY
AREA A City Auditorium
AREA C City Hall
AREA D Adams Hotel
AREA E Christ Church
AREA F Gem Theatre
AREA G
AREA H
RAILROAD YARDS
PIERS
BREAKWATER WALLS
Coast Guard Station
DRAWBRIDGE
CAUSEWAY
EVACUATE TO ARMORY
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ELEVATION CONTOURS, IN FT. M. S. L.
EVACUATION ROUTES
INDICATES LENGTH AND DIRECTION OF ONE-WAY APPROACH TO SHELTER
1 3/4 1/2 1/4 0 1
SCALE MILES
N
ATLANTIC OCEAN

EMERGENCY DUTY ASSIGNMENTS—Continued

	PLAN A	PLAN B
Transportation:	Airlines will operate additional flights if necessary to fly in emergency personnel, but will cancel all incoming trips and remove all flying equipment from Homeport as soon as the first signs of the hurricane are felt. National Defense Transportation Association supervisor will obtain wreckers to provide service and keep evacuation routes open. A transportation pool for relief supplies will be established at Crossville, Fairhaven, and Mound City. On instructions from the Emergency Operations Center, Homeport Transit Company will: 1. Station four buses at the marina to take evacuees from the Keys to the Masonic Hall. 2. Operate nine buses at 10-minutes intervals from Northville to Homeport on Route 17 with pick-up stops at all three villages east of the route; destination: City High School. 3. Operate eight buses at 10-minute intervals from Southville and Homeport on Route 17 with pick-up stops at all three villages east of the route; destination: Elementary School. 4. Operate 10-minute service in Area B of Homeport. Regular routes will be used in the area but the terminal will be City Auditorium and 15th Street. These emergency schedules will operate until the Emergency Operating Center cancels them or when police instruct bus drivers and passengers to seek shelter at protected City Park. Fares will not be collected. Passengers will not be carried on outgoing trips except for police, firemen, and those having Emergency Operating Center credentials. Public Works and Street Department equipment will be moved to the city lot except for the tree removal equipment assigned to assist the Fire Department.	Transit Company equipment will be supplemented by 10 county school buses and 10 National Guard trucks equipped to carry personnel. This equipment will operate under instructions of the transit company's chief dispatcher who will assign enough vehicles to maintain Plan B schedules.
Police:	City police will be stationed at every other intersection along shelter approaches, which will be temporarily one-way during the emergency with no parking permitted. Emergency vehicles will be permitted to travel in the opposite direction on the Homeport Beach causeway. Elsewhere, when entering evacuation areas they should use streets not designated as evacuation routes. The chief duty of the police will be to expedite evacuation traffic to the shelters and to prevent parking on approaches and within two blocks in any direction from a shelter.	
State Police:	The Emergency Highway Traffic Regulation Plan will be put into effect and State Police will set up road blocks on all routes into the Homeport area and will divert tourist and truck traffic to cities outside the threatened area. They will make a final patrol of evacuated areas to ensure that they are deserted and will also assist the Sheriff's force in warning settlements and supervising the evacuation.	An additional 15 troopers will be assigned to help Homeport Police in directing traffic and maintaining order. The Achilles County Emergency Highway Traffic Regulation will be put into effect and additional troopers will be assigned to regulate the flow of traffic on state and county roads involved in evacuation.
Sheriff:	The Sheriff and his men will ensure that all settlements, trailer camps, etc., are duly advised of the danger and of the need to evacuate.	The Sheriff will ensure that Sardine Springs, Four Corners, and Sandville receive evacuation warnings and any evacuation assistance they request.

	PLAN A	PLAN B
The National Guard:	Activated upon request to the Governor, National Guardsmen will help police prevent looting in evacuation areas. When the storm strikes, all policing forces in the evacuation area will take posts in designated safe buildings and wait out the storm. Some National Guardsmen will be equipped with walkie-talkie radios to report fires or cases of looting. National Guard personnel will also aid shelter operations. National Guard personnel carriers dispatched by the Emergency Operating Center, will pick up persons stranded in evacuation areas. Two National Guard ambulances will be used to evacuate incapacitated persons.	Ten trucks with drivers will be placed at the disposal of Homeport Transit Company for evacuation purposes.
Fire Department:	Equipment at station number 1 will be moved to the vicinity of the Field House in City Park. The station's battery-operated receiver will be taken along so the men can take shelter in the Field House. The station will not be abandoned, however, until winds reach about 30 miles per hour, by which time all evacuees should be in shelters. Each of the Department's three stations will operate at half strength. The remaining personnel will be on guard duty (in uniform) in their home neighborhoods to watch for fires and fallen live wires, and to give first aid if required. The Department's two ambulances will be used to evacuate incapacitated persons.	Equipment at station number 2 will move to the Burr High School Athletic Field when the wind reaches 40 miles per hour. Personnel will take shelter in the field house taking portable communications equipment with them. Public Works and Street Department equipment assigned to station number 2 will be moved to Burr High School Athletic Field.
Coast Guard:	At the discretion of the Commanding Officer, boats will be sent as available to ensure that the Keys have been evacuated. Only Shark Key requires assistance in the way of additional boats, which will be dispatched to evacuate about 40 persons from Shark Key. The Coast Guard will also stand by to tow any boats that may become disabled during the evacuation. Coast Guard Station will flood and must be evacuated. When no further patrolling is indicated, boats will return to station. Coast Guard personnel, with all appropriate available mobile equipment, will proceed to pre-assigned locations selected for maximum availability for rescue operations during and after the hurricane. Communications equipment will be placed in operation.	Use mobile communications equipment previously set up and take over when other units cease to function. Maintain contact with other Coast Guard units. Detail personnel to rescue operations, as weather permits.
Civil Air Patrol:	Two Civil Air Patrol aircraft will patrol offshore areas under Homeport jurisdiction to ensure all boats have sought protection. Planes will notify the Homeport Coast Guard Station by radioing the FAA station at Homeport airport, which will relay the message to the Coast Guard. Additional aircraft will patrol for isolated groups which do not appear to be taking shelter, and will notify the Sheriff's Office via the Homeport airport FAA Flight Service Station. Planes will leave for bases outside threatened area as soon as there appears to be no further need for patrolling or until winds become strong or ceiling or visibility begins to lower.	

EMERGENCY DUTY ASSIGNMENTS—Continued

	PLAN A	PLAN B
Public Utilities:	Main gas lines to evacuation areas will be shut off. Every attempt will be made to maintain electric service in the central section of the city in which most of the shelters are located. Here the power lines are underground and electrical hazards have been greatly reduced. In other sections of the city, power will be shut off when gusts begin to exceed 60 miles per hour.	The electric power and gas plant will flood and must be abandoned. As soon as it is likely that Plan B will have to be put into effect, notice of the impending plant shutdown will be released by the Emergency Operating Center for broadcast to the public. The plant management will telephone supervisors of all buildings equipped with standby power plants (lists of persons to be called are available at the plant, at its city office, and the Emergency Operating Center) to notify them of the expected service interrupion and to check standby equipment and fuel supplies.

EMERGENCY DUTY ASSIGNMENTS

	PLAN C
Communications:	Same as Plan B.
National Weather Service:	Same as Plan B.
FAA Flight Service Station:	Same as Plan B.
Civil Defense:	Same as Plan A except for additional evacuation areas.
Red Cross:	Same as Plan A except for additional shelters and assignment of more trained personnel.
Transportation:	Emergency Transit Schedule for Plan C will go into effect upon notification by the Emergency Operating Center. Equipment will be supplemented by 10 county school buses and 10 National Guard trucks.
Police:	City police will extend duties to cover additional evacuation areas and routes shown in Emergency Transit Schedules for Plan C.
State Police:	Same as Plan B.
Sheriff:	Same as Plan B.
National Guard:	Same as Plan B except that Armory must be evacuated.
Fire Department:	Same as Plan B.
Coast Guard:	Same as Plan B.
Civil Air Patrol:	Same as Plan A.
Public Utilities:	Same as Plan B.

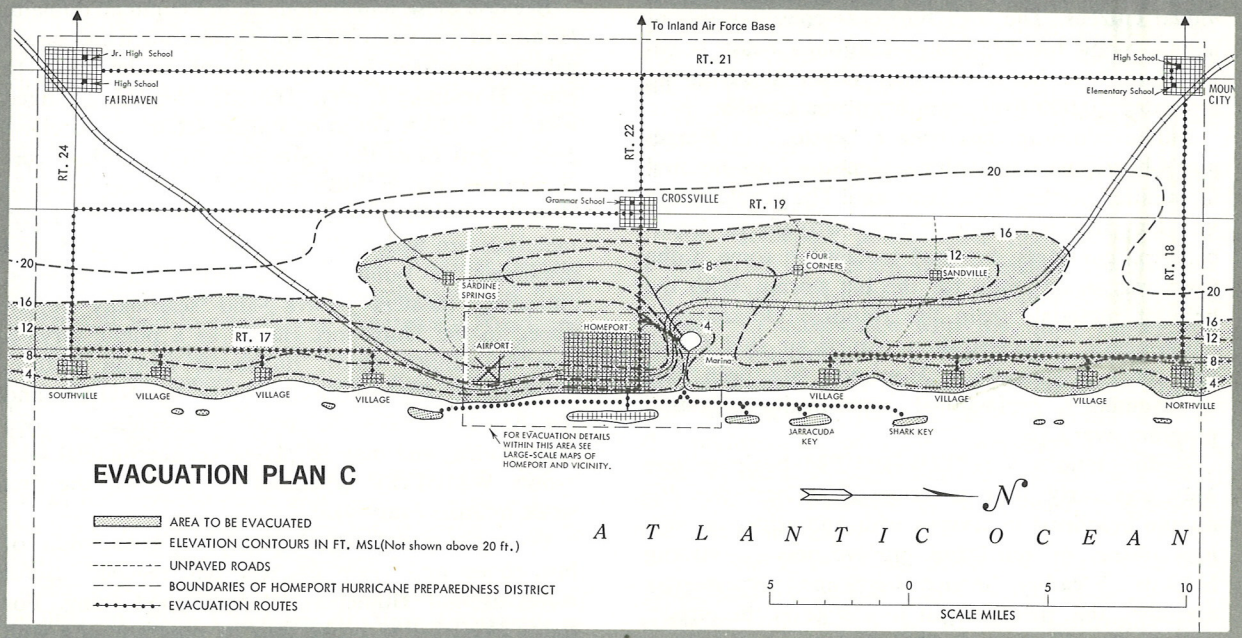
Note: Plan C areas are not the same as Plan A and B areas.

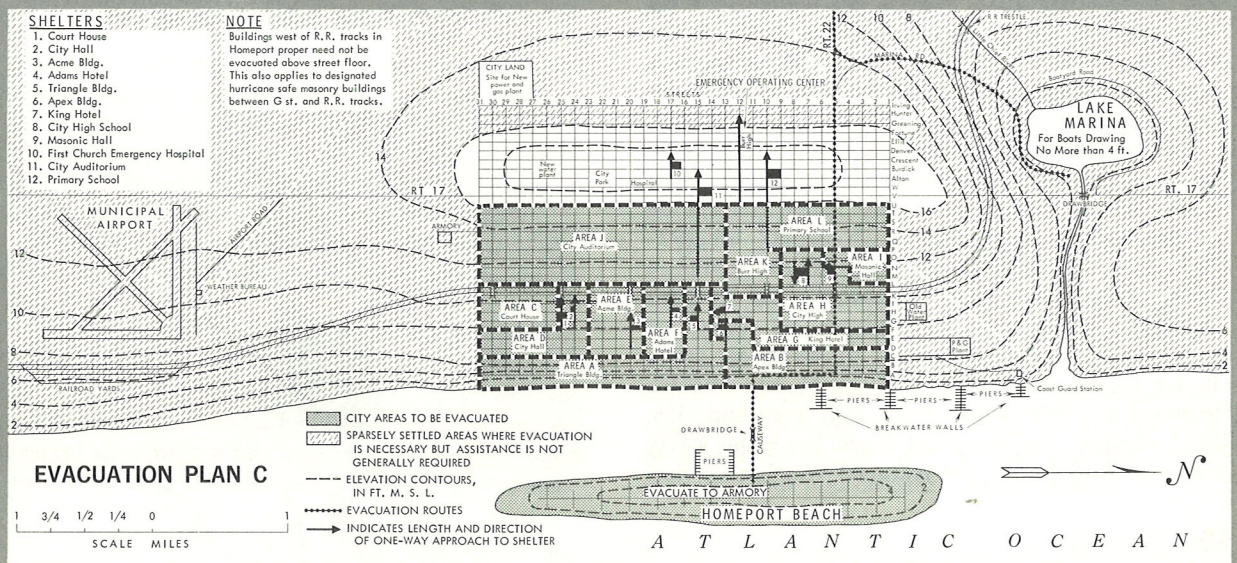
Buildings west of the railroad tracks in Homeport need not be evacuated above the street floor. This also applies to designated hurricane-safe masonry buildings between G Street and the railroad tracks. Tenants of upper floors are requested to provide refuge for street-level and basement occupants.

EVACUATION PLAN C

(Expected storm tides: 13-16 ft msl)

Areas to be evacuated (and time required to be evacuated and reach shelter)	Shelters	Routes or Approaches
Turtle, King, Barracuda, and Shark Keys (3 hrs)	Mound City High School	Boats to Marina; bus via Marina rd and N. on Rt 17; W. on Rt 18.
All settlements east of Rt 17, Northville to Homeport (5 hrs)	Mount City High and Elementary Schools	S. on Rt 17; W. on Rt 24; N. on Rt 19.
All settlements east of Rt. 17, Southville to Homeport (5 hrs)	Crossville Grammar School	S. on Rt 17; W. on Rt 24; N. on Rt 19.
Homeport Beach (4 hrs)	Fairhaven High and Junior High Schools	Causeway; N. on A; W. on 5th and Rt 22; S. on Rt 21.
Area A (3 hrs)	Triangle Building	W. on 15th
Area B (3 hrs)	Apex Building	W. on 13th
Area C (2 hrs)	Court House	W. on 25th
Area D (3 hrs)	City Hall	W. on 24th
Area E (2 hrs)	Acme Building	W. on 20th
Area F (2 hrs)	Adams Hotel	W. on 17th
Area G (2 hrs)	King Hotel	S. on H
Area H (3 hrs)	City High School	W. on 7th; E. on 8th
Area I (2 hrs)	Masonic Hall	S. on N.
Area J (3 hrs)	City Auditorium	W. on 15th
Area K (3 hrs)	Burr High School	W. on 12th
Area L (3 hrs)	Primary School	W. on 10th


To Inland Air Force Base
RT. 21
RT. 22
RT. 24
RT. 19
RT. 17
RT. 18
Jr. High School
High School
FAIRHAVEN
High School
Elementary School
Grammar School
CROSSVILLE
FOUR CORNERS
SANDVILLE
SARDINE SPRINGS
AIRPORT
HOMEPORT
Marina
SOUTHVILLE
VILLAGE
VILLAGE
VILLAGE
VILLAGE
VILLAGE
VILLAGE
NORTHVILLE
JARRACUDA KEY
SHARK KEY
FOR EVACUATION DETAILS WITHIN THIS AREA SEE LARGE-SCALE MAPS OF HOMEPORT AND VICINITY.
EVACUATION PLAN C
AREA TO BE EVACUATED
ELEVATION CONTOURS IN FT. MSL(Not shown above 20 ft.)
UNPAVED ROADS
BOUNDARIES OF HOMEPORT HURRICANE PREPAREDNESS DISTRICT
EVACUATION ROUTES
N
ATLANTIC OCEAN
5 0 5 10
SCALE MILES


SHELTERS
1. Court House
2. City Hall
3. Acme Bldg.
4. Adams Hotel
5. Triangle Bldg.
6. Apex Bldg.
7. King Hotel
8. City High School
9. Masonic Hall
10. First Church Emergency Hospital
11. City Auditorium
12. Primary School
NOTE
Buildings west of R.R. tracks in Homeport proper need not be evacuated above street floor. This also applies to designated hurricane safe masonry buildings between G st. and R.R. tracks.
MUNICIPAL AIRPORT
WEATHER BUREAU
RAILROAD YARD
CITY LAND Site for New power and gas plant
EMERGENCY OPERATING CENTER
LAKE MARINA
For Boats Drawing No More than 4 ft.
DRAWBRIDGE
AREA A Triangle Bldg.
AREA B Apex Bldg.
AREA C Court House
AREA D City Hall
AREA E King Bldg.
AREA F Adams Hotel
AREA G King Hotel
AREA H City High
AREA I Masonic Hall
AREA J City Auditorium
AREA K Burr High
AREA L Primary School
ARMORY
PIERS
BREAKWATER WALLS
Coast Guard Station
CAUSEWAY
EVACUATE TO ARMORY
HOMEPORT BEACH
EVACUATION PLAN C
CITY AREAS TO BE EVACUATED
SPARSELY SETTLED AREAS WHERE EVACUATION IS NECESSARY BUT ASSISTANCE IS NOT GENERALLY REQUIRED
ELEVATION CONTOURS, IN FT. M. S. L.
EVACUATION ROUTES
INDICATES LENGTH AND DIRECTION OF ONE-WAY APPROACH TO SHELTER
1 3/4 1/2 1/4 0 1
SCALE MILES
N
ATLANTIC OCEAN

Public Education

As populations grow more dense along the Atlantic and Gulf coasts, the hurricane season expands its curriculum, and teaches yet another crucial lesson: a community is never better prepared than its individual citizens. The high hurricane-consciousness of people along the Mississippi-Louisiana coast is believed to have been the major factor in saving an estimated 50,000 lives from hurricane Camille.

Public education has been a keystone in Homeport's hurricane preparedness planning from the first Committee meeting four years ago. The problem here was that Homeport's people had virtually no hurricane-consciousness, but had to develop some if the town was to be ready for the big storms. With the help of materials from the National Oceanic and Atmospheric Administration, American Red Cross, and other organizations, Homeport has been able to assemble a professional, multi-media education program every year.

Radio stations WHPT/WHPT-FM begin in late May and early June a series of at least five 15-minute broadcast interviews with authorities on various phases of hurricane preparedness—a visiting National Weather Service hurricane preparedness specialist, the meteorologist in charge at the airport station, the director of Civil Defense, and others. The Superintendent of Schools has his teachers tell their students about these broadcasts, on which the students are subsequently tested. The *Homeport Herald* publicizes these broadcasts and publishes interview summaries.

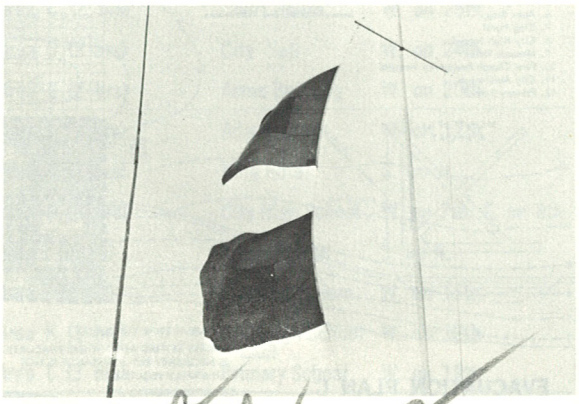
The Federal Communications Commission, State Industry Advisory Committee begins actual on-air state-wide test broadcasts of their State Association of Broadcasters "FM Weather Network" (WHPT-FM is a key network station) by originating a weekly three-minute "live" broadcast at the National Weather Service and transmitting the broadcast throughout the state by means of off-the-air relay. Radio station on WHPT/WHPT-FM and WMET intercept and rebroadcast these daily programs. The local stations also broadcast taped hurricane safety messages provided by the National Weather Service.

Other public information materials available from NOAA and the National Weather Service include hurricane preparedness ads and mats for newspaper use; photographs of hurricanes and related subjects to promote reader interest in hurricane safety; pamphlets describing hurricanes, wallet cards, safety rules, and hurricane and storm surge safety rule posters; Atlantic hurricane tracking charts; and press releases and publications describing certain special aspects of each hurricane season, as, for example, Project *Stormfury,* the joint NOAA-Navy project which seeks to modify hurricanes beneficially.

Because these publications lie in the public domain, Homeport has been able to provide hurricane safety rule posters (see back cover) and wallet cards to every Homeport family. The city's leaders arranged with the NOAA Office of Public Affairs to purchase plate negatives of the poster and wallet card, at cost of preparation. A local printer then used these in printing the city's own edition, also at cost. These materials are widely disseminated in Homeport, and displayed in public places—restaurants, schools, churches, theaters, stores—and seasonally reproduced in the Homeport Herald as a public service.

A 30-minute, color, full-sound motion picture, HURRICANE!, produced jointly by NOAA and the Aetna Casualty Company, is available on loan from Aetna, and may be played on commercial television. WMET-TV schedules the film for the first week in June every year.

Over the past several years, comprehension of hurricanes and their dangers has reached useful levels around Homeport. It is a good thing. For today WHPT-FM broke into its programming with news of hurricane Lady, a deadly spiral floating on the sea a few hundred miles to the southeast.



Tampa Daily News

HURRICANE LADY

The Watch

HURRICANE WATCH—An announcement issued by the National Weather Service to the public and all other interests via press and radio and television broadcasts whenever a tropical storm or hurricane becomes a threat to a coastal area. The hurricane watch announcement is not a warning; it indicates that the hurricane is near enough that everyone in the area covered by the watch should listen for subsequent advisories and be ready to take precautionary action in case hurricane warnings are issued.

A hurricane watch is out for the Homeport area, and, for the first time, the community's preparedness apparatus begins a wet run.

The airport office of the National Weather Service receives the watch message from the National Hurricane Center, Miami, and immediately notifies the Mayor (as chairman of the Hurricane Preparedness Committee) and the FCC's Homeport Operational Area Industry Advisory Committee (OAIAC). The Mayor calls an immediate meeting of the committees to review emergency preparation and procedures.

At the same time, the National Weather Service deploys additional people to supplement the local office staff and to establish an Emergency Hurricane Information Center. Hurricane advisories, bulletins, and local statements go out over the NOAA VHF Radio Weather station (KWX-36), NOAA Weather Wire, and pooled broadcasts.

Fire and police department personnel are placed on 24-hour on-call duty, and those on leave outside the area are recalled. An equipment check is made at these and other city departments.

Members of the FCC's Homeport OAIAC are notified by their Chairman or Vice Chairman to prepare for emergency communications procedures. The *Homeport Herald* and local radio stations publicize the threat and disseminate new advisories promptly. This material is restricted to official National Weather Service messages, as received via VHF-FM, weather wire, or broadcast pool.

Disaster representatives of the American Red Cross call in additional personnel and equipment to augment the facilities of the Homeport Chapter.

Both railroad companies operating in the area begin to move all rolling stock to yards in inland cities.

The Homeport Coast Guard Station, assisted by the Coast Guard Auxiliary, notifies all ships tied up at the piers or anchored offshore that a hurricane watch is in effect. Coast Guard aircraft from the nearest air unit deploy to patrol coastal and inland waterways and isolated land areas, dropping messages to vessels and other persons who may not have received warnings by other means.

The local National Defense Transportation Association supervisor lines up the vehicles he will need to handle refugees, carry the injured, perform rescue work, move personnel and relief supplies, and supply wrecker service along evacuation routes.

The Homeport Transit Company readies all spare buses and alerts its off-duty drivers.

The Civil Air Patrol launches aircraft to patrol the coastal area.

The Homeport police chief requests the State Police to set up check points on main highways leading into the threatened area to control entry and re-entry in accordance with the State Emergency Highway Regulation plan. The Homeport Hurricane Preparedness Committee issues special passes to persons who have to pass through the police lines in the performance of their emergency duties. The State Police also patrol the beaches 20 miles north and south of Homeport to warn beach campers of the hurricane danger.

The Sheriff sends his force out to alert all exposed settlements and trailer camps to maintain a constant radio watch for further instructions, and to tell them where to go if they are warned to evacuate. This preliminary alerting action also includes the temporary settlements or trailer camps of itinerant workers.

County Fire Departments activate the Fire Service Mutual Aid Agreement, and go on standby to render fire-rescue assistance where required.

The Public Health Department prepares for mass innoculations as required.

The highway, street, and public works departments take immediate steps to open all streets and roads where construction or repairs are in progress. Where this is not possible, streets or roads are barricated at an intersection to avoid a dead end and detour signs are prominently posted. Heavy movable equipment move to the city lot on the western edge of Homeport to be held in readiness for debris clearance and post-disaster cleanup work.

HURRICANE LADY

The Warning

HURRICANE WARNING—An announcement issued by the National Weather Service indicating that hurricane winds of 74 miles per hour (64 knots) or higher or a combination of dangerously high water and very rough seas (even though winds expected to be less than hurricane force) are expected in a specified coastal area. When a hurricane warning is announced, hurricane conditions are considered imminent and may begin immediately or at least within 24 hours. It is of utmost importance that precautionary actions be instituted immediately when a hurricane warning is announced.

The goal of the National Weather Service is to issue warnings in time to provide a minimum of 12 daylight hours for preparations and evacuations in areas where hurricane force winds are expected. Hurricane warnings issued 15 to 18 hours before the arrival of the center of an average hurricane will cover about 200 miles of coastline considered most vulnerable to hurricane force winds, dangerous storm surges, and some structural damage. The goal of 12 daylight hours of warning represents a compromise between the probable forecast errors and the need to overwarn, and the length of coastline in which it is economically feasible to conduct all-out hurricane preparations.

The emergency procedures placed in readiness upon receipt of a hurricane watch go into action when the hurricane warning comes in.

All emergency communications systems, plans, and procedures of the Homeport OAIAC operate continuously now until the emergency has ended. Broadcasts over WHPT and WHPT-FM are now live from the Emergency Operating Center and the National Weather Service office. All hurricane advisories, bulletins, and local statements are transmitted on the NOAA VHF Radio Weather station, NOAA Weather Wire, and pooled broadcasts.

Stations WHPT and WHPT-FM and Civil Defense activate and maintain their radio communications equipment at the Emergency Operating Center, and mobile units are dispatched to the parking lot at Burr High School by the city police, state police, sheriff's office, fire department and the highway department and utility companies.

Broadcasts remind the public to remain calm, to remain at home until ordered to evacuate, to stay tuned in continuously, and to begin taking precautionary measures. These broadcasts include:

1. *Hurricane Announcements,* a phonograph record containing four one-minute hurricane announcements on one side and tornado announcements on the reverse, available from the National Weather Service.
2. *Hurricane Preparedness in Homeport,* a tape prepared yearly by the Homeport Hurricane Preparedness Committee.
3. *Hurricane Safety Rules,* a record or tape prepared in advance by broadcast stations, from text available from the National Weather Service.

The broadcasts also remind the audience to call EM 1-1111 if there are persons who require ambulance transportation in case of evacuation. The Homeport Citizen Band Association and Radio Amateur Civil Emergency Services stand by to station mobile units at pre-designated locations throughout the city if the telephone system goes out.

Official emergency weather warnings are transmitted to WHPT/WHPT-FM by the National Weather Service on NOAA Weather Wire or KWX-36. These warnings and instructions are made as live broadcasts whenever possible.

The National Weather Service and Emergency Operating Center notify all agencies and individuals on their respective hurricane warning lists.

The Superintendent of Schools cancels all classes for the duration of the emergency; the notice is broadcast from the Emergency Operating Center.

The Mayor of Homeport puts one of the town's three evacuation plans in operation, selecting the plan to match predicted storm tide levels. Evacuation scheduling determined by the Mayor permits evacuees to reach designated shelters at least nine hours before the time of expected flooding.

Now the low-lying coastal city and its people get ready to confront the hurricane and all the isolation and destruction it is likely to bring. Along the streets of Homeport one sees the evidence of preparation—windows, taped or boarded, yards clear of loose toys and lawn furniture, families on the move, traveling light, leaving their homes.

There is tension here, but no panic and only normal fear. If hurricane Lady is a very intense storm, Homeport can expect massive destruction and months spent rebuilding the town and its opportunities. But Lady will probably take no lives in Homeport. The city and its people are trained and equipped to face the storm. They will survive. And that is what the Homeport Story is all about: survival.

SAMPLE ADVISORY

NATIONAL HURRICANE CENTER HURRICANE ADVISORY NUMBER 20 LADY NOON EDT SATURDAY AUGUST 28 1971.

DESTRUCTIVE WINDS AND HIGH TIDES TO STRIKE SOUTH FLORIDA TODAY.

THE WEATHER SERVICE ADVISES THAT A HURRICANE EMERGENCY WARNING HAS BEEN ISSUED FOR BOTH SIDES OF THE FLORIDA PENINSULA FROM STUART AND VENICE SOUTHWARD INCLUDING LAKE OKEECHOBEE AND THE KEYS SOUTHWARD AS FAR AS TAVERNIER. A DANGEROUS HURRICANE NOW THREATENS MOST OF SOUTH FLORIDA. SAFETY PRECAUTIONS SHOULD BE RUSHED WITH ALL POSSIBLE URGENCY ON THE SOUTHEAST COAST AND COMPLETED BY NO LATER THAN 6 PM SATURDAY AND SHOULD BE STARTED ON THE WEST COAST SOUTH OF TARPON SPRINGS.

IN THE HURRICANE AREA STORM TIDES WILL FLOOD COASTAL LANDS BAY AND INLETS TO HEIGHTS UP TO ABOUT 8 FEET ABOVE NORMAL TIDE LEVELS FOR THIS DATE WITH HIGH SWELLS AND WAVES ON THE COAST. DESTRUCTIVE WINDS AND DANGEROUSLY HIGH STORM TIDES WILL BEGIN BY EARLY THIS EVENING ON THE SOUTHEAST FLORIDA COAST WITH STRONGEST WINDS AND HIGHEST TIDES OCCURRING SUNDAY MORNING.

ALL PERSONS IN THE COASTAL AREA FROM MIAMI TO STUART ARE URGED TO EVACUATE IMMEDIATELY BEFORE RISING WATERS CUT OFF ESCAPE. FOR DETAILED INFORMATION ON EVACUATION CONSULT THE LATEST ADVICES FROM LOCAL PUBLIC OFFICIALS. EVACUATION RECOMMENDATIONS FOR THE WEST COAST WILL NOT BE MADE AT THIS TIME BUT THERE WILL BE DANGEROUSLY HIGH STORM TIDES TOMORROW SUNDAY AS FAR NORTH AS VENICE.

MANY INLAND LOW PLACES IN SOUTHERN FLORIDA ARE ALREADY SATURATED OR HAVE STANDING WATER DUE TO THE HEAVY SUMMER RAINS. THE TORRENTIAL RAINFALL EXPECTED FROM THIS HURRICANE WILL ADD AN ADDITIONAL FOOT OR TWO OF WATER IN MANY LOW PLACES.

A HURRICANE WATCH AND STORM WARNINGS CONTINUE OUTSIDE THE AREA OF HURRICANE WARNING FROM MELBOURNE THROUGH THE KEYS AND NORTHWARD ON THE WEST COAST TO CEDAR KEY. GALE WARNINGS EXTEND BEYOND THIS AREA ON THE ATLANTIC COAST OF DAYTONA BEACH AND ON THE GULF COAST OF APALACHICOLA.

THERE IS A POSSIBILITY OF A FEW TORNADOES IN SOUTHEAST FLORIDA THIS AFTERNOON ASSOCIATED WITH RAIN SQUALLS WHICH ARE EXPECTED IN ADVANCE OF THE HURRICANE.

SMALL CRAFT SHOULD REMAIN IN PORT ALL ALONG THE EAST FLORIDA COAST AND ALONG THE GULF COAST FROM THE MOUTH OF THE MISSISSIPPI EASTWARD. ALL SMALL CRAFT IN AND NEAR THE AREA OF HURRICANE DISPLAY SHOULD SEEK PLACES OF SAFETY IMMEDIATELY.

EMERGENCY HURRICANE PRECAUTIONS SHOULD BE CONTINUED IN THE EXTREME WESTERN BAHAMAS THIS AFTERNOON AND TONIGHT AGAINST HURRICANE WINDS AND DANGEROUSLY HIGH SEAS AND TIDES. THE CENTER WILL PASS OVER OR VERY NEAR NASSAU WITHIN A FEW HOURS AND MIAMI TONIGHT.

AT NOON EDT . . . 1600Z . . . THE CENTER OF HURRICANE LADY WAS ESTIMATED ABOUT 225 MILES EAST SOUTHEAST OF MIAMI OR NEAR LATITUDE 24.8 NORTH LONGITUDE 77.0 WEST. HOWEVER AT THAT TIME THE FORWARD EDGE OF THE DANGEROUS WINDS WAS ONLY 80 MILES EAST OF MIAMI. THE STORM IS MOVING TOWARD THE WEST NORTHWEST AT ABOUT 12 MPH. LITTLE CHANGE IN THE SPEED AND DIRECTION OF THE STORM IS EXPECTED DURING THE NEXT 12 HOURS.

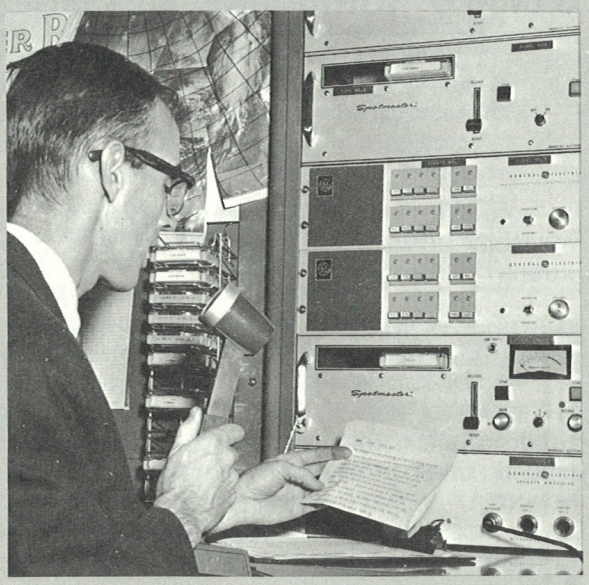
MAXIMUM SUSTAINED WINDS ARE ESTIMATED AT 125 MPH BRIEFLY HIGHER IN GUSTS NEAR THE CENTER WITH HURRICANE FORCE WINDS

EXTENDING OUTWARD 60 MILES TO THE NORTH AND WEST AND 30 MILES TO THE EAST AND SOUTH. GALE FORCE WINDS EXTEND OUTWARD 125 MILES FROM THE CENTER. THE STORM IS EXPECTED TO REMAIN ABOUT THE SAME INTENSITY DURING THE NEXT 12 HOURS. THE LOWEST PRESSURE IN THIS SEVERE HURRICANE IS 955 MBS OR 28.20 INCHES. NASSAU WAS REPORTING NORTHEASTERLY WINDS IN EXCESS OF 100 MPH.

REPEATING THE NOON POSITION . . . LATITUDE 24.8 NORTH LONGITUDE 77.0 WEST.

THE NEXT REGULAR ADVISORY ON HURRICANE LADY WILL BE ISSUED BY THE NATIONAL HURRICANE CENTER IN MIAMI AT 6 PM EDT. INTERMEDIATE BULLETINS WILL BE ISSUED FROM THIS OFFICE AT 2-HOURLY INTERVALS.

DOE



SAMPLE BULLETIN

NATIONAL HURRICANE CENTER BULLETIN HURRICANE LADY 2 PM EDT TUESDAY SEPTEMBER 7 1971.

HURRICANE WARNINGS ARE IN EFFECT IN EXTREME SOUTHERN FLORIDA FROM FORT LAUDERDALE THROUGH THE KEYS TO PUNTA GORDA. A HURRICANE WATCH AND GALE WARNINGS CONTINUE NORTH TO VERO BEACH ON THE EAST COAST AND TO ST MARKS ON THE GULF COAST.

GALE WARNINGS WERE DISCONTINUED FROM VERO BEACH NORTHWARD TO CAPE KENNEDY AT 2 PM THIS AFTERNOON.

EMERGENCY SAFETY PRECAUTIONS SHOULD BE COMPLETED AT THE EARLIEST POSSIBLE MOMENT FROM FORT LAUDERDALE THROUGH THE KEYS TO PUNTA GORDA. LIGHTHOUSES OFF THE MIDDLE KEYS ARE NOW EXPERIENCING SQUALLS OF CLOSE TO HURRICANE FORCE AND THE WINDS ARE INCREASING.

STORM TIDES ARE FORECAST UP TO 7 FEET ABOVE NORMAL AT KEY LARGO AND AS HIGH AS 11 FEET AT PLACES IN THE MIDDLE KEYS MOST SUSCEPTIBLE TO STORM TIDES. STORM TIDES IN THE CARD SOUND HOMESTEAD AREA SHOULD RANGE FROM 4 TO 6 FEET AND NORTH OF HOMESTEAD TO POMPANO BEACH FROM 2 TO 4 FEET ABOVE NORMAL. THE HIGH STORM TIDES WILL BE ACCOMPANIED BY HIGH WAVES AND BATTERING SURF.

ALL PERSONS IN COASTAL AREAS SUBJECT TO FLOODING FROM THESE TIDES OR WITHIN REACH OF THE HIGH WAVES AND BREAKERS SHOULD MOVE TO SAFE REFUGE. FOR FURTHER AND MORE DETAILED INFORMATION ON EVACUATION CONSULT THE LATEST ADVICES FROM LOCAL PUBLIC OFFICIALS.

IT IS EMPHASIZED THAT THIS IS AN EMERGENCY WARNING IN THE AREA FROM FORT LAUDERDALE TO PUNTA GORDA AND PARTICULARLY ON THE FLORIDA KEYS. IT IS EXTREMELY URGENT THAT EVACUATION IN ALL REQUIRED AREAS BE COMPLETED IN THE NEXT HOUR OR TWO SINCE FLOODING SHOULD BEGIN AT LOW POINTS ON THE OVERSEAS HIGHWAY VERY SHORTLY.

SMALL CRAFT IN THE SOUTHWESTERN BAHAMAS THE WEST AND CENTRAL COAST OF CUBA AND IN THE FLORIDA COASTS FROM ST. MARKS AND MELBOURNE SOUTHWARD SHOULD REMAIN IN SECURE HARBOR. PERSONS ARE REMINDED THAT ATTEMPTS TO SECURE BOATS AT THE HEIGHT OF THE HURRICANE FREQUENTLY RESULT IN CASUALTIES. IT IS DANGEROUS TO TRAVEL ON THE HIGHWAY AFTER THE TORRENTIAL RAINS AND HIGH WINDS OF THE HURRICANE HAVE STARTED.

AT 2 PM EDT SEVERE HURRICANE LADY WAS CENTERED APPROXIMATELY 150 MILES SOUTH SOUTHEAST OF MIAMI AND ABOUT THE SAME DISTANCE EAST SOUTHEAST OF KEY WEST.

HURRICANE LADY CONTINUES MOVING TOWARD THE WEST NORTHWEST AT ABOUT 12 MPH BUT AIRPLANE RECONNAISSANCE AND RADAR REPORTS DURING THE LAST 2 HOURS SHOW A CONTINUING VERY GRADUAL TENDENCY TOWARD A MORE NORTHWESTWARD MOVEMENT. IT IS LIKELY THAT THE HIGHEST WINDS AND TIDES WILL OCCUR IN THE MIDDLE KEYS. THE CENTRAL PRESSURE CONTINUES STEADY AT ABOUT 27.85 INCHES. MAXIMUM SUSTAINED WINDS ARE ESTIMATED AT 135 MPH NEAR THE CENTER.

THE NEXT ADVISORY ON SEVERE HURRICANE LADY WILL BE ISSUED BY THE NATIONAL HURRICANE CENTER IN MIAMI AT 6 PM EDT AND AN INTERMEDIATE BULLETIN AT 4 PM.

DOE

SAMPLE STATEMENT

NATIONAL WEATHER SERVICE GALVESTON TEXAS STATEMENT HURRICANE CARLA 1130 PM CDT THURSDAY SEPTEMBER 9 1971 FOR RESIDENTS IN THE COASTAL AREAS FROM PORT O'CONNOR TO HIGH ISLAND.

HURRICANE WARNINGS ARE IN EFFECT. TIDES ARE EXPECTED TO GRADUALLY INCREASE TONIGHT REACHING 10 TO 15 FEET ABOVE NORMAL ALONG THE COAST LATE TOMORROW. TIDES MAY BE IN

EXCESS OF 15 FEET IN THE UPPER REACHES OF GALVESTON BAY UP THROUGH THE HOUSTON SHIP CHANNEL.

THE FOLLOWING ACTIONS ARE INDICATED . . . ALL PERSONS PLANNING TO EVACUATE GALVESTON ISLAND SHOULD DO SO IMMEDIATELY SINCE THE LOWER SECTION OF THE HOUSTON/GALVESTON FREEWAY WILL PROBABLY BE FLOODED BEFORE DAYLIGHT. PERSONS NOT EVACUATING GALVESTON ISLAND SHOULD SEEK SAFE SHELTER TONIGHT. A 15 FOOT TIDE WILL FLOOD 90 PERCENT OF GALVESTON ISLAND.

BOLIVAR PENINSULA IS NOW ISOLATED BY HIGH WATER AND ANY PERSONS REMAINING BETWEEN PORT BOLIVAR AND HIGH ISLAND SHOULD SEEK SAFETY IN THE CIVIL DEFENSE SHELTER AT OLD FT TRAVIS IN FORT BOLIVAR.

PERSONS IN THE TEXAS CITY . . . LA MARQUE . . . HITCHCOCK AREA SHOULD BE PREPARED FOR POSSIBLE EVACUATION EARLY TOMORROW. THE REGION AROUND KEMAH . . . SEABROOK . . . CLEAR LAKE IS CONSIDERED ONE OF THE MOST VULNERABLE ALONG THE WESTERN SHORES OF GALVESTON BAY NORTH OF TEXAS CITY BECAUSE OF ITS LOW ELEVATION. DICKINSON BAYOU AND HIGHLAND BAYOU ARE ALSO VULNERABLE TO SEVERE FLOODING.

COASTAL EVACUATION SOUTHWEST OF GALVESTON ISLAND INCLUDING FREEPORT . . . SARGENT BEACH . . . MATAGORDA . . . MATAGORDA ISLAND AND MATAGORDA PENINSULA SHOULD BE COMPLETED TONIGHT.

CONSULT THE LATEST ADVICES FROM LOCAL PUBLIC OFFICIALS FOR FURTHER DETAILS ON EVACUATION.

ANOTHER STATEMENT WILL BE ISSUED BY THE GALVESTON WEATHER SERVICE AT 1230 AM CDT.

DOE

DEFINITIONS

Advisory. A formal message from a Weather Service Hurricane Warning Office giving warning information along with details on tropical cyclone location, intensity and movement and precautions that should be taken. The advisory may contain information on specific coastal warnings for which displays are made.

Bulletin. A public release from a Weather Service Hurricane Warning Office, issued at times other than those when advisories are required. The bulletin is similar in form to the advisory except that the bulletin includes additional general newsworthy information. The bulletin will routinely include a resume of all warnings in effect.

Gale Warning. A warning of sustained winds within the range 39 to 54 miles per hour (34 to 47 knots).

Storm Warning (Associated with Tropical Cyclones). A warning of sustained winds in the range of 55 to 73 miles per hour (48 to 63 knots) inclusive.

Hurricane. A warm core tropical cyclone in which maximum sustained surface wind is 74 miles per hour (64 knots) or greater.

Hurricane Center or Eye. The relatively calm area near the center of the storm. In this area winds are light and the sky often is only partly covered by clouds.

Hurricane "Season". The portion of the year having a relatively high incidence of hurricanes. In the Atlantic, Caribbean and Gulf of Mexico it is usually regarded as the period from June through November.

Hurricane Warning. A warning that one or both of the following dangerous effects of a hurricane are expected in a specified coastal area in 24 hours or less: (a) Sustained winds 74 miles per hour (64 knots) or higher; (b) Dangerously high water or a combination of dangerously high water and exceptionally high waves, even though winds expected may be less than hurricane force.

Hurricane Watch. An announcement for specific areas that a hurricane or an incipient hurricane condition poses a threat to coastal and inland communities. All people in the indicated areas should take stock of their preparedness requirements, keep abreast of the latest advisories and bulletins and be ready for quick action in case a warning is issued for their areas.

Local Statement. A public release prepared by a Weather Service Office in or near a threatened area giving specific details for its area of county responsibility on: (a) weather conditions; (b) sections that should be evacuated; (c) and other precautions necessary to protect life and property.

Squall. A sudden increase of wind speed by at least 18 miles per hour (16 knots) and rising to 25 miles per hour (22 knots) or more and lasting for at least one minute.

Tropical Cyclone. A non-frontal cyclone of synoptic scale, developing over tropical or sub-tropical waters and having a definite organized circulation.

Tropical Disturbance. A discrete system of apparently organized convection, generally 100 to 300 miles in diameter originating in the tropics or sub-tropics, having a non-frontal migratory character and having maintained its identity for 24 hours or more. It may or may not be associated with a detectable perturbation in the wind field. As such, it is the basic generic designation which, in successive stages of intensification, may be subsequently classified as a tropical wave, depression, storm or hurricane.

Tropical Wave. A trough or cyclonic curvature maximum in the trade wind easterlies. The wave may reach maximum amplitude in the lower middle troposphere, or may be the reflection of an upper troposphere cold low or equatorward extension of a middle latitude trough.

Tropical Depression. A tropical cyclone in which the maximum sustained surface wind is 38 miles per hour (33 knots) or less.

Tropical Storm. A warm core tropical cyclone in which the maximum sustained surface wind is in the range of 39 to 73 miles per hour (34-63 knots) inclusive.

Storm Tide. An abnormal rise of the sea along a shore primarily as the result of the winds of a storm. The storm tide may occur in basins not normally affected by the tide. It may also flood lowlands in coastal sections that are normally dry.

Sustained Wind. The wind obtained by averaging the observed value over a one minute period.

Photo courtesy of American Red Cross

HURRICANE ADVISORIES WILL HELP YOU SAVE YOUR LIFE . . . . BUT YOU MUST HELP. FOLLOW THESE SAFETY RULES DURING HURRICANE EMERGENCIES:

1. Enter each hurricane season prepared. Every June through November, recheck your supply of boards, tools, batteries, non-perishable foods, and the other equipment you will need when a hurricane strikes your town.

2. When you hear the first tropical cyclone advisory, listen for future messages; this will prepare you for a hurricane emergency well in advance of the issuance of watches and warnings.

3. When your area is covered by a hurricane watch, continue normal activities, but stay tuned to radio or television for all National Weather Service advisories. Remember: a hurricane watch means possible danger within 24 hours; if the danger materializes, a hurricane warning will be issued. Meanwhile, keep alert. Ignore rumors.

4. When your area receives a hurricane warning:
   Plan your time before the storm arrives and avoid the last-minute hurry which might leave you marooned, or unprepared. Keep calm until the emergency has ended.
   Leave low-lying areas that may be swept by high tides or storm waves.
   Moor your boat securely before the storm arrives, or evacuate it to a designated safe area. When your boat is moored, leave it, and don't return once the wind and waves are up.
   Board up windows or protect them with storm shutters or tape. Danger to small windows is mainly from wind-driven debris. Larger windows may be broken by wind pressure.
   Secure outdoor objects that might be blown away or uprooted. Garbage cans, garden tools, toys, signs, porch furniture, and a number of other harmless items become missiles of destruction in hurricane winds. Anchor them or store them inside before the storm strikes.
   Store drinking water in clean bathtubs, jugs, bottles, and cooking utensils; your town's water supply may be contaminated by flooding or damaged by hurricane floods.
   Check your battery-powered equipment. Your radio may be your only link with the world outside the hurricane, and emergency cooking facilities, lights, and flashlights will be essential if utilities are interrupted.
   Mobile homes are extremely susceptible to high winds. If you live in one, leave it for more substantial shelter.
   Keep your car fueled. Service stations may be inoperable for several days after the storm strikes, due to flooding or interrupted electrical power.
   Stay at home, if it is sturdy and on high ground. If it is not, move to a designated shelter, and stay there until the storm is over.
   Remain indoors during the hurricane. Travel is extremely dangerous when winds and tides are whipping through your area.
   Monitor the storm's position through National Weather Service advisories.

   BEWARE THE EYE OF THE HURRICANE
   If the calm storm center passes directly overhead, there will be a lull in the wind lasting from a few minutes to half an hour or more. Stay in a safe place unless emergency repairs are absolutely necessary. But remember, at the other side of the eye, the winds rise very rapidly to hurricane force, and come from the opposite direction.

5. When the hurricane has passed:
   Seek necessary medical care at Red Cross disaster stations or hospitals.
   Stay out of disaster areas. Unless you are qualified to help, your presence might hamper first-aid and rescue work.
   Drive carefully along debris-filled streets. Roads may be undermined and may collapse under the weight of a car. Slides along cuts are also a hazard.
   Avoid loose or dangling wires, and report them immediately to your power company or the nearest law enforcement officer.
   Report broken sewer or water mains to the water department.
   Prevent fires. Lowered water pressure may make fire fighting difficult.
   Check refrigerated food for spoilage if power has been off during the storm.
   Remember that hurricanes moving inland can cause severe flooding. Stay away from river banks and streams. National Weather Service advisories will keep you informed on river flood stages.

Tornadoes spawned by hurricanes are among the storms' worst killers. When a hurricane approaches, listen for tornado watches and warnings. A tornado watch means tornadoes are expected to develop. A tornado warning means a tornado has actually been sighted. When your area receives a tornado warning, seek inside shelter immediately, preferably below ground level. If a tornado catches you outside, move away from its path at a right angle. If there is no time to escape, lie flat in the nearest depression, such as a ditch or ravine.

HURRICANE WATCHES MEAN A HURRICANE MAY THREATEN AN AREA WITHIN 24 HOURS.
HURRICANE WARNINGS MEAN A HURRICANE IS EXPECTED TO STRIKE AN AREA WITHIN 24 HOURS.

U. S. DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration

NOAA/PA 70028

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