

## Hazard Mitigation Through Development Regulations

There are two areas where current floodplain regulations may conflict with good planning practice and other public goals.

The concept of hazard mitigation has become a high priority in the field of emergency management in recent years. Essentially, this kind of mitigation means *actions to prevent, avoid, or reduce the impacts of a hurricane*, especially actions that can be taken in advance to reduce the vulnerability of people and property to injury from a hurricane or tropical storm.

Yet some current floodplain regulations actually work *against* pre-storm hazard mitigation. This was acknowledged recently by James Witt, director of the Federal Emergency Management Agency (FEMA), who said that his agency's current approach:

*“does not provide incentives to take proactive mitigation actions. With the exception of the flood program where it is required in return for insurance, our current approach only provides for mitigation after there has been a disaster. We need to consider a more comprehensive strategy for mitigation, especially in the pre-disaster environment.”*

A recent publication from the Florida Department of Community Affairs (DCA) quoted Mr. Witt approvingly on this matter, and went on to observe that:

*“Retrofitting and flood mitigation are integral to floodplain management. However, they are also excellent forms of pre-disaster activities that involve undertaking and performing corrective and preventive measures to existing houses and businesses, electrical and mechanical equipment and water and sewer lines, as well as land areas” [Retrofitting and Flood Mitigation in Florida, DCA, 1995].*

DCA is taking this concept to great lengths, recognizing that post-disaster property damages can be dramatically lowered by modifying existing structures. DCA proposed a “residential

construction mitigation program” to the legislature in 1997. This program would help lower-income residents to retrofit their homes to increase their safety and protect their investments *before* a disaster occurs, using low-interest loans or grants as an incentive to structurally harden their homes against damage [*Breaking the Cycle: How Starting on Long-Term Redevelopment Can Help Florida Avoid Economic Disaster*, DCA, 1996]. The legislature appropriated \$3.1 million from their Catastrophic Hurricane Fund for a pilot program in 1997-98 and an additional \$2.5 million in 1998-99.

Unfortunately, these insights have not percolated to the level of some program administrators in these very agencies, resulting in the ironic situation of DCA using public funds to *subsidize* an activity that is actually restricted by existing laws and interpretations.

For instance, the current floodplain regulations that are required by federal law contain disincentives against improving older homes. Homes built in Lee County before 1984 were not required to be elevated above the base flood elevation. Since then, elevation requirements have been enforced for new homes (and for “substantial improvements” that cost more than 50% of an existing home's market value) through the building permit process. This is one example of the “50% rule” that causes so much difficulty for owners of older buildings when they are trying to maintain and upgrade their property.

The 50% threshold was chosen as a compromise between the extremes of (1) prohibiting all investment to older structures built below the base flood elevation, or (2) allowing buildings to be improved in any fashion without regard to the hazard that would be perpetuated by allowing these buildings to be renewed indefinitely without being elevated above the level of expected floods. The first alternative would have caused an extreme hardship on owners of nearly all existing buildings, since even normal deterioration could not be countered. The second alter-

native would have allowed uncontrolled continuation of a perilous situation, with buildings and people left in harm's way indefinitely. The 50% threshold is thus a compromise between competing policy goals [Answers to Questions About Substantially Damaged Buildings, FEMA, 1991].

The 50% rule is analogous to the standard zoning principles governing non-conforming buildings. Put most simply, older buildings that don't meet today's codes are legally tolerated but are expected to "wither away" over time. This withering is encouraged by rules that prevent owners from constantly renewing their buildings to counter the effects of time.

Owners of older buildings frequently rebel against the concept of forcing the deterioration of their property. Many local governments also have begun to question the wisdom of this theory, especially in light of its negative effects on affordable housing and on historically interesting buildings and neighborhoods. This questioning sometimes results in what seems to be innocuous changes to the minutiae of zoning law, changes though that mean survival or destruction to many older buildings.

These changes have moved forward in Lee County government in recent years. "Non-conforming buildings" now can be expanded (provided the addition does not increase its nonconformity). Buildings in historic districts are now provided with relief from some zoning and building codes. Redevelopment overlay districts provide new rules that are conducive to the survival and rebirth of older commercial areas. And the 50% rule in the floodplain ordinance was changed in 1992 so that the 50% applied to cumulative expenses over a five-year period, rather than over the life of the building.

Two more simple changes could be made to the floodplain ordinance to encourage healthy investment in older buildings at Fort Myers Beach. One is to provide more flexibility in determining "50% of what?" A property owner can be given the option of

using the official appraised value of the building, or of submitting an independent appraisal of its value.

Another valuable change would be to exempt structural improvements that will strengthen a building before a hurricane hits (rather than waiting to provide disaster aid or expedited permitting to repair damage that could have been avoided). Such a policy would allow property owners to strengthen their buildings by installing storm shutters or shatterproof glass; strengthening roof attachments, floors, and walls; and minor floodproofing. One way the town can encourage strengthening by excluding these costs from the 50% rule.

The following language could be inserted into Section 6-405 of the Land Development Code to accomplish both changes:

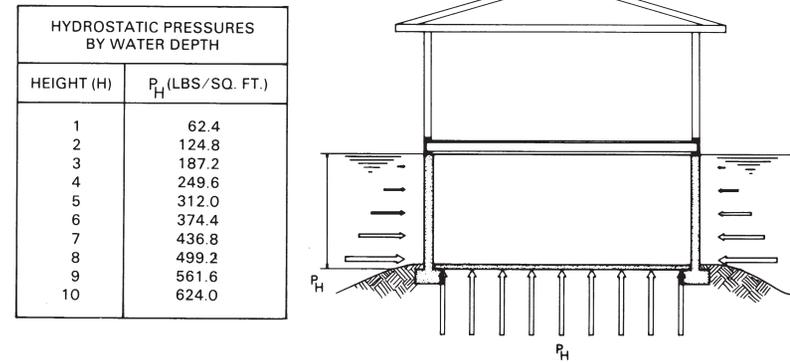
*Substantial improvement* means any reconstruction, rehabilitation, addition or other improvements to a structure, the cost of which equals or exceeds, over a five-year period, a cumulative total of 50 percent of the market value of the structure before the start of construction of the improvement. Costs of alterations or improvements whose express purpose is the mitigation of future storm damage are excluded from this cumulative total provided they do not exceed 50 percent of the market value of the structure over a one-year period. Examples of such mitigation include the installation of storm shutters or shatterproof glass; strengthening of roof attachments, floors, and walls; and minor floodproofing. The market value of the structure should be (1) the value of the building prior to the start of the improvement, or (2) in the case of damage, the value of the building prior to the damage occurring. Value will be as determined (for the structure only) by the Lee County Property Appraiser or by a private appraisal acceptable to the coordinator. ~~The~~ term "substantial improvement" includes structures which have incurred substantial damage, regardless of the actual repair work performed. The term does not, however, include either any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to ensure safe living conditions, or any alteration of a historic structure, provided that the alteration does not cause the structure to lose its historic designation.

**Commercial Buildings**

The floodplain regulations for commercial buildings are not identical to those for residential uses. In A-zones, commercial buildings are technically allowed to include space below the base flood elevation. However, their outer walls must then be “dry floodproofed” so as to be impervious to water and able to withstand complete inundation without collapsing. This is done by sealing the building walls with waterproofing compounds and some type of impermeable shielding over doors and windows to prevent floodwaters from entering at any point.

Dry floodproofing is difficult to achieve because of the obvious expense of making a building also act as an unfloatable boat. It is difficult enough to keep all water out; it is even more difficult to make a building strong enough to withstand the water pressure that will be caused by inundation, which will tend to collapse the building inward. Dry floodproofing has been considered relatively easy for concrete block construction up to a flood depth of about three feet, but difficult beyond that height because the pressure that standing water will exert on the floor and walls (see Figure 5). The first dry-floodproofed building at Fort Myers Beach is the new Waffle House restaurant between Crescent Street and Primo Drive.

Alternatively, the lower area can be “wet floodproofed” with flood waters being allowed to enter and exit the building without damaging the structure. “Wet floodproofing” is suitable for garages but obviously not feasible for stores and offices.



**Figure 5,** Hydrostatic pressures on a dry-floodproofed building

**Coastal Building Zone**

The State of Florida now requires its local governments to designate a “coastal building zone” which includes all of Estero Island. Several stricter standards are mandated for this zone, including: maintenance of public accesses to beaches; increased resistance of new buildings to high wind speeds; and disclosure statements to purchasers of property seaward of the CCCL. For present purposes, there is one troublesome provision, the apparent inclusion of the 50% rule in the state statutes through a definition of “substantial improvement” similar to the one required by FEMA [F.S. 161.54(12)]. Because of its inclusion directly in the statute, it is less amenable to refinements to carry out desired coastal policies at Fort Myers Beach. Interestingly, while being defined, this term is never explicitly used in the statute.

Lee County’s Land Development Code was amended in 1991 to implement this statute (through Section 6-331 through 368). Lee’s code explicitly makes the stricter standards apply to all new construction and to “substantial improvements” to existing buildings, using the definition just discussed from the state statute. Still, the purpose of this term in this context is not clear.

State officials who monitor local compliance with state and federal coastal regulations have suggested that this definition is mandatory for flood insurance purposes everywhere in the coastal building zone. However, this is only one possible interpretation of the statute, and not the obvious one; it also conflicts with the hazard mitigation initiative of the very agency that employs these officials. The Town of Fort Myers Beach can choose a different interpretation to allow flood-vulnerable buildings to be mitigated.

### **Consequences for Redevelopment Planning**

Returning now to the most important planning issue that led to this examination of the effect of coastal regulations on future rebuilding: What is the impact of mandatory flood regulations on the CRA Times Square redevelopment plan, especially the portion of this plan that calls for mixed-use development with retailing at ground level along Estero Boulevard from Times Square to Pearl Street? (That redevelopment plan is described in the Community Design Element.)

There are two separate impediments to implementing the CRA plan: uncertainties caused by the “dry floodproofing” requirements in the NFIP’s A-Zones, and the regulations for new buildings seaward of the CCCL.

The question is whether either of these requirements will prohibit the successful rejuvenation of Times Square, Old San Carlos Boulevard, and the Estero Boulevard frontage down to Pearl Street. It is important to determine whether it is technically and financially feasible to rebuild a high-quality pedestrian environment there. The University of Florida’s study for the CRA had suggested elevating retail spaces *above* the flood elevations, rather than dry floodproofing; but that approach poses many practical problems of its own (unless the existing small lots were consolidated and redesigned to accommodate an elevated system of boardwalks). If neither of these approaches are feasible, then

existing buildings will continue to deteriorate, or will be rebuilt incrementally outside the current regulations (endangering the town’s participation in the National Flood Insurance Program), or will be redeveloped in some presently unforeseen manner.

The following conclusions have been drawn from this analysis and an examination of the maps depicting the various regulatory zone:

- The flood-insurance prohibition against any new ground level enclosures in the V-zone will have only minor effects on carrying out the CRA master plan because only a few buildings, such as the Pier Peddler/Dairy Queen, are in the V-zone. (However, the V-zone covers almost all of the Gulf side of Estero Boulevard from the Red Coconut to the Catholic Church; it would not be practical to include any of those areas in an expanded master plan for pedestrian-oriented commercial space.)
- The flood-insurance requirement to dry floodproof all new ground-level commercial space in A-zones applies across the remainder of the CRA master plan. The only significant difference is the specific elevation that floodproofing must extend up to: 14 feet above mean sea level in Times Square and the Gulf side of Estero Boulevard; and 12 feet along Old San Carlos. With existing ground levels averaging about 6 feet above sea level, this would mean dry floodproofing up to 8 and 6 feet above ground level respectively. This distinction would improve the technical feasibility of dry floodproofing (making it less expensive to accomplish along Old San Carlos).
- The CCCL is a bigger impediment than the flood insurance requirements to commercial redevelopment along the Gulf side of Estero Boulevard. Unless the state of Florida is willing to look at this new plan for Estero Island as a whole, the 20%-per-parcel rule will preclude much of the lively streetscape envi

sioned in the CRA master plan, and ultimately could phase out most ground-level activity on the Gulf side of Estero Boulevard.

- If such changes to the CCCL regulations cannot be obtained, Old San Carlos and the Bay side of Estero Boulevard would become the most practical locations for commercial redevelopment.
- Full-height dry floodproofing is the most desirable alternative for providing commercial uses at ground level in pedestrian areas; the only remotely practical alternative is the University of Florida's elevated walkway concept, which is less desirable because it requires an expensive walkway system which detracts from, rather than adds, to the sidewalk environment.

Formal hazard mitigation policies are found in Policies 4-E-2, 4-E-3, 4-E-4, and 4-E-5 of this comprehensive plan.

## ***POST-DISASTER REDEVELOPMENT POLICIES***

When a passing hurricane destroys part of a community, difficult rebuilding questions arise immediately. Landowners have spent thousands and sometimes millions of dollars in developing their property. Not allowing landowners to rebuild would place a great economic burden upon them. But allowing redevelopment in the same manner might expose it to destruction in the next big storm.

### ***Current Build-Back Policy***

The current comprehensive plan contains a “build-back” provision initiated by Lee County in 1989 that allows post-disaster reconstruction at existing density levels, but requires improved resistance to future storms. This provision has been popular among landowners at Fort Myers Beach because of the greatly reduced density levels that would otherwise apply after a major storm. However, it falls far short of a redevelopment plan that would ensure that the community would be improved in other ways during the inevitable rebuilding process.

If a disaster strikes, structures that comply with all current regulations could of course be rebuilt in exactly the same form. However, many buildings at Fort Myers Beach do not comply with current regulations, particularly the maximum density level of six dwelling units per acre. When one of these structures is damaged greater than 50% of its current value, the build-back policy allows it to be rebuilt, but instead of meeting *all* current regulations, the new building can include the original number of dwellings and square footage. But it must meet all current flood, structural, and coastal setback requirements. The lowest floor level must be elevated; land uses are severely limited on the ground level; and break-away walls may be required. (Height and setback requirements might even be waived if needed for the building to comply with the new flood and structural requirements.)

One problem with the build-back policy is its limitation to post-disaster situations (such as floods, wind damage, or fire). Federal and state policy has been shifting in recent years to pre-storm mitigation of known hazards, instead of waiting for disasters to occur (as discussed in the previous section). The current policy is as inflexible in this regard as the National Flood Insurance Program.

Other possibilities for improving the build-back program in the future include:

- Mandating improved building form during the rebuilding process (some examples might be maintaining view corridors to the Gulf of Mexico, or allowing some mixed uses in residential-only towers, or placing buildings nearer the street).
- Allowing density transfers during the rebuilding process if they meet some stated public purpose.
- Creating a registry of pertinent building details (such as exact heights and exact building footprint on the ground) so that permitting would be eased in a post-disaster situation;

### ***Modified Build-Back Policy***

This plan makes one immediate change in the build-back policy. Owners of existing buildings that exceed the current density or height limits would no longer be categorically forbidden from rebuilding; they will be offered an opportunity to replace the building for the same use at up to the existing density and intensity (up to the original square footage, as already provided for post-disaster build-back) without waiting for a natural disaster (see Policy 4-E-1). Owners would request this option through the planned development rezoning process, which requires a public hearing and notification of adjacent property owners. The Town of Fort Myers Beach would approve, modify, or deny this request based on the conformance of the specific proposal with

this comprehensive plan, including its land-use and design policies, pedestrian orientation, and natural resource criteria.

The town could also provide additional incentives for "pre-disaster" build-back. For instance in areas designated "Pedestrian Commercial" on the future land use map, dry-flood-proofed commercial space below elevated buildings could be considered a bonus that would be permitted in addition to replacing the previous building's interior square footage. Policy 4-E-1 was modified in early 2009 to allow this additional incentive.

Circle. These options would be explored by a privately-funded but town-initiated planning process, with full involvement of affected and nearby landowners.

POLICY 4-C-12

**WETLAND BUFFERS:** Upland development shall maintain a 75-foot separation between wetlands and buildings or other impervious surfaces. This requirement shall not apply to platted lots, or to a previously approved development order to the extent it cannot reasonably be modified to comply with this requirement (see Chapter 15 of this plan for details).

**OBJECTIVE 4-D POST-DISASTER REDEVELOPMENT — Provide for the organized and healthy reconstruction of Fort Myers Beach after a major storm by showcasing successful local examples of flood-proofing, by requiring redevelopment activities to meet stricter standards for flood- and wind-resistance, and by improving the current post-disaster buildback policy.**

POLICY 4-D-1

**POST-DISASTER BUILDBACK POLICY:**

Following a natural disaster, land may be redeveloped in accordance with the Future Land Use Map or, at the landowner's option, in accordance with the following "buildback policy" begun by Lee County in 1989. This policy applies only where development is damaged by fire, hurricane or other natural disaster, and allows the following options:

- i. Buildings/development damaged *less than 50%* of their replacement cost (measured at the time of damage) can be re-

built to their original condition, subject only to current building and life safety codes.

- ii. Buildings/development damaged *more than 50%* of their replacement cost can be rebuilt to their legally documented actual use, density, intensity, size, and style provided the new construction complies with:
  - a. federal requirements for elevation above the 100-year flood level;
  - b. any building code requirements for floodproofing;
  - c. current building and life safety codes;
  - d. Coastal Construction Control Line requirements; and
  - e. any required zoning or other development regulations (other than density or intensity), except where compliance with such regulations would preclude reconstruction otherwise intended by this policy.
- iii. Redevelopment of damaged property is not allowed for a more intense use or at a density higher than the original lawful density except where such higher density is permitted under this plan and the town's land development regulations. To further implement this policy, the town may establish blanket reductions in non-vital development regulations (e.g. buffering, open space, side setbacks, etc.) to minimize the need for individual variances or compliance determinations prior to

reconstruction. The Land Development Code may also establish procedures to document actual uses, densities, and intensities, and compliance with regulations in effect at the time of construction, through such means as photographs, diagrams, plans, affidavits, permits, appraisals, tax records, etc.

**OBJECTIVE 4-E HAZARD MITIGATION — Mitigate the potential effects of hurricanes by easing regulations that impede the strengthening of existing buildings, by encouraging the relocation of vulnerable structures and facilities, and by allowing the upgrading or replacement of grandfathered structures without first awaiting their destruction in a storm.**

**POLICY 4-E-1 PRE-DISASTER BUILDBACK POLICY:**

Owners of existing developments that exceed the current density or height limits may also be permitted to replace for the same use it at up to the existing lawful density and intensity (up to the original square footage) *prior to* a natural disaster. Landowners may request this option through the planned development rezoning process, which requires a public hearing and notification of adjacent property owners. The town will approve, modify, or deny such a request based on the conformance of the specific proposal with this comprehensive plan, including its land-use and design policies, pedestrian orientation, and natural resource criteria. The Town Council may approve additional enclosed square-footage only if an existing building is being elevated on property that allows commercial uses; dry-flood-

proofed commercial space at ground level could be permitted in addition to the replacement of the pre-existing enclosed square footage.

**POLICY 4-E-2**

**COASTAL SETBACKS:** To protect against future storm damage and to maintain healthy beaches, the Town of Fort Myers Beach wishes to see all buildings relocated landward of the 1978 Coastal Construction Control Line. This line has been used on the Future Land Use Map to delineate the edge of land-use categories allowing urban development. Some existing buildings lie partially seaward of this line; when these buildings are reconstructed (either before or after a natural disaster), they shall be rebuilt landward of this line. Exceptions to this rule may be permitted by the town only where it can be scientifically demonstrated that the 1978 line is irrelevant because of more recent changes to the natural shoreline. The town shall seek the opinion of the Florida Department of Environmental Protection in evaluating any requests for exceptions. (Exceptions must also comply with all state laws and regulations regarding coastal construction.)

**POLICY 4-E-3**

**NATIONAL FLOOD INSURANCE**

**PROGRAM:** The town will continually maintain a floodplain ordinance that reduces future damage from flooding and qualifies landowners for the National Flood Insurance Program. The town shall modify its current floodplain ordinance in accordance with this comprehensive plan through measures such as:

- i. not counting costs of strengthening buildings as “improvements” that are limited to 50% of a building’s value; and

- ii. minimizing the negative effects of the 50% rule on historic buildings; and
- iii. adjusting the time period for calculating the 50% rule to encourage healthy redevelopment in this plan’s “Pedestrian Commercial” category; and
- iv. providing reasonable alternatives for determining the value of older buildings.

POLICY 4-E-4 **FLOODPROOFING OF COMMERCIAL BUILDINGS:** Where commercial development is allowed by this comprehensive plan, full-height dry floodproofing is the most desirable alternative for providing ground-level commercial space in pedestrian areas.

POLICY 4-E-5 **COASTAL BUILDING REGULATIONS:** The town shall request state approval of an island-wide (rather than parcel-by-parcel) approach to limiting obstructions below flood elevation if this change is needed to avoid the loss of pedestrian activity near Times Square.

**OBJECTIVE 4-F REDEVELOPMENT — Take positive steps to redevelop areas that are reaching obsolescence or beginning to show blight by designing and implementing public improvements near Times Square to spur private redevelopment there, by supporting the conversion of the Villa Santini Plaza into a pedestrian precinct, by providing an opportunity for landowners to replace vulnerable mobile homes and recreational vehicles with permanent structures in the Gulfview Colony/Red Coconut area, and by providing building code relief for historic buildings.**

POLICY 4-F-1 **HISTORIC BUILDINGS:** The protection of historic buildings is of great importance to the town, and shall be aided by implementing the policies set forth in other elements of this comprehensive plan.

POLICY 4-F-2 **SPECIFIC REDEVELOPMENT PLANS:** This comprehensive plan anticipates substantial redevelopment over the coming years. Specific concepts have been developed for three specific areas:

- i. **Times Square** – The Estero Island CRA’s plan for the Times Square area is reflected in this plan, bounded by the “Pedestrian Commercial” category at Times Square. Implementation of that plan will be on-going as discussed through this comprehensive plan and in accordance with the specific regulations provided in the Land Development Code. The Times Square redevelopment plan is described in Community Design Policies 3-D-1 through 3-D-13.
- ii. **Villa Santini Plaza** – This area is shown as “Pedestrian Commercial” on the Future Land Use Map. Existing land uses may continue. If landowners wish to redevelop part or all of this property, the following concepts shall apply:
  - a. buildings are brought closer to the street;
  - b. drainage has been placed underground to make room for wide sidewalks, street trees, and some on-street parking (once passive traffic calming activities have

- reduced speeding on Estero Boulevard);
- c. the shopping center is reconfigured with a central green plaza and better ties to the marina to the rear; and
- d. off-street loading areas are provided for delivery vehicles;

This redevelopment plan can only be accomplished through a public-private partnership as described in Community Design Policies 3-C-1 and 3-C-2.

- iii. ***Gulfview Colony/Red Coconut*** – This area is shown as “Mixed Residential” and “Boulevard” on the Future Land Use Map. If landowners wish to redevelop part or all of this property, the following concepts are encouraged, and shall form the basis for a pre-approved redevelopment option in the Land Development Code:
  - a. traditional neighborhood design emphasizing porches on the front; primary entrances visible from the street; and cars to the rear (except for on-street parking);
  - b. detached houses or cottages (with optional accessory apartments) abutting existing single-family homes;
  - c. low-rise townhouses or apartments allowed toward the center;
  - d. walkable narrow streets with shade trees that double as view corridor to the Preserve and Gulf;
  - e. substantial open space with views to be maintained from Estero Boulevard to the Gulf;
  - f. mixed commercial and residential uses along the Bay side of Estero Boulevard;

- g. quiet internal street connections to the north and south;
  - h. significantly reduced density from the existing level of 27 RV/mobile homes per acre at the Red Coconut to a maximum level of 15 dwelling units per acre;
  - i. provision for a publicly acquired access point to the Matanzas Pass Preserve.
- This redevelopment plan is described in Community Design Policies 3-A-5 and 3-A-6.

Different redevelopment concepts that are consistent with this comprehensive plan may also be proposed for any of these areas through the planned development rezoning process.

building (*not including* the land's value) over any five-year period. This is one example of the infamous "50% rule" that causes so much difficulty for owners of older buildings when they are trying to maintain and upgrade their property.

Instead, the town should encourage property owners to strengthen buildings before a hurricane hits rather than wait to provide disaster aid or expedited permitting to repair damage that could have been avoided. Such policy would allow property owners to strengthen their buildings by installing storm shutters or shatter-proof glass; strengthening roof attachments, floors, and walls; and minor floodproofing. One way the town can encourage strengthening by excluding these costs from the 50% rule, as proposed in the Future Land Use Element. The entire floodplain management program of the town is discussed in more detail there.

### **Building Back**

When a passing hurricane destroys part of a community, difficult rebuilding questions arise immediately. Landowners have spent thousands and sometimes millions of dollars in developing their property. Not allowing landowners to rebuild places a great economic burden upon them. But allowing redevelopment in the same manner exposes it to destruction in the next big storm.

If a disaster occurs within the Town of Fort Myers Beach, structures could of course be rebuilt in accordance with the adopted Future Land Use Map. (In most cases, the permitted use will be the same as before the storm.) Structures that are damaged greater than 50% of their current value are allowed by Lee County to be rebuilt, however they must be rebuilt in accordance with the regulations that apply to new development. This means that the lowest floor level is elevated; land uses are severely limited on the ground level; and break-away walls may be required.

This "build-back" policy was initiated by Lee County in 1989 to allow post-disaster reconstruction at existing density levels but with improved resistance to future storms. This provision has been popular among landowners at Fort Myers Beach because of the greatly reduced density levels that would otherwise apply after a major storm.

This Future Land Use Element of this plan makes one immediate change in the build-back policy. Owners of existing buildings that exceed the current density or height limits will be offered an opportunity to replace the building at up to the existing density and intensity without waiting for a natural disaster (see Policy 4-E-1). Owners would request this option through the planned development rezoning process, which requires a public hearing and notification of adjacent property owners. The Town of Fort Myers Beach would approve, modify, or deny this request based on the conformance of the specific proposal with this comprehensive plan, including its land-use and design policies, pedestrian orientation, and natural resource criteria.

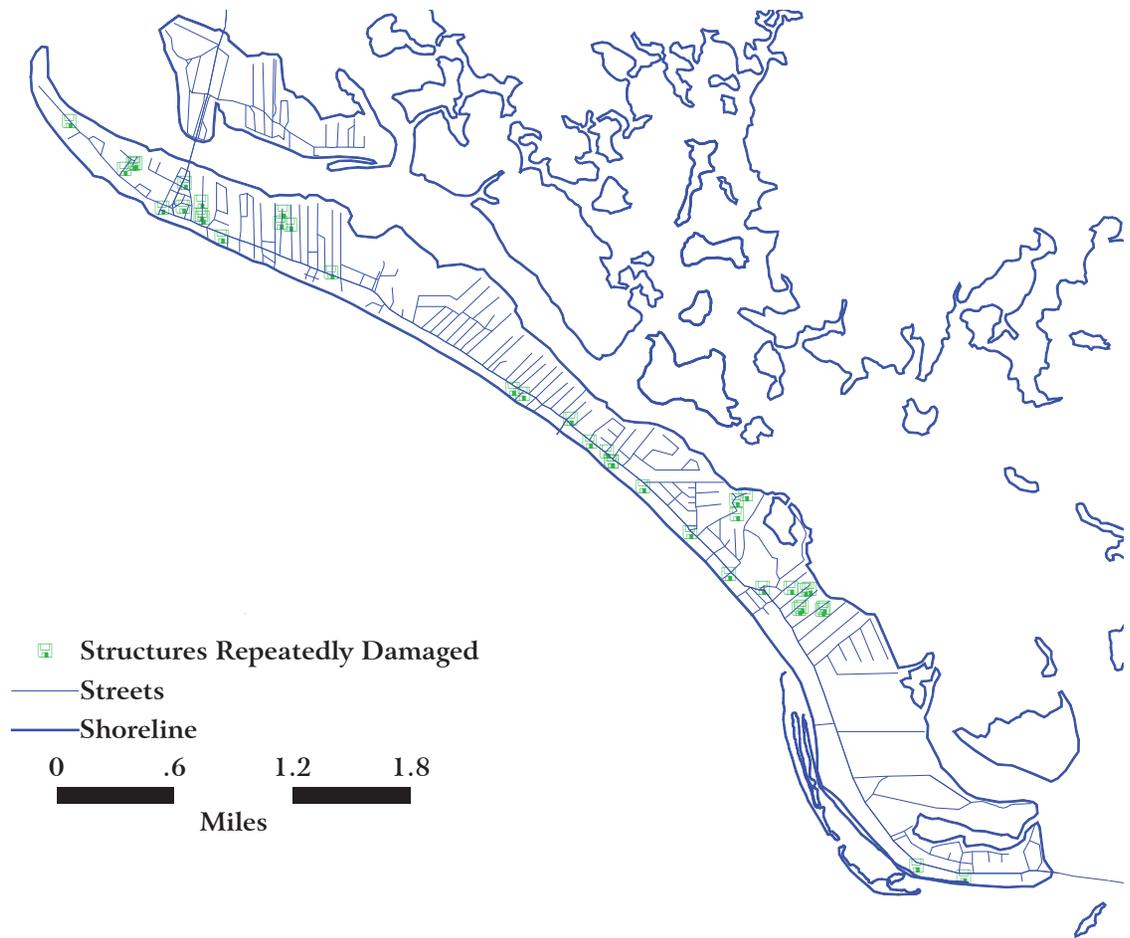
Major investments by government and private industry are made for public infrastructure. In order to rebuild, damaged infrastructure must be repaired or replaced. In a flood-prone area such as Fort Myers Beach, new or replacement infrastructure should be designed and constructed to minimize damage caused by hurricanes and tropical storms. Power lines can be placed underground. Potable water and sanitary sewer systems should eliminate infiltration of flood waters into utility systems, and they should be capable of running on auxiliary power during post-storm periods. Roads should be designed and constructed to manage minimum levels of storm events and be located in areas least susceptible to storm damage.

### Structures with Repeated Damage Due to Storms

A number of structures within the town have experienced damage as a result of past floods. Lee County began a program in 1995 to identify individual buildings that have been repeatedly damaged by flooding, as evidenced by claims under the National Flood Insurance Program (NFIP) of \$1,000 or more since 1978.

That program identified the properties in Table 5-6, which are mapped in Figure 6. No meaningful pattern appears on the map that would suggest neighborhood-wide flooding remedies. Of particular interest on Table 5-6, however, is that *none* of the floods that caused considerable damage at Fort Myers Beach in the past 15 years were even minimal hurricanes; in fact two weren't even strong enough to be considered tropical storms.

Lee County is conducting a detailed assessment of the costs of improving the buildings in the unincorporated area that have been repeatedly damaged by flooding. The county hopes to obtain 75% federal funding for many of the actual improvements. If the county is successful, the town may be able to qualify for a similar grant.



**Figure 6, Repeated Flood Damage**

**OBJECTIVE 5-B NATURAL DISASTER PLANNING — Reduce the threat of loss of life and property resulting from catastrophic storms by reducing evacuation times and improving shelter capabilities from their current levels.**

- POLICY 5-B-1 The town shall work to improve the capability of evacuating Fort Myers Beach when a tropical storm or hurricane threatens to strike. Specific problem areas include:
- i. County officials may be reluctant to order a county-wide evacuation even though an evacuation may be warranted for low-lying coastal areas such as Fort Myers Beach. town officials should be prepared to order a local evacuation if one is warranted.
  - ii. Australian pines and other trees along evacuation routes can pose a threat to evacuation routes due to decay or shallow root systems; such trees need to be identified and pruned or removed.
  - iii. In a cooperative process with Lee County, Sanibel, and the Southwest Florida Regional Planning Council, the town shall seek to improve mainland shelter capacities including private sheltering options.
  - iv. The town shall work closely with Lee County and Florida DOT to maintain or improve hurricane evacuation times and procedures, including off-island traffic bottlenecks.
- POLICY 5-B-2 The town shall participate fully in the federal government’s National Flood Insurance Program and seek constant improvements under the Community Rating System.

POLICY 5-B-3 The town shall encourage owners of private buildings to strengthen or otherwise protect them before severe storms strike to reduce avoidable damage to life and property. Town regulations that unnecessarily interfere with this important form of hazard mitigation shall be modified as described in Policy 4-E-3 of the Future Land Use Element.

POLICY 5-B-4 The town shall develop and adopt a storm emergency plan for preparing for, responding to, and recovering from a hurricane or tropical storm. Hazard mitigation recommendations of local peacetime emergency plan or interagency hazard mitigation reports shall be evaluated for inclusion in the town’s plans.

POLICY 5-B-5 Capital improvements to infrastructure and facilities under the town’s jurisdiction that can maintain or improve evacuation times will be identified and included in the Capital Improvements Element.

POLICY 5-B-6 The town shall maintain substantial reserve funds for emergency work that will be needed immediately following a major storm.

**OBJECTIVE 5-C POST-DISASTER REDEVELOPMENT — Plan for post-disaster rebuilding that will reduce the exposure of human life and property to future disasters and improve the community in other ways during the rebuilding process.**

POLICY 5-C-1 By 1999, the town in cooperation with Lee County officials shall prepare a post-disaster redevelopment plan. Such plan shall be consistent with this comprehensive plan and use the following priorities:

- i. Activities which prevent further loss of life or that minimize public health risks;
- ii. Activities which restore the basic public infrastructure and services to support the population;
- iii. Activities which prevent further damage to public or private property;
- iv. Activities which begin the rebuilding process as promptly as possible.

POLICY 5-C-2 By 1998, the town shall evaluate the elevation and drainage characteristics of evacuation routes to the mainland to identify problem areas that may prematurely block evacuation. Solutions shall be sought in cooperation with agencies having jurisdiction over such facilities.

POLICY 5-C-3 Rebuilding after a natural disaster is allowed in accordance with the “buildback policy” found in Policy 4-C-7 of the Future Land Use Element.

POLICY 5-C-4 To further coordinate the redevelopment activities proposed under this plan with state and federal floodplain management programs, the town shall pursue the following activities:

- i. Pursue all potential measures to encourage corrective and preventative measures to existing houses and businesses to increase their resistance to flooding and high winds before a disaster occurs. Examples include storm shutters; shatterproof glass; strengthening roof attachments, floors, and walls; and minor floodproofing.
- ii. Allow non-conforming buildings to be modified provided the modifications do not increase the non-conformity.

- iii. Investigate the feasibility promoting pedestrian activity in some redeveloping commercial zones by raising the existing grade of roads and sidewalks one to three feet, thus allowing adjoining commercial space to remain at ground level while reducing the required height of dry floodproofing.
- iv. Explore with the Department of Environmental Protection an alternative method of controlling building intensity seaward of the Coastal Construction Control Line. The current rule allows 20% of any single building’s frontage to be enclosed at ground level. This percentage may be too high for most parts of the town, but is too low where pedestrian zones exist or are being created. An alternative means of computing the 20% rule could better meet the state’s coastal management goals and the town’s revitalization program.

POLICY 5-C-5 New publicly funded buildings within the town shall be designed to withstand major storms and be able to serve as shelters/operation centers for emergency personnel.

POLICY 5-C-6 Design new and replacement infrastructure to minimize damage caused by flooding and high winds:

- i. Power lines shall be relocated underground whenever possible.
- ii. Water and sewer systems should eliminate infiltration of flood waters and be designed to function with auxiliary power when needed.

- iii. Roads should be designed to manage minimum levels of flooding and be located where least susceptible to storm damage.

POLICY 5-C-7 Continue to inventory buildings that are repeatedly damaged by flood waters to identify those that have recorded one or more National Flood Insurance Program (NFIP) flood losses of \$1,000 or more since 1978.

**OBJECTIVE 5-D BEACHES AND DUNES — Conserve and enhance the shoreline of Estero Island by increasing the amount of dunes, renourishing beaches to counter natural erosion, and reducing negative man-made impacts on beaches and dunes.**

POLICY 5-D-1 The town's policies on shoreline protection measures shall be as follows (see also Objective 5 and related policies in the Conservation Element of this plan):

- i. Beach renourishment will be necessary along much of the Gulf beach. The long-term recreational and economic benefits will offset the cost. The town shall work closely with Lee County, which has agreed to take the lead role in carrying out this important activity. All practical measures shall be taken to ensure that beach renourishment improves sea turtle nesting habitat rather than interfering with it. Public access to existing and renourished beaches is an important priority of the town of Fort Myers Beach.
- ii. Sand dunes should be protected and recreated wherever they have been removed. Native dune plants should be

protected and non-native exotics removed. Dune walkovers should be constructed where they do not exist and existing structures should be maintained.

- iii. The use of vehicles on any part of the beach should be severely limited in accordance with Conservation Policy 6-E-4(iv).
- iv. Buildings and other structures should be located as far away from the shoreline and dune system as possible since the beach is a constantly changing environment. Beachfront development shall be protected from coastal erosion, wave action, and storms by vegetation, setbacks, and/or beach renourishment rather than by seawalls or other hardened structures which tend to hasten beach erosion, interfere with public access, and block sea turtle nesting.
- v. Development (other than minor structures) shall not be allowed seaward of the 1978 Coastal Construction Control Line. Development seaward of the 1991 Coastal Construction Control Line may be permitted provided it complies with this comprehensive plan and all state and local permitting requirements.
- vi. Where buildings are threatened by erosion that cannot be reversed by major beach renourishment, the town's priorities are (1) to allow the structure to be

**Sec. 34-3237. Pre-disaster buildback.**

Owners of buildings or groups of buildings that exceed the density, intensity, or height limits for new buildings may seek permission from the town council to voluntarily replace those buildings at up to the existing lawful density or intensity and up to the existing height in accordance with Policy 4-E-1 of the Fort Myers Beach Comprehensive Plan, as follows:

- (1) The replacement building must meet the floodplain regulations for new buildings, as provided in article IV of ch. 6.
- (2) The replacement building must meet the coastal construction requirements that apply to new structures, as provided in article III of ch. 6 and in state regulations. Due to these requirements, habitable major structures and most minor structures must be rebuilt landward of the 1978 coastal construction control line.
- (3) The replacement building must comply with all current building, life safety, and accessibility codes.
- (4) The replacement building cannot exceed the lawful density and intensity of the existing building:
  - a. as measured for residential buildings in § 34-3238(2)d.;
  - b. as measured for hotel/motels in § 34-3238(2)e.; or
  - c. as measured for all other buildings by the gross square footage.
- (5) Each specific pre-disaster buildback proposal must be proposed to the town council through the planned development rezoning process (see division 6 of article III of this chapter), along with any proposed deviations from this code.
- (6) The town council will approve, modify, or deny each such request based on its opinion of the degree of conformance of the specific proposal with the Fort Myers Beach comprehensive plan, specifically including the plan's land-use and community design policies, pedestrian orientation, and natural resource criteria.
- (7) If the lowest floor of the rebuilt building must be elevated higher than the existing building to comply with current floodplain or coastal regulations, then the total height of the rebuilt building can be increased by the same amount. However, any pre-disaster buildback request for additional height beyond that increment must comply with Policy 4-C-4 of the comprehensive plan in the same manner as that policy would apply to an entirely new building on vacant land.

**Sec. 34-3238. Post-disaster buildback.**

Owners of buildings or groups of buildings that exceed the density, intensity, or height limits for new buildings and that are damaged or destroyed by a natural disaster, including fire, tropical storms, and hurricanes, shall be permitted to replace those buildings at up to their existing lawful density, intensity, and/or height in accordance with Policy 4-D-1 of the Fort Myers Beach Comprehensive Plan.

- (1) ***Less than 50% damage.*** If the cost to repair the damaged building is *less than 50%* of the building's value and the repair is thus not a "substantial improvement" as that term is defined in § 6-405, then the following rules shall apply:
  - a. The repairs may be made without bringing the building into full compliance with the requirements of this code for building size, dimension, location on the lot, number of dwelling units or guest units, building type, or compliance with floodplain regulations.
  - b. The repairs may not physically enlarge the building either laterally or vertically, with the following potential exception:
    1. During the repair process, owners may wish to elevate lawfully existing dwelling units or guest units that do not comply with the floodplain regulations in ch. 6 of this code.
    2. To encourage this elevation, the director may administratively modify setbacks, open space, buffer, or height requirements to the minimum extent that would accommodate rebuilding the units in conformance with ch. 6 up to their existing interior square footage, as computed in accordance with §§ 34-3238(2)d.1 or e.1.
    3. However, if the combined cost to repair the damage and elevate the units exceeds 50% of the building's value, then all provisions of § 34-3238(2) will apply.
  - c. All repairs must comply with all current building, life safety, and accessibility codes.
- (2) ***More than 50% damage.*** If the cost to repair or rebuild the damaged building is *more than 50%* of the building's value and is thus a "substantial improvement" as that term is defined in § 6-405, then the following rules shall apply:
  - a. The building must meet the floodplain regulations for new buildings, as provided in article IV of ch. 6.
  - b. The building must meet the coastal construction requirements that apply to new

structures and portions thereof, as provided in article III of ch. 6 and in state regulations. Due to these requirements, habitable major structures and most minor structures that are damaged by more than 50% must be rebuilt landward of the 1978 coastal construction control line.

c. The building must comply with all current building, life safety, and accessibility codes.

d. **Residential buildings.** A rebuilt residential building may exceed the density limits for new buildings on vacant land, but cannot exceed the legally documented number of dwelling units in the building immediately before the natural disaster.

1. All dwelling units legally existing prior to the natural disaster may be rebuilt, provided the total interior square footage of the rebuilt dwelling units does not exceed the interior square footage of the previous dwelling units. For purposes of this subsection, interior square footage excludes hallways, stair towers, elevators, open balconies, underbuilding parking, and similar common or non-air-conditioned space.
2. At the owner's option, this same square footage can be used for fewer but larger dwelling units.
3. Also at the owner's option, the number of dwelling units and the square footage of the new building may be determined by this code's current regulations for new buildings on the same site instead of using either the pre-disaster or post-disaster buildback regulations.

e. **Hotels/motels.** A rebuilt hotel/motel may exceed the intensity limits for new hotel/motel buildings on vacant land, but cannot exceed the documented number of lawful guest units in the building immediately before the natural disaster.

1. All guest units lawfully existing prior to the natural disaster may be rebuilt, provided the total interior square footage of the rebuilt guest units does not exceed the interior square footage of the previous guest units. However, interior square footage in the new building may be increased by 30 square feet for each bathroom to reflect current code requirements for larger bathrooms, and any lawfully existing guest units that are smaller than the minimum sizes required by this code may be enlarged to meet the minimum size requirements. For

purposes of this subsection, interior square footage excludes hallways, stair towers, elevators, open balconies, underbuilding parking, and similar common or non-air-conditioned space.

2. At the owner's option, this same square footage can be used for fewer but larger guest units.
  3. Also at the owner's option, the number of guest units and the square footage of the new building may be determined by this code's current regulations for new hotel/motel buildings on the same site instead of using either the pre-disaster or post-disaster buildback regulations.
- f. **All buildings.** The new building must comply with all other zoning and development regulations except where compliance with such regulations would preclude reconstruction otherwise intended by Policy 4-D-1 of the comprehensive plan. Specifically:
1. If the lowest floor of the rebuilt building must be elevated higher than the damaged or destroyed building to comply with current floodplain or coastal regulations, then the total height of the rebuilt building can be increased by the same amount.
  2. If a rebuilt building must be set back further from any property lines due to current requirements of this code, then the volume of the building so reduced can be rebuilt elsewhere on the site, including one or more extra stories on the building if in the opinion of the director there is no other suitable location to replace the volume.
  3. If current open space or buffer regulations cannot be met, those requirements may be waived administratively by the director.

**Secs. 34-3239--34-3240. Reserved.**