

OKALOOSA COUNTY

FLOODPLAIN MANAGEMENT

QUICK GUIDE



PREPARED BY

DEPARTMENT OF GROWTH MANAGEMENT

2013

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ABOUT THIS GUIDE

This publication is for informational purposes only. The data contained herein is subject to change.

This guide was prepared by the Okaloosa County Department of Growth Management to give the citizens of Okaloosa County a better understanding of how the floodplain is managed within Okaloosa County.

This publication was adapted from the State of Georgia's Department of Natural Resources, Environmental Protection Division, Floodplain Management Offices publication titled "*Floodplain Management in Georgia Quick Guide*".

For more detailed information, Okaloosa County's Floodplain Regulations are found in Chapter 3 of the Okaloosa County Land Development Code, Ordinance 91-1, as amended, and in the 2010 State of Florida Building Codes adopted by Okaloosa County.

If you have questions about the floodplains or building within the floodplains in Okaloosa County please contact the Okaloosa County Department of Growth Management at one of the following locations:

402 Brookmeade Dr.
Crestview, FL 32539
(850) 689-5080

812 East James Lee Blvd.
Crestview, FL 32539
(850) 689-5080

1804 Lewis Turner Blvd.
Ft. Walton Beach, FL 32547
(850) 651-7180



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INTRODUCTION

The Okaloosa County Growth Management Department is pleased to provide this Floodplain Management Guide to help our citizens understand what floodplain management is and why floodplain development is regulated.

Okaloosa County's main flooding sources are the Gulf of Mexico; Choctawhatchee Bay; Blackwater River; Shoal River; Yellow River and various bayous, creeks and streams which ultimately empty into them.

Okaloosa County regulates development in floodplains to:

To protect people and property. Floodplain management is about building smart. If we know where our high risk flood areas are located, we should be able to make reasonable decisions to help protect our families, homes, and businesses;

To make sure that Federal flood insurance and disaster assistance are available. Federal flood insurance is available only in communities that agree to regulate floodplain development. Standard homeowners insurance does not cover flood damage. If your home or business is in the floodplain, and Federal flood insurance isn't available, then you can't get some types of Federal financial assistance. Home mortgages will be hard to find and you won't be able to get some types of State and Federal loans and grants;

To save tax dollars. Every flood disaster affects Okaloosa County's budget. If we build smarter in and near floodplains, we'll have fewer problems the next time the water rises. Remember, Federal disaster assistance isn't available for all floods. And even when the President declares a disaster, most of the time Okaloosa County still has to pay a portion of the costs of evacuation, temporary housing, repair, and clean-up;

To avoid liability and lawsuits. If we know an area is mapped as a high-risk flood area, if we know people could be in danger, and if we know that buildings could be damaged, it makes sense to take reasonable protective steps when allowing development and building;

To reduce future flood losses in Okaloosa County. Developments that comply with the minimum floodplain management requirements are better protected against major flood-related damage; and,

To keep the natural and beneficial functions. Floodplain and coastal vegetation helps to stabilize the shoreline and river banks, provide habitat for terrestrial and aquatic wildlife, control erosion and sedimentation, and improve water quality by filtering pollutants.

Floods have been, and continue to be, a destructive natural hazard in terms of economic loss to the citizens of Okaloosa County. Okaloosa County joined the National Flood Insurance Program on July 1, 1977. Since 1977, Federal flood insurance policy holders in Okaloosa County have received over \$166 million dollars in claim payments. Currently there are 11,857 flood policies in effect in Okaloosa County. Even though these numbers represent many insurance payments and policies, many of the County's flood-prone property owners do not have flood insurance.



1 NATIONAL FLOOD INSURANCE PROGRAM



The National Flood Insurance Program (NFIP) was created by Congress in 1968 to protect lives and property and to reduce the financial burden of providing disaster assistance. The NFIP is administered by the Federal Emergency Management Agency (FEMA). Nationwide, over 20,200 communities participate in the NFIP.

The NFIP is based on a mutual agreement between the Federal Government and communities. Communities that participate agree to regulate floodplain development according to certain criteria and standards. The partnership involves:

- **Flood hazard maps.** In partnership with FEMA, the State produces flood maps in accordance with FEMA standards. The maps are used by communities, insurance agents, and others.
- **Flood insurance.** Property owners and renters in participating communities are eligible to purchase Federal flood insurance for buildings and contents.
- **Regulations.** Communities must adopt and enforce minimum floodplain management regulations so that development, including buildings, is undertaken in ways that reduce exposure to flooding.

To learn more about the NFIP, including your potential flood risk and the approximate cost of a flood insurance policy, go to FEMA's FloodSmart website www.floodsmart.gov

In addition to Okaloosa County, other local communities that participate in the NFIP are as follows:

COMMUNITY NAME	DATE OF REGULAR ADMITTANCE	COMMUNITY NUMBER
TOWN OF CINCO BAYOU	7/3/1985	120596
CITY OF CRESTVIEW	2/3/1993	120597
CITY OF DESTIN	7/6/1988	125158
CITY OF FORT WALTON BEACH	4/1/1977	120174
CITY OF MARY ESTHER	7/3/1985	120337
CITY OF NICEVILLE	7/18/1985	120338
TOWN OF SHALIMAR	7/3/1985	120579
CITY OF VALPARAISO	4/1/1977	120176



Flood Insurance Rates Are Established by the Government

Flood insurance rates are cut in stone by the Federal Government. You have no need to shop rates.

Agents Are Not Permitted to Bind Flood Coverage

Flood Insurance agents do not have binding authority. It takes your signature and receipt of money to validate coverage for your mortgage lender.

Flood Insurance is Required by Law

To get secured financing to buy, build, or improve structures in Special Flood Hazard Areas (SFHA's) you will be required to purchase flood insurance. Lending institutions that are federally regulated or federally insured must determine if the structure is located in a SFHA and must provide written notice requiring flood insurance.

Flood Insurance: Property Owner's Best Protection

Who needs flood insurance? Federal flood insurance is required for all buildings in mapped Special Flood Hazard Areas (SFHAs) shown on FEMA's maps if they are financed by Federally-backed loans or mortgages. All homeowners, business owners, and renters in communities that participate in the NFIP may purchase Federal flood insurance on any building and its contents, even if outside of the mapped flood zone. If the home is in the mapped SFHA, it is 5 times more likely to be damaged by flood than by a major fire.

Not in a mapped floodplain? Unfortunately, it's often after a flood that many people discover that their home or business property insurances DOES NOT cover flood damage. Approximately 25% of all flood damage occurs in low risk zones, commonly described as being "outside the mapped flood zone."

What about disaster grants and loans? Federal disaster grants do not cover most losses and repayment of a disaster loan can cost many times more than the cost of a flood insurance policy.

Want to know more? Learn more at www.floodsmart.gov . To purchase a flood insurance policy, call your insurance agent. To get the name of an agent in the area, call the NFIP's toll free number (888) 356-6329.

The NFIP's Community Rating System (CRS)

The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. Okaloosa County has been a participant of the program since October 1, 1995. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the County's actions.

The NFIP's CRS gives "Extra Credit" to communities in the form of reduced flood insurance premiums. Communities must apply to the CRS and commit to implement and certify activities that contribute to reduced flood risk. Examples of actions that Okaloosa County takes to reduce your flood insurance premiums include:



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- Preserve open space in the floodplain
- Enforce higher standards for safer development through zoning, stormwater, subdivision, and flood damage protection ordinances
- Develop hazard mitigation plans
- Obtain grants to buy out or elevate houses or flood-proof businesses
- Maintain drainage systems
- Monitor flood conditions and issue warnings
- Inform people about flood hazards, flood insurance, and how to reduce flood damage

Okaloosa County currently holds a **class 5** rating. This rating equates to a **25% reduction in flood insurance premiums** for policy holders.

Flood Smart

www.floodsmart.gov is the official website for the NFIP. This website is loaded with information on flood facts and flood insurance information. The toll free number for Floodsmart is **1-888-379-9531**.

Below is a small excerpt from the site about flood facts.

Why Care About Flooding

Floods are the most common natural disaster in the United States. They've caused nearly \$2.7 billion in U.S. flood losses in the last 10 years (2001-2010). There is a 26 percent chance of experiencing a flood during the life of a 30-year mortgage in high-risk flood areas. However, losses due to flooding are not covered under typical homeowner's and business insurance policies.

Causes of Flooding

- Hurricanes and tropical storms cause floods that can create far more damage than high winds.
- Nor'easters, or extra-tropical cyclones, also cause flooding and storm surge.
- Heavy rains, winter storms, and spring thaws bring flooding to river basins.
- Overburdened or clogged drainage systems lead to property damage both within and outside floodplains.
- Construction and new development affect natural drainage and can create new flood risks.

Determine your Flood Risk at FloodSmart.gov

Is your property in a high risk or moderate to low risk area? Knowing your flood profile will help you understand your risk of financial loss.

Find out your relative flood risk right now online at FloodSmart.gov's "Assess Your Risk". Simply enter your property address to see your relative risk, find links to flood maps, and other flood insurance community resources.

Flood maps determine your level of risk. You can also view current flood maps at FEMA's Map Store located at www.store.msc.fema.gov. FEMA is also undertaking a nationwide effort to produce new digitized flood maps for hundreds of communities over the next five years. These new maps will reflect changes in floodplains caused by new development and natural forces.



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Expanded, Lower-Cost Coverage

If a single family home or business is located in a low- to moderate-risk area, the owners may be eligible for the Preferred Risk Policy (PRP). For homeowners, this policy covers the home and contents for as little as \$129 a year. PRP policies are available for businesses as well, saving about 30 percent off standard premiums. Contents-only PRP policies are available for renters, and business owners that lease their buildings. Ask an insurance agent for details.

Other Flood Precautions People Should Take

Being Flood Smart includes protecting your property before floods occur. Be sure that major appliances, electric switchboxes, outlets and heating equipment are well above potential flood levels. Install floating drain plugs and sewer system backflow valves to help prevent flood drain overflow.

Find Out More About Flood Insurance

Flood insurance is offered through the National Flood Insurance Program, which provides federally backed protection against flood losses. To find out more, call your insurance agent, contact the NFIP at 1-800-427-2419 to find a nearby agent, or visit www.FloodSmart.gov.

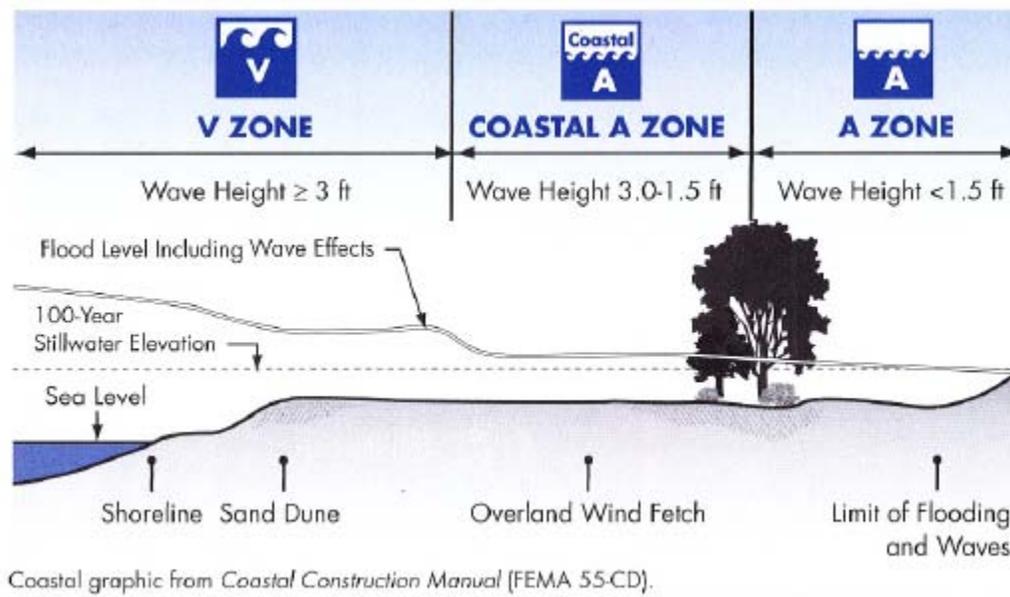


2 FLOODPLAINS AND FLOOD ZONES

Floodplain

A floodplain is defined by FEMA as *Any land area susceptible to being inundated by flood waters from any source*. Okaloosa County contains several types of floodplains including coastal, riverine, and floodway.

Coastal Floodplain



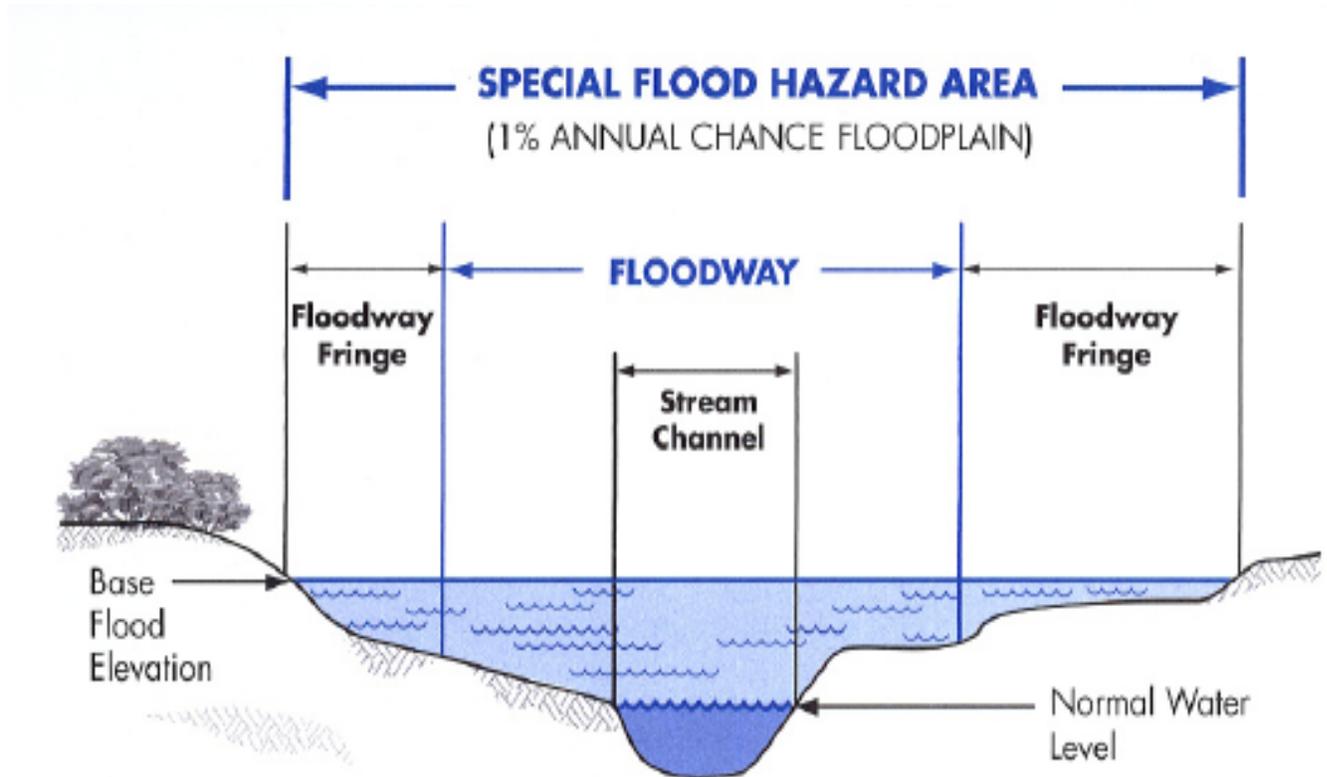
The **Coastal High Hazard Area (V Zone)** is the Special Flood Hazard Area that extends from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action. The area is designated on the FIRM as Zone VE. Zone VE is where wave heights are expected to be 3 feet or more

The term **Coastal A Zone** refers to the portion of the SFHA landward of the V Zone or landward of a shoreline that does not have a mapped V Zone. The principal sources of flooding are associated with astronomical tides, storm surges, seiches or tsunamis. Coastal A Zones may be subject to wave effects, velocity flows, erosion, scour or combinations of these forces. Zone AE is subject to flooding by the base or 1% annual chance (100-year) flood, and waves less than 3 feet high, (formerly called Zones A1-A30).

Zone X is the area of minimal flood risk outside the 500-year floodplain, formerly called Zone C.



Riverine Floodplain



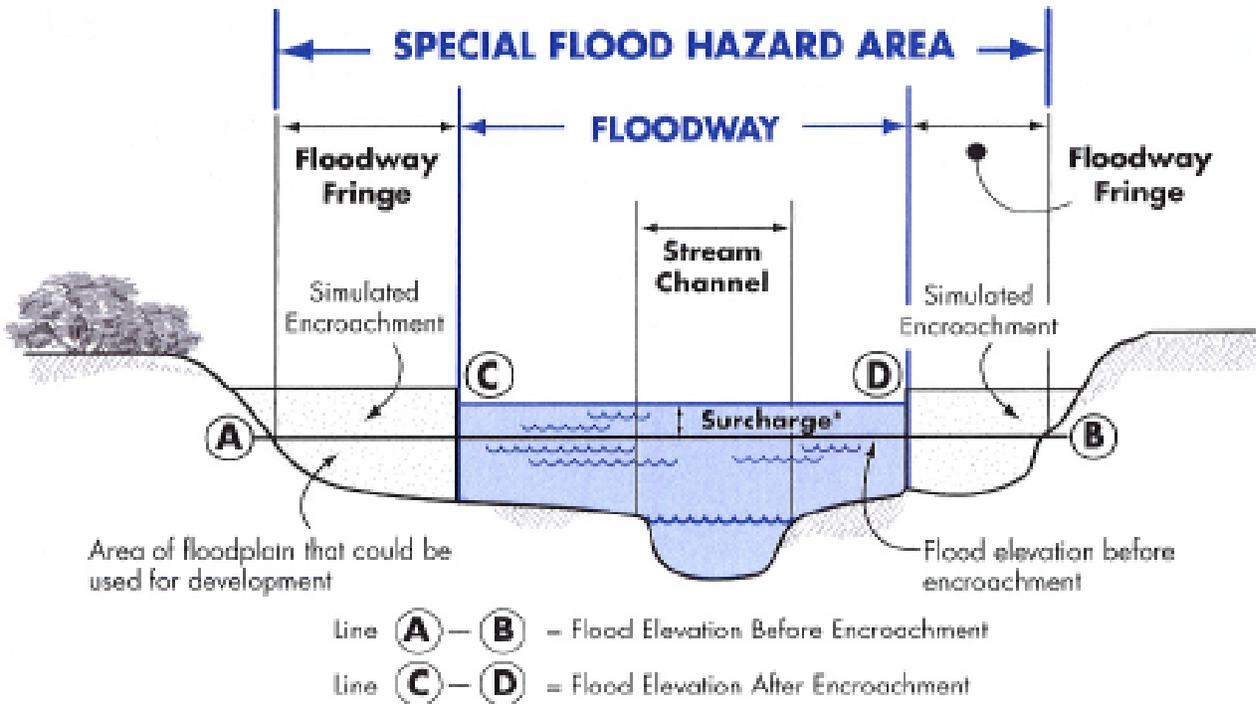
The Special Flood Hazard Area (SFHA) is that portion of the floodplain subject to inundation by the base flood (1% annual chance) and/or flood-related erosion hazards. Riverine SFHAs are shown on FIRMs as Zones A and AE.

For floodplains with Base Flood Elevations (BFEs) determined by detailed flood studies, the Flood Profile in the Flood Insurance Study (FIS) shows water surface elevations for different frequency floods. BFEs determined by Limited Detailed Studies are listed in tables in the FIS.



Floodway

The **Floodway** is the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to pass the base flood discharge without cumulatively increasing flood elevations.



Okaloosa County Land Development Code Section 3.06.05.C, 5 states:

Floodways: Located within areas of special flood hazard areas are designated as floodways. A floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and due to the erosion potential, encroachments, including fill, new construction, substantial improvements, and other developments are prohibited, unless certification is provided demonstrating that encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge. Certification must be provided, along with supporting technical data, by a Florida-registered professional engineer. All new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this section.



3 FLOOD RISK AND FLOOD ZONE MAPS

Flooding can happen anywhere, but certain areas are especially prone to serious flooding. To identify a community's flood risk, the Federal Emergency Management Agency (FEMA) conducts a Flood Insurance Study. The study includes statistical data for river flow, storm tides, hydrologic/hydraulic analyses, and rainfall and topographic surveys. FEMA uses this data to create the flood hazard maps that outline a community's different flood risk areas. Changing weather patterns, erosion, and development can affect floodplain boundaries. FEMA is currently updating and modernizing the nations Flood Insurance Rate Maps (FIRMS). These digital flood hazard maps provide an official depiction of flood hazards for each community and for properties located within it. FEMA has published almost 100,000 individual Flood Insurance Rate Maps.

To help communities understand flood risk, FIRM's show the locations of high risk, moderate-to-low risk, and undetermined risk areas. The definitions for each of these are as follow.

High Risk Areas (Special Flood Hazard Area or SFHA)

Floodplains and areas subject to coastal storm surge are shown as high-risk areas or Special Flood Hazard Areas (SFHAs). Some parts of floodplains may experience frequent flooding while others are only affected by severe storms. However, areas directly outside of these high-risk areas may also find themselves at considerable risk. In high-risk areas, there is at least a 1 in 4 chance of flooding during a 30-year mortgage. All home and business owners in these areas with mortgages from federally regulated or insured lenders are required to buy flood insurance. **They are shown on the flood maps as zones labeled with the letters A or V.**

Moderate-To-Low Risk Areas (Non-Special Flood Hazard Area or NSFA)

In moderate-to-low risk areas, the risk of being flooded is reduced but not completely removed. These areas submit over 20% of NFIP claims and receive one-third of disaster assistance for flooding. Flood insurance isn't federally required in moderate-to-low areas, but it is recommended for all property owners and renters. **They are shown on flood maps as zones labeled with the letters B, C or X (or a shaded X).**

Undetermined-Risk Areas

No flood-hazard analysis has been conducted in these areas, but a flood risk still exists. Flood insurance rates reflect the uncertainty of the flood risk. **These areas are labeled with the letter D on the flood maps.**

Coastal Barrier Resource Area (CoBRA)

The Coastal Barrier Resources Act of 1982 (CoBRA) and later amendments, removed the federal government from financial involvement with building and development in undeveloped portions of designated coastal barriers. These areas were mapped and designated as Coastal Barrier Resources System Units or "otherwise protected areas." These are called CoBRA zones. The sale of NFIP flood insurance is not allowed within these zones after October 1, 1983. The only CoBRA zone in Okaloosa County is located in Destin in the vicinity of Regatta Bay and Kelly Plantation.

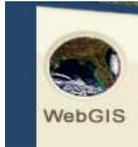


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Flood Zone Maps Online

Flood zone maps for Okaloosa County can be found on line at <http://www.co.okaloosa.fl.us/index.asp>



Click on the first round icon

Then Click [Accept](#) at the bottom of the page.
This will lead you to the map of Okaloosa County.

From this page you can search for property by zooming in; by a Parcel Identification Number; or by an address.

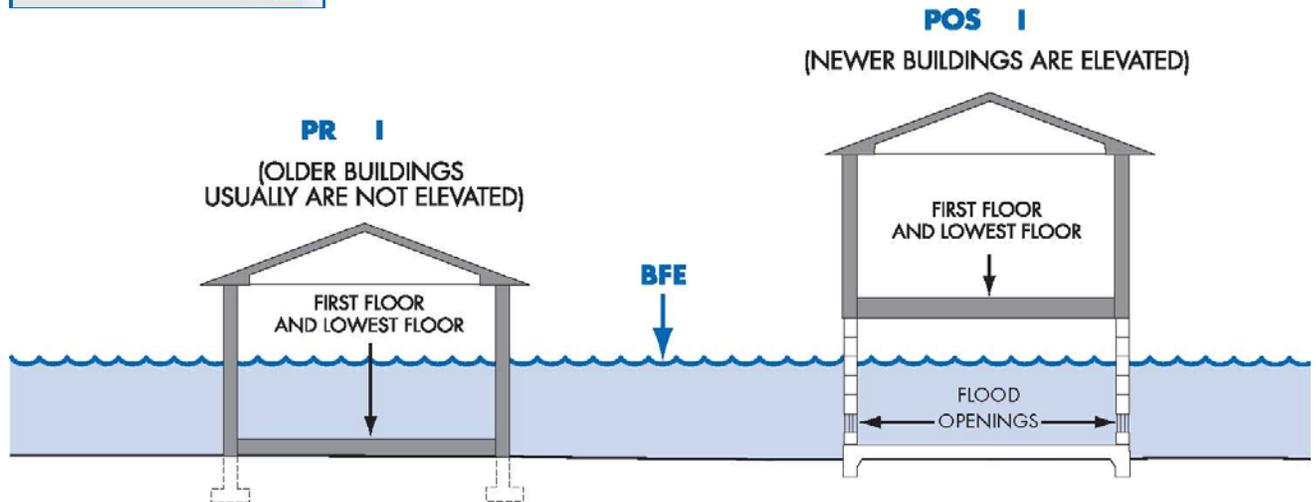
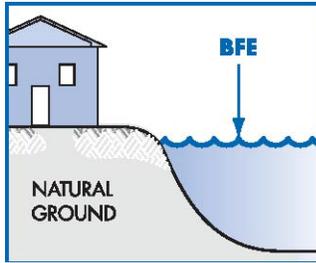
Under the “Layers” tab you can find the flood zone layer to show where the flood zones are located.



What are Pre-FIRM and Post-FIRM Structures?

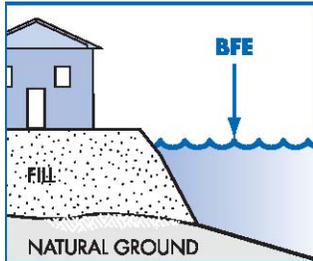
Pre-FIRM Structures are those structures which were built before July 1, 1977, at which time Okaloosa County joined the NFIP.

Post-FIRM Structures are those structures built after July 1, 1977 in Okaloosa County.





LOMAs and LOMR-Fs



The most accurate information available is used to make flood maps, including topographic base maps and detailed engineering methods or methods of approximation. FEMA issues map revisions if technical data is submitted to support the changes.

Letter of Map Amendment (LOMA) is an official amendment to an effective FIRM that may be issued when a property owner provides additional technical information from a registered land surveyor or engineer, such as ground elevation relative to the BFE. Lenders may waive the flood insurance requirement if the LOMA removes a building site from the SFHA because natural ground at the site is above the BFE.

Letter of Map Revision Based on Fill (LOMR-F) is an official revision to an effective FIRM that is issued to document FEMA's determination that a structure or parcel of land has been elevated by fill above the BFE, and therefore is no longer in the SFHA. Lenders may waive the insurance requirement if the LOMR-F removes a building site from the SFHA.

Check online at www.fema.gov/plan/prevent/fhm/ for more about map revisions for different user groups (homeowners, floodplain managers, surveyors, engineers and insurance professionals). Also learn about eLOMA, a web-based application for surveyors and engineers to submit applications for simple LOMAs to FEMA.

Risk Analysis Moving Forward with Accepting Letters of Map Amendments using LiDAR -- FEMA for a number of years now has had an established administrative process to review elevation data of properties that may be inadvertently shown within an Special Flood Hazard Area on a FIRM. The properties are inadvertently included because of limitations of map scale or limitations in the data used to create a FIRM. The process is free to property owners, but they are responsible for submitting their own elevation data. Obtaining this data through a land surveyor can sometimes be financially burdensome.

Risk Analysis is excited to announce that property owners, engineers, and surveyors, will soon have the ability to provide digital topographic data that has been collected by Local, State, or Federal agencies; or by private companies to support their determination in lieu of hiring a land surveyor. In the coming weeks, Risk Analysis will roll out the full procedures externally to those impacted. This is important news for the thousands of eligible homeowners that would otherwise be discouraged by the high costs of providing supporting elevation data for this process. (contact: *Mike Godesky, michael.godesky@fema.dhs.gov*)



Flood Map Revisions: CLOMRs and LOMRs

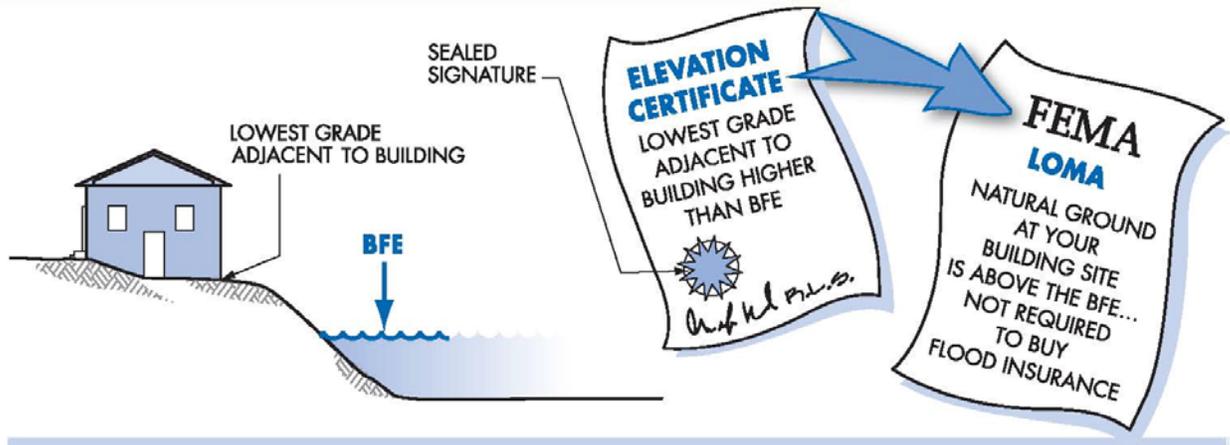
Conditional Letter of Map Revision (CLOMR) is a letter commenting on whether a proposed project, if built as shown on the submitted documentation, would meet the standards for a map revision. The County may require this evidence prior to issuing a permit, and the Certificate of Occupancy should be withheld until receipt of the final LOMR based on “as-built” documentation and certification.

Letter of Map Revision (LOMR) is an official revision to an effective FIRM that may be issued to change flood insurance risk zones, special flood hazard areas and floodway boundary delineations, BFE’s and/or other map features. Lenders may waive the flood insurance requirement if the approved map revision shows buildings to be outside flood risk areas.

To download the forms used to submit map revisions, go to www.fema.gov/library, click on “Search by Resource Title,” and search on “MT-EZ”, “MT-1”, and “MT-2”.

If your land is shown on the map as “in” the SFHA, but your building site is higher than the Base Flood Elevation (BFE)... get a State of Florida professional land surveyor to complete a FEMA Elevation Certificate. Submit a request for a Letter of Map Amendment to FEMA along with the EC to verify that your structure is above the BFE. If FEMA approves your request, lenders are not required to have you get a flood insurance policy, although some lenders may still require it. Keep the certificate and the LOMA with your deed— they will help future buyers.

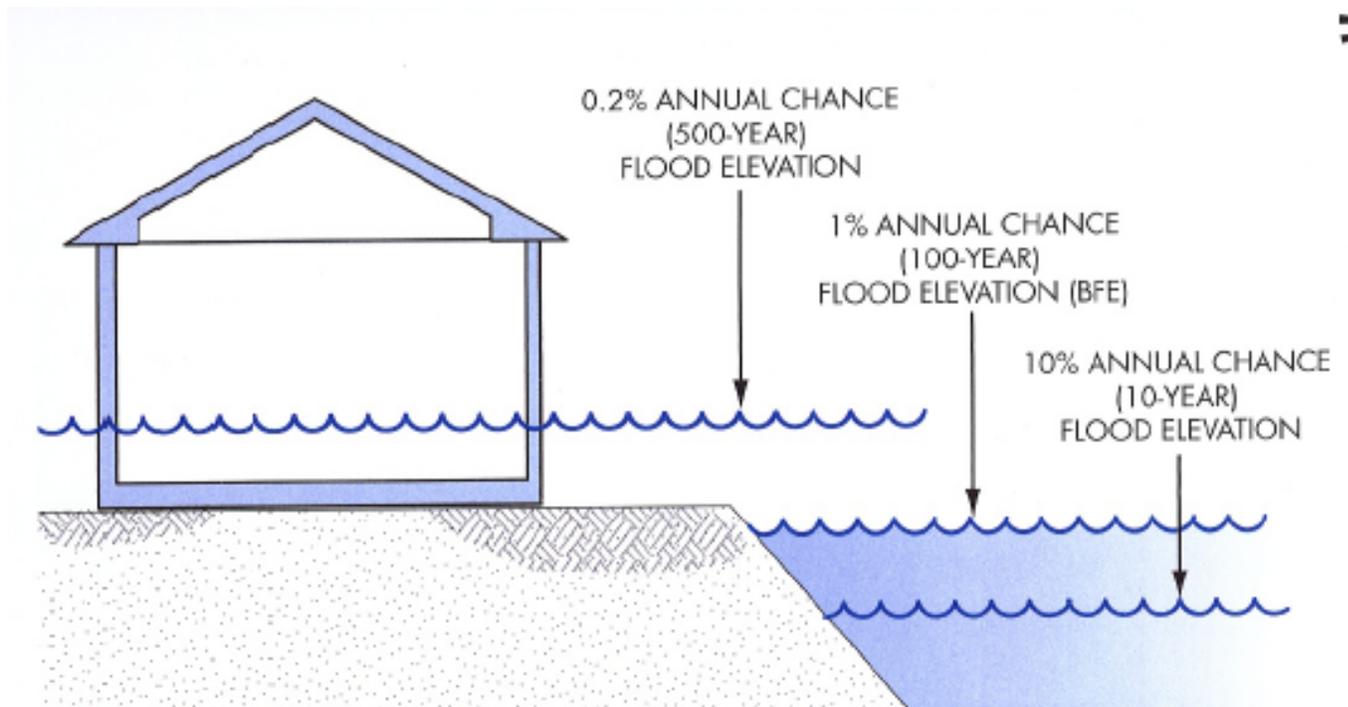
Is Your Building Site Higher than the BFE?





CAUTION!

NATURE DOES NOT READ THE FLOOD MAPS



Major storms and flash floods can cause flooding that rises higher than the Base Flood Elevation (BFE). Be safer – protect your home or business by building higher. Building higher will save you money on flood insurance.

Many people don't understand just how risky the floodplain can be. **There is a greater than 26% chance that a non-elevated home in the SFHA will be flooded during a 30-year mortgage period.** The chance that a major fire will occur during the same period is less than 5%!



4 BUILDING IN THE FLOODPLAIN

Activities in the Special Flood Hazard Areas that Require Permitting

- Construction of new buildings
- Additions to buildings
- Substantial improvements of buildings
- Renovation of building interiors/exterior
- Repair of damaged buildings
- Placement of manufactured (mobile) homes
- Subdivision of land
- Construction or placement of temporary buildings and accessory structures
- Construction of agricultural buildings
- Construction of roads, bridges, and culverts
- Placement of fill, grading, excavation, mining, and dredging
- Alteration of stream channels

Development permits are required for these and **ANY** land-disturbing activities in SFHAs.

Base Flood Elevation

The “base flood elevation” is defined by FEMA as “*The computed elevation to which floodwater is anticipated to rise during the base flood. Base flood elevations (BFE’s) are shown on the Flood Insurance Rate Maps.*” The BFE is the regulatory requirement for the elevation or flood proofing of structures. The relationship between the BFE and a structure’s elevation determines the flood insurance premium.

Building Construction Requirements

Building construction requirements and standards are described in Section 3.06.00 of the Okaloosa County Land Development Code as follows.

3.06.05 Provisions for Flood Hazard Reductions: In all areas of special flood hazard the following provisions are required.

1. New construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure;
2. Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable state requirements for resisting wind forces;
3. New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
4. New construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;



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5. Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
6. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
7. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharges from the system into flood waters;
8. On-site disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding; and
9. Any alteration, repair, reconstruction or improvements to a structure which is in compliance with the provisions of this section, shall meet the requirements of "new construction" as contained in this chapter.
10. New and substantially improved critical facilities are required to be protected from damage and loss of access as a result of the 500-year flood or the flood of record, whichever is higher. Critical facilities include, but are not limited to:
 - a. Those structures or facilities that produce, use, or store highly volatile, flammable, explosive, toxic, and/or water reactive materials;
 - b. Hospitals, nursing homes, and facilities licensed by the State of Florida as Community Residential Homes that are likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a flood;
 - c. Police stations, fire stations, vehicle and equipment storage facilities, and emergency operations centers that are needed for flood response activities before, during, and after a flood; and
 - d. Public and private utility facilities that are vital to maintaining or restoring normal services to flooded areas before, during, an after a flood.

3.06.06 General Standards for Project Proposals: The following general standards shall apply to applications for development projects.

1. All subdivision and project proposals shall be consistent with the need to minimize flood damage;
2. All project proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;
3. All project proposals shall have adequate drainage provided to reduce exposure to flood hazards; and
4. Base flood elevation data shall be provided for subdivision proposals and other proposed development (including manufactured home parks and subdivisions) which is greater than the lesser of fifty (50) lots or five (5) acres. When determining whether or not a detailed engineering analysis is required to develop base flood elevation data guidance shall be obtained from the "Guide for Approximate A Zone Areas", FEMA, latest edition.

3.06.07 Specific Standards: In all areas of special flood hazard where base flood elevation data have been provided, as set forth in subsection 10.05.01, or when data have not been provided, then as determined by a Florida-registered surveyor, the following provisions are required:



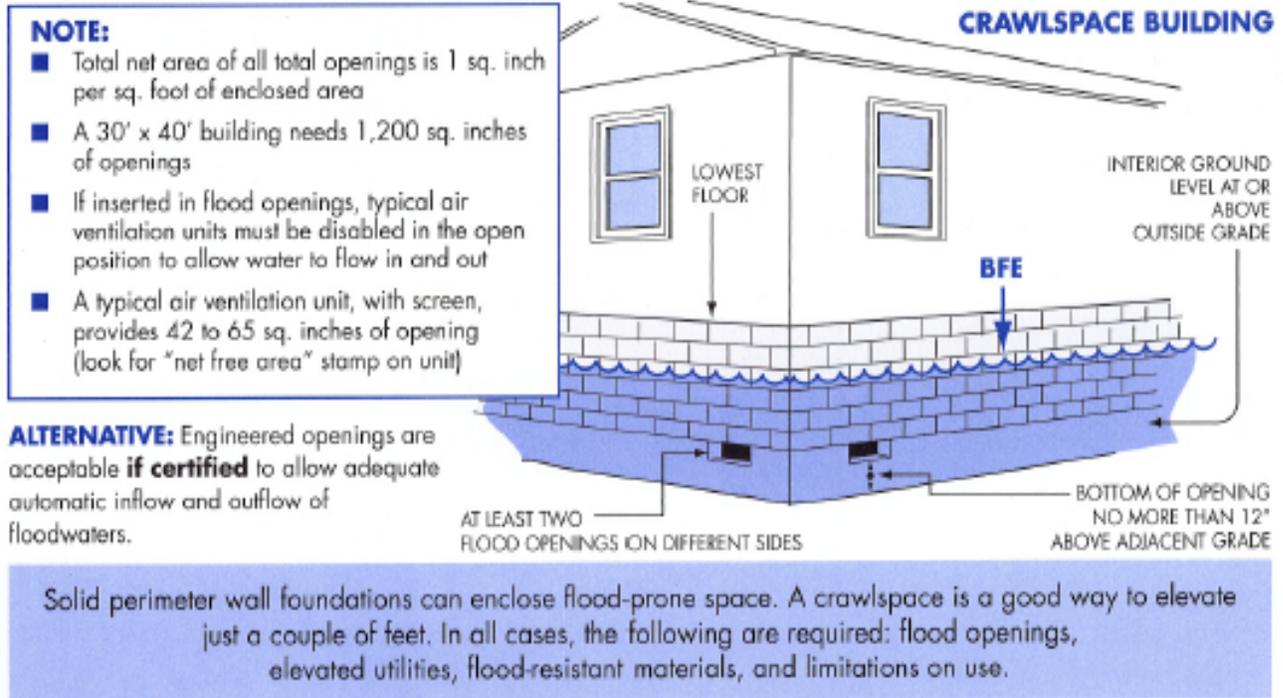
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1. Fill or re-grading of property shall be prohibited or limited except to establish required road elevations and for driveways and permitted principal and accessory structures, unless the environmental assessment shows that fill or re-grading the site will not adversely alter the hydrology of the site.
2. Residential Construction: Where base flood elevation data has been provided, new construction or substantial improvement of any residential structure shall have the lowest floor, including electrical, heating, ventilation, plumbing, and air conditioning and other service facilities (including ductwork), elevated at least one (1) foot above the base flood elevation as specified on the Flood Insurance Rate Maps. Where base flood elevation data has not been provided, new construction or substantial improvements of any residential structure shall have the lowest floor, including electrical, heating, ventilation, plumbing, and air conditioning and other service facilities (including ductwork), elevated at least five (5) feet above the highest adjacent finished grade. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of flood waters shall be provided in accordance with standards of paragraph 4, herein below.
3. Non-Residential Construction: New construction or substantial improvement of any commercial, industrial, or non-residential structure shall have the lowest floor, including basement, electrical, heating, ventilation, plumbing, and air conditioning and other service facilities (including ductwork) elevated at least one (1) foot above the level of the base flood elevation. Structures located in all A-zones may be flood proofed in lieu of being elevated provided that all areas of the structure below the required elevation are water tight with walls substantially impermeable to the passage of water, and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A Florida-registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the Department of Growth Management.
4. Elevated Buildings: New construction or substantial improvements of elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.
 - a. Designs for complying with this requirement must be certified by a Florida-registered professional engineer or architect meet or exceed the following minimum criteria:
 - i. Provide a minimum of two (2) openings on different sides of each enclosed area having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding;
 - ii. The bottom of all openings shall be no higher than one (1) foot above adjacent interior grade [which must be equal to or higher than adjacent exterior grade], and;
 - iii. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwaters in both direction.
 - iv. Electrical, plumbing, heating, ventilation and air conditioning and other service facilities (including ductwork) elevated at least one (1) foot above the level of the base flood elevation.
 - v. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator); and
 - vi. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.



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Remember: All enclosures below the BFE can only be used for Storage, Parking, and Entry.

5. Floodways: Located within areas of special flood hazard areas are designated as floodways. A floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and due to the erosion potential, encroachments, including fill, new construction, substantial improvements, and other developments are prohibited, unless certification is provided demonstrating that encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge. Certification must be provided, along with supporting technical data, by a Florida-registered professional engineer. All new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this section.

6. Coastal High Hazard Areas (V Zones): Located within the special flood hazard areas are areas designated as Coastal High Hazard areas. For purposes of this section only, the NFIP definition of "Coastal High Hazard Areas" means an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. These areas have special flood hazard associated with wave wash; therefore, the following provisions shall apply:

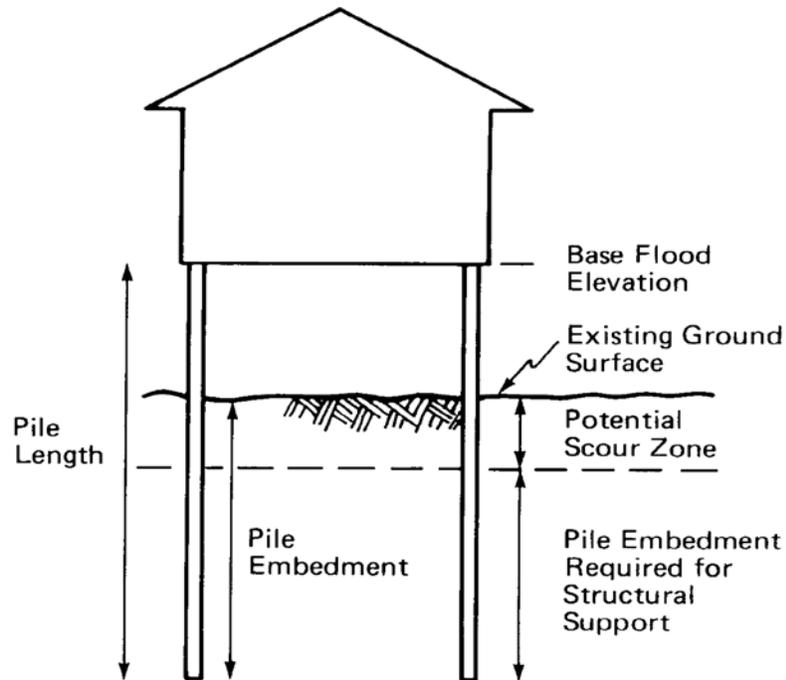
- All buildings or structures shall be located landward of the reach of the mean high tide;
- All buildings or structures in V Zones shall be elevated so that the bottom of the lowest supporting horizontal member (excluding pilings or columns) including electrical, heating, ventilation, plumbing, and air conditioning, and other service facilities (including ductwork) is located at least one (1) foot above the established base flood elevation, with all space below the lowest supporting member open so as not to impede the flow of water. Break away walls may be permitted and must be designated to wash away in the event of abnormal wave action and in accordance with this section;



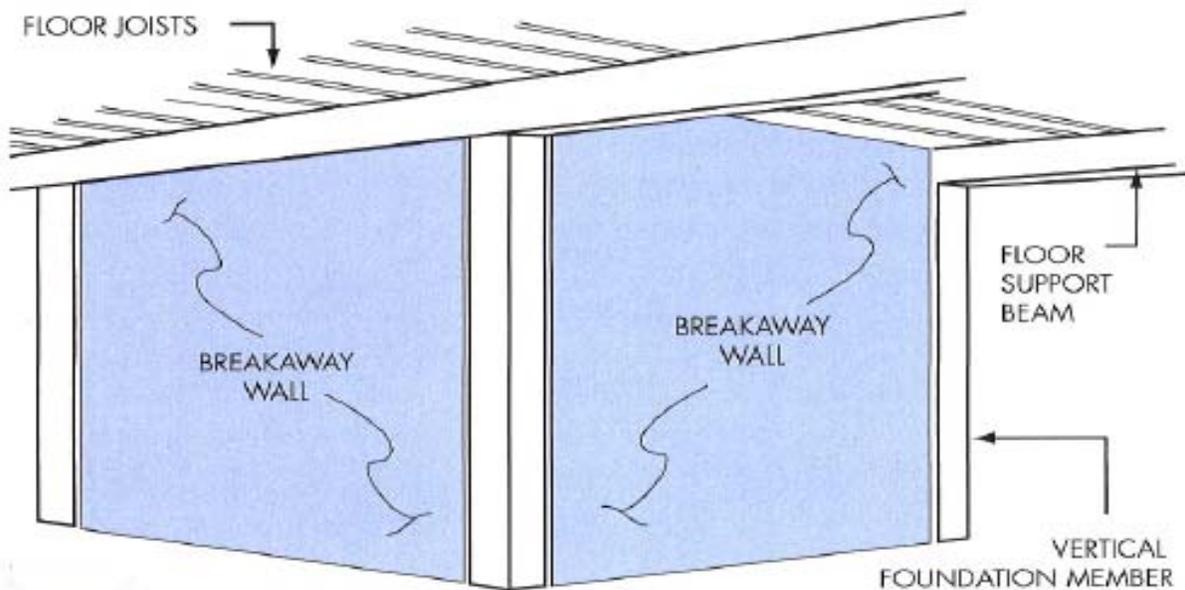
FLOODPLAIN MANAGEMENT QUICK GUIDE



- iii. All buildings or structures in V Zones on Okaloosa Island shall be elevated so that the bottom of the lowest supporting horizontal member (excluding pilings or columns) including electrical, heating, ventilation, plumbing, and air conditioning, and other service facilities (including ductwork) is located at least one (1) foot above the established base flood elevation, but no lower than ten (10) feet above MSL, with all space below the lowest supporting member open so as not to impede the flow of water. Break away walls may be permitted and must be designated to wash away in the event of abnormal wave action and in accordance with this section;
- iv. All buildings or structures shall be securely anchored on pilings or columns;
- v. All pilings and columns and the attached structures shall be anchored to resist flotation, collapse, and lateral movement due to the effect of wind and water loads acting simultaneously on all building components. The anchoring and support system shall be designed with wind and water loading values which equal or exceed the one hundred (100) year mean recurrence interval.
- vi. Florida-registered professional engineer or architect shall certify that the design, specifications and plans for construction are in compliance with the provisions contained in this section;
- vii. There shall be no fill used as structural support in V Zones. Non-compacted fill may be used around the perimeter of a building for landscaping/aesthetic purposes provided the fill will wash out from storm surge, (thereby rendering the building free of obstruction) prior to generating excessive loading forces, ramping effects, or wave deflection. The County Public Works Department shall approve design plans for landscaping aesthetic fill only after the applicant has provided an analysis by an engineer, architect, and/or soil scientist, which demonstrates that the following factors have been fully considered; [1] Particle composition of fill material does not have a tendency for excessive natural compaction; [2] Volume and distribution of fill will not cause wave deflection to adjacent properties, and; [3] Slope of fill will not cause wave run-up or ramping;
- viii. There shall be no alteration of sand dunes which would increase potential flood damage;
- ix. Non-supporting break away walls, open lattice-work, or mesh screening shall be allowed below the base flood elevation provided they are not part of the structural support of the building and are designed so as to break away under abnormally high tides or wave action, without damage to the structural integrity of the building on which they are to be used and provided the following design specifications are met: (1) Design safe loading resistance of each wall shall be not less than ten (10) nor more than twenty (20) pounds per square foot, or; (2) If more than twenty (20) pounds per square foot, a Florida-registered professional engineer or architect shall certify that the design wall collapse would result from a water load less than that which would occur during the base flood event, and the elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components during the base flood event. Maximum wind and water loading values to be used in this determination shall have (1) one percent chance of being equaled or exceeded in any given year.
- x. If breakaway walls are utilized, such enclosed space shall not be designed to be usable for human habitation but shall be designed to be useable only for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises;
- xi. Prior to construction, plans for any structures that will have breakaway walls must be submitted to the Planning and Inspection Department for approval; and
- xii. Any alteration, repair, reconstruction, or improvement to a structure shall not enclose the space below the lowest floor except with breakaway walls, as provided for in this section.



Piles must be embedded well below the scour depth





3.06.08 Standards for Streams without Established Base Flood Elevations and/or Floodways:

Located within the areas of special flood hazard established on the Flood Insurance Rate Maps, where small streams exist but where no base flood data have been provided or where no floodways have been provided, the following provisions apply:

1. No encroachments, including fill material or structures shall be located within a distance of the stream bank of twenty-five (25) feet, unless certification by a Florida-registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge; and
2. New construction or substantial improvements of structures shall be elevated or flood-proofed to elevations established in accordance with subsection 3.06.07.

In addition to the requirements of Section 3.06.00 above, additional building construction requirements are as follows.

6.02.03 Residential Floor Level: In Flood Zone X areas of minimum flooding, no residential dwelling shall be constructed with the lowest floor elevation (excluding basements and non-habitable garages) not less than one (1) foot above the average actual crown or center line of the lowest elevation of the road abutting the subject property. Exemptions to this requirement may occur only where an undue hardship due to the terrain of the land exists and is supported by technical data provided by the applicant, or stormwater management improvements are provided, and the improvements are approved by the County Engineer. The following criteria will be used in granting the exemptions:

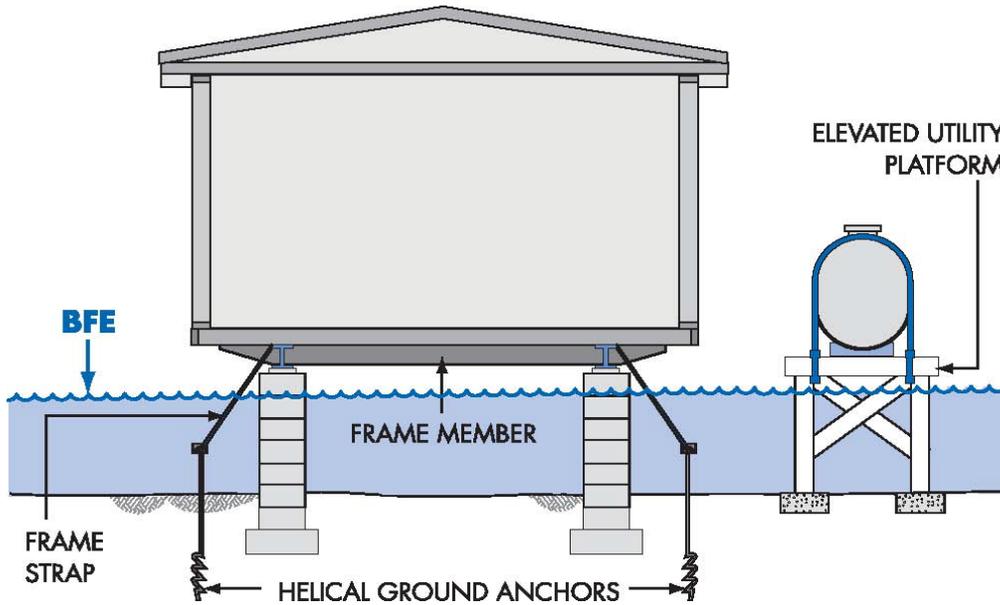
1. The natural ground elevation adjacent to the back wall is equal to or greater than two (2) feet below the crown of the road abutting the subject property and there will be positive drainage to the back of the lot to convey runoff away from the lot without the potential for backup or flooding of the lot, or;
2. There will be adverse impact from stormwater runoff to and from adjacent properties if the required minimum elevation is used, or;
3. The front building placement is equal to or greater than 150' from the roadway and the proposed finished floor elevation is at least one foot (1') above the existing ground elevation and there will be positive drainage from the lot without the potential for backup or flooding of the lot.

When A, AE, V or VE flood zones encroach on the property the elevation shall be from the NGVD 1929 Datum.

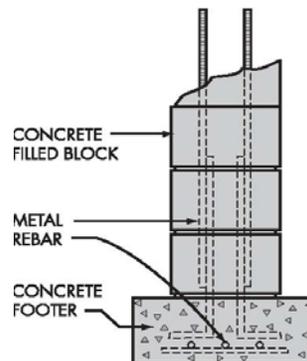
Compliance with the exemption criteria above does not provide for an exemption from the criteria set forth in the applicable water and sewer ordinance for any site location.



Manufactured Homes



Experience shows that manufactured homes are easily damaged. Just a few inches of water above the finished floor can cause substantial damage.



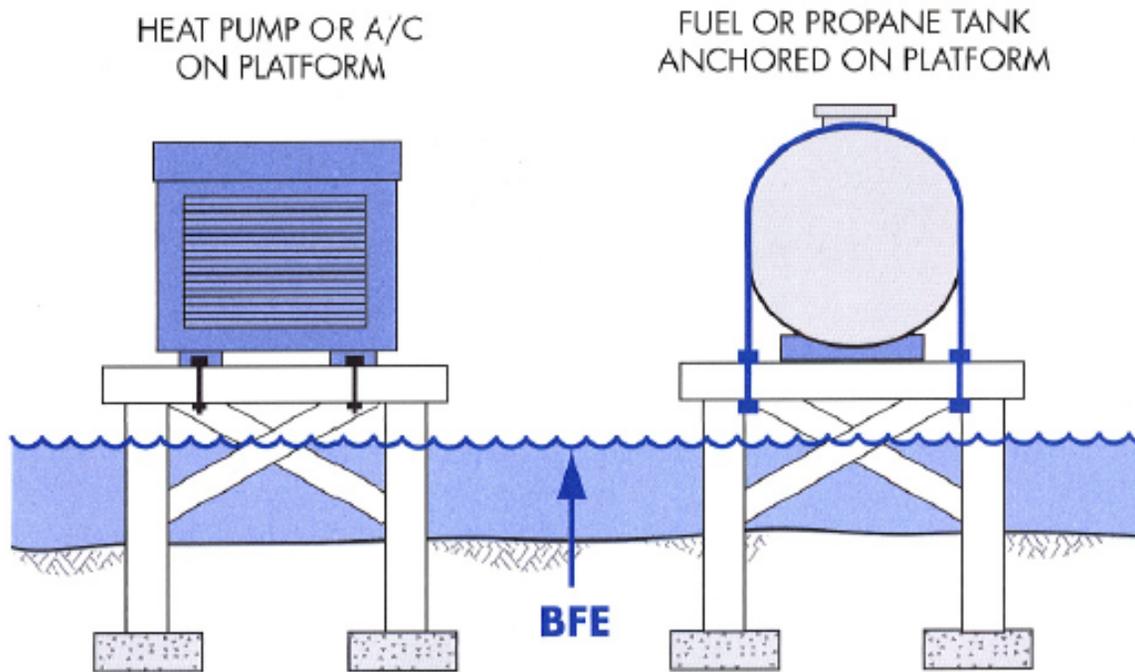
Typical Mobile Home support column.

Manufactured homes must be anchored to resist flotation, collapse, and lateral movement by being tied down in accordance with the manufacturers' installation specifications for SFHAs or the State of Florida Administrative Code 15C.

Remember: All duct work and services must be elevated 1' above the Base flood elevation also.



Utility Services

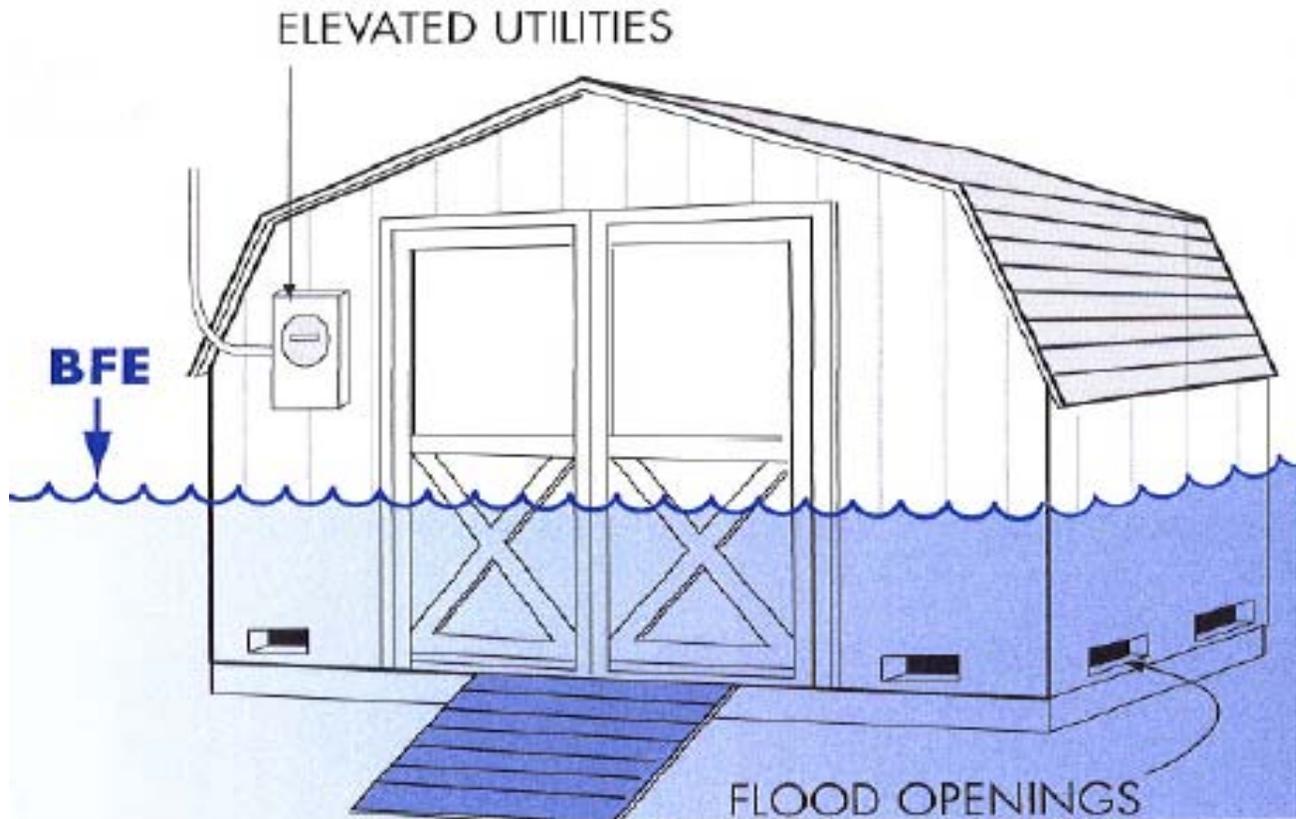


Whether inside an attached garage or outside the building, **all** utilities, appliances, and equipment servicing the building must be elevated 1' above the BFE. Utilities include plumbing, electrical components, gas lines, fuel tanks, and heating and air conditioning equipment.

Fuel and propane tanks may cause explosion and pollution risks during flood conditions. Even shallow water can create large buoyant forces on tanks, so extra care must be taken to ensure that all tanks are anchored to resist floatation, collapse, and lateral movement.



Accessory Structures



An "Accessory Structure" is a structure located on the same lot with, and of a nature customarily incidental and subordinate to, the principal use or structure.

In the Special Flood Hazard Areas, accessory structures must:

- Not be habitable
- Be used only for parking or storage
- Be anchored to resist floating
- Have flood openings
- Be built of flood-resistant materials
- Have elevated utilities
- Not be modified for different use in the future
- Have a documented floor elevation (Elevation Certificate)

Even small buildings require permits. They must be elevated or anchored and built to withstand flood damage.

Remember, **EVERYTHING INSIDE WILL GET WET** when flooding occurs.



Substantial Improvements/Damage

Any reconstruction, rehabilitation, addition, or other improvement of a structure, which the cost equals or exceeds 50% of the market value of the structure before the start of construction in the improvement. This term includes structures which have incurred substantial damage from any cause (flood, fire, hurricanes, tornadoes, vehicle impact etc.) regardless of the actual repair work performed. The term does not, however, include either any project for improvement of a building to correct existing state or local code violations or any alteration to a "historic building", provided that the alteration will not preclude the building's continued designation as a "historic building".

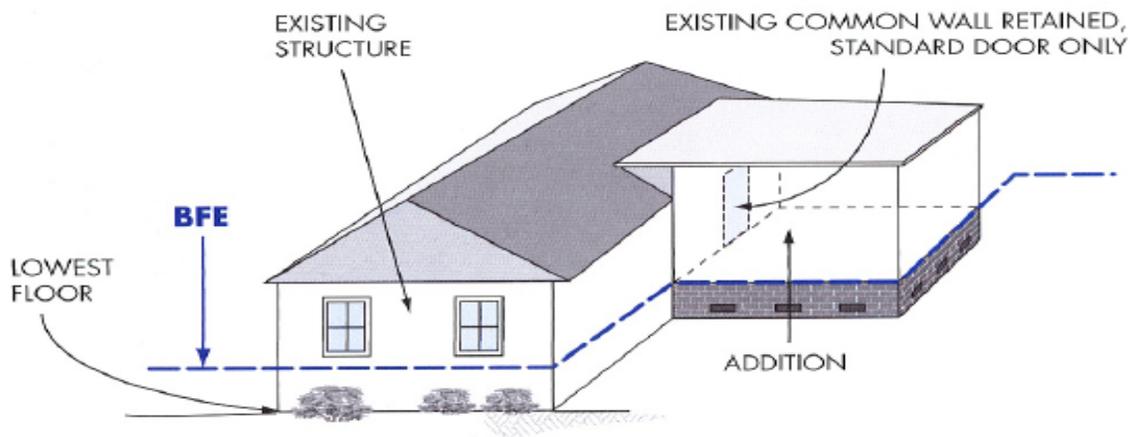
To obtain permits you will need:

- Legal description for the property
- Survey
- Elevation Certificate (of the existing structure and/or the proposed construction)
- Building Application
- Structural plans (if necessary)
- Energy Efficiency Forms (if necessary)
- Product Approval forms
- Copy of the construction contract or a cost estimate (including estimated market value of your own or donated labor and materials)
- Staff will compare your estimated cost of construction to the just value set by the Okaloosa County Property Appraiser, or you may submit an independent assessment of the market value of the building performed by a State of Florida Licensed Appraiser, to determine if the cost of construction is less than or greater than 50% of the market value of the building.
- If the cost of construction is greater than 50% the whole structure will have to meet the requirement of the finished floor being 1 foot above the BFE (A-Zones) or in a V-Zone the building shall be elevated so that the bottom of the lowest supporting horizontal member (excluding pilings or columns) including electrical, heating, ventilation, plumbing, and air conditioning and other service facilities (including ductwork) is located 1 foot above the BFE, with all space below the lowest supporting member open so as not to impede the flow of water.
- If the costs do not trigger the Substantial Improvement requirements above, then you should still consider ways to reduce future damage to the building.



Additions in the Floodplain

Lateral Addition Only



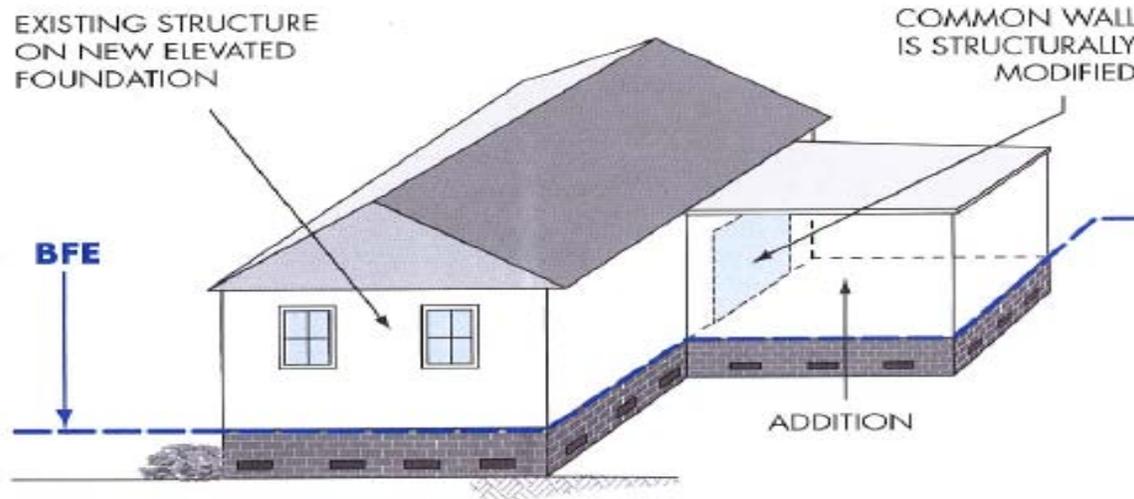
If the existing building is below the BFE a substantial improvement (over 50% of the market value of the structure before the start of construction) addition can be added to the existing building provided:

- No interior modifications are made to the existing building
- No structural modifications are made to the existing common wall other than adding a standard 36 inch door into the addition AND
- The additions finished floor must be a minimum of 1' above the BFE.

Remember Additional requirements can be found in the Okaloosa County Land Development Code and 2010 Florida Building Code.



Other Additions



If the existing building is below the BFE, and a substantial improvement (over 50% of the market value of the structure before the start of construction) addition is proposed along with other work to the structure, the proposed work can be preformed provided:

The existing structure and the proposed addition must be elevated so that the finished floor is 1 foot above the BFE in an A zone and in a V-Zone the building shall be elevated so that the bottom of the lowest supporting horizontal member (excluding pilings or columns) including electrical, heating, ventilation, plumbing, and air conditioning and other service facilities (including ductwork) is located 1 foot above the BFE, with all space below the lowest supporting member open so as not to impede the flow of water.

Examples that would cause the whole structure to be elevated:

- The work involves adding a new top floor
- If the addition proposes structural modifications to the existing common wall
- Modification, renovation, or rehabilitation of the interior or exterior of the existing building in excess of 50% of the market value of the structure before the start of construction



Damage Repairs After the Flood

Okaloosa County requires building permits to be issued prior to the start of any construction, renovation, repair, or demolition.

Items needed for repair permits

- Legal description for the property
- Survey
- Elevation Certificate (of the existing structure)
- Building Application
- Structural plans (if necessary)
- Energy Efficiency Forms (if necessary)
- Florida Product Approval forms
- Copy of the construction contract or a cost estimate (including estimated market value of your own or donated labor and materials)

Staff will compare your estimated cost of construction to the just value set by the Okaloosa County Property Appraiser, or you may submit an independent assessment of the market value of the building performed by a State of Florida Licensed Appraiser, to determine if the cost of construction is less than or greater than 50% of the market value of the building.

If the cost of construction is greater than 50% the whole structure will have to meet the requirement of the finished floor being 1 foot above the BFE (A-Zones) or in a V-Zone the building shall be elevated so that the bottom of the lowest supporting horizontal member (excluding pilings or columns) including electrical, heating, ventilation, plumbing, and air conditioning and other service facilities (including ductwork) is located 1 foot above the BFE, with all space below the lowest supporting member open so as not to impede the flow of water.

If the cost does not trigger the Substantial Improvement requirements above, then you should still consider ways to reduce future damage to the building.

Emergency Repairs

The Florida Building Code, Section 105.2.1 Emergency Repairs; reads "Where equipment replacements and repairs must be preformed in an emergency situation, the permit application shall be submitted within the next working business day to the building official."

The Okaloosa County Growth Management Department maintains current information on licensed contractors.



Elevation Certificate



The elevation certificate is an important administrative tool of the NFIP. It is used to determine the proper flood insurance premium; it can be used to document elevation information necessary to ensure compliance with community floodplain management regulations and to support a request for a Letter of Map Amendment or Revision (LOMA or LOMR-F).

The elevation certificate is required in order to properly rate post-FIRM buildings, which are buildings constructed after publication of the Flood Insurance Rate Map (FIRM) for flood insurance Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, and AR/AO. The elevation certificate is not required for pre-FIRM buildings unless the building is being rated under the optional post-FIRM flood insurance rules. **If your property requires an elevation certificate, you will need to obtain the certificate prior to receiving a quote.**

As part of the agreement for making flood insurance available in a community, the NFIP requires the community to adopt a floodplain management ordinance that specifies minimum requirements for reducing flood losses. One such requirement is for the community to obtain the elevation of the lowest floor (including basement) of all new and substantially improved buildings and maintain a record of such information. The Elevation Certificate provides a way for a community to comply with this requirement.

Elevation certificates must be prepared and certified by either a land surveyor, engineer, or architect who is authorized by commonwealth, state, or local law to certify elevation information. Community officials who are authorized by local law or ordinance to provide floodplain management information may also sign the certificate.