



City of Gibraltar Flood Zone Information

What is a flood? Floods occur when runoff from rain or snowmelt exceeds the capacity of rivers, stream channels or lakes and overflows onto adjacent land. Floods can also be caused by storm surges and waves that inundate areas along tidal or Great Lakes coastlines.

Throughout history, floods have claimed uncounted human lives and devastated property, even destroying cities. Yet people continue to settle and build in floodplains, increasing the risk of property damage and loss of life.

What is a floodplain?

Floodplains are low-lying lands next to rivers and streams. When left in a natural state, floodplain systems store and dissipate floods without adverse impacts on humans, buildings, roads and other infrastructure. Natural floodplains add to our quality of life by providing open space, habitat for wildlife, fertile land for agriculture, and opportunities for fishing, hiking and biking.

Floodplains can be viewed as a type of natural infrastructure that can provide a safety zone between people and the damaging waters of a flood. But more and more buildings, roads, and parking lots are being built where forests and meadows used to be, which decreases the land's natural ability to store and absorb water. Coupled with changing weather patterns, this construction can make floods more severe and increase everyone's chance of being flooded.



What is the National Flood Insurance Program?

The National Flood Insurance Program is a federal program created in 1968 to provide flood insurance to people who live in areas with the greatest risk of flooding, called Special Flood Hazard Areas. The program provides an alternative to disaster assistance and reduces the escalating costs of repairing damage to buildings and their contents caused by floods. The program provides flood insurance, while at the same time encouraging the sensible management and use of floodplains to reduce flood damage.

The National Flood Insurance Program offers flood insurance to homeowners, renters and business owners, provided their communities use the program's strategies for reducing flood risk, including adopting and enforcing floodplain management ordinances to reduce future flood damage. Community participation in the National Flood Insurance Program is voluntary. However, flood insurance and many kinds of federal disaster assistance are not available in communities that do not participate in the program. Fortunately, the City of Gibraltar does participate in the National Flood Insurance Program.

Each participating community has a local law for flood damage prevention that contains specific standards for any development in federally mapped Special Flood Hazard Areas. These areas have a one percent or greater chance of experiencing a flood in any year and are shown on Flood Insurance Rate Maps provided by the Federal Emergency Management Agency (FEMA).

Construction Questions

All communities that participate in the National Flood Insurance Program have a local law or ordinance that regulates development within mapped floodplains. The basic standards are contained below. However, anybody who wishes to develop any area within a floodplain should consult with their local floodplain manager, often a building inspector or zoning officer, for specific requirements.

Q. What areas are subject to construction regulations?

A. All development within Special Flood Hazard Areas is subject to floodplain development regulations. The Special Flood Hazard Area is the area that would be inundated by the 100-year flood, better thought of as an area that has a one percent or greater chance of experiencing a flood in any single year. Special Flood Hazard Areas are shown on federal flood maps, known as Flood Insurance Rate Maps, as shaded areas labeled with the letter "A" or "V" sometimes followed by a number or letter.

- "V" zones are coastal flood hazard zones subject to wave runup in addition to storm surge.
- "A" zones include all other special flood hazard areas.
- "VE" zones, "AE" zones, "V" zones, or "A" zones followed by a number are areas with specific flood elevations, known as Base Flood Elevations.
- A zone with the letter "A" or "V" by itself is an approximately studied flood hazard area without a specific flood elevation.

- Within an "AE" zone or a numbered "A" zone, there may be an area known as the "regulatory floodway," which is the channel of a river and adjacent land areas which must be reserved to discharge the 100-year flood without causing a rise in flood elevations.

The floodway is shown either on the community's Flood Insurance Rate Map or on a separate "Flood Boundary and Floodway" map for maps published before about 1988. Within regulatory floodways, more stringent development controls exist than elsewhere in the Special Flood Hazard Area.

Q. What is the "base flood elevation?"

A. It is the elevation that the one hundred-year flood, better thought of as the flood that has a one percent or greater chance of occurring in any given year, rises to. It is the basic standard for floodplain development, used to determine the required elevation of the lowest floor of any new or substantially improved structure.

Q. What type of development is subject to construction regulations?

A. All development, including buildings and other structures, mining, dredging, filling, paving, excavation, drilling, or storage of equipment or materials is subject to construction regulations if it occurs within a Special Flood Hazard Area.

Q. Who regulates development in a Special Flood Hazard Area?

A. In Michigan, local communities that participate in the National Flood Insurance Program regulate development in Special Flood Hazard Areas. An exception is development funded and undertaken by the state or federal government, which is regulated by the responsible agency.. A community is defined as a town, city or village. Each participating community in the state has a designated floodplain administrator. This is usually the building inspector or code enforcement official.

Q. Who must get local floodplain development permits?

A. Private development is subject to local floodplain development permits.

Q. When is a structure covered by floodplain development regulations?

A. Any new structure or structure that is substantially improved or substantially damaged by any cause is subject to floodplain development regulations. Substantial improvement or damage occurs when the improvement or the value of the damage exceeds 50% of the market value of the structure.

Q. What are the standard development requirements within an "A" zone?

A. When there is a base flood elevation available, the lowest floor including any basement, must be at or above the base flood elevation (plus two feet beginning in 2007). Elevation may be by means of properly compacted fill, a solid slab foundation, or a "crawl space" foundation which contains permanent openings to let flood waters in and out. Non-residential structures may be flood proofed in lieu of elevation.

Q. What if there is no base flood elevation?

A. In most communities, new structures must have the lowest floor three feet or more above the highest adjacent grade. Where a local floodplain administrator has information to estimate a base flood elevation, such as historic flood records or a hydraulic study, that elevation must be used. If the development consists of more than 5 acres or more than 50 lots, the permit applicant must develop a base flood elevation and build accordingly.

Q. What about a building's utilities?

A. Machinery and equipment servicing a building must be elevated to or above the base flood elevation.

Q. What are the requirements within a regulatory floodway?

A. No development is allowed unless the developer has first proven that the development will not increase flood elevations at any location during the 100-year flood.

Q. May a local community pass more restrictive standards?

A. Yes. In fact, local communities are encouraged to provide an extra margin of safety by requiring structures to be elevated above the base flood elevation. Additional flood control measures have been implemented in the City of Gibraltar and include the installation of berms that were installed on most of the waterfront property in town in 1987. The installation of these berms were the result of significant flooding due to high lake levels in 1985.

Q. How does building elevation effect flood insurance?

A. Flood insurance for a house built two or more feet above the base flood elevation will cost about half as much as for a house built to the base flood elevation. Flood insurance for a house built just one foot below the base flood elevation will cost about four times more than for a house built to the base flood elevation. This additional cost could mean tens of thousands of dollars over the life of a 30-year mortgage.

The City of Gibraltar would like residents to understand that over the past few years, Great Lakes water levels are on the rise with Lake Erie being higher than it has been in many years. This is of particular concern to the residents of Gibraltar since we have experienced flooding in

the past when lake levels are high and if Lake Erie continues to rise the possibility for the City to experience flooding increases.

In preparation for potential flooding, residents should take particular care to insure that flood control measures installed previously are maintained and are still in place. Berms over time may have settled lower than the commonly agreed upon height of 577.2 ft. above sea level or in some cases removed. Since all of the berms must be in place, in tact and at or near the required height to provide flood protection, it is essential that full compliance with previous construction and elevation designs are maintained. Openings and lowered areas in berms for walkways, drainage or any other reason should be closed with compacted clay based material as was required in the original berm construction. Open pipes or drains of any kind that go under berms or other flood control measures should be removed to prevent inflow. The cooperation of waterfront property owners to maintain the flood control measures on their individual properties is necessary to insure the maximum possible flood control with those measures. The City encourages those property owners to voluntarily make any necessary repairs or upgrades to their berms or other flood control measures to help protect the community from flooding and to avoid future ordinance enforcement.

In addition to the inspection and remediation of berms and other flood control measures additional portable diesel powered pumps have been deployed at various strategic locations throughout town. These pumps will be in addition to those already deployed and ready to run should the need arise to alleviate flooding from storm water due to significant rain fall and/or a rising lake level.

Non-water front property owners can also help by not allowing yard waste like grass clippings, leaves and other debris from accumulating in street gutters and keeping drain grates cleared in front of their homes.

Rising lake levels with easterly winds and significant rain events truly are at the control of “Mother Nature” however, the actions described in this letter are in our control. The City of Gibraltar with the cooperation of its residents, officials and employees working together to accomplish the objectives described in this letter can provide the best possible opportunity for flood prevention with the flood prevention measures currently in place.

For more information regarding flood insurance, flood zones, or flood risk, please contact the City of Gibraltar at 734-676-3900.