

## What are the general floodplain regulations?

This guide summarizes the local and Federal floodplain regulations to help homeowners and landowners understand what is and what is not allowed within the floodplain.

Land within the floodplain may be used for other purposes as long as:

- The primary functions of conveyance and flood storage are preserved;
- The use is not a detriment to water quality; and
- The use is consistent with the local Land Development Code.

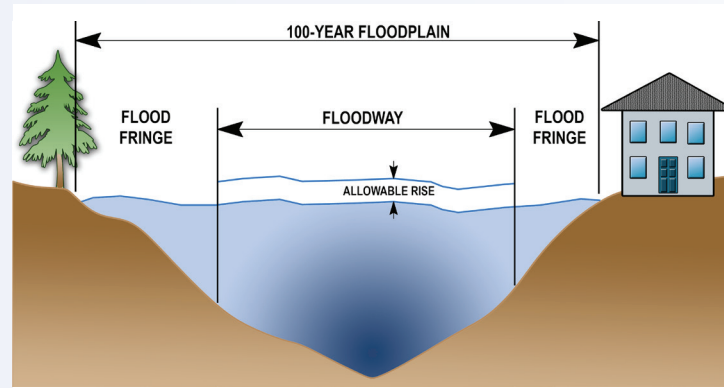
In addition, any improvement with the potential to cause the following is prohibited:

- Obstruction of the flood water flow so that the floodplain is altered in elevation (unless approved through a floodplain modification study);
- Reduction in the carrying capacity of the channel (unless approved through a floodplain modification study);
- Potential for material, equipment, or facilities to become dislodged or displaced and to be deposited downstream causing culvert or bridge blockage, channel degradation, or damages to other properties; and
- Potential for negatively impacting water quality.

The local floodplain administrator has the final determination as to whether a particular use or proposed improvement conforms with the local floodplain regulations and management program.

## What does this mean to me?

When planning improvements within a floodplain, you should first contact the local floodplain administrator to discuss the nature of the improvements and whether those improvements are allowed by the floodplain regulations. In cases where improvements are allowed, a floodplain development permit will likely be required.



## What is a floodplain?

A floodplain is composed of two primary zones: the floodway and the flood fringe. The floodway is the portion of the floodplain with the greatest depths and velocities and is the area of highest risk. Communities must regulate development in the floodway to ensure that there are no increases in upstream or downstream flood elevations. Areas of flooding outside of the floodway are called the flood fringe. Contact the local floodplain administrator for the flood fringe development requirements. Below are a few key guidelines regarding the floodway and flood fringe.

- With regard to work in the floodplain, development means any project not specifically designed and constructed as a flood control channel improvement or stabilization project.
- The floodway must be preserved to allow floodwater to pass through the river or stream without being obstructed. The floodway is shown as the crosshatched areas on the Flood Insurance Rate Map (FIRM). (See Contractor's Guide for additional details). No private development is allowed in the floodway.
- Some improvements are allowed in the flood fringe, but must meet the local and Federal floodplain regulation requirements. This pocket guide provides information regarding what is and what is not allowed in the flood fringe.
- If any proposed improvements cause the boundaries of the floodplain or floodway to change, the owner may have to submit information to the Federal Emergency Management Agency (FEMA) in the form of a request for a Conditional Letter of Map Change (CLOM). This application must be prepared by a professional engineer. FEMA's approval must be obtained before permitting and construction can begin. Following completion of improvements, the owner must also submit an application requesting a Letter of Map Change (LOMC) to FEMA to revise or amend the FIRMs.
- The floodplain administrator can provide guidance on whether a CLOM or LOMC is required.



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# PLANNING AND CONSTRUCTION HOME IMPROVEMENTS IN THE FLOODPLAIN

A pocket guide for  
homeowners and  
property owners



SEMSWA EDUCATION SERIES

## Am I in a regulated floodplain?

If you're not sure if your property is in a floodplain, you can visit FEMA's flood map website. This website provides FIRMs for all National Flood Insurance Program communities throughout the country. Access to these maps is available via the internet at <http://msc.fema.gov/>.

These maps may also be obtained by contacting your local floodplain administrator.

FIRMs show the boundaries of Special Flood Hazard Areas (SFHAs), or the high-risk flood zones, within a community. SFHAs are flood zones identified according to their varying levels of risk. Areas of high risk on riverine systems (rivers, streams, creeks, gulches, etc.) are summarized in the table below. In general, if your project is located in any "A" Zone, the guidelines of this pocket guide apply to you. If you are located in a shaded Zone "X" or a Zone "X", then only the standard local improvement guidelines, such as building permits, local Home Owners Association guidelines, etc. would apply to your improvements.

Flood Hazard Zones	
Zone	Description
High-risk zones: A, AE, AH, AO, AR	Areas with a 1%-annual-chance flood or a 26% chance of flooding over the life of a 30-year mortgage. Flood insurance is required in these areas.
Moderate and low risk zones: X, shaded X, B	Areas outside the 1%-annual-chance floodplain, areas of 1%-annual-chance sheet flow flooding where average depths are less than 1 foot, areas of 1%-annual-chance stream flooding where the contributing drainage area is less than 1 square mile, or areas protected from the 1%-annual-chance flood by levees. No Base Flood Elevations or depths are shown within this zone. Flood insurance is not required in these zones, but it is highly recommended.
Non-FEMA regulated floodplains	Sometimes the most up-to-date and relevant floodplain studies are not shown on the FIRM. For example, the Urban Drainage and Flood Control District produces Flood Hazard Area Delineations (FHADs) showing potential 100-year flooding. These maps are commonly used by floodplain administrators to determine if properties and/or structures are within the floodplain. Floodplain administrators regulate to these floodplains when they are available and are not shown on the FIRM. Consult with the floodplain administrator to determine if there is a non-FEMA regulated floodplain in your project area. Insurance purchase is not required in these zones, but is highly recommended.

## What's allowed?

While many improvements are prohibited in a floodplain, some uses are allowed if the improvement conforms to local regulations and the improvements do not violate any of the items mentioned under the "What's prohibited?" section of this pocket guide. Here's a list of those allowable improvements related to individual homeowners:

- Playground Equipment – Property owners will be required to accept legal liability for flooding potential and hazards;
- Landscaping in conformance with uses allowed in drainage easements;
- At-grade trails, such as footpaths that are not placed above the existing ground;
- Underground utilities with adequate cover; and
- Recessed stairs.

## I think my improvements are allowed by the regulations. Do I still need permits?

- A Floodplain Development Permit is required for any development, which means any manmade changes proposed in the floodplain. All activities, regardless of impact, need to be permitted.
- Building permits are required for any structural improvements or additions.
- A Grading, Erosion, and Sediment Control permit is required for any grading activities within the floodplain.
- A Fence Permit is required for fence construction.

## Where can I find additional information?

Detailed floodplain regulations for Arapahoe County and the City of Centennial can be found on SEMSWA's website by clicking on the Floodplain Regulations & Permitting link. At any time, you can contact your local floodplain administrator for direction concerning your proposed improvements.

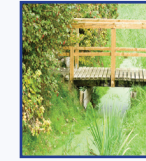
## When planning improvements, contact your local floodplain administrator first to discuss the nature of those improvements.

## What's prohibited?

The list of uses below specifically related to homeowners is prohibited within the floodplain.

### Structures

New structures and additions to existing structures are prohibited in the floodplain. This includes residential, non-residential, temporary, and recreational buildings. This also includes sheds and outbuildings that do not require a building permit.



### Home Addition Improvements

Substantial improvements to existing structures are prohibited in the floodway. Please contact the local floodplain administrator, as the substantial improvement requirements vary in Centennial and Arapahoe County. Some improvements are allowed if they are in the flood fringe and if they are below the threshold of "substantial." See additional information under "Building Improvements" in this guide.



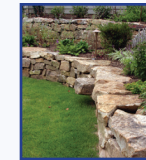
### Fencing

Fencing, which includes solid or perforated wood, split rail, chain link, stone, brick, and other materials, is prohibited in the floodplain in Centennial's Land Development. The three-strand barbed wire exemption is specific to the Arapahoe County Land Development Code.



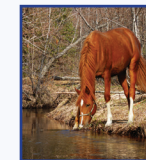
### Site Grading and Landscaping

Any site modification in the floodplain that would act as an obstruction to flow or adversely affect the floodplain is prohibited. This includes retaining walls, landscape walls, pedestrian bridges, or landscaping. Decks, patios, and pools are also prohibited.



### Storage of Material

Storage of floatable or hazardous materials is prohibited in the floodplain. These materials can be swept downstream in a flood and can damage neighboring properties. They can also become lodged in culverts or bridges and cause flooding or increased flooding in areas that were not previously prone to flood.



### Manufactured Homes/Mobile Homes

Placement of and additions to manufactured homes in the floodplain are prohibited in the floodplain. Please contact the local floodplain administrator for the recreational vehicle requirements in the floodplain.



## What are the substantial improvement requirements?

Substantial improvements to existing structures in the floodplain are allowed in the flood fringe, but not the floodway, provided such improvements meet the freeboard criteria set forth in the local Land Development Code and do not increase the footprint of the structure. In all cases, a Floodplain Development Permit is required for any improvements to existing structures. Substantial improvement is defined by the conditions below.

- A building permit is requested for any repair, reconstruction, rehabilitation, or improvement of a legal, existing structure in the floodplain in which the cost of the improvements equals or exceeds 50 percent of the market value of the structure before the start of construction of the improvement or cumulative improvements over the specified time period in the local Land Development Code.
- Substantial improvement includes structures that have incurred Substantial Damage, regardless of the actual repair work performed. Substantial Damage is damage of any origin sustained by the structure, whereby the cost to repair the structure to its condition just before the damage would equal or exceed 50 percent of the market value of the structure before the damage occurred. Improvements due to damage may be cumulative over a time period specified in the local Land Development Code.
- Substantial improvement is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building begins, whether or not that alteration affects the external dimensions of the structure.

If your proposed residential improvement is below the substantial improvement threshold, then it likely can be permitted and constructed. The intent of the local Land Development Code is that all existing legal, nonconforming structures either be removed upon obsolescence or be improved to meet the criteria below. The improvement must also meet the freeboard requirement of 2 feet. Freeboard is the measured height above the 100-year flood level that a structure must be built above. In the City of Centennial, the improvements will be tracked cumulatively as set forth in the City's Land Development Code. All substantial and non-substantial improvements shall be constructed with flood-resistant materials and equipment.

- Freeboard for improvements to an existing structure, including any garages is 2 feet.
- The lowest floor of a structure, including the basement, must be elevated 2 feet above the 100-year flood level.
- All electrical work must be elevated 2 feet above the 100-year flood level.