

UTILITIES DIVISION FAQs | STORMWATER UTILITY, CREEKS & DRAINAGE BASINS

Creeks and Drainages

During the recent flood event, flooding resulted from a variety of scenarios:

- Significant rainfall in the city and upstream of the city caused major drainageways (such as creeks) to overflow their banks causing a variety of localized flooding issues. Under normal conditions, precipitation that falls on homes and businesses flows across landscaped areas and parking lots into streets or directly to creeks and ditches. This inundation caused water to flow or accumulate in areas that are generally not significantly impacted during a typical rainstorm.
- This rain event caused the water table (generally described as the depth below ground where soil is saturated with groundwater) to rise substantially. Homes and businesses that are constructed below the water table often have a sump pump to move water away from the foundation. In many cases, the groundwater elevation increased so much that those pumps were unable to keep up. Homes and businesses built above the normal water table often do not have a sump pump and were also impacted by groundwater or surface flooding.
- For information about basement flooding and wastewater collection system issues, see the 'Wastewater Collection System FAQs' on www.BoulderFloodInfo.net.

What is the difference between the stormwater collection system and the major drainageways?

The stormwater collection system consists of inlets, catch basin, pipes, ditches, street gutters, and other features that collect water from streets and properties and deliver it to creeks and drainages. In general, the system is designed to keep streets passable during normal rain events. Stormwater system components are generally designed to handle between a 2-year storm (50 percent probability of occurrence in a given year) and a 5-year storm (20 percent probability of occurrence in a given year). The recent flooding event far exceeded the capacity of the storm system in many locations throughout the city.

The major drainageway system is comprised of Boulder Creek and 14 tributaries that pass through the City of Boulder. These are natural (and some built) features that convey water from rain and snowmelt runoff. The Federal Emergency Management Agency (FEMA) publishes maps of areas that have a 1 percent chance of being impacted in any given year by flooding on these drainageways (the 100-year floodplain). The city's Capital Improvements Program regularly includes projects intended to help contain a 100-year flood event.

- Was this a 100-year flood?

A variety of experts have weighed in on what type of flood event the city of Boulder recently experienced and opinions vary. The city is primarily focused on determining how the extent of flood inundation correlates with adopted FEMA mapping. This information will help improve mapping, emergency response and prioritization of future mitigation efforts. Preliminary assessments indicate that some creeks, such as Boulder Creek, experienced flows much less than anticipated 100-year levels. Other creeks, such as Fourmile Canyon Creek in North Boulder may have experienced flows and inundation significantly larger than a 100-year event. Over the next several months, data compiled by staff, consultants and the public will be used to more fully analyze the flood event.

- **I have a drainage running through my property that has caused erosion and needs to be repaired. Who is responsible for the repair?**

The city maintains the conveyance capacity and integrity of the major drainageways in areas where access has been granted through a drainage or flood control easement. Minor drainageways and areas where the city does not have an easement are the responsibility of the property owner. For reference, see the 'Floodplain Maps' linked on www.BoulderFloodInfo.net.

When will repairs and maintenance of major drainageways be completed by the city?

The city is currently assessing damages along the major drainageways and will be working with FEMA in the next several months to assess, prioritize and restore drainageways to pre-flood conditions that qualify to receive federal funding. Maintenance and repair will be prioritized based on need, public safety and severity, and will be limited to areas where the city has legal access. It is anticipated that restoration of the city's major drainageway system may take up to five years to complete.

- **How can I report damage of a drainageway?**

While the city is unable to complete repairs on private property, it is helpful to know the impacts flooding had on private property. To log your flood property damage, visit www.BoulderFloodInfo.net and click on the 'Community Flood Assessment map.' Public property damage should be reported to the Public Works call center 303-413-7100.

- **Many of the culverts were blocked with sediment and debris. Why didn't the city clean these culverts?**

The recent flood event impacted the entire city and crews were generally not able to respond to requests related to specific culverts. The flood event significantly exceeded the capacity of most culverts in the city, which are designed to handle only routine storms and are easily blocked by dirt and debris. Where resources were available to clear culverts, work needed to proceed in a systematic manner to avoid releasing water that may have flooded downstream areas.

- **Why doesn't the city remove the trash racks/bar screens on culverts? The reason the culverts are overflowing is because the trash racks are full of debris.**

The trash racks installed on the upstream end of road culverts are designed to catch debris in a location where it can be more easily removed. Once debris enters a culvert, it is extremely difficult to remove, particularly while water is actively flowing.

Floodplain Mapping and Floodplain Regulations

How can I find out if my property is located in a regulated floodplain?

You can find out if your property is in a regulated floodplain by using the city's interactive mapping tool to locate specific parcels in relation to floodplain limits determined by FEMA Digital Flood Insurance Rate Maps (DFIRMs). View the Boulder Flood Hazard Mapping at gisweb.ci.boulder.co.us/agswebsites/pds/floodmap/

What are the city's floodplain regulations?

The city regulates development within the 100-year floodplain. See [Chapter 9-3-2 of the Boulder Revised Code](#) at www.colocode.com/boulder2/chapter9-3.htm.

Buildings located in the 100-year floodplain are subject to local floodplain regulations, which require a floodplain development permit to construct improvements or building expansions. Buildings in the 100-year floodplain that are financed through a federally backed mortgage are required to have flood insurance.

Buildings located in the 100-year floodplain that are also located in the high hazard or floodway/conveyance zone are subject to additional floodplain regulations and restrictions. Before beginning any construction activities on property within the 100-year floodplain, please contact the Planning and Development Services Center to determine whether a permit is required.

The Planning and Development Services Center is located at 1739 Broadway, 3rd floor, online at www.BoulderPlanDevelop.net or via email at plandevlop@bouldercolorado.gov.

Flood Insurance

Do I need flood insurance?

Most standard homeowner's insurance policies do not cover flood damage. The [National Flood Insurance Program](#) (NFIP) allows Boulder residents to purchase flood insurance for structures, as well as contents. If you are a renter, it is a good idea to purchase contents insurance to cover personal possessions, as flooding could affect both the building and its contents. Learn more about flood insurance at bouldercolorado.gov/water/flood-insurance. Properties located outside of the 100-year floodplain can still obtain flood insurance and generally have discounted insurance premiums.

How do I get flood insurance?

You can purchase flood insurance from a licensed private insurance company or an independent property and casualty insurance agent. This is usually your homeowner's insurance agent.

When should I get flood insurance?

Do not wait for the next flood to buy flood insurance, with most policies there is a 30-day waiting period before insurance will take effect.

Private Property Issues

What can I do to protect my property?

FEMA provides recommendations on how a private property owner can protect their property (see the below link). If you'd like to take measures to protect your property, please contact the Planning and Development Services Center to determine if a permit is required.

The Planning and Development Services Center is located at 1739 Broadway, 3rd floor, online at www.BoulderPlanDevelop.net or via email at plandevlop@bouldercolorado.gov.

Homeowner's Guide to Retrofitting www.fema.gov/media-library-data/20130726-1441-20490-4268/fema_p312_a.pdf

Can I build a berm to protect my house or property?

Construction of flood protection improvements must be built in a way so that it does not adversely impact neighboring properties and must comply with building standards and engineering practices. They also require a

permit from the city or county to ensure compliance with floodplain ordinances. Please contact the Planning and Development Services Center to determine what type of permitting is required.

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Do I need a permit to replace or construct a new fence or wall?

Yes, construction of a fence or wall does require a permit. Permits may be obtained at the Planning and Development Services Center, located at 1739 Broadway, 3rd floor. The office is open Monday, Wednesday – Friday from 8 a.m. to 4 p.m. and Tuesday from 10 a.m. to 4 p.m. The fence or wall permit application form may be found at www.Boulderplandevlop.net and click on the ‘Applications and Forms Database’ link and search for ‘Fence,’ or at www-static.bouldercolorado.gov/docs/PDS/forms/305_fence_pmt_app.pdf.

My neighbor has constructed a fence, wall or berm around their property. I am concerned that it will divert drainage onto my property. Is this allowed?

Construction of a structure may be allowed if a permit has been issued in accordance with City of Boulder codes and regulations. If you are unsure if a permit has been issued, please contact the Planning and Development Services Center at www.BoulderPlanDevelop.net or via email plandevlop@bouldercolorado.gov. Please have the address of the property available when you call.

If a structure is under construction without a permit or if construction of a berm (or grading) is taking place without a permit, please contact the Planning and Development Services Center at www.BoulderPlanDevelop.net or email plandevlop@bouldercolorado.gov.

My neighbor’s sump pump pipe is discharging directly into my yard, is this allowed?

The city regulates the discharge of water onto public property only. If you believe you have suffered damages or other impacts to your private property due to the activities of neighboring property owners diverting or discharging water, you may wish to consult with a private attorney to explore your legal rights. The city cannot provide legal advice to people who believe they have suffered damages due to an adjacent or nearby property owner diverting water onto a neighbor’s property.

Do I need a grading permit to stabilize the banks of the drainageway within my property?

Yes, you will be required to obtain a permit for grading in the drainageway. Please contact the Planning and Development Services Center to determine what type of permitting is required.

The Planning and Development Services Center is located at 1739 Broadway, 3rd floor, online at www.BoulderPlanDevelop.net or via email at plandevlop@bouldercolorado.gov.

My property is located within the floodplain, but did not experience flooding. Can I be removed from the floodplain?

Preliminary assessments indicate that some creeks, such as Boulder Creek, experienced flows much less than anticipated for 100-year floodplain mapping levels. If your property is elevated, you may qualify for a Letter of Map Amendment (LOMA) to remove your property from the 100-year floodplain. You may contact a licensed land surveyor to determine if a LOMA could remove your property from the floodplain.

Will the floodplain be remapped?

Over the next several months, data compiled by staff, consultants and the public will be used to more fully analyze the flood event. It is likely that floodplain delineation studies that are currently in progress will include some modifications. Staff will update the project websites and hold a public meeting after the mapping revisions have been completed to allow for public comment.

I heard about a public meeting, but have not received notification. Where can I find this information?

The dates, times and locations of public meeting are available at www.Boulderfloodinfo.net under the 'Neighborhood Flood Recovery Meetings' tab.