



FORT COLLINS: BE FLOOD READY

Flooding on the Poudre near College Avenue north of Vine Drive, Sept. 13, 2013.



Knowledge is Power! Stay Informed During Floods

View Real-Time Rainfall and Streamflow Data

Have you ever wondered how much rain is falling near your house or what the flow is in on the Poudre River? Real-time data is available from Utilities' early flood warning system, which includes the same streamflow and precipitation gauges monitored by City staff. Visit fcgov.com/floodwarningsystem.

Other Sources of Weather and Emergency Information

- National Weather Service – online or via an NOAA Weather Radio
- Local TV and radio
- NOCOAlert – Sign up for emergency notifications at nocoalert.org.
- To report general flooding, call 970-221-6700. **Do not** call 911 for information.

Know the Difference Between a 'Watch' and a 'Warning'



Flood Watch

- Flooding is possible.
- Be alert and prepared.



Flood Warning

- Flooding is happening or will happen soon.
- Take immediate action.

Play It Safe on the Poudre River

Know Before You Go: Be Location- and Weather-Aware

With the Poudre River Whitewater Park now open, it is important to respect the power of water. "Play It Safe." Make sure to wear a life vest. Know the flow and weather conditions. Plan where you are going, especially where your take-out location will be. Learn more at fcgov.com/PFA-river-safety.



Kayakers at Whitewater Park.



Be alert for hazards.





Construction underway for the Flow Restoration Project at Colorado State University's Environmental Learning Center, which was necessary to keep water in the river at this location and provide a high-quality habitat for wildlife and native plants in the heart of Fort Collins.

Protect Wetlands, Waterways, and the Banks of Rivers and Streams ... They Protect You

Flooding is a natural process. A healthy ecosystem along the river relies upon frequent inundations to survive and thrive. Floodplains help reduce flood damage by allowing water to spread out over a large area. This reduces the speed of floodwater as it is soaked up in wetlands like a sponge, lowering peak flows downstream.

You can experience the natural beauty and wildlife habitats that help Fort Collins be flood ready at over 17 conserved natural areas along the Cache la Poudre River. Learn more at fcgov.com/naturalareas.

There are many City-conserved open spaces that also reduce the flood hazard along Spring Creek, Fossil Creek and other drainages.



Open space along waterways provides natural flood and erosion control, as well as a place for us to enjoy the outdoors. Look for birds such as kingfishers, great blue herons, redtail hawks, great horned owls and a diversity of migratory songbirds that use drainage corridors, too.

Learn How to Protect Your Family and Property

BEFORE A FLOOD	DURING A FLOOD	AFTER A FLOOD
Purchase flood insurance.	Do not drive through floodwater.	Check for structural damage to your building.
Make an emergency plan.	Move to upper floors of your home or climb to higher ground.	Document all damages.
Document your belongings.	Don't walk through flowing water.	Remove all wet items.
Store valuable items (computers, family photos, heirlooms, etc.) at higher locations in your home.	Listen for emergency updates.	Get a Floodplain Use Permit and a Building Permit before making any repairs.
Sign up for emergency messages at <i>leta911.org</i> .	Turn off electricity at the main power switch and shut off water and gas.	Contact your insurance agent and file a flood insurance claim.



**American
Red Cross**

***Be Red Cross Ready. Get a kit.
Make a plan. Be informed.
Details: redcross.org/prepare***

Only Flood Insurance Covers Floods – Purchase Flood Insurance

Flood insurance is highly recommended and covers all surface floods. Most standard property insurance policies do not cover flood damage. **You don't have to live in a floodplain or high-risk area to purchase flood insurance.**

Any walled and roofed structure can be insured, and separate coverage is available for building contents.

Renters can purchase insurance for their belongings, even if the owner has not purchased structural coverage.

Don't wait for the next flood to buy insurance – there is a 30-day waiting period before National Flood Insurance takes effect. Insurance agents sell policies under rules and rates set by the federal government.



*Buy when it's dry. Don't wait to get flood insurance.
Visit [floodsmart.gov](https://www.floodsmart.gov).*

The City of Fort Collins Has Some of the Lowest Flood Insurance Premiums

The Community Rating System (CRS) provides reduced flood insurance premiums to communities that exceed the minimum federal NFIP requirements. Fort Collins floodplain residents receive one of the lowest flood insurance rates in the country as a result of Fort Collins Utilities' Floodplain Management Program.

Residents and businesses in Fort Collins can receive up to a 40% discount on flood insurance premiums.

Build Responsibly: Know the Floodplain Regulations

Before you begin any construction (new development, addition, remodel, filling, grading, etc.) on your building or property, contact Fort Collins Utilities for specific floodplain regulation requirements. Some important considerations are listed below.

Get a Floodplain Use Permit Before You Build or Grade

These required permits ensure that structures are protected from flood damage and that construction projects do not cause flooding problems for existing properties. According to Fort Collins City Code, all new residential structures and additions built in the 100-year floodplain must be elevated above the 100-year water surface elevation. New non-residential buildings and additions also must be elevated or floodproofed above the 100-year flood elevation.

Floodway Requirements

The floodway is the most dangerous section of the floodplain. New residential development is not allowed and commercial development is very restricted. For all other permitted development, an engineering analysis that shows no-rise in the 100-year flood elevation is required.

Substantial Improvement Requirement

If the cost of reconstruction, rehabilitation or other improvements to a building equals or exceeds 50% of the existing market value, the structure must meet some of the same requirements as those of a new building. Substantially damaged buildings must meet the same standards upon reconstruction. Improvement requirements are addressed during the floodplain development permitting process.

For more information, call 970-416-2632 or email floodplains@fcgov.com.



The Union on Elizabeth was designed to be protected from flood damage by elevating the floor 18 inches above the 100-year flood elevation.

Protect the Environment

You may think it's OK to put little things down the storm drain, but it all adds up and can create problems. Our storm drains run directly into lakes and streams and eventually to the Cache la Poudre River. To help keep them clean, properly dispose of motor oil, pick up grass clippings and pet waste, and use car washes instead of washing your car at home.

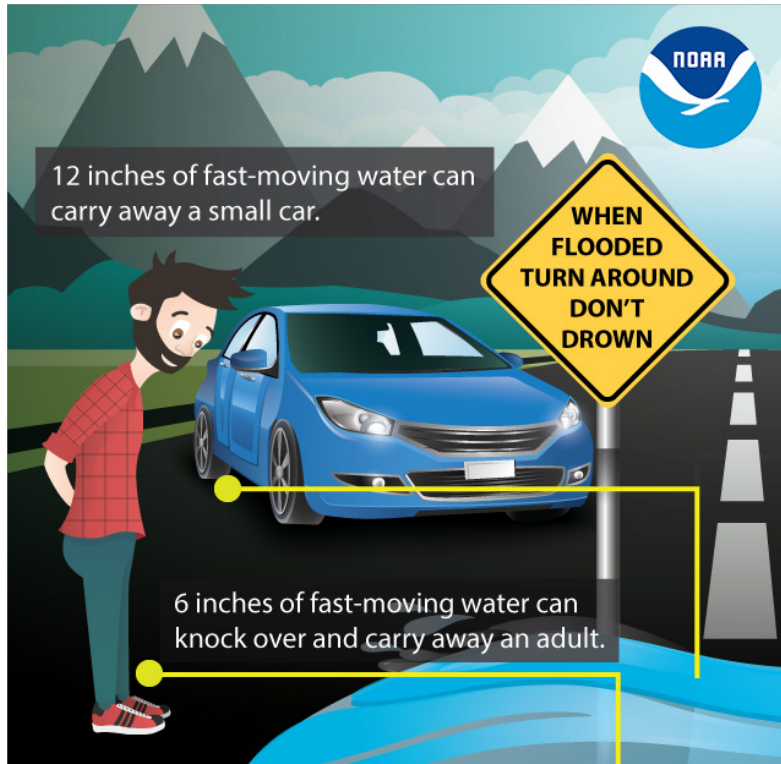
Do not dump or throw anything into ditches or streams. Obstruction and pollution of our waterways and ditches are violations of Fort Collins City Code.

Report any debris or dumping in ditches or streams to Fort Collins Utilities at 970-221-6700 or utilities@fcgov.com.



Turn Around, Don't Drown

Do you really know how deep the water is? It only takes 12 inches of water to sweep a car away and 18-24 inches for a large truck or SUV.



Fort Collins Has a Flood History: It's Not If, but When

10-Year Anniversary of the 2013 Flood

Ten years ago, Fort Collins experienced the largest flood event on the Poudre River since 1930. Storm runoff started increasing on Sept. 10 due to heavy and persistent rainfall west of Fort Collins. Rain cells were unusually long in duration, with those of greatest intensity located above the foothills and the lower mountains east of the Continental Divide. By Sept. 13, it had grown into a flood so large that its probability of occurring any given year is only about 3%.

The highest stream gage reading on the Poudre River at the canyon mouth was about 10,400 cubic feet per second, which is the equivalent of 10,400 basketballs flowing downstream every second at any one location. Parts of the High Park Fire burn area in the Poudre River watershed received almost 12 inches of rain over a seven-day period. The City Manager issued an Emergency Declaration, and several nearby counties received Presidential or State of Colorado Disaster Declarations.

Did you know? A 100-year flood isn't necessarily a flood that will only occur once in 100 years. The term "100-year" means that there's a 1% chance of an event of that size occurring in any given year.



*College Avenue, north of Vine Drive, looking south.
The water was inches from overtopping the road.*



Flooding at Lemay Avenue and Mulberry Street.



Commercial flooding near College Avenue and Vine Drive, looking southwest.



Flooding behind the Discovery Center, looking north.



Residential flooding along Vine Drive.



A controlled spill near Timberline Road that sent water into the Riverbend Ponds Natural Area, where the water could spread out and slow down.

Protecting for the Future

The Master Drainage Plan includes plans for the 12 stormwater basins across the city. The purpose is to identify stormwater management issues and develop solutions that reduce flood risk, improve stormwater quality and promote stream rehabilitation. Each plan looks at the unique characteristics of the basin, identifies potential problems, and provides an alternative analysis and recommended improvements.









Utilities prioritizes all stormwater and stream rehabilitation projects on an annual basis. The main categories used to evaluate each project include protection of structures from flooding, road overtopping, cost-benefit ratio, health and safety, water quality and habitat improvement.



Left: A new storm pipe enters Spring Creek just downstream of Remington Street.

Above: A stream rehabilitation project on Mail Creek just after completion in May 2020.

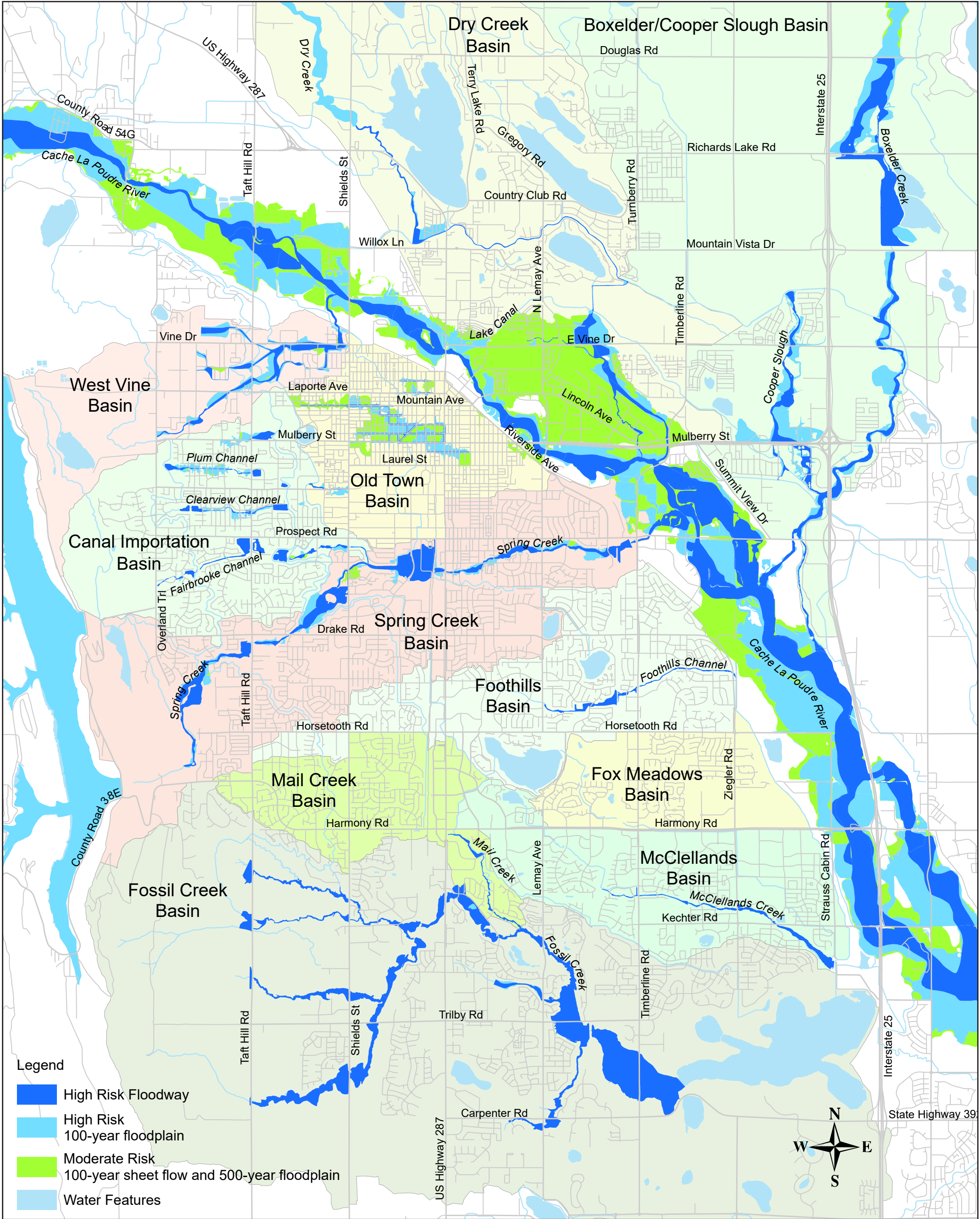
Flood History Information

Drainage Basins	Dates	Descriptions
Cache la Poudre River	 1844, 1864, 1891, 1904, 1923, 1930, 1976, 1983, 1999, 2010, 2011, 2013 and 2014	The three largest floods occurred in 1864, 1891 and 1904, with peaks of approximately 21,000 cubic feet per second (cfs). For comparison, the discharge of the Poudre River at “flood stage” is about 4,000 cfs. Flooding on the Poudre is primarily from snowmelt in late May and June. However, flash flooding can occur at any time. A severe flood has not occurred in more than 100 years.
Spring Creek	 1902, 1904, 1938, 1949, 1951, 1961, 1977, 1983 and 1997	The 1997 flood resulted in five deaths, destruction of 120 mobile homes and damage to 2,000 homes and businesses. This flood was considered to be greater than a 500-year event.
Dry Creek	 No serious flooding since about 1950	The absence of even minor flooding is generally attributed to the network of irrigation canals that have some capacity for intercepting small to moderate Dry Creek flows.
Fossil Creek	 1902, 1938, 1965, 1977, 1979, 1997, 1999 and 2007	Fossil Creek is relatively undeveloped and past floods have gone unnoticed. In addition to flooding hazards, Fossil Creek also is susceptible to bank erosion.
Boxelder Creek/Cooper Slough	 1909, 1922, 1930, 1937, 1947, 1963, 1967, 1969 and 2007	Boxelder Creek has a drainage area of 251 square miles, and 176 square miles now are controlled by Soil Conservation Service flood control dams near Wellington.
Old Town Basin	 1904, 1933, 1938, 1951, 1977, 1983, 1988, 1992, 1997, 2009 and 2018	Street flooding is the primary problem in this basin.
Canal Importation Basin	 1938, 1951, 1975, 1992, 1997, 1999 and 2009	There are several small drainage areas in this basin. Development prior to drainage criteria encroached on the channels, reduced the flow capacity and caused flooding. The irrigation canals also overflow their banks and cause flooding.
West Vine Basin	 1980, 1997 and 1999 (Past floods were not well documented.)	Localized flooding occurs due to encroachment on drainages and from irrigation ditch spills.

Everyone Has Flood Risks: Know Yours

This map represents Fort Collins' floodplains and is continuously updated. To determine if a property is within a floodplain, call Fort Collins Utilities at 970-416-2632, email utilities@fcgov.com or view a detailed map at fcgov.com/floodplain-maps. Additional map information, such as erosion buffer zones, flood elevations and historic flood data, is available.

All rivers, streams, tributaries and canals – regardless of size – have the potential to flood. In Fort Collins, major sources of flooding include the Cache la Poudre River, Spring Creek, Dry Creek, Fossil Creek and Boxelder Creek. Urban street flooding also is a hazard. All drainage basins flow to the Cache la Poudre River.



Poudre Floodplain Maps Are Changing

The Poudre River floodplain maps are old and outdated. Updated mapping provides a better evaluation of flood risk, which helps protect lives and properties. View the preliminary maps at:

fcgov.com/riskmap

Elevation certificates are available for some properties. Call 970-416-2632 to learn more.