

# FLOOD READY LARIMER COUNTY



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EMERGENCY PREPAREDNESS  
GUIDE

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## We are all in this together.

*The Cameron Peak and East Troublesome Wildfires are no longer burning. However we cannot let our guard down yet. We must all take responsibility in addressing post-fire flooding, and work together to reduce the potential impacts of this situation.*

For four long months, our Larimer County mountain and foothill communities were impacted by the largest wildfire in Colorado history, the Cameron Peak Wildfire. Additionally, evacuations were prompted in the Estes Park area due to the East Troublesome Fire, which crossed over into our county from the west. As a result, our landscape is significantly changed due to a total of 208,913 acres being burned, leaving behind a massive burn scar.

A burn scar is the result of a significant wildfire, where intense burning and heat create a landscape in which the area is left without vegetation. This creates what is known as “hydrophobic” soil conditions, or a situation in which rain is not easily absorbed by the soil and instead runs off. In this setting, a normal thunderstorm that would not normally have a big impact can create a flash flood event, and this type of flooding can happen with little to no warning. In addition to flash flooding, following a wildfire there are also hazards

known as mud or debris flows. In this situation, water picks up vegetation (such as fallen trees or shrubs), mud, sediment, ash, etc, and this type of flow can cause significant damage to homes and/or properties.

Larimer County is no stranger to flooding, especially riverine flooding, and while we take measures to prepare for this type of incident every year with higher water in the spring, we must take measures to prepare for additional flooding that would likely not otherwise occur due to the fresh burn scars in our area. This increased risk will continue not only through this spring and summer, but likely for several years.



Larimer County is working closely with partners in collaboration for mitigation efforts to reduce risks and impacts to our community members, and additionally have developed and reviewed emergency plans should response be required.

However, we need your help in making sure our communities are prepared and resilient for future potential events. It takes all of us working together, being informed, and having a readiness plan to overcome these challenges.

***For more information on recovery efforts in Larimer County, please visit the following pages:***

**Larimer Recovery Collaborative**

<https://www.larimerrecovers.org>

**Larimer County Wildfire Recovery Resources**

<https://www.larimer.org/wildfire-resources>

**Larimer Long-Term Recovery Group (LTRG)**

<https://www.larimerrecovers.org/larimer-long-term-recovery-group>

***For more information on emergency plans or resources, please visit the following:***

**Larimer County Office of Emergency Management**

<https://www.larimer.org/emergency>

**Larimer County Sheriff's Office**

<https://www.larimer.org/sheriff>

**BE INFORMED.**

**SIGN UP FOR EMERGENCY ALERTS.**

**Text "FLOOD2021" to 888-777 for updates & information related to flash flooding or burn-scar-related flooding.**



This guide serves as a resource to better help Larimer County community members prepare for and respond to flooding.

It is the intention of this guide to save lives, keep people safe from injuries, and protect property and homes. The information in this guide will help better inform our community members of the risk associated with flooding, what can potentially be expected, and provide guidance on actions one can take to increase their likelihood of surviving this type of event, as well as other disasters.

## What is Burn Scar Flooding?

Following a catastrophic wildfire, as we saw here in Larimer County and around the state of Colorado in 2020, the intense heat leaves behind conditions where vegetation is burned away completely, and soil is heavily charred. The soil develops a layer, almost wax-like, that repels water, and this condition can last for several years. As a result, when it rains, the water is no longer absorbed into the soil and instead behaves similarly to water running across a sidewalk. This potentially leads to flooding or mudflows, even when rain is light.

Flooding is a hazard that is very likely in Larimer County, however, the burn scar from the Cameron Peak Wildfire is over 200,000 acres, which increases this likelihood of post-fire flooding occurring significantly in Larimer County. Additionally, areas that typically experience high waters, particularly in the

spring with run-off, such as rivers, streams, or tributary and properties located below or downstream from burn areas are at increased risk of flooding.

**It is critical that our community members plan and prepare for flood-related hazards now. Taking these actions will help to prevent and reduce loss of life and/or property, and ensure the long-term resilience of our community.**



# OTHER TERMS TO KNOW

## FLOOD:

A temporary overflow of water onto land that is normally dry

## FLASH FLOODING:

The number one killer of all thunderstorm-related hazards, flash floods are dangerous, sudden rises in water levels along streams, rivers, and creeks above a predetermined flood level. Flash floods can also be rapid flows of higher water moving into a normally dry area.



**Do not underestimate the power of moving water. It only takes 6 inches of fast-moving water to knock you off your feet.**



**Flash floods can roll big boulders, tear out trees, destroy buildings, & even scour out new channels**

## MUDFLOW:

A flash flood becomes a mudflow when it becomes a combination of a river of moving water and flowing mud on the surface of normally dry land. These are common after fire due to the fact that there is vegetation loss. Additionally mudflows can happen after heavy rains or snow when water saturates the ground and results in long, thick movement of earth and liquid, such as during times of rapid snowmelt.

## LANDSLIDE:

The sliding down of a mass of earth or rock from a mountain or cliff

## SLOPE FAILURE:

A phenomenon where a slope collapses abruptly due to weakened self-retainability of the earth under the influence of a rainfall or an earthquake



This guide has been developed by the Larimer County Office of Emergency Management in collaboration with partners, to be used by our community as a resource and as a way to receive step-by-step guidance on actions that can be taken before, during, and after a flood event.

The most important thing you can do right now, is to make a plan. This plan should take into account you and your family’s unique needs (including those of your pets). Part of your planning process must also include a review of emergency preparations and checklists on a regular basis, putting together a disaster go-kit, and knowing how to be warned in the case of an emergency, including staying informed about current and future weather conditions.

Larimer County is committed to keeping our community and visitors safe, and to help further increase our resilience county-wide. We ask for your help by reading and studying this guide to be prepared, and to share this resource widely with your neighbors.

***Please also know where to receive credible information before, during, and after a disaster. The following are websites and social media platforms we recommend to receive current, accurate, and up to date information.***

National Weather Service - Boulder	<a href="https://www.weather.gov/bou">https://www.weather.gov/bou</a>
US Forest Service - Arapaho & Roosevelt National Forests, Pawnee National Grassland	<a href="https://www.fs.usda.gov/arp">https://www.fs.usda.gov/arp</a>
Larimer County	<a href="https://www.larimer.org">https://www.larimer.org</a>





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**Larimer Recovery  
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**LARIMER COUNTY EMERGENCY  
PREPAREDNESS GUIDE**

The purpose of this guide is to serve as a resource to prepare for post-fire and burn-scar related flooding hazards.

However, floods are not the only hazard of concern in Larimer County, and the more you educate yourself and build awareness of potential impacts to you, your family, and your community about these hazards, the more resilient we are county-wide.

We encourage you to reference our Larimer County Emergency Preparedness Guide, available in both English and Spanish, for further information and study. This is a comprehensive resource that includes information about all hazards in Larimer County, emergency planning assistance, alert and warning information, tips to build an emergency kit, important contact information, and more.

Find our [Larimer County Emergency Preparedness Guide](http://www.larimer.org/emergency) at [www.larimer.org/emergency](http://www.larimer.org/emergency).

# BE PREPARED TODAY

It is important to start preparing for potential flooding now. The following information is a step-by-step guide on ways you can take action to be prepared for yourself and your family. However, know that you are not alone. Larimer County Office of Emergency Management and partners are ready and available to answer any questions you may have. For contact information, please review the information at the back of this document.

**1. KNOW YOUR RISK.** The most important first step you can do is inform yourself of the flood and hazard risk of your property. Keep in mind potential cascading risks, or those types of situations that can increase your risk of flooding or hazard-related damage. Seek out resources and guidance on mitigation actions you can take to reduce the potential impacts of flooding on your property.

**2. ENSURE YOU WILL BE WARNED.** The Emergency Alert System in Larimer County is called NoCoAlert, and this is a free service for Larimer County community members and visitors. Emergency Alerts are sent when there is an imminent threat to life, and it is critical that you register for these alerts to ensure that you will receive them. If we cannot reach you, we cannot warn you. Please note that local emergency alerts such as those issued by NoCoAlert are NOT the same as Amber Alerts, Presidential Alerts, or other types of federally issued alerts. To register for NoCoAlert, please visit [www.nocoalert.org](http://www.nocoalert.org).

**Additionally, you may be recreating or in an area where cell phone service is not available. In order to make sure that you are still able to receive weather-related warnings, we recommend purchasing a National Oceanic and Atmospheric Administration (NOAA) battery-powered or wind-up radio and keeping them with you.**



**3. STAY AWARE.** If flash flooding is a risk in your location (find out if your area is at risk by seeing the Larimer County Cameron Peak Fire Risk Assessment Report at [www.larimer.org/wildfire-resources](http://www.larimer.org/wildfire-resources), listed under the drop down labeled “Larimer Fire Risk Assessment 2021”), be sure to watch for warning signs that could indicate potential flooding. These warning signs include:

- a. Heavy rains, or sudden warming weather leading to rapid snow melt
- b. Increase in the height and intensity of water flows
- c. Mudslides
- d. Debris in creeks
- e. Color changes in water
- f. Leaning trees

Additionally, inform yourself of potential hazardous conditions prior to recreating, especially in areas near the Cameron Peak Burn Scar. While recreating, be sure to stay alert of your surroundings, and have a plan if you need to seek high ground quickly. Remember that banks of rivers and streams may be unstable and dangerous.



**NoCoAlert is providing updated information throughout the spring and summer related to post-fire flooding to help inform the public of hazardous conditions and steps to prepare. To receive this information, text “FLOOD2021” to 888-777.**

**4. MAKE A PLAN.** Make an emergency plan that is tailored to you and your family’s unique needs. Start by learning and practicing evacuation from your home, and learning evacuation routes in your area. Reach out to your local fire department, and other emergency services organizations for guidance and advice for your area. Include your neighbors in your planning, and check on neighbors who are elderly or disabled to make sure they have a plan and are aware of potential impacts. Teach your children about high water safety. Notify your local fire department if kids, elderly, or disabled are often home alone so someone in emergency services knows to check on them.

Designate a family meet up spot in a safe location. Choose a relative or close friend out of the area as a contact person for family members and friends. Make sure to have a full tank of gas in your vehicle. Do not forget to include family pets and livestock in your planning, and make necessary arrangements for them.

**5. MAKE AN EMERGENCY KIT ("GO-KIT").** Create a kit organized around necessary supplies you would need in the event of an emergency and you have to leave your home quickly, or if services in your area are cut off. Make sure to include supplies for each person's unique needs, as well as your pets, and include such things as medication, or comfort items. Routinely check this go-kit to make sure that supplies are fully stocked, and functioning properly. See our [Larimer County Emergency Preparedness Guide](#) for a go-kit checklist, or visit [www.ready.gov/kit](http://www.ready.gov/kit)

**6. OBTAIN FLOOD INSURANCE.** Keep in mind, if it can rain, it can flood. Most homeowner's insurance policies do not cover flooding. Review your current insurance policy, know what is covered, and ensure the limits are adequate for the building and any personal belongings. If you do not currently have flood insurance, it is strongly considered to obtain it as soon as possible, as it typically takes thirty (30) days for a new flood insurance policy to go into effect. Speak with your insurance agent today about options, or learn more about the National Flood Insurance Program (NFIP) at [www.floodsmart.gov](http://www.floodsmart.gov)

**7. SAFEGUARD YOUR POSSESSIONS.** Protect yourself financially by itemizing and taking pictures of your possessions. Keep photos and copies of important documents on a thumbdrive in your emergency go-kit. Keep important documents in watertight containers. Additionally, keep a photo of you with your pet to expedite having your pet being returned to you should you have to seek separate sheltering.

**8. PROTECT YOUR PROPERTY.** Move valued items to higher levels. Declutter drains and gutters. Install check valves. Consider a sump pump with a battery. Secure objects in your yard that may be swept away or damaged by floodwaters. Elevate your home and utilities (electrical, furnace, water heater, etc.) above the flood elevation. Consider building a barrier with sand bags to help divert and stop water from getting inside vulnerable doors and around foundations. Well heads that are in the flood zones should also be sandbagged.



# UNDERSTANDING ALERTS & WARNINGS

Accurate, timely information is critical in ensuring you take the necessary actions to survive during disasters such as flood situation. There are different types of warnings and alerts to be aware of. See the below information to learn more about them and how to receive them.

## WIRELESS EMERGENCY ALERTS

Wireless Emergency Alerts (WEAs) are just one of the ways public safety officials can quickly and effectively alert the public to serious emergencies. What you need to know about WEAs:

- WEAs can be sent by state and local public safety officials, the National Weather Service, the National Center for Missing and Exploited Children and the president of the United States.
- WEAs look like text messages but are designed to get your attention with a unique sound and vibration repeated twice.
- WEAs are no more than 360 characters and include the type and time of the alert, any action you should take and the agency issuing the alert.
- You are not charged for receiving WEAs and there is no need to subscribe, you will automatically receive them.

If you are not receiving Wireless Emergency Alerts here are some tips to troubleshoot your mobile device:

- Check the settings on your mobile phones and review your user manual. Some mobile service providers call these messages “Government Alerts,” or “Emergency Alert Messages.”
- Older phones may not be WEA capable.
- All major phone providers and some smaller providers participate in WEA.

## EMERGENCY ALERT SYSTEM

The Emergency Alert System (EAS) is a national public warning system that was first implemented for the President to address the American people within 10 minutes during a national emergency. The alerts are sent through broadcasters, satellite digital audio services, direct broadcast satellite providers, cable television and wireless cable systems. Must have broadband access, cellular service, or cable.

- The EAS is used by state and local authorities to deliver important emergency information such as weather information, imminent threats, AMBER alerts and local incident information targeted to specific areas.
- The EAS is also used when all other means of alerting the public are unavailable

## **NOCOALERT**

NoCoALERT is the free Emergency Alert System available to all Larimer County community members and visitors. Signing up for this service will ensure that you receive information about local incidents that pose an imminent threat to life safety in your area. Don't wait to register. Sign up today at [www.nocoalert.org](http://www.nocoalert.org)

## **NOAA WEATHER RADIO**

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations that broadcast continuous weather information from the nearest National Weather Service office based on your physical location.

- NWR broadcasts official warnings, watches, forecasts and other hazard information 24-hours a day, seven days a week, regardless of broadband access, cellular service, or cable.
- NWR also broadcasts alerts of non-weather emergencies such as national security or public safety threats through the Emergency Alert System.

## **FEMA APP**

Severe weather alerts from the National Weather Service are provided for up to five locations across the U.S.; additional preparedness material is also available for over 20 types of hazards. The FEMA App is also available in Spanish. You can download the app to your mobile device or smartphone free in the App Store (Apple-iOS 6.0 or later) and Google Play (Android). Learn more at [www.fema.gov/mobile-app](http://www.fema.gov/mobile-app).

## **AMERICAN RED CROSS APP**

The Red Cross Emergency app combines more than 35 different types of severe weather and emergency alerts. You can choose the alerts that are important to your location or the location of loved ones. The app also offers preparedness information. All content is also available in Spanish. You can download the app to your mobile device or smartphone free in the App Store (Apple-iOS 6.0 or later) and Google Play (Android). Learn more at [www.redcross.org/prepare/mobile-apps](http://www.redcross.org/prepare/mobile-apps).



**SAFE AND WELL**

If you are separated from your family in a disaster, but are safe, you can let them know by registering with American Red Cross’s Safe and Well website. This is a secure and more private option than the “I’m Safe” feature on the Emergency App. It allows people to list their own status and allows friends and family to search for messages from their loved ones. Registrations can also be completed by texting **“SAFE”** to **78876** or by calling **1-800-RED CROSS (1-800-733-2767)** to be connected to your local chapter. Messages exist in both English and Spanish. More information on Safe and Well can be found by visiting [www.redcross.org/safeandwell](http://www.redcross.org/safeandwell)

**THE WEATHER CHANNEL APP**

Tracks weather and provides local forecasts and push alerts of severe weather to your mobile device. Download the app to your mobile device or smartphone free in the App Store (Apple-iOS 6.0 or later), Google Play (Android), App World (BlackBerry), and Windows Phone at [www.weather.com/apps](http://www.weather.com/apps).

**ALERT & WARNING  
TERMINOLOGY**

**Outlook - Special Weather Statement**

Storm information that may impact area several days from now.

**Advisory**

Nuisance level weather hazard is occurring now or likely to occur.

**Flood or Flood Watch: 6-24 hours in advance**

Life or property-threatening weather hazard possible. Conditions are favorable and floods are possible, but there is some uncertainty. Stay tuned for updates

**Flood Warning: 5-60 minutes in advance**

Life or property-threatening hazard is occurring now or likely to occur in the near future, move to higher ground or evacuate immediately. Flash Flood Warning: 5-60 minutes in advance Life or property-threatening weather hazard is occurring now. Move to higher ground immediately.



# FLOOD EVACUATION ORDERS

**ACT QUICKLY TO ENSURE YOUR SAFETY!**

## VOLUNTARY EVACUATIONS

### Voluntarily Evacuate If:

- You are concerned for your safety
- You need additional time to evacuate the area
- You have health conditions that may be aggravated by the incident

### Additional Considerations

- Gather essential items to add to an emergency Go-Kit; such as medication & items you may need if away for an extended period
- Create a plan for transporting animals out of the area if needed

## MANDATORY EVACUATIONS

### Evacuate NOW!

- You are ordered to leave due to an imminent or immediate threat to your safety
- Gather your Go-Kit and leave the area immediately
- If you cannot leave the area, move to higher ground immediately!

### Additional Considerations

- If driving, be aware that the road may not be in tact under flood waters. Never drive through flooded roadways!
- If your vehicle stalls, leave it immediately & seek higher ground!

## IMMINENT THREAT

### LEAVE NOW!

- There is no time to gather personal belongings
- Reach higher ground by any means necessary



# SANDBAGGING

Sandbagging is a technique used for flood prevention in which bags of sand are placed to form a barrier that diverts and stops water from getting inside vulnerable doors and around foundations.

Sandbags are available to Larimer County community members in the burn area that need them. These have been provided due to a partnership with Serve 6.8, and many local volunteers that we cannot thank enough!

To find the closest sandbagging staging area near your property, please take a look at our Community Sandbag and Dumpster Staging Map: <https://tinyurl.com/CPFSBagandDumpsterStaging>

To place sandbags around your property, please use the following tips and instructions from the US Army Corps of Engineers:

**STEP ONE:** Remove any debris from the area where the bags are to be placed. Additionally, determine the height of the wall you wish to build, as this will help to calculate the number of bags you will need for your barrier.

**STEP TWO:** Fold the open end of the unfilled portion of the bag to form a triangle. If tied bags are used, flatten or flare the tied end.

**STEP THREE:** Place the partially filled bags lengthwise and parallel to the direction of flow of water, with the open end

facing against the water flow. Tuck the flaps under, keeping the unfilled portion under the weight of the sack. Tamping down on the top of the sandbags before placing the next row will help create a better seal.

**STEP FOUR:** When building the second and third rows, Place succeeding bags on top, offsetting by one-half (1/2) filled length of the previous bag (similar to the process for laying bricks) and stamp into place to eliminate voids, and form a tight seal.

**STEP FIVE:** For barriers over three rows high, build the wall in a pyramid shape. The base of the pyramid should be three times wider than it is tall with the bags overlapping at the seams.

## **For Sandbag Diking, the recommended method is as follows:**

- Dig a trench one bag in depth and two bags wide as a foundation for the dike structure
- To be effective, the base of a dike must be three times as wide as it is high
- Lap unfilled portion under next sack
- Sacks should be approximately one half full of clay, silt, or sand

## **GENERAL SANDBAGGING TIPS**

- Do not stack sandbags against the outside walls of your home to keep water out. Stack sandbags away from house walls to prevent high water from reaching your home.
- Construct the sandbag dike on high ground, as close as possible to your home or building. By being closer to your home or building, fewer bags will be needed and the sandbag dike will be less exposed to the tributary, creek or river.
- Sandbagging should also focus along existing flood works or any low spots along dikes for maximum protection.
- Dig a trench one bag in depth and two bags wide as a foundation for the dike structure. To be effective, a dike must be three times as wide as its base as it is high.
- The open ends of the sandbags should be facing upstream and/or uphill so that the moving water will not remove the sand from the bags as readily.
- Alternate direction of sandbags with bottom layer, i.e., bottom layer lengthwise with dike, next layer crosswise.
- As individual bags are put in place, walk on bags to tamp them into place to ensure maximum strength. Take care to avoid puncturing the bags.
- The number of sandbags needed to protect a home or building varies depending on the local topography and the anticipated depth of water.



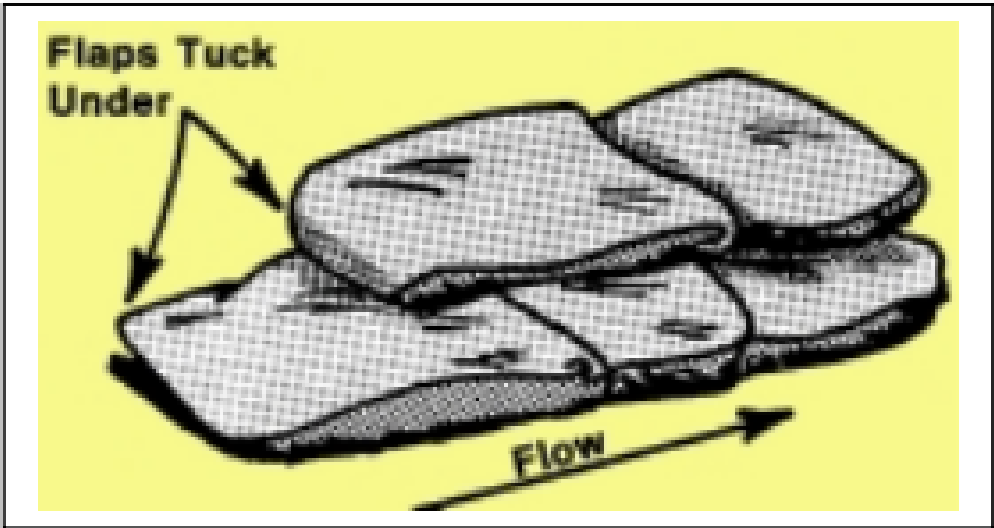
# SANDBAG PLACEMENT

**Sandbag placement**

Remove any debris from the area where the bags are to be placed.

Fold the open end of the unfilled portion of the bag to form a triangle. If tied bags are used, flatten or flare the tied end.

Place the partially filled bags lengthwise and parallel to the direction of flow, with the open end facing against the water flow. Tuck the flaps under, keeping the unfilled portion under the weight of the sack.

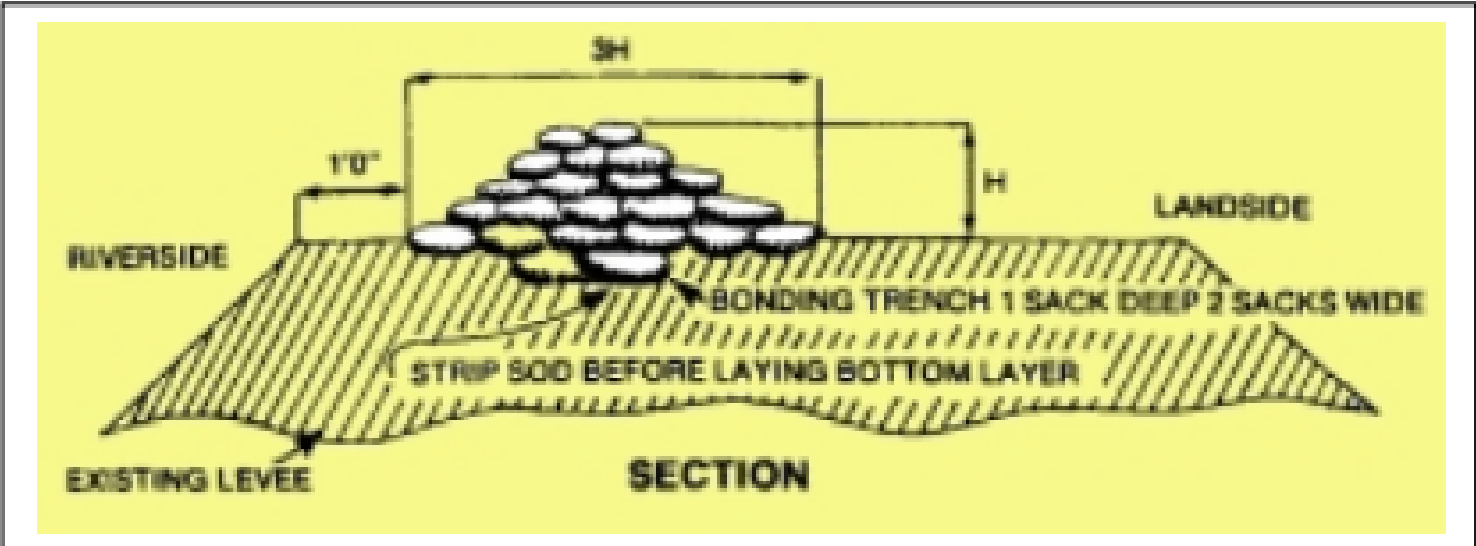


Place succeeding bags on top, offsetting by one-half (1/2) filled length of the previous bag, and stamp into place to eliminate voids, and form a tight seal.

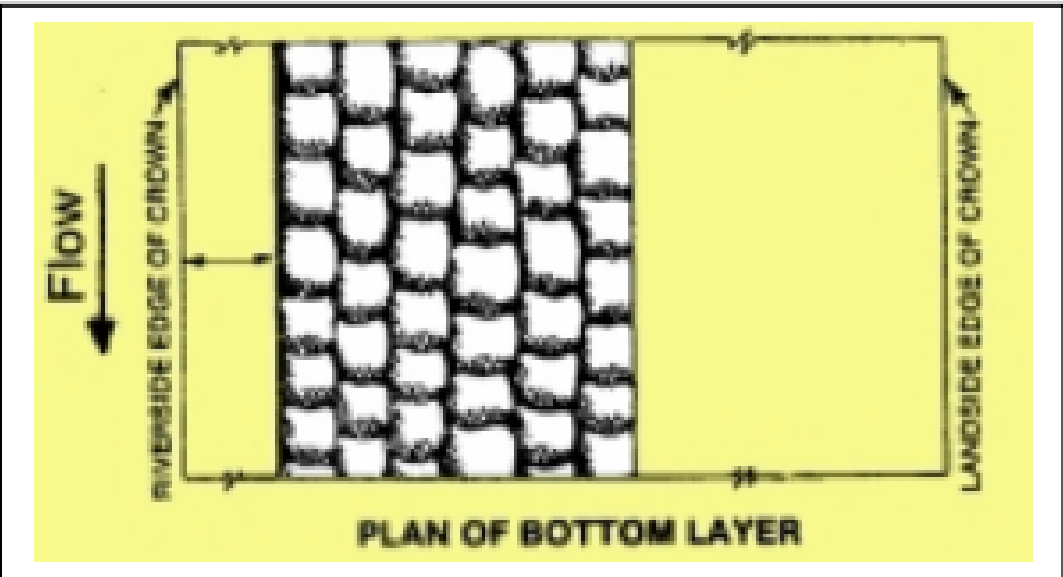
Stagger the joint connections when multiple layers are necessary. For unsupported layers over three (3) courses high, use the pyramid placement method.

**Pyramid Placement Method**

The pyramid placement is used to increase the height of sandbag protection.



Place the sandbags to form a pyramid by alternating header courses (bags placed crosswise) and stretcher courses (bags placed lengthwise).



Stamp each bag in place, overlap sacks, maintain staggered joint placement, and tuck in any loose ends. Use the following table to estimate the number of bags required:

Height above levee	Bags/100 feet
1 foot	800
2 feet	2000
3 feet	3400

*Information & Graphics provided by the U.S. Army Corps of Engineers*

In addition to sandbags, wattles are used to help deter flood waters on property. Wattles are used most effectively in areas such as improved, paved surfaces or areas where staking in place is not practice or desired such as driveways, pathways, patios, or other hard and rocky areas, along the perimeter of a property, along the toe, top, face, and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow, or around backyard drains and stockpiles. The below information further explains wattles and the instructions that follow are provided by Streets to Creeks.

## What is a Wattle?

A wattle is a long, tubular, weighted fiber roll that is stuffed with materials such as straw, coir, curled wood fiber or other biodegradable materials and has an imbedded ballast core material such as sand or gravel.

Wattles are installed to help intercept runoff, reducing its flow velocity, release the runoff as sheet flow, and provide removal of sediment and debris (i.e. ash) from the run off. These are placed at property perimeters and on the toe and face of slop along contours, and serve as a method to reduce sheet and rill erosion until vegetation can be re-established after a burn.

## Wattle Installation on Hard/Non-Permeable Surfaces Instructions:

It is critical that rolls are installed perpendicular to water movement, and parallel to the slope contour. A good rule-of-thumb for spacing of multiple contours (when needed) is:

- 50 feet apart for slopes flatter than 10:1 (H:V) [ $<10^\circ$  slope]
- 20 feet apart for slopes from 4:1 to 10:1 (H:V) [ $10^\circ$  to  $25^\circ$  slope]
- 15 feet apart for slopes from 2:1 to 4:1 (H:V) [ $25^\circ$  to  $50^\circ$  slope]
- 10 feet apart for slopes steeper than 2:1 (H:V) [ $>50^\circ$  slope]

\*(H:V) H = Horizontal; V = Vertical

1. Overlap ends by at least 12” to 18”. Rolls should be overlapped, NEVER abutted.
  - Overlap the wattle ends like shingles on a roof with the higher wattle on top of the lower wattle, so that water and sediment don’t break through the joints.
  - It is recommended to fasten overlapped ends together.
  - Pass zip tie, tie wire, or other fastener through the loop at the end of each wattle and secure around the adjacent wattle.
  - Fasteners can also be secured to solid structures like fence posts for added stability.
2. Turn the ends of the fiber roll up slope to prevent runoff from going around the roll.

**Wattle Installation on Softer Soil**

1. Follow Above Instructions, with a few additional steps:
2. Dig a small trench across the slope of the contour. The trench depth should be 1/4 to 1/3 of the thickness of the roll, and the width should equal the roll diameter.
3. Backfill the trench after placement to ensure that there are no gaps between the soil and the bottom of the weighted wattle.
4. Use stakes on the downhill side of the weighted wattles.
  - Use 18” stakes for harder soils, 24” stakes for softer soils. Wood stakes are recommended as they are biodegradable.
  - Install stakes at each end and a maximum of 4 feet on center. Additionally, stake the end of each weighted wattle through the provided loop.
  - Make sure stakes are long enough to extend 2-3” above top of wattle after fully securing into ground.

**Wattle Maintenance**

- Wattles should be inspected after each significant rainfall event to ensure there are no frays, gaps, or separating ends and routinely, at minimum every three months, in dry weather.
- Maintain fiber rolls to provide an adequate sediment holding capacity. Remove sediment and debris when the sediment accumulation reaches three quarters (3/4) of the barrier height.
- Damaged wattles should be replaced.



# MAKE A COMMUNITY PLAN

Making a plan for you and your family is an important and critical first step to ensuring safer communities in Larimer County, however, overall resilience of a community is a team effort.

It has been shown time and time again that communities that have high social capital, meaning they work together and neighbors support each other, adapt to and recover from adversity much easier and more quickly than those that have lower social capital.

Are there ways you can connect to your neighbors in your planning process? For example, can you help direct neighbors to credible sources of information, or be a support for their own recovery plans? Can you arrange for your neighbor to pick up your pet in an evacuation situation if you are not home and vice versa?

Also remember that community resilience means looking out for our neighbors who might need additional assistance in the event of an emergency. Consider working with those close to you in your community to make sure that neighbors who are elderly or disabled are able to evacuate if needed.

Setting up a system, or a community hub, in which to share information, band together to leverage resources, work together to solve problems, and more can be hugely beneficial in your community.

**If this is something you are interested in standing up with your neighbors, we can offer technical assistance through the Larimer Connects Program. For more information, see our website at: <https://www.larimer.org/emergency/larimer-connects/community-hubs>**

# SURVIVE DURING THE FLOOD

You are ultimately responsible for your own safety during a flood. The following information includes protective actions you can take to avoid injury or death during a flood.

**1. ASSESS THE SITUATION.** Depending on where you are, and the impact and the warning time of flooding, go to the safe location that you have identified. Help a neighbor who may require special assistance – infants, elderly people, and people with disabilities. Free cattle and lead livestock to a safer location.

**2. IF TOLD TO EVACUATE, DO SO IMMEDIATELY.** Never drive around barricades. Local responders use them to safely direct traffic out of flooded areas. Work in cooperation with Police, Public Works, and Emergency Personnel. Always follow the instructions given— authorities will direct you to leave if you are in a low-lying area or within the greatest potential path of rising waters. Even if you haven't been ordered to evacuate yet, it's always best to be prepared when a flood watch is issued.

**3. LISTEN TO EMERGENCY ALERT SYSTEMS, NOAA WEATHER RADIO, OR LOCAL ALERTING SYSTEMS** for current emergency information and instructions.

**4. DO NOT WALK, SWIM, OR DRIVE THROUGH FLOOD WATERS.** Turn Around. Don't Drown.® Just six inches of fast moving water can knock you down, and one foot of moving water can sweep your vehicle away.

**5. STAY OFF OF BRIDGES OVER FAST-MOVING WATER.** Fast-moving water can wash bridges away without warning.

**6. IF YOUR VEHICLE IS TRAPPED IN RAPIDLY MOVING WATER, STAY INSIDE.** If water is rising inside the vehicle, seek refuge on the roof.

**7. IF TRAPPED IN A BUILDING, GO TO ITS HIGHEST LEVEL.** Do not climb into a closed attic. You may become trapped by rising floodwater. Go on the roof only if necessary. Signal for help.

**8. IF YOU HAVE TIME, TURN OFF THE GAS, ELECTRICITY, AND WATER.** Disconnect appliances to prevent electrical shock when power is restored. Adjust the thermostat on refrigerators and freezers to the coolest possible temperature to prevent food from spoiling

## BE SAFE AFTER - FLOODWATER SAFETY

Floodwater and standing water can be dangerous. Protect yourself and your loved ones from risks brought on by floods.

### **Avoid moving water.**

**Play it safe.** Additional flooding or flash floods can occur. Listen for local warnings and information. Return home only when authorities indicate it is safe.

**Avoid wading in floodwater**, which can contain dangerous debris and be contaminated. Underground or downed power lines can also electrically charge the water.

**Use a generator** or other gasoline powered machinery ONLY outdoors and away from windows.

**Stay away from damaged areas** unless your assistance has been specifically requested by police, fire or relief organizations.

**Be aware of areas where floodwaters have receded.** Flooding may have caused familiar places to change. Floodwaters often erode roads and walkways. Roads may have weakened and could collapse under the weight of a car. Use extreme caution when entering buildings, there may be hidden damage, particularly in foundations. Stay out of any building if it is surrounded by floodwaters.



**Confirm the water supply is safe to drink.** Listen for news reports to learn whether your community’s water supply has been contaminated by the floodwaters. Remember to carry bottled drinking water and discard any food products that may have come in contact with floodwater.

**Wear heavy gloves and rubber boots during clean up.** Ventilate your home. Open all doors and windows to allow air to circulate and dry out your home. Dehumidify as soon as possible after a flood. If salvageable, clean and disinfect everything that got wet. Mud left from floodwaters can contain sewage and chemicals.

**Service damaged septic tanks, cesspools, pit and leaching systems as soon as possible.** Damaged sewage systems are serious health hazards.

**Contact your insurance agent** to discuss claims, if you purchased flood insurance.

**Be wary** of people who drive through neighborhoods offering help in cleaning up or repairing your home as they may not be legitimate. Check references if you hire cleanup or repair contractors, and be sure they are qualified to do the job.

# CONTACT INFORMATION

## EMERGENCIES

911

## LARIMER COUNTY GOVERNMENT

Animal Control – Larimer Humane Society	(970) 226-3647
Assessor's Office	(970) 498-7050
Building Department	(970) 498-7700
Clerk & Recorder	(970) 498-7860
Coroner's Office	(970) 498-6161
Larimer County–CSU Extension Office	(970) 498-6000
Economic Development & Workforce Center	(970) 498-6641
Human Services	(970) 498-6300
Manager's Office	(970) 498-7010
Motor Vehicle	
Fort Collins	(970) 498-7878
Loveland	(970) 619-4521
Estes Park	(970) 577-2025
Natural Resources	(970) 619-4570
Office of Emergency Management	(970) 498-7147
Planning Department	(970) 498-7683
Public Health & Environment	(970) 498-7000
Road and Bridge	(970) 498-5650
Sheriff's Office	(970) 498-5100
Sheriff's Office Non-Emergency	(970) 416-1985
Solid Waste	(970) 498-5760

# CONTACT INFORMATION

## EMERGENCIES

911

## LARIMER COUNTY FIRE DISTRICTS & DEPARTMENTS

Allenspark Volunteer Fire Department	(303) 747-2586
Berthoud Fire Protection District	(970) 532-2264
Big Elk Meadows Volunteer Fire Department	(303) 823-5717
Big Thompson Volunteer Fire Protection District	(970) 962-2471
Crystal Lakes Volunteer Fire Protection District	(970) 881-3521
Estes Valley Fire Protection District	(970) 577-0900
Front Range Fire Rescue Authority	(970) 587-4464
Glacier View Volunteer Fire Protection District	(970) 493-3353
Glen Haven Volunteer Fire Department	(970) 586-5406
Livermore Volunteer Fire Protection District	(970) 472-5592
Loveland Fire Rescue Authority	(970) 962-2471
Lyons Fire Protection District	(970) 484-9102
Pinewood Springs Volunteer Fire Protection District	(303) 823-5086
Poudre Canyon Volunteer Fire Protection District	(970) 881-2472
Poudre Fire Authority	(970) 415-2892
Red Feather Lakes Volunteer Fire Department	(970) 881-2565
Rist Canyon Volunteer Fire Department	(970) 566-2300
Wellington Fire Protection District	(970) 568-3232
Windsor-Severance Fire Rescue Authority	(970) 686-2626



# ADDITIONAL RESOURCES

**Fact sheets, preparedness materials, informational websites and flyers, frequently asked questions, and more.**

## ***References, Resources and More Information***

### **Boulder National Weather Service**

[www.weather.gov/bou](http://www.weather.gov/bou)

### **National Flood Insurance Program**

[www.floodsmart.gov](http://www.floodsmart.gov)

### **Emergency Preparedness**

[www.fema.gov](http://www.fema.gov)

[www.ready.gov/floods](http://www.ready.gov/floods)

[www.ready.gov/be-informed](http://www.ready.gov/be-informed)

[www.redcross.org/get-help/how-to-prepare-for-emergencies](http://www.redcross.org/get-help/how-to-prepare-for-emergencies)

[www.cdc.gov/disasters/floods/readiness](http://www.cdc.gov/disasters/floods/readiness)

[www.weather.gov/bou/floodafterfire](http://www.weather.gov/bou/floodafterfire)

[cwcb.colorado.gov/flood-after-fire](http://cwcb.colorado.gov/flood-after-fire)

[mars.colorado.gov](http://mars.colorado.gov)

[dhsem.colorado.gov/info-center/readycolorado](http://dhsem.colorado.gov/info-center/readycolorado)

[www.larimer.org/emergency](http://www.larimer.org/emergency)

### **Monitor River Gauges**

<https://water.weather.gov/ahps2/index.php?wfo=BOU>

### **Wildfire Recovery**

[www.larimer.org/wildfire-resources](http://www.larimer.org/wildfire-resources)

[www.larimerrecovers.org](http://www.larimerrecovers.org)

[www.larimer.org/emergency/recovery](http://www.larimer.org/emergency/recovery)

# CITATIONS

## **Grand County Office of Emergency Management**

<https://www.co.grand.co.us/156/Office-of-Emergency-Management>

## **Ready.gov**

<https://www.ready.gov/floods>

## **Federal Emergency Management Agency (FEMA) / National Flood Insurance Program (NFIP)**

<https://www.floodsmart.gov/floodsmart/>

## **U.S. Geological Survey (USGS)**

[https://www.usgs.gov/mission-areas/water-resources/science/usgs-flood-information?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/mission-areas/water-resources/science/usgs-flood-information?qt-science_center_objects=0#qt-science_center_objects)

## **Colorado Water Conservation Board (CWCB)**

<https://cwcb.colorado.gov/flood-after-fire>

## **National Weather Service (NWS) / National Oceanic and Atmospheric Administration (NOAA)**

<https://www.weather.gov/wrn/spring2017-flood-sm>

## **Colorado Department of Homeland Security and Emergency Management (DHSEM)**

<https://mars.colorado.gov/dr4581-wildfire-recovery>

