

Huerfano County Office of Emergency Management



Spring Fire Flooding & Debris Flow Public Alert & Warning Plan

June 28, 2019

Description of the Risks

Historical Background: Flooding has occurred many times before in Huerfano County. This includes locations, such as La Veta and Walsenburg, and elsewhere which lie in the Chucharas River floodplain. The Huerfano River, and its floodplain have also historically seen repeated flooding.

Increased Risks Due To The Spring Fire: Burn scars are known to dramatically increase the level of flooding and debris flows for many years after a fire. The increased level of risk is highly correlated to the intensity of the fire, and to the size of the area burned. Officials have described the Spring Fire, as the hottest fire in Colorado history. It is also the 3rd largest fire in State history.

The Experts Agree: Flood estimates have been compiled by experts on the subject, including the Natural Resource Conservation Service (NRCS) the United States Army Corps of Engineers (USACE) JW and Associates, and Enginuity (The latter two firms are private engineering consultants, who specialize in flooding and flood mitigation.) The results are alarming. All agree that Huerfano County has very real potential for extreme flooding and debris flow events which threaten both life and property.

A Small Amount of Rainfall Can Be Deadly: Life threatening flooding has already occurred in Huerfano County with only 3 tenths of an inch of rain. At least two other life-threatening events occurred with only ½ inch of rain over a relatively small area. The more rain, the greater the danger. The faster the rain falls, the greater the danger.

You Should Act to Prepare Now: All governments, fire districts, medical providers, schools, businesses, residents, and visitors in Huerfano County are being instructed to take all the necessary measures to prepare for the consequences of these likely incidents. Even many of those who are not present within the burn scar, or in the floodplains will experience severe problems if and when a large scale flood event occurs. This may include loss of power, communications, gas and other utilities. Highways, roads, bridges and other infrastructure may be severely impacted or destroyed.

Flash Flooding and/or Debris Flow Incidents May Occur With Little or No Warning: Stay ready to leave immediately when flooding occurs. Flooding has been known to occur in Colorado without any forewarning. Flooding without warning has already occurred in Huerfano County in 2018. It will happen again. Authorities will attempt to provide as much advance warning as possible; however, the person who is ultimately responsible for your safety, is **YOU**. Maintain situational awareness, and be ready to move to high ground immediately. You may not get any other warnings. Stay alert.

Move Up, Not Out! Prepare to move immediately to high ground. Those who live, work, or travel in flood prone areas should be ready to move to high ground immediately in the event of flooding and or debris flows. Everyone should prepare a [Go/Stay bag](#), containing water, food, medicine, and other essentials, and be ready to move to high ground at a moment's notice. Never attempt to drive through flood waters; this is the leading cause of death from flooding in the United States. If you live or work in the floodplain, take steps to prepare now. Have a safe spot picked out ahead of time. What is safe for your family or business, might be different than what is best for your neighbors. Be ready to move there immediately upon danger, or official warnings.

The Risks to Life and Property and the Potential Length of Displacement From Your Home or Business Are Highly Variable: The scale (magnitude) and scope (geographic area) of an event are highly variable. Some events may have only a localized impact. Other events could be wide-spread and impact a large area. As the magnitude of the event increases, the risks will too. Just because the last event was small, does not mean the next one will be. Pay attention to all warnings issued. More rain, especially rainfall in a short period of time, means increased risks. With more rain, the geographic area impacted will also be larger.

Secondary Flooding: Flooding may occur in areas not previously thought to be at risk. Debris jams may force water and debris in an unforeseen direction. There are over 100 water diversion points (irrigation ditch head gates) in the county. Each might be subject to secondary flooding. Head-gates might be over-topped or destroyed, and water and debris could flow unabated down these ditches in larger events.

Cascading Events: In larger floods events, the possibility of sequential, cascading events exist. Floodwaters overwhelming a head-gate may, in turn, flow into a reservoir below. If that flow in turn overwhelms the capacity of the reservoir system to absorb and to release, it might be threatened. Those in areas below reservoirs might need to move to high ground, even if they are not located in a known flood plain.

Forecasting The Hazards

National Weather Service: The [National Weather Service \(NWS\)](#) is the agency mandated with the task of forecasting weather, and issuing forecasts and warnings to inform the public concerning conditions which have the potential to produce flash flooding. These alerts may take the form of Watches, advisories, and warnings.

NWS **Flood Watches** are forecasts, indicating conditions are present, which have the potential to produce flooding. If a Flood Watch is issued for Huerfano County, this means everyone should maintain a vigilant attitude toward the possibility of flooding. This is particularly true, if a flood watch for the Spring Fire Burn Scar is issued.

Remember, weather is highly variable, and severe storms may arise quickly at any time which could produce flooding. A Flood Watch may or may not have been issued. You may or may not have received any warning or Code Red message. If flooding occurs, always take action. Move up, not out.

The NWS may also issue a **Small Stream Flood Advisory**. These are a type of warning, which indicate that localized flooding is imminent or already occurring. These events have the potential to be life threatening or to damage property in a localized area. If you are in the area described, please treat these NWS advisories seriously.

When the NWS issues a **Flash Flood Warning**, this means that a severe life threatening flooding event is imminent or is occurring. Flash Flood Warnings are more serious than Small Stream Flood Advisories, and have the potential to cover an increasing large geographic area. Especially if rainfall continues. If you are within the area described in the warning, always take immediate action. Your individual risk during a Flash Flood Warning depends upon how low the ground is where you are. If you are on low ground, get up to higher ground immediately. If you are on high ground, you might be a place of refuge for friends and neighbors. Please help others.

3 Burn Scar Warning Areas: When a Flash Flood Warning is initially issued for the Spring Fire Burn Scar, it will be for 1 or more of the 3 broad areas of the scar: 1) Costilla County. 2) Huerfano County north of US Highway 160. 3) Huerfano County south of US Highway 160.

Larger events might trigger a warning for 2 or all 3 of these areas at the same time. Events in Costilla County typically move east and might trigger a Warning in Huerfano County. However, rainfall could also move north to south, south to north, or in from the east. Therefore, anytime a Flash Flood Warning has been issued, vigilance should be maintained.

Increasingly Severe Warnings: Please pay attention to the details of NWS Flash Flood Warnings. The first warning will probably be broader geographically. Subsequent NWS Flash Flood Warnings will often provide additional information. Each should be considered carefully. The NWS will try provide additional important information about the probable impact of the flooding. Consider:

- The **amount of rainfall** which is occurring. The more rainfall - the higher the potential threat.
- The **rate of rainfall**. The faster the rate of rainfall the higher the threat!

Please observe the language of each warning. Any warning means you need to take action. Dire warnings are even more serious! For example:

- ✚ Did the Flash Flood Warning say ½ inch has fallen?
- ✚ Or did it say 4 inches have fallen? Is so, flooding will be much worse! The impacts of very high rates of rainfall in a short time can be devastating!
- **Are you currently present in the warning area?** If your location is within the specific area mentioned in the Flash Flood Warning, then immediate danger exists.
 - ✚ For example, did the warning say a Flash Flood Warning is in effect for the town of La Veta? If it did, and if you live in La Veta, this means you should expect to be directly impacted by flooding.
 - ✚ You should take immediate action. **“Move up, not out!”** Do not try to flee the flood by traveling on routes that could put you or others at risk.
 - ✚ Remember, it is far better to move to high ground, and not have flooding, than it is to caught in the flood. Welcome the chance to practice your flood plan. This is a chance to practice something that might save your life, the next time.

- **Note the specific drainage or drainages which are receiving the rainfall.** If you live below the warning area, but in the drainages mentioned, flooding could be heading your way.

A NWS Flash Flood Emergency: A Flash Flood Emergency indicates that the NWS has determined that the highest possible threat is coming your way. Take all Flash Flood Warnings very seriously. Your very life depends upon them. **A Flash Flood Emergency is the last and highest NWS warning of them all.** If you are in an area covered by a Flash Flood Emergency, move to high ground immediately.

Monitoring and Analysis of Threats

Only One Agency Evaluates the Flood Threats 24 x 7: The [NWS Pueblo office](#) is the only agency to both monitor and fully analyze flood threats on a 24 hour a day, 7 days a week basis. The [NWS](#) will communicate observed threats to:

- Directly to the public – This is why you should have your own [SAME weather radio](#), it is the fastest way to be notified.
- Huerfano County Dispatch – Who will then issue a [Code Red](#) (Reverse 911) and possibly an [IPAWS message](#) to those areas impacted.
- Huerfano County Office of Emergency Management
- The Town of La Veta
- The City of Walsenburg

Huerfano County Dispatch: Dangerous situations observed by the National Weather Service (NWS) will be communicated to the public 24 x 7 by Huerfano County Dispatch, by [Code Red](#) calls and [IPAWS alerts](#). Call dispatch to sign up for Code Red. 719-738-1044. Important information coming after an event will be communicated first via Code Red.

The Town of La Veta: The Town of La Veta has processes in place to ensure personnel are on call to monitor and to analyze threats during conditions requiring heightened vigilance. Their concern will be focused specifically on the dangers facing the town and its residents. La Veta has sirens to warn of flooding, and will work with Huerfano County Dispatch to issue emergency warnings for the town.

The City of Walsenburg: The City of Walsenburg also has a siren to warn of flooding, and will work with Huerfano County Dispatch to issue emergency warnings for the city.

NexRad Weather Radar: The only technology currently existing which has been proven to give ample advance warning of flash flooding is NWS weather radar. Once a threat is known to exist, based on radar rainfall totals, other methods will be used to refine the extent of the danger.

Stream Warning Gauges: [7 Stream Flow warning gauges have been installed](#), and are being monitored. 4 more stream gauges are coming soon. This concept is very promising. It is also untested. Stream gauges should provide a secondary layer of information about the size and timing of flooding. These gauges help provide a secondary confirmation of events observed by [NWS NexRad weather radar](#). These gauges will measure and on report 3 things:

- Stream flow (Stage)
- Stream velocity
- Rainfall

First Responder - Field Observations: When possible, live reports from the field, coming from governmental agencies will be used to confirm the extent and timing of flooding. In no event should these first responders be expected to place themselves in harm's way. First responders should report directly to their own agency or dispatch, and in turn to the Huerfano County Dispatch center.

Trained Burn Scar Weather Spotters: Those who have officially been trained may be activated when needed, and will call in as instructed by the NWS. At no time should any weather spotter place themselves or others in danger.

General Public: If you are a member of the public and observe flash flooding, please call 911. In a flash flood incident, please do not call the Huerfano County Dispatch center to get information. Information will be transmitted via Code Red, IPAWS, and on the dispatch [Facebook Page](#).

Cameras: [Colorado Department of Transportation \(CDOT\)](#) will be installing cameras in key locations to observe structures (key bridges) and the slopes of Mt. Maestas. These cameras will have significant latency, and thus will only show events after they have occurred. Installation is expected in the fall of 2019.

Rain Gauges: Rain gauges are used to confirm what actually occurred, and calibrate NWS Weather radar. They have been found to NOT be rapid enough to provide timely warnings to others. If you have a personal gauge, and it shows dangerous levels of rainfall, you should take immediate action.

Dissemination of Alerts and Warnings

Different Types of Warnings: There are at this time several types of warning products which will be employed to warn the public of the imminent danger of flash flooding and or debris flows. It is advised that you have access to as many of these as possible. In a large event communication could be limited. Do not assume that one warning medium is sufficient.

National Weather Service (NWS) Warnings: There are several ways to get NWS warning products. It is advised that you use as many as possible.

- [SAME Weather Radios](#) – These will come on automatically, when programmed correctly
- Normal NOAA weather radios – these must be tuned correctly and turned on to work
- Smart Phone Apps
- TV & Radio
- [Code Red](#)
- [Wireless Emergency Alerts \(WEAs\)](#) - These will be transmitted to your smart phones, like an Amber Alert. Please do not turn this functionality off.

Huerfano County Dispatch Code Red (Reverse 911): You must sign up to receive these alerts!

- Call 719-738-1044 to sign up
- Tell the dispatch operator where you live; these alerts are mapped to the location which you provide
- A 800 number will call, be sure to say “hello”
- A text message will also be sent to cell phones
- If you know someone who does not know how to sign up, please call for them

Sirens: The Town of La Veta, and the City of Walsenburg have acquired warning sirens. **When the sirens sounds it means one thing: “Move To High Ground Immediately.”** These will be tested regularly during flood season.

IPAWS: [The Integrated Public Alert & Warning System \(IPAWS\)](#) is now operational. Huerfano County Dispatch will issue these warnings directly to the public. These notifications will go to your smart phone, and may also be broadcast on TV and Commercial Radio. This is a new technology, and limitations are known to exist. Please do not turn off these notifications. Cell phones must be able to connect with a cell tower for this service to work. Be aware that there are areas in the county, where no cell signal is present; please maintain enhanced awareness if you are in such a location.

Local Capabilities to Respond to the Situation Are VERY Limited – Be Prepared To Act For Yourself

Outside assistance will be slow in coming, especially at first.

Huerfano County does not have a single paid fire-fighter, they are all volunteers. (We thank all who volunteer!) There are a limited number of Law Enforcement Officers, and they will be busy. No public transportation system exists, nor is there currently a local capacity to transport those who are impacted by flooding, or stranded by it. Local medical services are also limited. Act for yourself. Move up, not out. Get to a safe place on high ground and wait till flooding recedes. In a disaster, the first 48 hours will be the most critical. Plans are in place to get outside resources moving here to help as soon as possible, if a large event should occur. However this help will take time to mobilize.

Be ready to be on your own, and please consider helping others in need. We can get through this when we all work together. You should make preparations to be on your own for at least 3 days. When you move to high ground, take your [Go/Stay bag](#) with you, including: water, food, medical provisions, and other needed supplies. Depending on the remoteness of your location, and the scale of the flooding, you could be isolated for more than 3 days. If you plan to stay there, and are otherwise safe from flooding please plan on having your own provisions. Do not expect local governments to provide for your basic needs (Water, food, medicine & shelter.) Emergency responders will be overwhelmed, if a disaster occurs. Governments will be busy with operations to assist the injured, and to restore basic services and utilities. Your access back home may be cut off. Roads and highways may be closed. Bridges may be out. Water and Sewer may be unavailable, along with phone, electrical power, cell service, and the internet. Walsenburg natural gas and/or water delivery may have to be shut off.

If a large scale flood occurs, utilities may be interrupted, and it may not be safe for you to return home for many days, or even weeks. In the 2013 flooding, many Colorado residents were displaced for months. Full recovery of all infrastructure is still ongoing now in 2019 almost 6 years later.

Flight for Life and other medical air services will only be available as the weather permits. The same storm that brings the flood, may hamper air ambulance operations.

Be prepared to take action to get yourself, and your family to high ground. Move up, not out. A little planning and preparation now will help save your life.