

Two Homeowning Neighbors Flagstaff, AZ



What is Burn Scar Flooding?

Burn scar flooding happens because the vegetation that normally helps absorb rainwater no longer blocks water absorption after it is burned. When it rains too much in a short amount of time, the water then rushes downhill of the burn scar and can cause flash flooding, mudslides, and debris flow. It only takes about a half of an inch of rain in less than an hour to cause burn scar flash flooding.

During the monsoon season, normally functioning culverts, put in place to prevent flooding, are regularly blocked by debris, mud and sediment. This allows flood waters to rise to dangerous levels in areas without proper capacity for drainage.



The Broader Challenge:

Over the past decade, flooding as a result of Monsoon Season in the American West has become almost as common as Atlantic hurricane flooding. Additionally, widespread fires taking place in the mountains above populated areas such as Flagstaff have increased the risk of flash floods. After a wildfire happens, areas around the fire will be more prone to severe flooding for at least the next few years after the fire occurs. This type of flooding is called Burn Scar flooding and it's become a greater risk throughout the West.

The Specific Challenge:

As two homeowners located down elevation from recent burn scars outside Flagstaff, Arizona, our customers knew they needed to do something to combat the relatively new phenomenon of increasing flood waters as a result of rising creek levels, a lack of drainage and rain at higher elevations. As storms and flood events increased in frequency throughout Arizona, the homeowner's concern over water rapidly breaching normal creek levels and approaching their residences from the back grew. They knew that even a small amount of water breaching their home could cause significant damage.

Goals:

Garrison's goal for these two homeowners was to provide an inexpensive flood protection solution that was not only effective, but easy to deploy, manage and store.

Assisting homeowners with a flood protection plan is one of our specialties and we can typically evaluate most flood scenarios using Google Maps, photos, and dimensions provided by the homeowner. We recognized that preparing for a flood can be overwhelming and difficult for homeowners, as they often don't know who to turn to for advice and guidance on protecting their home and we make the process easy for our clients. The lack of storage space and a limited budget can sometimes lead to a lack of viable options when picking certain protective solutions and we take that into consideration when evaluating the right options.

CASE STUDY: Two Homeowning Neighbors, Flagstaff, AZ

Solution:

In order to provide the most effective flood solution for these neighboring homeowners, Garrison recommended its Guppy™ water filled flood tubes, positioned along the creek front and spanning both homes. Guppy water filled flood tubes can be easily placed in a desired protection area, adjusted and then filled with a standard garden hose. Guppy is available in 10ft, 25ft, 50ft and 100ft lengths, which allows for flexibility when creating a flood protection or water diversion strategy.

To allow for a comprehensive area of protection, the homeowners each purchased 24" x 100ft and 24" x 50ft Guppy flood tubes as part of their emergency flood barrier plan. Using a coordinated strategy, the homeowners worked together to set up the protection in their backyards, simultaneously spanning both properties by overlapping tubes to create a single flood barrier for both homes. An individualized approach would have simply led to water going around the newly created flood wall from the neighbors property. By working together using the Guppy, they ensured both properties were protected at the same time.

For additional stability, both homeowners decided to add rows of sandbags to help support the Guppy and provide even more protection against flash floods. During Monsoon Season, time is of the essence, so Garrison was able to rush deliver the flood barrier product from our California warehouse to Arizona in time to resist potential monsoon flash floods.

Takeaways:

- Monsoon flooding can be just as damaging as hurricane flooding. The dry environment of states like Arizona make for severe flood conditions when there is sudden rain.
- Burn scars dramatically increase the risk of flash floods for several years after a wildfire.
- Post fire flood corridors known as culverts are commonly blocked by debris and sediment causing a lack of drainage, leading to flooding.
- Homeowner flood solutions are most effective when they are compact and easy to deploy by only 1-2 people.
- Guppy water filled flood tubes are an easy to deploy solution that are durable and effective against substantial flood events.
- Guppy™ comes in 10ft, 25ft, 50ft and 100ft lengths of protection and 6", 12" and 24" heights, to fit the needs of most homeowners.
- With proper planning and the Guppy water filled flood tubes, two neighbors, working together, were able to resist recent Monsoon flood events and protect their valuable homes.



GARRISON
FLOOD CONTROL