

HIGH AND DRY

A Quarterly Newsletter from the Utah Floodplain Program and the Utah Floodplain Stormwater Management Association (UFSMA)

MARCH 2021

Photo by Rachel Struhs

UFSMA

by Tom Wright, P.E., CFM
UFSMA Chair of the Board



Thank you for making it to yet another virtual conference last year. On behalf of the board we hope that it provided a moment in your week to break out of the doom scroll hypnosis your news feed subjected you to and maybe brought some insight as to the ongoing challenges that our profession faces when identifying and communicating flood risk. The UFSMA gift boxes, financed by your continuing commitment to floodplain and stormwater awareness, gave you tools to fight fomites, airborne pathogens, and your own bad breath for at least a couple of months. Thinking back, the breath mints didn't seem to help my situation, so I hope you all have been flossing more than I.

Let's look forward to our upcoming fall conference, where our little ragtag community of flood fighters, modelers, planners, policy makers, scientists, engineers and hobbyists might band together once again. If the will of the Great State of Utah be so lenient, if the great men and women of the health care system (you too dentists) stay brave, stay the course and jab the many arms, we may once more sit together comfortably in 3D. Not as holograms but as flesh, blood and bone. We shall meet in Moab and break records: attendance records, my own personal daily steps record, but hopefully not the flood of record.

Meanwhile, do take care. And in your everyday workflow that guides your recreation and professional decisions, please--give the sources that flood some room. Room to scour, jump, shift shape, flow and deliver the best snow on earth into our reservoirs, canals, rivers, lakes and estuaries.

To 2021 rue-ing the every blurred together day of 2020!



NFIP News

by Angelia Crowther
Utah State Floodplain Manager/NFIP Coordinator



As the new Utah Floodplain Manager and NFIP Coordinator for the State of Utah I wanted to say hello and introduce myself. I am a mother of two amazing hard-working boys, and married to my high-school sweetheart of 25 years. I was raised in Price and attended Carbon High School. After raising my kids I decided to go back to college and earned an Associates Degree at Utah State University Eastern in 2020. Eventually my goal is to earn a Master's Degree within Emergency Services Administration with a concentration in Emergency Management & Disaster Assistance.

My past experience with Emergency Management has been an almost 12 year journey back in 2009 with Carbon County Emergency Management, first as an Administrative Assistant, and then as an Emergency Management Specialist. This is where I found my passion working with first responders, government partners, and the community. During my almost 6 years with Carbon I earned my EMT license,

volunteered with Helper City Fire, and worked along side the Carbon County Hazmat, Dive, and SWAT members.

In 2014, the Utah Division of Emergency Management took a chance at hiring me as a Community Support Liaison for Regions 6 & 7 (Carbon, Emery, Grand, and San Juan counties). This role gave me amazing opportunities and helped me build personal and professional relationships not only with county emergency managers but with other federal, state, and local agencies. Being an LNO for 6 years has taught me the importance of these relationships we work so hard to create and that they are key to being successful in our emergency preparedness roles in keeping the public prepared and safe.

I also wanted to take this time to thank Kathy Holder for all her hard work and dedication she has given the Utah National Flood Insurance Program. Her level of professionalism, commitment, and passion has given the program abundant strides and built lasting relationships and friendships throughout the floodplain community that I am truly thankful for and know you all are too.

I am looking forward and am excited to have the opportunity to get to know you all and learn the NFIP program so that I may be of support to our floodplain partners.

Flood After Fire


Last summer Utah had over 1,500 wildfires, many of these fires burned close to homes and in their wake left burn scars. Flood risk after fires can persist for years after a burn. Vegetation acts as an anchor in the soil, keeping it in place, but when this vegetation is burned, instead of being absorbed, water simply runs over the soil instead of penetrating it which leads to flooding. This means that living below a burned area increases the risk of flash floods, or mudflows which can potentially destroy your home.

FLOOD AFTER FIRE


Did you know that wildfires dramatically alter the terrain and increase the risk of floods?

Reduce your risk. The time to buy flood insurance is now.


Contact your local insurance agent for more information or visit the National Flood Insurance Program at www.fema.gov/national-flood-insurance-program




During normal conditions, vegetation helps absorb rainwater.




But after an intense wildfire, burned vegetation and charred soil form a water repellent layer, blocking water absorption.




During the next rainfall, water bounces off of the soil.




And as a result, properties located below or downstream of the burn areas are at an increased risk for flooding.




Degree of Land Slope
Higher degrees of land slope speed up water flow and increase flood risk.



Flash Floods
Intense rainfall can flood low lying areas in less than six hours. Flash floods roll boulders, tear out trees and destroy buildings and bridges.



Mudflows
Rivers of liquid and flowing mud are caused by a combination of brush loss and subsequent heavy rains. Rapid snowmelt can also trigger mudflows.





In this 2018 file photo, crews work to clear mud and debris from state Route 143 in Parowan Canyon near a burn scar, July 9, 2018 | Photo courtesy of Parowan Police Chief Ken Carpenter, St. George News / Cedar City News



Do you know your property's flood risk?

Head to floodsmart's map zone [website](#) to learn more about your risks, or go to FEMA's [mapping service center](#) to find flood maps for your area. Remember to do outreach within your community! Flood risk awareness is important!



Image of the Connecticut burn scar from a 2020 fire in Salt Lake City (Photo by Holly Strand).

Remember, one inch of water can cause upwards of \$25,000 in damage. Learn more about Flood after Fire and common questions at [floodsmart.gov](#)



A debris flow from the burn scar of the 2018 Coal Hollow Fire in Utah County (Photo from Utah Wildfire Info Twitter).

The Importance of Community Flood History Documentation

by Jamie Huff

Risk MAP Program Manager

"Floods are acts of God, but flood losses are largely acts of man" - Gilbert F. White

In an arid state like Utah, it seems strange to worry about flooding. And yet flooding is the most common and can be a costly hazard in Utah. Long-term residents may remember the widespread flooding in the mid-1980s, but new homeowners or newcomers to the state may not have this "flood memory". They are more likely to be worried about fires and earthquakes. The fact is we are simply in a sustained dry cycle which leaves most of our residents high and dry. We still see localized flood events, but these are mainly due to short duration high intensity, localized storms. It's easy for residents to develop a "but that won't happen to me" attitude.

It falls to flood managers and other community officials to keep an accurate perspective of flood risk alive. We need to capture and document past and future flood events in order to craft a strong message that these events represent clues to our current risk. They are uncommon but recurring events. They are even predictable—but on a very coarse time scale.

Community history should be in the flood manager's head as well as available to the public. What do you know of your community's history? Can you provide a flood timeline for your constituents? Do you have images? Reports or data on damage? If you don't have much evidence of past floods this would be a great opportunity to get your community involved. Flood history documentation could be a great project for interns, retired community advocates, student research projects or any volunteers that just want to help out their community.

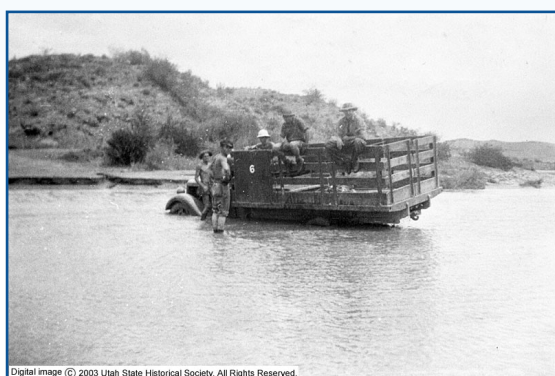
What is important to know or to have?

- Location of the flooding, cause of flooding (Thunderstorm, snowmelt, etc.),
- Photos
- Interviews of people who experienced the event
- Map or GIS Boundaries
- Type amount of damages
- Meteorological information (how much water in how much time
- High water marks

Where do you look for this information? Here are some suggestions:

- Long-term residents
- Local and state newspaper archives
- Utah State Historical Society
- Google searches
- The US Geological Survey has developed a guide for identifying and preserving high water mark information [here](#)
- Academic Literature
- FEMA's disaster declaration history [site](#)
- NOAA's Storm event [database](#)

The longer you wait, the more information your community could potentially lose. Flood survivors or witnesses don't live forever. Pictures are destroyed. The best time to do this is now!



Flood in a CCC camp in Utah (photo by Ashley A. Workman some time between 1934-1941).



Flood on 200 South in 1909 (photo by Shipler Commercial Photographers)

Flood Risk During Periods of Drought

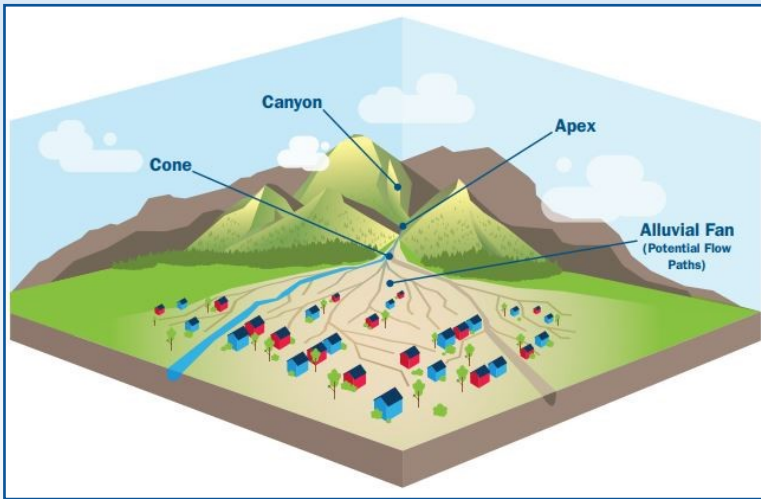
by Sarah Moore

USACE-SPA, Utah Silver Jackets



Right now, communities across Utah are joining forces with the Utah Silver Jackets team to plan for flooding during one of the state's driest periods. Currently, the [U.S. Drought Monitor](#) has categorized 98% of Utah as being in a Severe Drought. It is easy to become complacent on flooding when rain is scarce however, recent 2020 flooding events across the state - Emery County flood, Washington County Flood and the St George flood - make it clear that flooding can happen even during dry periods. Since dry soils can't absorb water as quickly as moist soils, a drought can actually increase flood risk, particularly flash flood risk. The [Utah Silver Jackets](#) team is a state led interagency team consisting of state, federal, and local agencies that work to build partnerships with Utah communities to better prepare for flood disasters before they strike. The communities and projects highlighted in this article show the diversity of flood preparedness work being completed across Utah – even during this dry weather!

Preparing for flooding disasters begins by understanding your community's flood risks. The City of Ephraim worked with the U.S. Army Corps of Engineers to update their floodplain mapping. This process showed that the city was partially located in an alluvial fan. Using this information, the City of Ephraim has worked with the Utah Silver Jackets to complete outreach to city officials and the public regarding the updated floodplain mapping and the associated risks of flooding in alluvial fans. Utah communities located on alluvial fans, like the City of Ephraim, can have a high flood risk and need to be empowered to select flood mitigation measures suited to local needs. The [Utah Division of Emergency Management](#) is currently mapping alluvial fans throughout the state of Utah and is partnering with Silver Jackets to develop a guide for communities detailing mitigation options to reduce alluvial fan flooding at the local level.



"An alluvial fan is a fan-shaped area where silt, sand, gravel, boulders, and woody debris are deposited by rivers and streams over a long period of time. Alluvial fans are created as flowing water interacts with mountains, hills, or steep canyon walls." Source: FEMA, Salt Lake County, and Utah DEM

Common across the southwest, unexpected cloudbursts can lead to flash floods that happen with little to no warning time. When flash floods impact slot canyons, the results can be deadly for anyone recreating inside the slot canyon. Zion National Park is home to some of the most visited slot canyons in the country and sadly, the park has experienced multiple fatalities from flash flooding in its slot canyons. The park is currently working closely with the Utah Silver Jackets and local agencies on a *Zion Flash Flood Risk Reduction Project*. Building off the experience and work being completed in Zion, the Utah Silver Jackets are working with Emery County to address flash flooding in slot canyons following a deadly 2020 flood event that occurred near Goblin Valley State Park. People will always want to recreate in slot canyons and communities like Zion National Park and Emery County are taking the steps to educate visitors and plan for the risk associated with flash flooding and slot canyons.

Once a community has an idea of their flood risks, it is important to prepare for those risks by creating a Flood [Emergency Action Plan](#) (EAP). The Utah Silver Jackets offers communities help in planning and preparing Flood Risk EAPs. Grand, Carbon, San Juan and Castle Counties all took advantage of an EAP Workshop held 22 January 2020 in Grand County, UT. For the counties without an EAP, the first half of the workshop outlined the important elements included in an EAP. The second half of the workshop focused on improvements to existing plans, resources, and past experiences in emergency events. EAPs are not just for county level emergency managers. The City of West Jordan is planning an EAP Workshop for March 2021 and the City of Bluffdale has been continuously working with the Silver Jackets on an EAP to go along with their *Canal Failure Flood Consequence Study*. The City of Bluffdale is going one step further and testing their EAP with a Tabletop Exercise on 22 February 2021. Tabletop Exercises assess an organizations ability to respond to an emergency and help identify improvements for keeping people safe.

In the News

["Welcome to the Flood Zone" February 2021 Newsletter](#)

Biden Reinstates Obama-Era Federal Flood Protection Standard

By Joel Scata, *National Resources Defense Council*, January 22, 2021

In a sweeping Executive Order issued on the first day, President Biden reinstated the Obama-era Federal Flood Risk Management Standard. This flood protection standard had required federally funded infrastructure, like public housing, hospitals, fire stations, and water treatment plants, to be built with a higher margin of safety against extreme floods and sea level rise.

[Click here to read the article!](#)



On 4 August 2014, Carbon County received a large amount of rain in a short period of time. This caused the Price River to breach its banks, leaving a path of mud and destruction. Source: Utah Natural Hazards Flickr Page

Working together as a team, the communities of Utah and the Silver Jackets are increasing flood risk awareness and providing a platform for interagency collaboration and resource sharing across the state. All of the communities mentioned above, and many more like them, are proving that the people of Utah understand that flood risks are real - even in periods of drought.

If you know of communities in Utah that may be interested in better understanding their flood risks, putting together an EAP, or exercising their EAP with a Tabletop Exercise, please email the USACE Silver Jackets Coordinator for Utah, Rachael Orellana at Rachael.Orellana@usace.army.mil.

NFIP Changes

["Welcome to the Flood Zone" February 2021 Newsletter](#)

Effective January 1, 2021

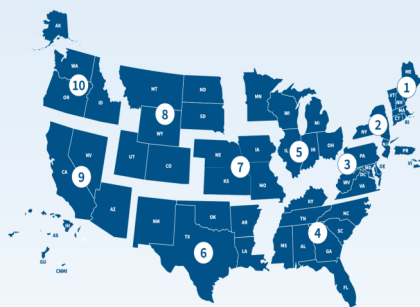
- Preferred Risk Policies (PRPs): Premiums will increase 14.9 percent, with a total amount billed increase of 12.5 percent
- A99 and AR Zone Policies eligible for the PRP: Premiums will increase 14.9 percent, with a total amount billed increase of 12.2 percent.
- Properties Newly Mapped into the SFHA: Newly Mapped policies receive PRP premiums during the first year following the effective date of the map change. Annual increases to these policies result from the use of a "multiplier" that varies by the year of the map change; this multiplier is applied to the base premium before adding the Increased Cost of Compliance premium. As a result of increases to the multiplier that will be effective January 1, 2021, premiums for Newly Mapped policies will increase 14.8 percent, with a total amount billed increase of 12.5 percent.

[Click here to learn more about these 2021 changes, and others that became effective as of April 1, 2020, from the FEMA Bulletin W-19014, dated October 1, 2019.](#)

Trainings

FEMA Region 6 Recorded Trainings (still applicable to Region 8):

- Maintaining Your Maps: [Click Here](#)
- Codes and Regulations: [Click Here](#)
- Buyouts and Acquisitions: [Click Here](#)
- Local Floodplain Ordinances: [Click Here](#)
- What Requires a Permit?: [Click Here](#)
- Finding Your Maps and Determining In vs Out, Map Service Center: [Click Here](#)
- Substantial Improvement/Substantial Damage: [Click Here](#)
- Floodplain Administrator Roles and Responsibilities: [Click Here](#)
- Elevation Certificates: What Are They & How to Review for Common Mistakes: [Click Here](#)
- The Elementary Characteristics (ECs) of the Elevation Certificate (EC): [Click Here](#)



8 hour basic floodplain management course “4x2”, given for Louisiana audience:

- Day 1: Mapping, Post Disaster: [Click Here](#)
- Day 2: Regulations: [Click Here](#)
- Day 3: Permitting: [Click Here](#)
- Day 4: Determining BFE and Insurance: [Click Here](#)

Lunch and Learns

Our weekly Lunch and Learns have moved to monthly. Our next one is Wednesday, March 3rd at 12:00 pm. If you would like to volunteer to present about anything flood related please contact Angelia Crowther.

UFSMA 2021 Conference

The UFSMA 2021 Conference will be held from Tuesday, November 16th through Friday, November 22nd at the Hilton Hoodoo Hotel In Moab! As of now the conference will be *in person*, but will shift to *virtual* if needed. We hope you will join us!



Technical Bulletins

There are two newly updated bulletins on Dry Floodproofing available now:

NFIP Technical Bulletin 3: The bulletin explains and provides guidance on program requirements for the design and certification of dry floodproofing of non-residential and mixed-use buildings. Status: newly updated, released January 2021. [Click here](#)

NFIP Technical Bulletin 6: The bulletin provides guidance on the NFIP requirements for the design and certification of dry floodproofed below-grade parking areas. Status: newly updated, released January 2021. [Click Here](#)

Helpful Links

- Information about becoming a CFM, getting CFM credits, and maintaining your accreditation. [Here](#)
- Utah DEM website for Flood Facts. [Here](#)
- National Flood Insurance Program (NFIP) website. [Here](#)
- The Association of State Floodplain Managers (ASFPM) guide for Elected Officials. [Here](#)



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