

High and Dry



Photo Credit: Capt. Kyle Ekker, ECSO

Summer 2022 Newsletter

Provided by:
Utah Division of Emergency Management
Utah Floodplain Stormwater Management Association

2022 UFSMA Annual Conference



The annual Utah Floodplain & Stormwater Management Conference will be held in Park City from October 18-21, 2022.

Tuesday, October 18th: NFIP 101 (all day)

For more information and to register, find the link below:
<https://ufsma.org/meetinginfo.php?id=16&ts=1650401219>

Risk Rating 2.0 - All renewals on or after April 1, 2022, are subject to the new rating methodology



[Risk Rating 2.0](#) is The National Flood Insurance Program's new pricing methodology. The rating methodology includes flood frequency, multiple flood types (river overflow, storm surge, coastal erosion, and heavy rainfall), distance to a water source along with property characteristics (elevation and cost to rebuild). Find the discount explanation guide [here](#).

[FEMA Fact Sheet - Rating 2.0](#)

Contact your insurance company or agent for more information.

Get more details and learn more [here](#).

New Website Helps Utah Communities Understand Flood Maps and How to Use Them

By Holly Strand
RISKMap Planner

Utah Risk MAP is a floodplain mapping program housed within the Utah Division of Emergency Management. The program is actively collecting data and working with highly qualified engineers, counties, and communities to create, update and digitize flood risk information all over the state. The program has just launched a new website floodhazards.utah.gov with two types of users in mind:



- 1) *Utahns interested in finding out the risk of flooding at a particular property and protecting that property from flooding damage.* The [Property Owners page](#) shows viewers how to look up their address on a flood map and find out what zone their property lies in. There are also tips for reducing risk and a link to the [National Flood Insurance Program](#).
- 2) *Risk managers and floodplain administrators who are working to lower the risk of flood damage in their communities.* The site contains multimedia features explaining the Risk MAP process and products, active project pages, links to [mitigation resources](#) available in Utah, and an [FAQ](#).

Holly Strand is the site's webmaster. She will grow the site based on feedback from Utah's flood risk management community. Look for upcoming additions on the risk of building on alluvial fans, video tutorials on using Risk MAP products, and case studies of successful Utah mitigation efforts that others can learn from.



Does Your Floodplain Appear to Be Geographically Shifted?

By Jamie Huff

RISKMap Manager



In some areas in Utah, floodplains or floodways don't seem to align perfectly with base map water drainages. Here we explain the possible reasons why this might happen. Then we describe what communities can do to fix this.

The Problem:

Sometimes--when looking at DFIRMS or the National Floodplain Hazard Layer--floodplain managers notice that a particular floodplain area appears to have geographically "shifted" away from its corresponding drainage channel. There are three reasons why this happens:

1. Human alteration to the stream channel/watercourse or other development has moved the channel and the flood risk map data has not been updated to show this.
2. Naturally occurring flood event/s have moved the watercourse since the latest map publication and the data has not been updated to show this.
3. On older maps, streams, corresponding floodplains, and base maps were all delineated using topo maps or some other linear- (or vector-) based information. Nowadays, base maps, stream drainages and floodplains are all derived from highly accurate grid-based remotely sensed data. If older (vector) floodplains are depicted on the newer, more accurate grid maps, a geographic mismatch may result.

Special Flood Hazard Area (SFHA) in effect at the time of permitting *must be used* to make floodplain development determinations. If this legal requirement is not followed, non-compliant development can be identified as a violation of your floodplain ordinance.

The Solution:

The only way to resolve the problematic “shift” is to formally update your Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS). This can either be performed through a Letter of Map Revision (LOMR) or a Physical Map Revision (PMR). For reference, a LOMR is a localized revision that typically updates a portion of one or two FIRM panels and associated FIS. A PMR is a larger study that updates multiple FIRM panels and the FIS.

As a participant in the National Flood Insurance Program, communities have a responsibility (per 44 CFR 60.3) to keep their flood risk data updated in between large map revision efforts. Large map revisions can be performed by Utah Risk MAP since the Utah Division of Emergency Management is a Cooperating Technical Partner (CTP) with FEMA. *However, a community should not wait for Utah Risk MAP to revise known flood data issues.* Our projects take many years to complete as we have many projects going simultaneously, and we must secure FEMA grant funding for each one, and for each major phase of the study. The LOMR or PMR process initiated by a community is by far the quickest and best option for fixing your floodplain shift.

There is, however, an additional option for property owners who are individually affected by shifted floodplains. They can seek a Letter of Map Amendment (LOMA) through FEMA, but approval is not necessarily a guarantee. The required documentation should include but may not be limited to 1) a property information form 2) a recorded deed 3) a tax assessor's map 4) a completed elevation certificate or LiDAR data. Additional documentation may also be necessary to determine the compliance of the property. The online portal for submitting applications for all Letters of Map Change (including the Letter of Map Amendment) is available at <https://hazards.fema.gov/femaportal/onlinelomc/signin>.



New Guide for Risk Reduction on Alluvial Fans Provides Comprehensive Management Options to Utah Communities

By Carolyn Gombert

U.S. Army Corps of Engineers Sacramento District



A recently published guide detailing risk reduction on alluvial fans is proof that good things come in sets of three. A tri-disciplinary foundation built on scientific research, effective communication, and pro-active community outreach has been front and center for the guide development team, led by the U.S. Army Corps of Engineers Sacramento District (USACE) and the Utah Division of Emergency Management (DEM).

The *Community Guide for Flood Risk Reduction on Alluvial Fans* is a comprehensive document aimed at supporting Utah residents who live or work on an alluvial fan. In its introductory pages, the guide offers a mini science lesson in the form of text, diagrams, and photographs. This background provides communities with the knowledge and vocabulary required to engage in risk management discussions. The core of the guide focuses on non-structural risk reduction measures, such as the development of a community Emergency Action Plan, active management of forested lands, and strategic land use planning, such as development of parks and open spaces on the most vulnerable areas of an alluvial fan.

fans are fan-shaped deposits of sediment, also known as alluvium, located at the base of a canyon on the valley floor. A fan is built over thousands of years—each time floodwaters exit a canyon, they flow in a new direction and lay down a fresh deposit of alluvium.

For millennia, natural processes have driven the creation of a patchwork of alluvial fans across the Utah landscape. Yet these geologic timescales are at odds with human timescales. A picturesque hillside may seem to be the perfect place for a neighborhood until a flood event that happens only once every hundred years comes through, leveling structures and leaving a trail of debris. This is where USACE and Utah DEM entered the picture.

Jamie Huff, manager of Utah DEM's Risk Management and Planning (Risk MAP) Program, is responsible for identifying the flood risk portion of the alluvial fan equation. Huff initiated an inventory of alluvial fans across the state of Utah, one of the fastest-growing states in the nation. Simultaneously, Huff led Utah DEM into a partnership with USACE and the Utah Silver Jackets team. This created fertile ground for the development of communication materials that can be leveraged to educate residents in high hazard areas when flood risk has been identified.

The statewide dataset of alluvial fans across Utah is scheduled to be available at the same time as the *Community Guide for Flood Risk Reduction on Alluvial Fans*. Throughout development of the guide, the Utah Silver Jackets team met to exchange feedback on the working version of the document. Team members from the U.S. Geological Survey, the Federal Emergency Management Agency, the National Weather Service, and the Utah Geological Survey all provided key input on the technical concepts presented in the guide.

Upon completion of the community guide, the Utah Silver Jackets team created a short informational video to help roll out the guide and reach a broader audience. The video includes an animation of alluvial fan vocabulary terms and directs viewers to learn more from the community guide. Utah DEM will host the informational video as well as a digital copy of the guide on their webpage. With these resources in hand, Utah residents will be able to better understand alluvial fan flood risk in their communities and take the next step to actively manage that risk.

Link to Utah DEM webpage that will host guide: <https://floodhazards.utah.gov/floodplain-specialists/#specialconditions>

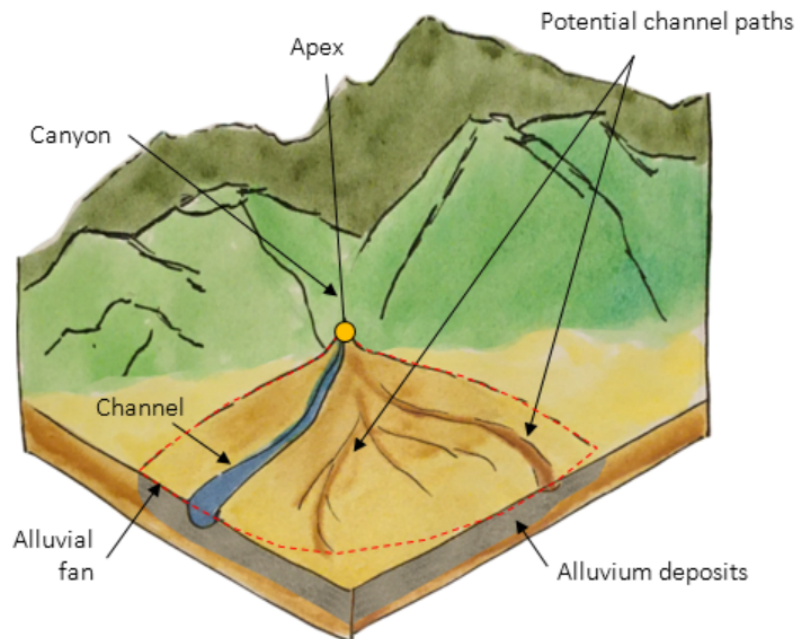


Photo Caption: The guide includes a crash course on alluvial fans, introducing vocabulary terms and technical concepts that communities can use to inform their risk management discussions and decisions. (Credit: USACE 2021).

Hazards Linked to our Changing Climate

By Peter Reinhardt, CFM & Tracie Harrison, CFM
FEMA Region 8, Mitigation Specialist



The ongoing effects of climate change we are seeing in the western US states are higher temperatures and

the 22-year history of the U.S. Drought Monitor.” (NOAA)

With persistent warmer temperatures and drier conditions contributing to increased fuel loads, the frequency and intensity of wildfires are on the rise. No longer is there a wildfire season with fires occurring year-round. Over the past two years, Utah has experienced wildfires every month, having 1,131 fires reported in 2021 resulting in over 63,792 acres burned. (Utah DNR). And with this increased risk of fire comes the increased risk of flood after fire even in times of drought.

Drought is a “Period of abnormally dry weather sufficiently long enough to cause a serious hydrological imbalance.” (Meteorological Society). Our Southwest Region has been in a drought for much of the last 20 years. These unusually dry conditions were accompanied by excessive heat in both 2020 and 2021, with Utah having the fourth driest April-June, on record in 2021. The earth’s atmosphere is always trying to balance itself between warm and cooler air, a type of *yin and yang*. Ridges of warm, dry weather will meet up with cool wet weather creating instability in the atmosphere in the form of thunderstorms.

Why is this relevant in our Region? Warmer air can hold more moisture and causes greater evaporation. As temperatures continue to increase, the warm air will hold more evaporated water in a hydrologic cycle. This evaporated water needs to be released in the form of thunderstorms, which can be more intense than a traditional rainstorm event. The cycle will result in more severe droughts followed by interspersed periods of intense flooding.

Flooding is one of the most common and costly disasters in the United States. Floodplain management efforts are community-based and intended to prevent or reduce flood risks. Part of that task is to understand your community’s risks and determine actions needed to address those risks by answering the following questions:

- Which threats and hazards can affect our community?
- If they occurred, what impacts would those threats and hazards have on our community?
- Based on those impacts, what capabilities should our community have in place?

The answers to these questions are a good start to collaborating with your local emergency management, and community officials to prepare your community to be more resilient in the face of drought, wildfire, and flooding.

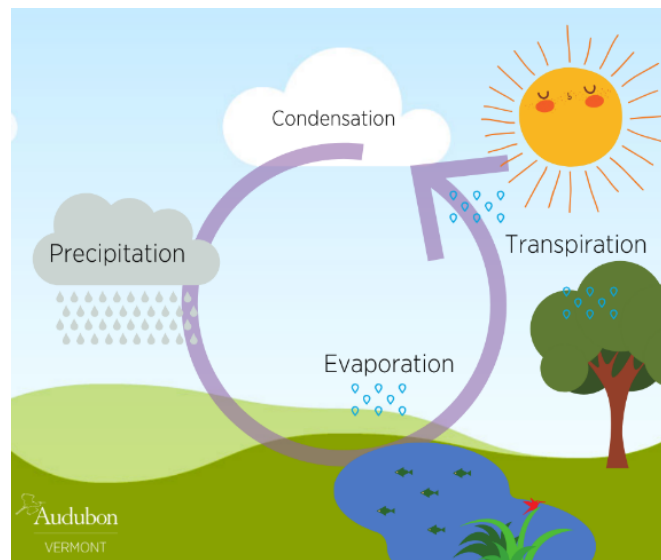


Photo: Audubon Vermont

Sources: [Drought - Glossary of Meteorology \(ametsoc.org\)](https://www.noaa.gov/stories/warm-dry-march-worsened-record-drought-conditions-in-west#:~:text=The%20current%20multi-year%20drought,or%20near%20record-low%20levels), (<https://www.noaa.gov/stories/warm-dry-march-worsened-record-drought-conditions-in-west#:~:text=The%20current%20multi-year%20drought,or%20near%20record-low%20levels>); <https://ffsl.utah.gov/uncategorized/2021-utah-wildfire-annual-report/>; [Climate.gov Home | NOAA Climate.gov](https://www.noaa.gov/)

A Note from the Chair

By Jeff Erdman PE, CFM



Seven years of volunteering for the Utah Floodplain and Stormwater Management Association (UFSMA) has given me the privilege to be this year’s Chair of the UFSMA Board. Our Board of Directors is made up of volunteers that serve to represent UFSMA by organizing our annual conference, providing technical training, and engaging as advocates on floodplain and Stormwater regulations. Within the UFSMA Board, we are never short of opportunities for professional and personal growth as we take on tasks that aren’t part of our regular job descriptions. Some, such as writing a paragraph in a newsletter, are things I’ve never attempted. Each new responsibility is something to be completed and a lesson to be learned. Thankfully, I have never had a fear of trying something new and learning by doing. Instead of backing down or giving up, I have been supported with the experience, knowledge, and talents of others to help accomplish the mission.

This leads me to a great calling that is to come. Utah has been selected to host the 2024 Association of State Floodplain Managers (ASFPM) conference. We are excited about this announcement and know there are new opportunities coming for our members. Within the coming year, UFSMA will be developing subcommittees to organize this national conference. We want to welcome all members to contribute to making the ASFPM conference a success!

Jeff Erdman PE, CFM

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