Dear Schultz/Pipeline Flood Area Resident and Property Owner,

Thank you for your interest in the 2022 Schultz/Pipeline Fire Flood Preparedness Guide, which is provided by the Coconino County Flood Control District (District).

The purpose of this Guide is to assist residents in the Schultz/Pipeline Flood Area with taking immediate action to mitigate post-wildfire flooding. With a strong monsoon season underway, it is imperative that those identified for flood mitigation act now to make and place sandbags and to work with the District on placing barriers if your home has been identified as needing barriers. The Guide reflects the lessons learned over more than 12 years through the Schultz, Slide, and Museum Fire/Flood experiences that can be applied this year to reduce the impacts of flooding. If you have not done so already, then we strongly encourage everyone to begin planning now for flooding, the most critical first step of which is to purchase or renew your flood insurance. This is the single most important thing you can do to protect against the financial and physical impacts of flooding. We encourage you to read through this Guide carefully and again begin mobilizing sandbagging if the District recommends this for your home.

With monsoon season upon us, this Guide offers flood preparation guidelines and resources to help keep you and your family aware, informed, and safe during and after flash flooding events. In addition, the Guide has information regarding emergency notification, sandbag installation and District preparation activities to help you throughout monsoon season.

This Guide is essential reading for everyone who lives or owns property in the Schultz/Pipeline Flood Area because the threat of severe and repetitive flooding is real, and because your property will remain at high risk for post-wildfire flooding for years to come. Your safety during the monsoon season is of paramount concern to us. Please know that District and Coconino County continue to stand with you and are working hard on your behalf. We thank you for your continuing cooperation and hope you find the information in this Guide valuable and supportive.

Sincerely,

Patrice Horstman
Chair, Flood Control District
District 1 Supervisor

Jeronimo Vasquez
Vice Chair, Flood Control District
District 2 Supervisor

Judy Begay
Director, Flood Control District
District 4 Supervisor
The County's engineering consultants have created Recommended Flood Mitigation Exhibits for the Timberline, Wupatki Trails, Fernwood, and Doney Park areas, which have been posted to www.coconino.az.gov/SchultzPipelineFloodArea. However, it is very important to note that these exhibits only show the priority, high-risk mitigation areas.

The Recommended Flood Mitigation Exhibits have been prepared based on modeling of a 2-inch, 45-minute rainfall event over the Schultz, Tunnel, and Pipeline burn areas. As the name implies, this is a monsoon storm event that would drop 2 inches of rain on the watersheds impacted by the fires during a 45-minute period. This storm has a 25-Year recurrence interval probability. This does not mean that such a storm only occurs every 25 years. Instead, a 25-Year Event is one that statistically has a 4% probability of occurring at any given time.

Although the Recommended Mitigation Exhibits have been prepared utilizing the best available data, unpredictable changes may occur in the flow patterns and channels as watershed conditions constantly change due to levels of saturation, debris, sediment impacts, and other factors. As such, it is very important to note that these changes could impact the modeling results used to prepare these Exhibits and, in turn, the effectiveness of the recommended emergency flood mitigation measures presented here.

For more information and to view the Exhibits please visit https://www.coconino.az.gov/2929/Recommended-Flood-Mitigation-Exhibits.

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**Projects Completed**

The Coconino County Flood Control District (District) is charged with reducing the risk of flood loss; minimizing the impact of floods on human safety, health, and welfare; and restoring and preserving the natural and beneficial values served by floodplains. Ideally, the District accomplishes these goals through long-term, preemptive projects like forest restoration. During and after events like the Pipeline Fire, however, the District’s role shifts to emergency response to help mitigate the threat of post-wildfire flooding in downstream neighborhoods.

**Schultz Flood Mitigation**

The District invested over $31 million in Schultz Flood mitigation projects between 2011 and 2015. Crews are currently working to repair some of the on-forest sediment reduction measures that were damaged in the fires. For more information on these projects please visit www.coconino.az.gov/SchultzFloodMitigation.

**Coconino County Flood Control District: Investing in Post-Wildfire Communities**

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**Pipeline Fire**

On Sunday, June 12, 2022, the Pipeline Fire broke out just west of Schultz Pass, which is six miles north of Flagstaff. Fanned by 50- to 60-mile per-hour winds, the fire spread quickly eastward, burning across much of the same area that was burned during the Schultz Fire in 2010. The fire ultimately charred almost 27,000 acres and impacted significant portions of 10 area watersheds - Schultz Creek, Government Tank, Paintbrush, Siesta-Paintbrush, Campbell, Copeland/Glodia, Peaceful, Thames/Brandis, and Lenox/Wupatki Trails – much of which was severely or moderately burned during Schultz. The reburn of the Schultz Fire burn scar has resulted largely in moderate to severe burn severity, but the areas that were not burned at all during Schultz Fire, particularly all of the Government Tank watershed was burned severely. This means that the soil was “fried” and will act like glass and shed water rapidly, a condition known as “hydrophobic soils” as was witnessed in the area after the Schultz Fire in 2010. As a result, downstream communities including the Timberline, Wupatki Trails, Fernwood, and Doney Park neighborhoods are now at critically high risk for post-wildfire flooding during monsoon season. For more information, please see the U.S. Forest Service Burned Area Emergency Response (BAER) Soil Burn Severity Map at www.coconino.az.gov/SchultzPipelineFloodArea/BurnSeverityMap.

**An Emergency Response Plan Built on Science & Experience**

Within 24 hours of the fire’s start, the District’s staff and consultants began analyzing the expected flood impacts using state-of-the-art technology and applying the lessons learned from both prior flooding experiences to model the potential flood impacts for downstream neighborhoods. The flood model’s results showed that these neighborhoods are now at high risk for severe and repetitive post-wildfire flooding. The maps showing the expected flood depths are posted on the Schultz/Pipeline Flood Area website. www.coconino.az.gov/2929/Recommended-Flood-Mitigation-Exhibits.

**24/7 Flood Area Monitoring**

The District has continuously monitored the Schultz Flood Area for over 12 years and is now continuing this effort with the Schultz/Pipeline Flood Area. The District’s on-duty Flood Director regularly checks weather, radar, and rain gauges, and receives text alerts when gauges exceed designated thresholds. The Flood Director also mobilizes flood area observers when certain rainfall thresholds are reached and continuously communicates with the National Weather Service to assess the flood threat. If necessary, then the Flood Director also coordinates with Emergency Management to issue Emergency Notifications to the public. Please see page 5 for Schultz/Pipeline Flood Area rainfall threshold alert information and please sign up for Emergency Notifications.
Get Your Sandbags Ready for Monsoon Season

Sandbag Walls: A well-built sandbag wall can mitigate the impacts of floodwater to home. The District has established the following sandbag stations in the burn area:
- Campbell & Highway 89
- Copeland Detention Basin - Copeland Lane off of Hwy 89 (also has prefilled bags)
- Brandis Way near Hwy 89
- Brandis Way and Ostrich Lane
- Wupatki Trails – at the end of Ventoso Court
- Cromer Elementary School
- Just east of Cromer Elementary School
- Stardust Trail & McGee Road
- Stardust Trail & Mercury Drive

For up-to-date information please visit www.coconino.az.gov/PipelineSandbagInfo.

Sandbag Assistance
Residents who are elderly or have disabilities that prevent them from placing sandbags near their homes can contact the Call Center at 928-679-8525 or email pipelinefirefloodarea@coconino.az.gov for assistance.

Water Diversion & Legal Considerations
Efforts by property owners or tenants to keep water off of their properties could have consequences for their neighbors and result in liability for the person diverting the water. The law in Arizona regarding water diversion is based primarily on court decisions rather than statute. Different rules apply depending on whether the water that is diverted is surface water, flood water or water that has been previously captured in a stream or water course.

It is important to be careful that your mitigation efforts do not increase the flood hazard to your neighbors both upstream and downstream. You may be legally liable for damage. The County cannot consult as to the legality or illegality of water diversion on private property.

The Arizona Attorney Magazine published an article by attorney David L. Abney that has a good summary of water diversion law in Arizona. This article is available in the County’s Law Library and can be found at www.coconino.az.gov/WaterDiversion.

Looking for sandbags?
www.coconino.az.gov/PipelineSandbagInfo

Please Volunteer!
Volunteers are needed right now to make & install sandbags in the Schultz/Pipeline Flood Area. Anyone interested in volunteering to assist with sandbag production and placement, including organizations – sports teams, scouting, church groups, and other volunteer organizations – please sign up to volunteer at the UWNA Volunteer hub: https://uwna.volunteerhub.com

The pyramid placement method 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.

Visit Fema.gov for additional sandbag information.
Monsoon Season Flood Preparation

The possibility of flash flooding during monsoon season is a fact of life in post-wildfire areas. Due to the topography of the Schultz/Pipeline Fire Flood Area, flash floods will give very little warning before they hit downstream neighborhoods. It is imperative that residents in the Schultz/ Pipeline Fire Area prepare themselves for flash flooding during the monsoon season. Following are some tips to help keep you and your family safe:

Sign Up for Emergency Notifications
Coconino County’s free Emergency Notification service provides alerts for emergencies such as wildfires, thunderstorms, tornadoes, and flash flooding in your area. Sign up your cell phone number, email and/or your home phone. Go to www.coconino.az.gov/ready to sign up for Emergency Notifications, or please contact the Coconino County Emergency Management Department at (928) 679-8311.

Be Prepared to Shelter in Place or Go to Higher Ground
All Schultz/Pipeline Fire Flood Area residents should be prepared to shelter in place during a flood event. When a Flood Alert is received, persons indoors or close to an indoor location should immediately. Do not evacuate! People who are outdoors should relocate to the nearest high ground immediately.

Have an Emergency Preparations & Communications Plan
Because flash flooding can strike unexpectedly, it is important that you and your family plan well in advance of monsoon season. During inclement weather, always know where family members – especially young children, disabled persons, and the elderly or infirmed – and your pets are at all times.

Parents also need to plan for what their kids should do when they are home alone during a flood event and practice these actions prior to flooding. Once roads are closed, no one, including law enforcement, will be allowed into the area - this is for your own safety. The District encourages residents to use cell phones and text messages to communicate with children and others at home during flooding. If power is lost or communication is lost with children with no explanation, then residents can call 928-679-8525 to report the situation and request a physical check once the area is safe for passage by law enforcement.

Planning should include sheltering in place. If you are at work and get the emergency alert, do not go back into the flood area. Know how you will contact family members, how you will get back together, and what you will do in different situations. Emergency preparedness and family communication plan brochures from the Arizona Emergency Information Network (AZEIN) are available in English and Spanish at www.coconino.az.gov/SchultzPipelineFloodArea

Have both a “Go Kit” and a “Stay Kit”
All Schultz/Pipeline Fire Flood Area residents should have emergency Stay Kits for their homes that contain enough supplies to support their families for at least 72 hours. Build a kit that includes nonperishable food and potable water and provides for the needs of your family, including children and sick individuals. Other Stay Kit recommended items include:

- Prescription medications and eyeglasses
- Flashlight(s) with extra batteries
- First aid kit
- Battery-powered or hand-crank radio
- Personal hygiene items
- Important papers (e.g., insurance and financial)
- Cash (e.g., small bills and coins)
- Cell phone and charger
- Manual can opener
- Pet supplies

For more information, please visit www.coconino.az.gov/SchultzPipelineFloodArea

Prepare Your Property for Flash Flooding
Survey your property and strongly secure all objects. Loose objects like chairs, tables, BBQs etc. will become dangerous floating objects during a flash flood. Remember to clear out any drainages of obstructions such as downed trees and debris. Also, know where your gas & water shutoffs and electrical circuit breaker panel are located and how to turn these utilities off. Driveway culverts are the responsibility of property owners. If you have a driveway culvert, then please make sure that it is clear enough for water to flow through it.

Prepare your Septic System for a Flood
There are certain measures homeowners can take to protect their septic systems for a flood:

- Make sure all septic tanks are full. High-water season is not the time to have tanks pumped because empty tanks are buoyant and may float out of the ground when water tables are high.
- Plug floor drains to keep sewage from backing up into house. Of course, floodwaters may still enter through cracks and seams.
- Seal all the septic system’s possible points of entry. If possible, seal the manhole and inspection ports to keep excess water out of the tank.
- Waterproof all electrical connections to avoid electrical shock, or damage to wiring, pumps, and the electrical system.
- Replace cracked, damaged, or missing septic system caps.

Most septic tanks are not damaged by flooding since they are below ground and completely covered. However, septic tanks and pump chambers can fill with silt and debris and must be professionally cleaned. If you have any questions, then please contact a licensed septic tank professional.

How to Pack a Go Kit

Five P’s the most important items to take with you.

Papers: Copies of your important documents in a waterproof and portable container (insurance cards, photo IDs, proof of address, copies of prescriptions, etc.)

Pets: Don’t leave home without them! Coconino County will set up animal shelters as needed for families that have no alternate animal care.

Prescriptions: Medications and other essential personal items; be sure to refill medications before they expire; keep a list of the medications each member of your family takes, why they take them, and their dosages.

Pictures: Take those important pictures that cannot be replaced if ruined by flood water.

Personal Computers: Remember to back up your PC and hard drive. Also bring those jump drives and external drives with you! Remember to bring chargers for all your electronic devices.
Family Emergency Planning – Be Ready

Be Weather-Wise

• Check Daily Flood Risk: Flash flooding can occur during periods of heavy or extended rain. Monitor National Weather Service (NWS) weather and check the daily flood risk at [https://www.weather.gov/fgz/FlagstaffBurnScarFloodRisk](https://www.weather.gov/fgz/FlagstaffBurnScarFloodRisk).

• Check Radar & Rain Gauge Data: Schultz/Pipeline Flood Area Rain Gauge & Radar Data is available at the flood area web page, [www.coconino.az.gov/RainGaugeData](http://www.coconino.az.gov/RainGaugeData).

• Know Where Your Family Is: During inclement weather, know where your family members – especially young children, disabled persons, and the elderly or infirmed – and your pets are at all times.

Animal Evacuation Planning

If you have large animals such as horses, cattle, sheep, goats, or pigs on your property, then be sure to prepare before a disaster.

Preparation Guidelines:

• Ensure all animals have some form of identification that will help facilitate their return.
• Evacuate animals whenever possible.
  Arrangements for evacuation, including routes and host sites, should be made in advance.
  Alternate routes should be mapped out in case the planned route is inaccessible.
• Make arrangements for food, water, veterinary care, and handling equipment.
• Make available vehicles and trailers needed for transporting and supporting each type of animal. Also make available experienced handlers and drivers.

Note: It is best to allow animals a chance to become accustomed to vehicular travel so they are less frightened and easier to move. If evacuation is not possible, then a decision must be made whether to move large animals to available shelter or turn them out. This decision should be determined based on the type of disaster and the soundness and location of the shelter (structure).

Weather Terminology: Understanding NWS Watches, Warnings, and Advisories

FLOOD/FLASH FLOOD WATCH is issued when the expectation of a flood event has increased, but its occurrence, location, and/or timing is still uncertain. Usually are issued within 48 hours of the forecast flood event.

FLASH FLOOD WARNING is issued when flash flooding is occurring or is imminent. Individuals in the warned area should take immediate precautions to protect life and property.

SMALL STREAM FLOOD ADVISORY is issued for elevated river/stream flows, ponding of water in urban or other areas, and for flooding that is generally only an inconvenience (not life threatening) to those living in the affected area.

Please check Schultz/Pipeline Flood Area weather conditions and warnings regularly at [www.weather.gov/fgz/FlagstaffBurnScarFloodRisk](https://www.weather.gov/fgz/FlagstaffBurnScarFloodRisk)

Know Your Area’s Rainfall Thresholds and Alert Notifications

Rainfall Gauge Threshold #3
When this threshold is reached, an Emergency Notification Alert will be issued to the entire Schultz/Pipeline Flood Area, including the Timberline, Wupatki Trails, Fernwood, and Doney Park areas. A text message with the alert (similar to an Amber Alert) will be sent to cell phones registered to addresses in these areas through the Emergency Notification database. The alert will be posted to Flood Control District and County social media channels and websites.

Rainfall Gauge Threshold #2
When this threshold is reached, the following occurs: An Emergency Notification Alert will be issued ONLY to the Timberline, Wupatki Trails, and Fernwood areas. A text message with the alert will be sent to cell phones registered to addresses in this area through the Emergency Notification database. The alert will be posted to Flood Control District and County social media channels and websites.

Rainfall Gauge Threshold #1
When this threshold is reached, the Flood Director will alert the Emergency Operations Center, County officials, and activate personnel to monitor drainages and water flows. No emergency notification alerts will be sent.

Remember: In a Flash Flood You Must Shelter in Place

SCHULTZ/PIPELINE FLOOD AREA

THRESHOLD

3

0.75 inches of rain in 15 minutes

THRESHOLD

2

0.40 inches of rain in 15 minutes

THRESHOLD

1

0.25 inches of rain in 15 minutes
After a Flood

Flash flooding can have devastating effects on your home and family. The following can help you safely address impacts from flood events.

Stay Safe After a Flood!


Track Weather: Monsoon storms often come in groups. The danger is that storms following a flood event will often fall on saturated ground, especially late in the monsoon season. This can greatly increase the risk of additional flooding in your area from even a moderate monsoon storm. Regularly checking the area’s weather page at www.coconino.az.gov/RainGaugeData for radar and rain gauge information can help you plan accordingly for what might be coming next.

Avoid Floodwaters: Keep your family and pets away from floodwater. Standing water hides many dangers including toxins, chemicals and sharp debris. Moving floodwater is especially dangerous as it can quickly sweep people and animals downstream. This happened in the Schultz Flood area where a 12-year-old girl was swept to her death by fast-moving floodwaters.

Avoid Impacted Areas: Please do not visit flood-impacted areas. In addition to being dangerous, your presence may hamper emergency operations, which include utility work to repair downed powerlines.

Heed Road Closed and Cautionary Signs: Road closure and other cautionary signs are put in place for your safety. Pay attention to them!

Post-Flood Private Road Maintenance

After a flood event, the County will respond to assist with clearing private roads to make them open and passable but cannot conduct repairs. If flooding does occur, then please be aware of these operations in your neighborhoods!

What to Do After a Flood

The following are tips for protecting yourself and your family from the dangers of flooding and flash floods:

Returning Home

- Keep children and pets out of the affected area until cleanup has been completed. If you are away from your home during a flash flood event, then you remain in a safe location until a notification if given that it is safe to return to your home.
- Use battery- or crank-powered flashlights if returning at night.
- Shut off electrical power and natural gas/propane tank at valve to avoid fire, electrocution or explosions. If you smell gas or suspect a leak, then turn off the main gas valve, open all windows, and leave the house immediately. Do not turn on the lights or do anything that could cause a spark. Notify the gas company or fire department; do not return until you are told it is safe.
- Consult your utility company about using electrical equipment, including power generators.
- Avoid any downed power lines or wading in standing water, which may contain glass or metal fragments.

Tetanus Shots

If you have been exposed to floodwaters or have suffered injuries as a result of a flood, then obtain a tetanus shot from the County’s Health & Human Services Department or your doctor, especially if you haven’t received one in the last 5 years. If you have open cuts or wounds, then take extreme precautions when walking through floodwaters to avoid contracting tetanus.

Cleanup of Home and Floodwater

If the cleanup is a smaller job that you can do yourself, then take precautions by wearing goggles, fitted mask (if appropriate), rubber boots, waterproof gloves and long-sleeved shirts and long pants.
- If the cleanup is a large job, then call a professional who is experienced in cleaning up mold.
- Dry out your house when you re-enter your home by using fans, air conditioning units and dehumidifiers. Thoroughly clean all hard surfaces (flooring, furniture, countertops, appliances, sinks, etc.) with hot water and laundry or dish detergent, then disinfect with a household unscented chlorine bleach solution. To make and use a household bleach solution: Add 1 tablespoon of bleach to 1 quart (4 cups) of water. Let stand for 5 minutes, then rinse the surface with clean water.
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Seek immediate medical attention if you become injured or ill.
- After completing the cleanup, wash your hands with soap and water. If the water system or your well have been contaminated, then use water that has been boiled for one (1) minute but still has ice crystals. Note: the quality of these products may be impacted by refreezing.
- Completely thawed foods, including fruits, vegetables, meats, poultry, fish, shellfish and cooked food, should not be refrozen.
- Any vacuum-packed fish that is no longer frozen should be discarded.

Safe Well Water

Do not drink the water from your well without testing it! Flooding may carry contaminated water into your well, even if you are in a safe location not submerged by floodwaters. There is also a danger of electric shock from well components.

Do not turn on equipment until it has been checked by a qualified electrician, well driller or pump contractor. Visit www.azhealth.gov/wellwater for information on how to test and disinfect your well.

Food Safety After a Flood

This fact sheet provides tips for protecting yourself and your family from food-borne illness after a flood.

UNPACKAGED FOODS
- Do not eat any food that may have come in contact with flood water.
- Discard any food that is not in a waterproof container if there is any chance that it has come into contact with flood water.
- Discard all fresh or processed meat (except when in hermetically/alright sealed cans), cheese, eggs, dairy and poultry products.
- Discard all dried bulk foods, grains, beans, nuts, dried fruits, dried milk and fried egg products.

SEALED FOIL OR CELLOPHANE AND PAPER PACKAGED FOODS
- Discard any food that is not in a waterproof container if there is any chance that it has come into contact with flood water, including those with screw tops, twist off caps, flip top closures and vacuum packed foods.
- Food products in sealed foil, cellophane or paper packages (e.g. candy, cereals, crackers, bread, chewing gum and shelled nuts) that were stored above flood level are often damaged by condensation. Examine all containers for leaks, breaks or other signs of damage.
- Discard any damaged food products.
- Discard cardboard juice, milk and baby formula boxes if they have come in contact with flood water because they cannot be effectively cleaned and sanitized.
- Discard food that is normally finely divided (e.g. powdered or granulated) but is found caked or clumped after a flood.
- Discard any food packages that have stains on the inner paper wrapper, even if the outer foil package looks undamaged.

FROZEN FOODS
- Discard all food products inside a refrigerator or freezer if they were contaminated by flood waters.
- If the inside of the refrigerator or freezer was not contaminated by flood waters, then food might be salvaged and refrozen if:
  - The products remained at, or below, 41°F at all times.
  - If the food is only partially thawed and still has ice crystals.

Mosquito-Borne Illness

Standing water from flooding can result in an increased risk for mosquito-borne illness like West Nile Virus. People returning to flooded areas should protect themselves from mosquitoes by learning how to reduce the number of mosquitoes around their home and take personal precautions to avoid mosquito bites.

Agency Resources
- Centers for Disease Control and Prevention – www.cdc.gov
- Food and Drug Administration – www.fda.gov
- Arizona Department of Health Services – www.azdhs.gov
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The Community Effort Continues...

The Coconino County Flood Control District would like to thank its partners, including the National Weather Service, JE Fuller, Public Works Road Maintenance Division, Tiffany Construction, United Way of Northern Arizona, and all of our volunteers for all their hard work to prepare the Schultz/Fire Flood Area for the 2022 monsoon season. Most importantly, though, we would like to thank everyone in the flood area neighborhoods for their ongoing patience, support, and community spirit during this challenging time.