



Pinal County Flood Control District

PINAL COUNTY
wide open opportunity

2015 Annual Newsletter

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Your Property May Be In or Near a Special Flood Hazard Area (SFHA)

This newsletter is sent annually to residents who own structures that are in or near areas subject to flooding as identified by the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps. FEMA defines special flood hazard areas as land areas ("the floodplain") that have a 1 percent annual chance of being inundated by floodwaters.

Knowing your flood risk is the first step to being prepared for when future floods occur. The Pinal County Flood Control District invites you to learn more about these maps and your specific risk of flooding by contacting us at 520-866-6411 or by visiting our flood information request form online at: <http://pinalcountyaz.gov/Departments/PublicWorks/FloodControlDistrict/Pages/FloodInfoRequest.aspx>. If you have Google Earth installed on your computer, you easily download the map information by going to FEMA's Mapping Information Platform here: <https://hazards.fema.gov/femaportal/wps/portal/NFHLWMSkmzdownload>



Are You Ready for Monsoon Season?

Flooding may occur at any time, with little or no warning. Monsoon season is especially boisterous though significant storms and floods have occurred in other times of the year. In Arizona, monsoon season runs from June 15th through September 30th. This period of time is ripe for sudden thunderstorms, dust storms, and significant flash flooding.

Preparing for monsoon season is something that everyone should participate in. Preparedness begins with planning ahead. During the monsoon season be sure to watch the current weather forecasts and plan your daily activities accordingly. It also pays to make notes of where the known flash flood areas are so that you will be prepared to change your route or delay an outing if needed. For more information on Monsoon Safety, please visit <http://www.monsoonsafety.org/>. Every family should also prepare a family disaster supply kit in the event of severe weather conditions. The disaster supply kit should contain essential items such as food, water, and sturdy clothing, to sustain a family for up to three days since electric power, gas and water services may be interrupted. Your disaster supply kit should contain enough water for your family for at least three days, non-perishable foods and a basic first aid kit.



Dust Storm Near Casa Grande, Pinal County

For more information on what should be in your disaster supply kit, visit FEMA's website here: <http://www.ready.gov/basic-disaster-supplies-kit>

Floods Happen In Pinal County

Pinal County is no stranger to rain and floods. Our climate and unique landscape makes us susceptible to both, including when we least expect it. Pinal County is capable of experiencing 100-year and 500-year floods and beyond. In fact, in some areas of the county in 1983, floods resulting from Tropical Storm Octave measured far beyond the 100-year flood. This storm was particularly significant in that it caused more than \$45 million dollars in damage (U.S. Army Corpse of Engineers, 1994). Significant floods have also occurred in Pinal County 1993, 2004, and even as recently as 2012.



Flooding within the City of Maricopa, October, 1983. Today, the City of Maricopa is home to nearly 45,000 residents. Today, much of the City remains within the Special Flood Hazard area.



Pinal County, August 2014

Even small storms can produce flooding that endangers property and structures. In 2014, County staff conducted over 150 site visits to residences and businesses to investigate flooding and issues with drainage. Just over 20% of the properties visited had experienced flooding within or adjacent to a structure which ultimately required significant clean up or repair. Of those who experienced flooding within their homes, only 3 of the structures were actually shown to be in a Special Flood Hazard Area according to FEMA's maps.

Floodplains Explained

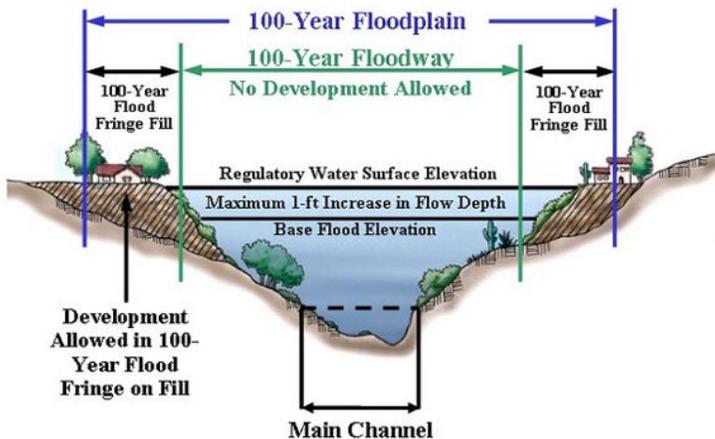
One way to define such floods is by their likelihood, or probability, of happening each year. For example, a person living on the edge of the 100-year floodplain has a 1 percent chance of flooding every year. The risk for flooding increases as he or she moves closer to the stream centerline and deeper into the 100-year floodplain. Over a 30 year period, a 100-year flood has a 26% chance of occurring. A 500-year flood has a 0.2 percent chance of happening every year.

It is important to note that floodplains, as defined on FEMA's Flood Insurance Rate Maps, show flooding from the 100-year and 500-year floods when our ephemeral streams or washes experience significant rainfall in their upper contributing watershed. The maps do not take into account flooding from local sources such as roadside ditches or storm sewers. In addition to this, FEMA's maps do not show areas susceptible to flooding from more frequent storm events, such as one caused by small local storms.

Terminology

Ephemeral Stream - A stream that flows only briefly during and following a period of rainfall in the immediate locality.

Watershed - The area of land that includes a particular stream and all the rivers, streams, etc., that flow into it.



Flood Safety: Don't Cross Flooded Roadways

We're sure you've heard the phrase "Turn around. Don't Drown." before and in Pinal County this couldn't be more applicable. Did you know that eighteen percent of flood fatalities in the US in 2012 occurred when people walked into flooded areas? Forty percent of flood related deaths occurred when people drove their vehicles into flooded streets.

The danger is not always obvious, but the risk of crossing a flooded roadway is clear. It only takes six inches of flow water to knock over an adult and cause the loss of control of a vehicle. A foot of water can cause many vehicles to float and only two feet of water can carry a vehicle away.



Pinal County, 2008

Insure Your Property Against Flooding

One of the easiest ways to protect yourself from a flood is to get flood insurance (don't forget contents coverage either). Flood insurance is also available to people renting homes located within the floodplain. And remember, most homeowner's insurance policies don't cover any damages resulting from a flood.



Government grants to help recover from a flood are not always available, and if they are it's usually in the form of a loan that you must repay. Only flood insurance will cover the cost of recovering after a flooding disaster.

Flood Insurance is sold through the National Flood Insurance Program and can be obtained from most insurance companies. Contact your insurance agent today or visit: <http://www.floodsmart.gov/> for more information.

Build Responsibly: Floodplain Development and Permit Requirements

The Pinal County Flood Control District strives to regulate safe building in flood hazard areas. By following some simple guidelines and respecting our environment and the property rights of others, we can all build homes and structures that survive the rain storms while reducing our susceptibility to flooding. Our goal is to minimize the loss of life and property from flooding by regulating floodplain development and adhering to the provisions of the law. This is why development within a floodplain requires a Floodplain Use permit. Here are some useful tips if you are considering a construction project in the floodplain:

- Before investing money in plans or building materials, contact us at 520-866-6411 or floodcontrol@pinalcountyz.gov and find out what conditions may need to be met for your specific project.
- New structures must be elevated to at least 1 foot above the floodplain elevation at the location of your proposed building. The floodplain elevation is also referred to as the "base flood elevation" and is sometimes shown on the Flood Insurance Rate Maps. Depending on your location within the floodplain, the floodplain elevation could be anywhere from six inches to several feet deep.
- An addition or improvement to an existing building that is located in a floodplain may be allowed if the cost of the improvements are less than 50% of the market value of the existing building, not including the value of the land. It may also be allowed if you can show that the current structure already meets Pinal County's floodplain regulations.

For more information on applying for a floodplain use permit, visit our website at: <http://pinalcountyz.gov/Departments/PublicWorks/FloodControlDistrict/Floodplain/Pages/Apply.aspx>

Protecting Your Property from Flood Hazards

After learning about your flood risk and obtaining flood insurance, there are several ways that you can protect your property from flooding. The Pinal County Flood Control District recommends the following tips:

- Although not always practical, consider raising the existing buildings above the anticipated flood depth at the property.
- Obtain a floodplain use permit to re-grade your lot to help drain runoff away from the buildings. This works best on large lots, if flood waters aren't too deep and if the changes will not affect other properties.
- Keep natural watercourses clear. Don't dump trash, fill material, or excess vegetation in the watercourse. Not only is this illegal, it also increases your risk of flooding. Materials dumped in washes can constrict flows raising flood heights and increasing flood velocities. Loose debris can also be washed downstream where it can block culverts and cause damage to public infrastructure.
- Consider flood proofing your structures. Waterproof your walls and install watertight enclosures over entry ways. This is not recommended for houses with basements or if flood waters will exceed two feet in depth.



Eloy, Pinal County

For more information about protecting your property from flood hazards, visit FEMA's website here: <http://www.ready.gov/floods>

Septic Systems and Floodplains

Did you know that septic systems located within flood prone areas can cease to function during and after a flood? When a drain field has been super-saturated by rain or by rising flood waters, infiltration of effluent leaving the tank may be significantly reduced. Tanks that aren't properly sealed may also be infiltrated by runoff that can cause clogging of the leach lines. In either case, the first indication that there is a problem is usually that toilets no longer flush properly. Raw sewage may also back up into shower and bath drains first since they are usually located at the lowest points in the building. Here are some common steps you can take to reduce or eliminate problems associated with a flooded septic system:

- Install a backflow preventer on the pipes leading to the septic tank so sewage cannot backup into your home during a flood.
- Seal all access holes and clean-outs which could allow floodwaters to enter the tank.
- Construct a small mound of soil above the leach field to direct rainwater and surface runoff away from the area.

For more information about this topic, check out the Environmental Protection Agency's Website here: <http://water.epa.gov/drink/emergprep/flood/septicssystems.cfm>

Concerned About Flooding on Your Property? The Pinal County Flood Control District currently has five Certified Floodplain Managers (CFM®) on staff with a combined total of 30 years of experience in the floodplain management field ready to assist you. We can answer questions, provide building advice, and perform field inspections to investigate flooding problem areas.

Protecting Natural Floodplains



McClellan Wash, Pinal County

Floodplains are a natural part of the ecosystem and serve many functions. In addition to providing a habitat to many of Pinal County's native plant and animal species, floodplains also have direct benefits to humans. The vegetation often found in floodplains can act as a natural means

of erosion control holding the soil in place and stabilizing the topography of the land. Natural floodplains also absorb more flood water than barren land does thus reducing the impact to downstream property. So, how can you do your part to help protect and preserve Pinal County's Natural floodplains? Here are some tips:

- Use low impact building techniques that avoid the destruction of natural lands.
- Consider building outside of the floodplain.
- Manage your storm water and prevent oils and chemicals from entering the floodplain.
- Keep natural watercourses clear of trash and litter. Don't dump within a floodplain.
- Plant trees and shrubs on your property to enhance the floodplain.

For more information on the natural and beneficial functions of floodplains, here is a link to an article prepared by the Association of State Floodplain Managers (ASFPM): http://www.floods.org/PDF/WhitePaper/ASFPM_NBF

Contact Information

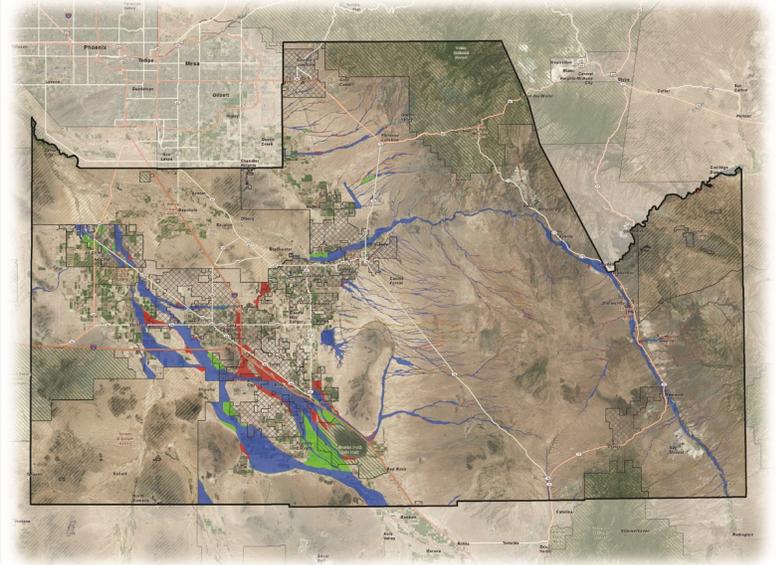
Pinal County Flood Control District
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PO Box 727
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Phone: 520-866-6411
Contact Center: 520-509-3555
Toll-Free: 888-431-1311
Fax: 520-866-6511
Email: FloodControl@pinalcountyaz.gov

Web: www.pinalcountyaz.gov

Floodplain Facts and Figures

- Flooding is the most common and widespread natural disaster occurring in all 50 states. In the past 5 years alone, all 50 states have experienced flooding.
- 90% of all presidential-declared U.S. natural disasters involve flooding.
- A home that is located in a 100-year floodplain has a 26% chance of being flooded during a 30 year mortgage.
- 25% of all flood insurance claims are for properties not located in a high risk area as shown on the FEMA Flood Insurance Rate Maps.
- Arizona has had over 3,940 flood losses totaling over \$33.2 million in insurance claims since 1978.
- In the United States, floods kill approximately 140 people each year and cause more than \$6 billion in property damage annually.
- As of May 1st, 2015 Pinal County is a participant in the Community Rating System. This means that residents living in the unincorporated areas of Pinal County can receive discounts on their flood insurance policy.
- If you live below a dam or near a levee, you should consider purchasing flood insurance. These manmade structures are no match for Mother Nature. There are more than 25 such structures in and upstream of Pinal County.



Pinal County Flood Control District
 PO Box 727
 Florence, AZ 85132

PINAL COUNTY
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Property Owner Name 1
 Property Owner Name 2
 Address 1
 Address 2

Para ver este Boletín en Español, visite la pagina web
<http://www.pinalcountyaz.gov/PublicWorks/FloodControl/Pages/home.aspx>