FLOOD CONTROL DISTRICT
ANNUAL NEWSLETTER
May 2019 | http://www.pinalcountyaz.gov/PublicWorks/FloodControl

FLOOD CONTROL IN YOUR COMMUNITIES

Pinal County’s Flood Control District’s mission is to reduce the risk of flooding to life and property by managing our floodplains, regulating development, and providing public outreach and response.

Concerned About Flooding on Your Property? Don’t hesitate to contact us!
The District has six Certified Floodplain Managers (CFMs) on staff who are ready to assist you. We can answer flood insurance questions, provide building advice, and perform field inspections to investigate flooding problem areas.

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Pinal County Achieves A Class Rating 7, Saving Residents Up To 15% On Their Flood Insurance!
Pinal County joined the National Flood Insurance Program (NFIP) in 2015 and has since achieved a Community Rating System (CRS) class of 7. This recognizes the County’s efforts to exceed the NFIPs minimum standards. What does this mean for you? Residents with homes in the Special Flood Hazard Area (SFHA) can receive a discount of up to 15% on their flood insurance premiums and everyone else can receive a 5% reduced rate. Be sure to check with your insurance company to receive your discount.

WHY ARE YOU RECEIVING THIS NEWSLETTER?

1. Call us at: (520) 866-6411.
2. Fill out a Flood Information Request form online at: http://www.pinalcountyaz.gov/PublicWorks/FloodControl/Pages/FloodInfoRequest.aspx.
3. If you have Google Earth, you can download FEMA’s Map Information Platform here: https://hazards.fema.gov/femaportal/wps/portal/NFHL-WMSkmzdownload.
WHAT IS A FLOODPLAIN AND HOW CAN IT AFFECT ME?

Flooding in Pinal County – More Common Than You Think

Pinal County is no stranger to rain and floods. Our climate and unique desert landscape makes us very susceptible to both, especially when we least expect it. For example, in 1983, some areas of the County experienced flooding far beyond the estimated 100-year flood due to Tropical Storm Octave, which caused more than $45 million in damage (U.S. Army Corps of Engineers, 1994). Since then, Pinal County has reported significant floods in 1993, 2004, 2012, 2014, and 2016.

It’s important to note that even smaller storms can result in flooding, endangering people and property. In 2014, County staff conducted over 150 visits to residences and businesses to investigate drainage issues and found that over 20% of the properties visited have experienced flooding in the past. Of all those, only three structures were in a Special Flood Hazard Area (SFHA). So even if you’re not in a designated floodplain, your property may still be at risk for flooding.

What Exactly Is a 100-Year Flood?

The phrase “100-year flood” has caused much confusion over the years. Many mistakenly believe that it is a flood that occurs every 100 years. However, the phrase really means a flood that has a 1-percent chance of occurring in any given year. Statistically speaking, over a 30-year period, a 100-year flood has a 26% chance of occurring. A 500-year flood has a 0.2% chance of happening in any given year and a 6% chance of occurring in any 30-year period.

To make matters even more complicated, the risk of flooding also increases as you move closer to the stream centerline and deeper into a 100-year floodplain, as shown in the graphic below. This is because the susceptibility to flooding from more frequent events such as the 25-year flood (which has a 4% chance of occurring in any given year) increases as you get closer to the flooding source.

Stormwater Terms & Definitions

- **Community Rating System (CRS):** Provides discounts off flood insurance premiums to communities that go beyond the minimum for floodplain management.

- **Flood Insurance Rate Map (FIRM):** A map used for floodplain management, mitigation, and insurance purposes. As a property owner, you can use a FIRM to get a reliable indication of what flood zone you’re in.

- **National Flood Insurance Program (NFIP):** Aims to reduce the impact of flooding by providing affordable insurance to property owners by encouraging communities to adopt and enforce floodplain management regulations.

- **Special Flood Hazard Area (SFHA):** The area where the NFIP’s floodplain regulations must be enforced and where the mandatory purchase of flood insurance applies. The SFHA includes Zones A, AE, AH, and AO.
FLOOD INSURANCE – HOW TO PROTECT YOUR HOME

Protecting Your Home or Business From Floods

Even though flood insurance is relatively inexpensive, most Arizona homeowners choose to not purchase the available insurance protection. According to the Federal Insurance Administration, less than one-quarter of the homes in areas most vulnerable are insured against flood loss. In those areas, flooding is 24 times more likely to occur than a fire during the course of a typical 30-year mortgage.

What’s even more alarming is that the cost to repair a 2,000-square foot home flooded with six inches of water is nearly $40,000. Even with one inch of water, the cost could add up to over $20,000. The flooding damages everything sitting on your floor; from the washer and dryer to shoes in your closet to all your furniture, plus the drywall will need replacing.

It is important to know that the standard Arizona homeowner’s insurance policy will not cover damages caused by flooding, and 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. Furthermore, the Flood Disaster Protection Act of 1973 prohibits federal agencies from making or guaranteeing a loan secured by a building located in a Special Flood Hazard Area (SFHA) unless a flood insurance policy has been purchased. Pinal County is a participating community in the National Flood Insurance Program (as are all 13 incorporated cities within our borders) which makes flood insurance available to residents and property owners. This program protects our citizens against much of the financial losses resulting from flood disasters.

How Are Premiums Determined?

Flood insurance for buildings in high-risk flood zones (zones beginning with the letter A) are based on its elevation relative to the Base Flood Elevation (BFE) - the higher the building and surrounding grade the lower the insurance premium. Elevation Certificates document a building’s elevation for the purposes of determining the insurance premium.

In moderate-to-low risk zones (zones beginning with letters B, C, or X), rates are not based on elevation, so an Elevation Certificate is not necessary to determine the insurance premium. For building’s in these locations, there are standard rates available based on the type of building that is being insured.

A structure built or improved prior to 1975, or the date of the first FIRM that maps that property within a high-risk flood zone, can be insured using “subsidized rates,” even though it may not be built to code. An Elevation Certificate may still save the owner money if the structure’s elevation is higher than previously thought.

Bottom line: To financially protect yourself from a flood, we recommend considering flood insurance (don’t forget contents coverage either), and it’s also available to people renting homes located within the floodplain. Flood Insurance is sold through the National Flood Insurance Program and can be obtained from most insurance companies. For more information, contact your insurance agent today or visit: http://www.floodsmart.gov.
After learning about your flood risk and obtaining flood insurance, there are several ways that you can protect your property. The Pinal County Flood Control District recommends the following:

**Tip 1:** Although not always practical, consider raising the existing building above the anticipated 100-year flood depth at the property. Elevating structures is the best way to prevent flooding.

**Tip 2:** Obtain a Floodplain Use Permit to re-grade your lot to drain runoff away from buildings. This works best on large lots, if flood waters aren’t too deep, and if the changes will not affect other properties. In many cases, the services of a Professional Engineer may be needed to ensure that the grading work will function as intended.

**Tip 3:** Don’t dump trash, fill material, or excess vegetation in watercourses. 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.

**Tip 4:** Consider waterproofing walls and installing watertight enclosures over entry ways. In anticipation of flooding, you can even install temporary doorway gaskets or shields to prevent the passage of water into your home. This method is not recommended for houses with basements or if flood waters will exceed two-feet in depth.

**Tip 5:** Locate electrical panel boxes, air conditioning units, furnaces, water heaters, and appliances such as washers/dryers in areas that are less likely to flood. Some of these items can be easily elevated on a raised platform to protect them from flooding.

For more information about protecting your property, visit FEMA’s website at: [http://www.ready.gov/floods](http://www.ready.gov/floods).


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**Removing Your Property From the FEMA Floodplain (LOMA/LOMR-F)**

So your property is partially or entirely within the floodplain, you’re on the hook for additional flood insurance — and there’s no way to avoid it, right? Not necessarily. The Federal Emergency Management Agency (FEMA) is not always right and there are ways to mitigate your risk or demonstrate that your property is mistakenly classified. This can be done by securing a Letter of Map Change (LOMC). Depending on your property, there are two main options to securing a LOMC – Letter of Map Adjustment (LOMA) and Letter of Map Revision – Based on Fill (LOMR-F). FEMA has standardized application procedures that every property follows. Of primary importance, each type of map change will require the applicant to produce an Elevation Certificate signed and sealed by a Professional Engineer or Registered Land Surveyor. A LOMC can take anywhere from two to six months for final approval from FEMA, so it is important to start the process as soon as possible. Once the letter is secured, you can provide it to your insurance company to reduce or eliminate the flood insurance requirement for your property.

For more information on how to obtain a LOMA or LOMR-F please visit the FEMA website at: [https://www.fema.gov/letter-map-amendment-letter-map-revision-based-fill-process](https://www.fema.gov/letter-map-amendment-letter-map-revision-based-fill-process).

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**WHAT CAN I DO IF I’M IN A FLOODPLAIN OR DON’T THINK I SHOULD BE?**

**Long-Term Solutions to Protect Your Home From Water Damage and Flooding**

- **Tip 3:** Don’t dump trash, fill material, or excess vegetation in watercourses. 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.
- **Tip 4:** Consider waterproofing walls and installing watertight enclosures over entry ways. In anticipation of flooding, you can even install temporary doorway gaskets or shields to prevent the passage of water into your home. This method is not recommended for houses with basements or if flood waters will exceed two-feet in depth.
- **Tip 5:** Locate electrical panel boxes, air conditioning units, furnaces, water heaters, and appliances such as washers/dryers in areas that are less likely to flood. Some of these items can be easily elevated on a raised platform to protect them from flooding.

For more information about protecting your property, visit FEMA’s website at: [http://www.ready.gov/floods](http://www.ready.gov/floods).


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**What is an Elevation Certificate?**

For properties within the Special Flood Hazard Area (SFHA), an Elevation Certificate is used to help set flood insurance rates. This form is developed by the Federal Emergency Management Agency (FEMA) and is used as an official record of the elevation of a building. The form must be completed by a professional engineer or land surveyor. In most jurisdictions, including Pinal County, an elevation certificate is also used to determine compliance with floodplain regulations both before and after development permits have been issued.

The Flood Control District maintains records of elevation certificates for most buildings within Pinal County (the Cities of Casa Grande and Apache Junction maintain their own certificates). If you have an existing home that needs an elevation certificate for insurance purposes, we would be happy to check and see if we have one on file. Please contact us at 520-866-6411 or floodcontrol@pinalcountyaz.gov to obtain this information.
Manufactured Homes – What You Need to Know

One of the most common floodplain use permits that Pinal County issues is for the installation of new or replacement manufactured homes which typically involves the Pinal County Building and Safety Department, Pinal County Flood Control District, and Arizona State Office of Manufactured Housing. Installers and/or property owners will need permits from all three of these agencies to successfully place a new or replacement manufactured home. In addition to this, many installations will require that the foundation be designed by a Professional Engineer to meet the requirements of the Pinal County Floodplain Ordinance, as well as state laws. These include, but are not be limited to:

- Elevating the home so that bottom of the frame is at least one foot higher than the Base Flood Elevation (BFE).
- Elevating the HVAC unit (and other attached utilities) so they are at least one foot higher than the BFE.
- The home should be oriented parallel to the direction of the flood flow.
- Homes should meet the minimum erosion hazard setback from any wash/channel. Typically this setback is fifty feet but could be reduced with an engineer’s analysis.
- Skirting needs to be flood resistant, non-rigid, break-away (non-structural) or have the flood vents installed at a rate of one square inch of net opening for every square foot of enclosed space. The bottom of the flood vents can be no higher than one foot above the adjacent grade.
- Be careful of inadvertently creating a basement. FEMA considers a basement to be anything that is sub-grade on all four sides. If the crawlspace is below the exterior grade of the home, it may be considered a basement which can result in significantly higher flood insurance premiums.
- Provide a pre-construction and post-construction elevation certificate prepared and sealed by a Professional Engineering or Registered Land Surveyor.

For more information on Manufactured Home installations in floodplains or about the permitting process in Pinal County, visit: http://www.pinalcountyaz.gov/PublicWorks/FloodControl/Pages/FloodplainPermit.aspx.

Build Responsibly: Floodplain Development and Permit Requirements

The Flood Control District strives to ensure safe building in flood hazard areas. This is why development within a floodplain requires a Floodplain Use Permit. By following some simple guidelines, we can build structures that survive rain storms while reducing our susceptibility to flooding by regulating floodplain development and adhering to local laws.

- Before investing money in plans or building materials, contact us at 520-866-6411 or floodcontrol@pinalcountyaz.gov to find out what conditions need to be met for your project.
- New structures must be elevated to at least one foot above the Base Flood Elevation (BFE). Depending on your location within the floodplain, the BFE could be anywhere from a few inches to several feet deep.
- An improvement or addition to a 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.

For more information, visit our website at: http://www.pinalcountyaz.gov/PublicWorks/FloodControl/Pages/FloodplainPermit.aspx.

Solar Panel Installation in a Floodplain

Did you know that you need a Floodplain Use Permit to install roof mounted solar panels on a building that is located within a floodplain? Installing solar panels is considered an improvement to an existing building and is a regulated activity for floodplain development. This means you need to comply with the substantial improvement rules described in Pinal County’s floodplain regulations. Ground mounted panels may be subject to floodplain regulations as well.

If you are thinking about investing in solar energy for your home be sure to let your solar installer know if you are in a floodplain and/or contact Pinal County Flood Control to find out what conditions may need to be met for your specific panel installation.
Floods: Assembling a Disaster Kit

When Hurricane Harvey struck in Texas, many were left without power and residents were left stranded due to flooding. Since floods are the most common natural disaster in the United States, it’s important to be prepared and keep a disaster supply kit stocked. Most of the items are inexpensive and easy to find, and any one of them could save your life. Please note: being prepared means having your own food, water and other supplies to last for at least 72 hours.

Headed to the store? Download a printable checklist to take with you to ensure you have all the essentials: https://www.fema.gov/media-library/assets/documents/90354.

Just as important as putting your supplies together is maintaining them so they are safe to use when needed. Keep items in airtight plastic bags and put your entire disaster supply kit in one or two easy-to-carry bags.

For more detailed information on building your kit, visit www.ready.gov/build-a-kit.

Weather Terminology — Understanding Watches, Warnings, and Advisories

Pinal County depends on the National Weather Service (NWS) for flood and weather-related warnings/notifications. If flooding or a storm is anticipated, a warning will be broadcasted. Residents should tune in to their local tv/radio stations or subscribe via email or text message for advisories, watches, and warnings. The NWS also has a great webpage listing several free subscription services. Visit their page at: http://www.weather.gov/subscribe.

Pinal County maintains a network of stream, precipitation, and weather stations which are used by the NWS to increase the accuracy of their weather forecasts. These are used in conjunction with other data to help the weather service issue accurate flood warnings to residents. Pinal County’s stream and precipitation data can be viewed live at our new Automated Local Evaluation in Real-Time (ALERT) viewer: https://app3.pinalcountyaz.gov/jefmap/.
You’ve probably heard the saying, “Turn around, don’t drown!” But did you know there’s a law for that?

Yep, back in the 1990s, Arizona lawmakers grew tired of using taxpayer money to rescue drivers who drove around barricades and tried to cross flooded roads and washes. In 1995, the state legislature passed Arizona Revised Statutes, ARS 28-910, now commonly known as the “Stupid Motorist Law”.

The law states anyone who enters a public street or highway that is barricaded because of flooding is liable for the expenses of any emergency response required to remove the car, driver, or any passengers. Damages are capped at $2,000.

Other states have adopted similar laws as well, hoping to prevent motorists from making a fatal mistake. For example in 2016, Ohio enacted a law almost identical to Arizona’s called the Allan H. Anderson, Jr. Act. It is named for a firefighter who was killed trying to rescue two teenagers who had driven into a flooded area.

**Key takeaway:** Be safe and be sensible. If you see a flooded roadway after a storm, find another route to your destination. It may take you longer to get there, but a little caution can save you money and heartache.

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### Drive Safe During Monsoon Season

According to the National Weather Service, nearly half of all flood fatalities are vehicle-related. The danger is not always obvious, but the risk is clear. It only takes six inches of flowing 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. If you are caught in a severe storm and can’t drive safely, move completely off the road, stop, and turn your lights off. Take your foot off the brake to make sure your brake lights aren’t lit. This will prevent other drivers from following your tail-lights, thinking you are still on the road. Never stop in the travel portion of the road.

**Pro tip:** Replace your windshield wipers before the monsoons start and be sure to check the weather before traveling.

### Did You Know? Fun Facts About Arizona’s Monsoon Season

Since our monsoon season is upon us, we decided to share some cool facts about the rainiest time of year.

- The name ‘monsoon’ is believed to be derived from the Arabic word ‘mausim’. Mausim means a shift in season or wind.
- A monsoon always blows from a cold region to a warm region.
- Monsoon season replenishes basin groundwater and helps bring new life to the desert plants.
- It is estimated that there are approximately 500,000 lightning strikes during a monsoon.
- Arizona receives 31.5% of its total annual rainfall during the monsoon.
- In Arizona, during a monsoon, it is also common to see a wall of dust (haboob) which reaches hundreds of feet in the air.
- In India, during monsoon season, it is common to see a mouse on the back of frog. They do this to escape the floodwaters.

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### Noteworthy Resources to Have Handy

- [www.monsoonsafety.org](http://www.monsoonsafety.org)
- APS – to check on outages, call 855-OUTAGES
- SRP – to report outages, call 602-236-8888
- Traffic Alerts – visit [www.AZ511.gov](http://www.AZ511.gov) or dial 511 from any land line or mobile number
- [www.pulasidestayalive.org](http://www.pulasidestayalive.org)
Earth fissures are tension cracks that open as the result of land subsidence due to the pumping of groundwater. As the ground slowly settles, cracks can form deep underground and propagate towards the surface, hundreds of feet above. Individual fissures a few feet to several miles long and have a width less than an inch to several feet wide. Rainstorms can erode fissure walls rapidly causing them to widen and lengthen suddenly, and dangerously, to form gullies 5 to 15 ft wide and tens of feet deep.

In 2006, the Arizona State Legislature directed the Arizona Geological Survey (AZGS) to map earth fissures throughout the State. AZGS efforts are concentrated in Cochise, Maricopa, Pima and Pinal Counties, where fissures are known to occur. In June 2007, AZGS published a series of 1:250,000 scale planning maps of known or reported earth fissures for the four counties. In recent years, AZGS has completed detailed maps for 25 earth fissures hot spots through the state of Arizona.

For more information about Earth Fissures (including maps), please visit the AZGS Earth Fissure Center at: https://azgs.arizona.edu/center-natural-hazards/earth-fissures-ground-subsidence.

If you have questions regarding fissures or would like to report fissure activity, the Arizona Geological Survey (AZGS) can be contacted at: 520-621-2470 or azgs-info@email.arizona.edu.

Hazards Associated with Earth Fissures

Earth fissures and associated erosional gullies pose a hazard to people, property, and livestock. Some common hazards include:

- Cracked or collapsing roads
- Severed or deformed railroad tracks
- Broken pipes
- Damaged well casing or wellhead
- Broken canal liners
- Disrupted drainage paths
- Human injury
- Cracked foundation/separated walls
- Livestock/pet injury or death
- Contaminated groundwater aquifer
- Broken or disrupted utility lines

For more information, visit our website at: http://www.pinalcountyaz.gov/PublicWorks/FloodControl/Pages/home.aspx.

Did You Know ... Pinal County Has A Map and Information Portal?

The portal includes geographic information including floodplains, earth fissures, and much more. Go to check it out by visiting: https://pinal.maps.arcgis.com/home/index.html.
LOCALLY MAPPED FLOODPLAINS

Locally Mapped Floodplains Versus FEMA Special Flood Hazard Areas
The Federal Emergency Management Agency (FEMA) maps Special Flood Hazard Areas (SFHA), 100-Year floodplains, to show areas susceptible to a high risk of flooding. These maps, called Flood Insurance Rate Maps (FIRMs), are used to determine where the purchase of flood insurance is mandatory (if the building has a federally backed mortgage). However, FEMA’s maps do not show the complete picture when it comes to flood risk. In fact, 25% of all flood insurance claims are for properties that are not located in one of FEMA’s Special Flood Hazard Areas.

In many cases, FEMA’s FIRMs lack the detail and data to show all the flood hazards in a community, especially localized drainage issues. In addition to this, many of FEMA’s FIRMs for Pinal County use data from floodplain studies performed in the 1980s and 1990s. Pinal County has seen significant growth and change since this time! For this reason, the County has local floodplain maps which depict high-risk areas just like FEMA FIRMs do. According to Pinal County’s Floodplain Management Ordinance, development in a locally mapped floodplain is regulated in the same manner as development located in FEMA SFHA. The only difference for Pinal County residents is that flood insurance is not mandatory in a locally mapped floodplain.

If you have a building in a locally mapped floodplain where flood insurance is not mandatory, you should still consider purchasing it to protect your investment. If the building is not located within a FEMA SFHA, then you may be eligible for very low flood insurance premiums or even a Preferred Risk Policy. Contact your insurance agent today to find out more about how much flood insurance will cost you.

Need to Determine a Base Flood Elevation for a Proposed Building Project?
If you are planning a new building in a Special Flood Hazard Area (SFHA) then you may already know that lowest floor elevation must be at least 1 foot above the Base Flood Elevation (BFE). The BFE is key to properly plan, design, permit, and eventually construct your building, but determining what the BFE is can sometimes be difficult. Depending on where the proposed building is located, the BFE can be anywhere from a few inches to several feet above the ground. For this reason, Pinal County staff are available to help you determine what the BFE is for any single lot residential development project within our area of jurisdiction. We will use any number of available floodplain studies, engineering reports, and flood data to determine a BFE that you can use for your proposed building. Please contact Pinal County Flood Control at 520-866-6411 or FloodControl@pinalcountyaz.gov for more information.

Kenworthy Road Flooding
Head Cutting on Santa Cruz River
Tips For Minimizing Stormwater Pollution

- Pick up after your pets. Pet waste can significantly contribute to stormwater pollution. Many public spaces now have pet waste bags to help prevent this form of pollution.

- Use commercial car washes that treat or recycle their wastewater, or wash your car on your yard so the water infiltrates into the ground rather than being sent into the storm sewer or drainage system. Use biodegradable and/or low phosphorus soaps to help reduce nutrient contamination.

- Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations. Clean up any spilled fluids with absorbent materials.

- Properly dispose of household waste such as paints, solvents, and other chemicals used in do-it-yourself projects. Clean tools and brushes in the sink and contact your local waste disposal facilities for instructions on how to dispose of excess chemicals.

- Avoid sweeping or washing trash, debris, dirt, or leaves into the street. Instead, collect this waste and dispose of it in a trash bin.

- Avoid applying pesticides and herbicides in large quantities or when rain is in the forecast.

PROTECTING NATURAL FLOODPLAINS

Storm Water Quality – Why It’s Important

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground and impervious surfaces like driveways, sidewalks, and streets. Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly into a wash, lake, stream, or river. Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people.

Did you know that sediment, such as silt, dirt, and sand, can be considered a stormwater contaminant? This can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats by burying habitat areas or by simply carrying other contaminants that attach themselves to the soil particles to the water body.

Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life and eventually reach the groundwater table contaminating the water used by residents and farmers. Land animals and people can become sick or die from eating diseased fish, contaminated crops, or by ingesting the polluted water. Another result of stormwater contamination is the increased costs of treating the water to make it safe for human use and consumption.

How To Protect Natural Floodplains

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. 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 to avoid the destruction of natural lands.
- Consider building outside of the floodplain.
- Manage stormwater to prevent oils and chemicals from entering the floodplain.
- Keep natural watercourses clear of trash. Don’t dump within a floodplain.
- Protect native vegetation to enhance the natural function of the floodplain.

For more information on the 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_White_Paper_0908.pdf.
PINAL COUNTY FLOOD CONTROL FAQS

What does the Pinal County Flood Control District regulate?
The Pinal County Flood Control District regulates all development within Special Flood Hazard Areas (areas mapped as a 100-year floodplain by the Federal Emergency Management Agency), floodplains associated with watercourses that have a 100-year discharge of 200 cubic per second or greater, erosion hazard zones associated with washes/watercourses, and locally mapped floodplains. The Pinal County Flood Control District does not regulate runoff coming off of rooftops, parking lots, or from areas with a contributing watershed that results in a 100-Year discharge of less than 200cfs.

There’s water in my retention basin, who comes out to help?
Most retention basins in Pinal County are privately owned; Pinal County does not provide assistance with basin maintenance nor can we pump out retention basins. If you have a retention basin on your property then it is likely your responsibility to provide maintenance. Note that the Pinal County Drainage Ordinance requires that all retention basins drain within 36hrs via evaporation and/or percolation to prevent mosquito infestations.

If I want to install a block wall or fence, are there any places I should avoid?
Block walls and fences can create some of the most serious flooding problems. Avoid constructing walls across any channel or wash. If you need to cross a wash or channel, you may need to obtain a floodplain use permit and the crossing may need to be designed by an Arizona Registered Professional Engineer. Walls or fences should not encroach into any drainage easement, adversely affect the natural conveyance of flows, and must follow the Arizona Revised State Statute 48-3613 for management of floodwater.

How far from a wash do I need to build my house? Why?
All buildings must be set back from washes to add a means of protection from erosion and lateral migration of the wash's main channel. Pinal County requires a minimum setback of 50ft from the established bank of the wash. In some cases, very large washes will require a 300ft setback. The setback is measured from the bank of the wash. Setbacks can be reduced if an Arizona Registered Professional Engineer provides a report or analysis that states that a lesser setback will be safe or provides a design for bank protection within the wash.

The culverts under the roadway are blocked with debris. Who do I call to get them cleaned out?
Please contact the Public Works, Road Maintenance Branch at 520-866-6419 or by emailing PCRoadMaintenance@pinalcountyaz.

There is water ponding after recent rains and now we have mosquitos. Can you help us?
Please contact the Environmental Health Department at 520-866-6864 or by visiting their webpage at: http://www.pinalcountyaz.gov/EnvironmentalHealth/Pages/Home.aspx.

Is my property buildable?
This is a difficult question that cannot be easily answered by Pinal County. An Arizona Registered Professional Engineer can determine the feasibility of placing a structure on a property given the characteristics of the site and the applicable regulations. Pinal County can only determine if a proposed structure will meet minimum standards and cannot comment on feasibility or build-ability.
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 one of FEMA’s Special Flood Hazard Areas.
- Since 1978, Arizona has had over 3,940 flood losses totaling over $33.2 million in insurance claims.
- In the United States, floods kill approximately 140 people each year and cause more than $6 billion in property damage.
- Based on information from www.Floodsmart.gov, a typical 2,000 sqft home could sustain nearly $50,000 in damage from only 1-foot of flood water entering the building.
- 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.