



Yavapai County Flood Control District



Newsletter

December 2011

Volume 1, Issue 6

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Websites for other related organizations:

AZ Dept of Water Resources
www.azwater.gov

AZ Dept of Environmental Quality
www.azdeq.gov

AZ Division of Emergency Management
www.dem.azdema.gov

CORPS of Engineers
www.usace.army.mil

Federal Emergency Management Agency
www.fema
www.floodsmart.gov

National Weather Service
www.weather.gov

National Resource Conservation Service
www.nrcs.usda.gov

US Environmental Protection Agency Region IX
www.epa.gov/aboutepa/region9

Happy 30th Anniversary, Flood Control District!

It was thirty years ago, back in December 1981, that the Yavapai County Flood Control District was created by the Arizona State Legislature. During that time, the District Board of Directors adopted the “Flood Damage Prevention Ordinance”, intended to minimize public and private losses due to flood conditions. Since then, on a ten year average District staff has reviewed over 4,500 building permits and provided over 6,000 requested Flood Status reports to citizens, lenders and realtors. Staff has also provided hundreds of on-site drainage assistance visits to home and property owners.

In the last 30 years the District has branched out into other areas of service as well. In 1990 the District joined the Community Rating System which is part of the National Flood Insurance Program. By going above and beyond the minimum requirements of the NFIP, the District earns points through community related activities such as outreach and floodplain studies. The District has received a Class 7 rating, which saves the citizens 15% on flood insurance policies issued through the NFIP.

The District has also been able to set up over 80 rain and stream

gauges as part of the Storm Warning System. Real time gauge data may be viewed at the County’s website.

An accurate ArcMap project is under construction by District staff. When completed, available flood status reports, elevation certificates and Letters of Map Amendment for specific properties will be available online.

FEMA and the District have both evolved dramatically in the last 30 years. However, the goal of the District—to minimize losses due to flooding—has not changed. We continue to improve our resources and technology with that end in mind.

A History of Major Projects with the District

Due to the nature of development prior to the formation of the District, many subdivisions have regional drainage issues that can only be solved with a regional solution—usually beyond the financial and professional ability of the residents of the area. While the District regulates new subdivisions to prevent regional issues from developing, we also

investigate older drainage issues to determine if a regional solution is something we can support and provide.

One example of the type of projects the District would consider are the two levees in Yavapai County. The Dry Creek



Lynx Creek Levee protecting Orchard Ranch RV Park



Dry Creek Levee protecting Sedona Shadows

Levee near Sedona protects the Sedona Shadows resort from the one-hundred-year flood, while the Lynx Creek Levee protects the Orchard Ranch RV Park. In addition to requiring certification with the Army Corps of Engineers, both levees have recently

come up against new FEMA guidelines for safe levee systems, known as PALs, or Provisionally Accredited Levees, and are in the process of being approved. The District is responsible to maintain and continue to certify the levees as needed.

See page three for additional District project photos.

What is the Clean Water Act?

The Clean Water Act was developed in 1972 to protect the Nation's waterways and to stop pollution from being discharged into waterways.

The Clean Water Act, or the Federal Water Pollution Control Act, as it is more properly known, was passed in 1972 to offer Federal protection to the country's waterways. This Act was passed because rivers and lakes were becoming alarmingly polluted and wetlands were drying up. The Clean Water Act's purpose is to stop pollutants from being discharged into waterways and to



maintain water quality to provide a safe environment for fishing and swimming. The Act also includes sections devoted to wetlands. It was realized that wetlands serve as areas of filtration and help to strain harmful pollutants from the water, provide flood control during storms and are vital habitats for plants and animals.

The goal of the Act was to have completely eliminated the discharge of pollutants into waters and to have those waters fit enough for fishing or swimming by 1985. Even though those actual goals have not been reached, pollutant discharge has been reduced significantly and recreational waters are much cleaner than in the 1970's. Approximately 75% of the waters tested have reached the goal. Point source pollutants, those that come from a specific, identifiable source, have been easier to regulate, while



non-point source pollutants, such as from storm runoff, are only beginning to be studied and researched.

The Clean Water Act provides guidelines and offers financial assistance for identifying the causes of pollution, and the clean up of polluted areas. There are standards and regulations that must be adhered to by industries that discharge into waterways and financial assistance is available for research and for the construction and operation of wastewater treatment facilities.

La Niña Update

Last month we mentioned the current La Niña condition would lead to a warmer and drier than average winter, just before a winter storm brought above average rain and snow fall to the County. So what happened?

According to the Southwest Climate Outlook, a weak to moderate La Niña event is still prevalent in the Pacific Ocean, however, "several wet and cold early winter storms moved through the region, dumping rain and snow in the southwest...These storms tapped tropical moisture and chilly polar air, creating ripe conditions for snow to fall at mid-elevations."

The storms on December 18 are being attributed to atmospheric rivers (ARs), or narrow bands of strong winds near the earth's sur-

face that funnel moist air over the ocean. The ARs result from uneven temperatures of the earth and form during the winter when the temperature difference between the tropics and the poles is the greatest. The result is usually rainfall and flooding that is limited to coastal areas, but once in a while they cross the coastal mountains into Arizona. The storms that caused flooding in Yavapai County in January of 2010 are also attributed to atmospheric rivers.

It is still believed that a weak La Niña condition exists and that it will peak in January and February. In the meantime, the unexpected storms have slightly improved drought conditions in Arizona, which is always good news. For more information go to <http://climas.arizona.edu/outlooks/swco>.

Gauge of the Month



ASH FORK DRAW @ I-40

Gauge ID: 3865

Gauge Type: Precipitation/Stage

Watershed: Big Chino Wash/Verde River

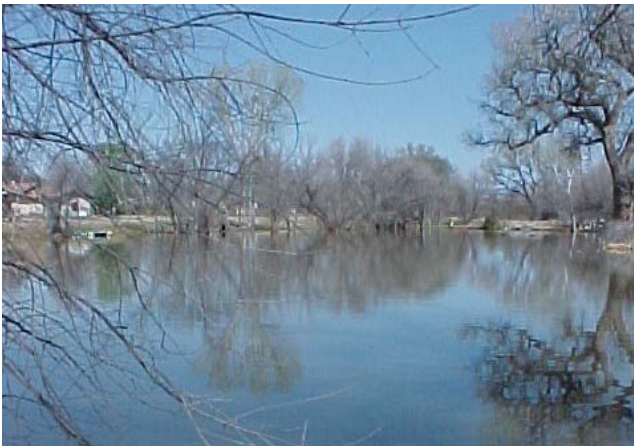
Installed: 5/4/2006

Location: Ash Fork

Projects continued from page one



The Chick Road Detention Pond under construction, above, and operating after a rainstorm, below. The pond was designed to minimize flooding for residential structures downstream of the pond near Cornville. The District continues to monitor and maintain the pond.



The Wineglass Dam spillway project, during construction, above, and at completion, below, was designed as a result of the State's determination to remove the dam from the unsafe dams list. By adding the spillway, the dam was able to remain in place and continue to provide flood protection to the properties below.



The District designs and constructs storm drain systems such as the system in the Village of Oak Creek shown above when there is space and required right-of-way available or attainable. Similar projects have been completed in areas such as Lake Montezuma and Black Canyon City.



Lee Wash in Lake Montezuma was lined with gabion baskets on the sides and gabion mattresses on the bottom. A similar project, in its preliminary stages, is being considered along South Rocky Boy Wash in Peoples Valley to prevent continued erosion into the properties platted along the wash in the early 1970s.



The Paso del Sol Subdivision in Congress benefitted from a channel that the District designed and built to protect properties in the floodplain.

The Next Five Years

With the effects of Hurricane Katrina and the ever increasing cost of flood damage the business of floodplain management is coming under increasing scrutiny. In the second half of the last century the push was for structural solutions to flooding. While those solutions have their place they come at a high cost and with a series of unintended consequences.

The business of floodplain management centers around three main tasks: Identification of flood risk, Communication of that risk, and Mitigation or reduction of the risk. All activities of the District are addressed to one or more of these tasks. A look ahead at the District's activities for the upcoming years will show focus in all three areas.

To identify flood risk the District has a number of floodplain studies underway with more areas identified for study in the future. While our base maps are provided by FEMA

those maps are outdated in some areas and are of questionable quality in others. Additionally, with advances in aerial mapping and computer modeling we can accomplish floodplain to a much greater degree of accuracy than with the tools of the past. Current study techniques provide a wealth of data concerning potential streamflow, water depth and velocity and other information that provides a much better picture of true flood risk.

With new computer resources, social media, reverse 911 systems and other resources the area of communication of flood risk has a variety of new avenues and options to explore. The District is working to provide a wide array of information on their website. We purchased a dedicated server this past year and will be developing a number of new information resources.

The third area, mitigation of risk, is an area

we will be focusing more attention to in the upcoming years. Nationally, the focus is shifting away from structural solutions to other areas. Generally, the focus will move toward development rules which encourage leaving natural floodplains in place, individual property mitigation strategies and increased attention to floodwarning and flood response planning. However, structural solutions do have a place in the equation and the District will continue to pursue drainage improvement projects. To that end, we have developed a 5-year project plan and we will be developing community specific mitigation plans that will address all aspects of mitigation plans.

Other things on the horizon for the District will be a move to a new building and working with the building department and Public Works engineers to develop a detailed engineering criteria manual for use Countywide.

Yavapai County Flood Control District

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Prescott, AZ 86303

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Fax: 928.771.3427

10 S. Sixth St.
Cottonwood, AZ 86326

Phone: 928.639.8151
Fax: 928.639.8118

www.co.yavapai.az.us

Please visit the County website for more information:

- Applications, Forms and Instructions
- Building Codes
- Community Plans
- Drainage Criteria Manual
- Fees/Impact Fees
- Flood Hazard Status Reports
- Flood Protection Information
- General Plan
- Ordinances
- Regulations
- Storm Water Management Program
- Related Links & More

COUNTY TOLL FREE TELEPHONE NUMBERS

Ash Fork, Bagdad, Seligman, Yarnell 800.771.2797
Black Canyon City and Phoenix Area 602.495.8800

COUNTY SWITCHBOARD NUMBERS

Prescott 928.771.3100 - Verde Valley 928.639.8100

The Yavapai County Board of Supervisors also serve as The Board of Directors for the District.

The initial floodplain ordinance was adopted December 1981, and has been revised over the years.

The Drainage Criteria Manual, was first adopted November 1998, and revised August 2005. The current Ordinance and Drainage Criteria Manual are available on line at the County website or may be purchased at the Prescott and Cottonwood District offices.

Services Performed

The District is available for assistance or technical advice on the following topics:

- National Flood Insurance Program
- District ALERT System
- Flood Insurance Rate Maps
- Flood Status Information on a Parcel of Land
- Flood Protection & Safety
- Local Flood Hazard
- Development & Permitting within the 100 year floodplain
- Construction in or adjacent to a significant watercourse
- Storm Water Quality and Pollution Control

Flood protection information and links to other agencies are available on the County website. Go to www.ycflood.com for archived issues of this newsletter.