

**RESOLUTION 2018-04**

**A RESOLUTION OF THE MAYOR AND COUNCIL OF THE TOWN OF  
TUSAYAN, COCONINO COUNTY, ARIZONA REGARDING  
ASSUMPTION OF FLOODPLAIN MANAGEMENT  
RESPONSIBILITIES.**

**WHEREAS**, pursuant to A.R.S. § 48-3610, the Town of Tusayan (“**Town**”) is authorized to assume the powers and duties of floodplain management under Article 1 of Chapter 21 of Title 48 of the Arizona Revised Statutes; and

**WHEREAS**, the Town Council hereby determines that assuming such powers and duties of floodplain management is in the best interests of the Town.

**NOW THEREFORE, THE MAYOR AND COMMON COUNCIL OF THE TOWN OF  
TUSAYAN HEREBY RESOLVE THAT:**

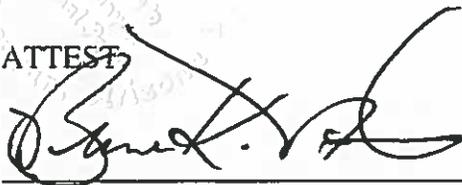
1. The Town intends to assume the powers and duties of floodplain management under article 1 of chapter 21 of title 48 of the Arizona Revised Statutes as authorized by A.R.S. § 48-3610;
2. Town staff is directed to notice and schedule a hearing on the form of floodplain ordinance attached hereto as Exhibit A (“**Floodplain Ordinance**”) as required by A.R.S. 48-3609.F;
3. Following such hearing, the Town Council will adopt the Floodplain Ordinance at a duly called meeting of the Town Council and thereby assume floodplain management responsibilities.

**PASSED AND ADOPTED** by the Mayor and Town Council of the Town of Tusayan, Arizona this \_\_\_ day of July 2018.



\_\_\_\_\_  
Craig Sanderson, Mayor

ATTEST



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Bruce K. Northern, Town Clerk

APPROVED AS TO FORM:



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William J. Sims, Town Attorney

MEMO

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# of pages: 4

DATE: April 10, 2018

TO: Clarinda Vail  
Red Feather, Inc.

FROM: Michael Kearly, PE, CFM

RE: Potential Floodplain Management by Town of Tusayan

Clarinda

The purpose of this letter is to provide you with some technical information and background into the issues relative to incorporated communities choosing to self-administer the floodplains within their jurisdictions. It is understood that the Town of Tusayan is considering adopting an ordinance to assume floodplain management within their corporate boundaries with the intended purpose of expediting corrections to perceived errors in the current Flood Insurance Rate Map (FIRM). As a concerned resident and business/property owner, you desire that the Town be as informed as possible before making such a decision. I am unaware of the Town's level of research and understanding of floodplain management to this point, but as a licensed civil engineer and certified floodplain manager, can highlight some concerns that I would have if I were informing the council.

Arizona Cities and Towns and Floodplain Management: As a bit of context, all 15 counties within the state of Arizona and 90 cities/towns within those counties participate in the National Flood Insurance Program (NFIP). Participation is required in order for property owners to purchase flood insurance. Of the 90 cities and towns, roughly half defer floodplain management to their respective county flood control districts. A community that defers floodplain management is referred to as a District Dependent Community (DD) and by default, all communities are DD unless they formally assume the role of floodplain management.

The size of the community does not appear to necessarily dictate whether it defers floodplain management to their County. That is, there are large and small cities alike that choose to not assume the role of floodplain manager. If there is a trend that can be inferred from the data, it would appear that generally, where a county has a well-staffed and proactive flood control district, the inclusive communities of that county tend to defer their floodplain management. Maricopa, Yavapai and Pinal counties all have fairly active flood districts and a majority of their cities and towns defer flood control to them.

In Coconino County, only Sedona and Tusayan currently defer floodplain management. This may be partly due to passive management practices in years past. However, the County has taken steps in recent years to actively manage its floodplains. Those steps include a tax specifically for a Flood Control District and adding support staff devoted to floodplain management.

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With the Flood Control District tax revenue, since 2012 the County has commissioned and completed at least three formal floodplain studies to include Kachina Village, Munds Park and the Ft. Valley area. Additionally, the County recently commissioned an assessment of potential post-wildfire debris flow and flooding in the event of wildfire in the watersheds above the Williams and the Ft. Valley communities. These are examples of how the County is now taking a proactive approach to floodplain management with the funds available from its larger tax base. Given the tourism tax dollars that the businesses in Tusayan represent to the County and the possible impact that a large flood event could have, it seems reasonable that with some coordination between the Town and the County, Tusayan could benefit from similar actions by the Flood Control District.

Relative to smaller communities of similar scale and/or economic base as Tusayan, there are 28 incorporated communities in Arizona with populations less than 5,000. Of those 28, a little less than half (13) self-administer their floodplains. The remaining communities have chosen to defer to their respective county flood control districts for floodplain management. In those arrangements, it is typical that the city or town work closely with the flood control district for general community development and emergency response planning. Additionally, the community's building departments work closely with the district as part of their permit approval process to ensure that floodplain issues are properly addressed before plan submittals are approved.

Requirements of Floodplain Management: For a community to assume the role of floodplain management for the FEMA-regulated floodplains within their boundaries, there are policy and technical concerns for which the Town leadership should be considering and reasonably informed about prior to making such a decision.

Assuming the role of Floodplain Management requires a level of technical expertise to perform correctly and complying with NFIP regulations may add a significant staff time burden and/or costs associated with a contracted engineering firm to manage the program. Typically the person designated as floodplain manager is also certified as such (CFM) through the Association of State Floodplain Managers (ASFPM) and is required to continually stay abreast of the ever changing rules and regulations. Speaking with other small Arizona communities that have elected to take on Floodplain Management may give insight into the level of paperwork and staff/external costs. If the Town has not yet done so, it may be a worthwhile exercise to reach out to those communities and gain their perspective on the pros and cons of self-administration of FEMA floodplains. Some relatively small communities (less than 5K in population) within Arizona that have chosen to take on floodplain management include Fredonia, Kearny, Parker, Patagonia, and Williams.

As an incentive to better manage floodplains, FEMA has a Community Rating System (CRS), in which every community can voluntarily participate. The program allows communities to obtain discounts for their property owners that are required or elect to have flood insurance. Ratings are from 1 to 10, with 1 being the highest. New communities start out with a rating of 10 (lowest) and can move up in the scale depending upon their proven compliance with NFIP regulations and other pro-active floodplain management practices. As a DD community of Coconino, Tusayan property owners within floodplains currently receive a 10% discount in premiums based upon the county's current rating of 8. As described earlier, Coconino County has taken steps in recent years to more actively manage the floodplains under its jurisdiction and with time and a proven record of proactive management, the county may move up in its rating. Flagstaff for example,

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with a fully staffed Stormwater Management Department has a CRS rating of 5, which provides a 25% discount for flood insurance to property owners in flood zones.

A word of caution may be in order for anyone with the perception that floodplain management allows decision making authority over FEMA floodplains without due diligence. FEMA will periodically audit communities for compliance with NFIP regulations and, if found in violation, can suspend their involvement in the program. If suspension were to occur, existing flood insurance policies would not be cancelled, but new flood insurance policies would not be issued until the community was brought into compliance. Such a situation can have an economic impact to the community. As most mortgage and finance companies are required by the federal law to require flood insurance on insurable structures within floodplains, suspension could impact the ability to sell and/or finance properties and construction projects. Existing policy holders would also see their flood insurance rates increase by way of a surcharge to those policies while the community is under suspension.

Proactive Flood Control Management: An important part of actively managing floodplains will be to have a well thought out strategy, budget and commitment for moving forward. It is fairly obvious to those in the Tusayan community that the existing FEMA-mapped floodplain poorly matches reality. This can likely be attributed to the floodplain not having been studied in any detail and that the original flood boundaries were likely defined using poor resolution USGS topographic maps dating to the 1970's.

One of the first tasks of active floodplain management would likely be to formally remap the floodplain using updated topographic maps and updated hydrologic/hydraulic modeling. Typically the remapping effort will require a detailed study by an engineering firm, development of what is called a Technical Data Notebook (TDN) and a submittal to FEMA for review and approval. And while the town floodplain administrator is required to approve the TDN and its included hydrology/hydraulics prior to submittal to FEMA, they would not be the final approving authority. Peer review by FEMA-contracted engineers and hydrologists is part of the approval process. Personal experience has shown that those reviewers prefer to error on the conservative side in the range of possible flooding scenarios and typically favor larger calculated flows and wider floodplains.

Such an effort can be time consuming and costly. Tusayan has one primary flooding source (Coconino Wash) with several significant tributaries that would likely be formally mapped in any detailed flood mapping effort. Typically the study and approval process through FEMA will take at least a year to complete with costs in the hundreds of thousands of dollars. Coconino County Flood Control has recently performed detailed flood mapping of the Kachina Village, Munds Park and Ft. Valley areas and should be able to provide the Town with comparative costs for such a study, if they inquire.

Other Considerations: As the existing floodplain map for Tusayan is recognized to be inaccurate, it should be understood that updated and more detailed mapping will likely place properties into the mapped floodplain that aren't now within it and vice versa. Those parcels with buildings that fall inside the floodplain will likely be required to purchase flood insurance if any existing or future financing occurs relative to those properties. Those parcels that are removed from the floodplain (if any) may see a reduction in flood insurance rates and likely have the requirement of flood insurance dropped by their lending institutions.

Overall though, a more accurate flood map would be a net positive to the community and its citizens. An accurate floodplain map allows for responsible, informed growth, better planning, safety of citizens, and protection of the community's business and residential properties.

Whether the town performs the flood mapping effort for themselves or remains a District Dependent community, expectations with the public will need to be managed and that will require a firm understanding of the costs and processes. It is almost certain that the remapping effort would be less costly for the Town if it defers to the County. The Flood Control District has utilized its funding to hire qualified contractors to provide hydrologic studies and flood plain remapping services. Additionally, a remapping study of the Coconino Wash will take time to complete. However, with close cooperation between the Town and Flood Control District, it may be possible to correct the apparent inadequacies in the existing flood maps in a more cost effective manner for the town. This possibility should be fully explored before the Town spends limited resources on the technical requirements of managing their flood plains.

If you have further questions regarding floodplain mapping and policies, please let us know and we will do our best to provide you with answers.

Michael D Kearly, PE, CFM  
Principal Engineer  
Natural Channel Design, Inc.  
Flagstaff, Arizona



EXPIRES: 03/31/2021