

Public Comments Received on the Proposed 2019 Update to the Pinal County Floodplain Ordinance

Comment #	Source of Comment	Location/Section	Comment	Pinal County Response	Action
1	Black & Veatch	General	Fill in Floodplains, Per the Proposed 2019 Ordinance, will the Engineer of Record be required to demonstrate there is no cumulative impact, taking into account all adjacent (including historic) activities within the floodplain. Solely limiting the evaluation to the area of interest can provide a misleading results and could create risk for the County should the total cumulative impact not be monitored for long term changes.	Each site and plan of development (Including fill) is a stand alone unit which must demonstrate that it meets the requirements of the Ordinance and the NFIP. If each individual site can be shown to not increase flood heights or negatively affect flood velocities as compared to the pre-developed condition, then the expected cumulative impact would be negligible. In other words, if all developments individually show no adverse impact, then the resulting cumulative effect should be same.	The Ordinance already has a definition for "Compensatory Storage, however, we have added clarifying language to section 6.05.G specifying that "Depending on the degree of encroachment into the Regulatory Floodplain, the Floodplain Administrator may require Compensatory Storage as part of the plan of development and Floodplain Use Permit approval in order to ensure that there is no increase in Base Flood Elevations. "
2	Black & Veatch	General	Fill in Floodways, Per the Proposed 2019 Ordinance, same question as above. If the Engineers Certification is based on an individual lot analysis and not cumulative changes it can provide an incomplete answer, thus creating unintended risk to adjacent properties.	Each site and plan of development (Including fill) is a stand alone unit which must demonstrate that it meets the requirements of the Ordinance and the NFIP. If each individual site can be shown to not increase flood heights or negatively affect flood velocities as compared to the pre-developed condition, then the expected cumulative impact would be negligible. In other words, if all developments individual show no adverse impact, then the resulting cumulative effect should be same.	The Ordinance already has a definition for "Compensatory Storage, however, we have added clarifying language to section 6.35 specifying that "Depending on the degree of encroachment into the Regulatory Floodway, the Floodplain Administrator may require Compensatory Storage as part of the Floodplain Use Permit approval in order to ensure that there is no increase in Base Flood Elevations."
3	Black & Veatch	General	Building in Floodways, Per the Proposed 2019 Ordinance. Cumulative impact question is also valid here. Furthermore, it appears the County is moving toward the option of allowing substantial improvements and building replacements in the same footprint on standard foundations or existing foundations. If structures are located within the identified floodway, perhaps this should be discouraged to minimize the partial risk to property flood damages and potential losses. Relying on the elevation certificate alone may not be the best course of action for this risk. I think you may concur that the placement of substantial improvements, in an area of such risk, is discouraged per the NFIP and are recommended for removal or floodproofing efforts.	Any substantial improvement to an existing building in the floodway would be required to meet the elevation requirements of Section 6.05. This would mean that if the lowest floor elevation is too low in its current condition then it would need to be raised to meet the requirements. One thing to note is that most of the floodways in Pinal County are either A) urbanized with development (including buildings) existing for years prior to the floodway being mapped, or B) Very wide with shallow flows. In some cases the floodway is 2 miles wide and flow depths are 1-2 feet at relatively low velocities. The goal here is to accomodate these issues without compromising the minimum requirements to have elevated buildings and no rise in flood heights.	No Action
4	Black & Veatch	General	Standards for Storage of Materials and Equipment, Per the Proposed 2019 Ordinance. a. Does this apply to emergency equipment for flood fighting scenarios? Typically it should be elevated above the 100-yr floodplain and accessible by emergency crews. I've observed flood fighting equipment sorted in the bottom of basins, low lying areas, or in situations with little to no access during significant storm events. A dedicated area of elevated or protected land with secured space for storage of flood fighting materials should be identified and recorded, value added credit for the NFIP as well. b. Does the policy have restrictions for propane tanks in the floodplain/floodway? We would highly encourage them to be secured to concrete foundations and properly restrained to avoid displacement during floods.	Section 6.10, Standards for Storage of Materials and Equipemtn pertains only to the storage or processing of hazardous materials as described this section and would not apply to emergency equipment for flood fighting. The language is taken directly from the Arizona State Model Ordinance. With regards to propane tanks, this should be addressed in section 6.05.030 as part of the requirements for Utility Appurtenances.	Added the words "propane tank" to section 6.05.030

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5	Mark Fountain, PE, CFM, ENV SP with Black & Veatch	Section 6.20.040	Use of above ground structures, Per the Proposed 2019 Ordinance. It is my assumption this proposed change is intended to prohibit the construction of new structures while grandfathering any existing features into the County portfolio. Is grandfathering addressed in detail with limitations? With respect to previous inspections, there are sizeable berms/levee like features that currently exist and create risk with their above ground impoundment on agricultural properties. Is the intent of this ordinance to defer the need for additional insurance, inspection programs, minimize risk, or other?	The use of above ground flood control structures to protect residential properties comes at a significant cost and with a significant risk to Pinal County. In addition to the residual flood risk associated with these types of structures, there are also increased operation and maintenance requirements, certification and permitting requirements, as well as requirements for insurance, among other things. Currently in Pinal County there are 2 certified Levees and several dams. These existing structures would not be impacted by this section of the Ordinance. Pinal County has received very few of these proposals in the past. The intent here is not to prevent these types of projects outright, but instead to bring them to the attention of the Board so that the elected officials have an opportunity to review the proposal and understand the risks, financial implications, advantages, and disadvantages that come with protecting residential properties from flooding using levees, dams, berms, etc. In this way, the Board would make an informed decision on this issue rather than the Floodplain Administrator.	Change section 6.20.40 from "...protect new residential structures or residential lots from flooding or to revise the current FIRM panels is prohibited unless specifically authorized by the Flood Control District Board of Directors." to "...protect new residential structures or residential lots from flooding or to revise the current FIRM panels requires specific authorization by the Flood Control District Board of Directors before a plan of development, Floodplain Use Permit, Conditional Letter of Map Revision, or Letter of Map Revision will be approved. Such flood control structures, if authorized by the Flood Control Board of Directors, shall meet all applicable Federal Emergency Management Agency (FEMA) and Army Corps of Engineers engineering standards."
6	Arizona Game and Fish Department	Section 1.25.030, pg 5	Change to "...stream channels, natural protective barriers, and other riparian areas, which help..."	Additional wording added. This is consistent with the definitions as well as section 5.05.070	Added the words "and other riparian areas" to section 1.25.030
7	Arizona Game and Fish Department	Section 2.05, pg 7	Edit definition of Areas Drainage Master Study (ADMS): "identify potential flood hazard areas, drainage problems, riparian areas, and recommended solutions..."	An ADMS is performed specifically for Hydrologic and Hydraulic purposes and would not include identifying environmental issues or concerns. These issues can be a supplement to an ADMS, however, they are typically studied separately.	No Action
8	Arizona Game and Fish Department	Section 2.05, pg 10	Don't use "watershed" in this first senence if you are also defining a draingage area as a watershed.	Noted	Changed the definition of drainage area to state "contributing area of land" instead of "watershed."
9	Arizona Game and Fish Department	Section 2.05, pg 16	Should be "Perennial Stream". Other two classifications in these definitions are "intermitent stream" and "ephemeral stream."	Noted	Changed "Perennial" to "Perennial Stream"
10	Arizona Game and Fish Department	Section 2.05, pg 18	Change "Riparian" to "Riparian Area"	Noted	Changed "Riparian" to "Riparian Area"
11	Arizona Game and Fish Department	Section 2.05, pg 20	Current definition does not account for ecological or biological services provided by a watershed. Add definition of watershed: "The land within which all the water drains to a single place or outlet. These drainage networks provide essential ecosystem services."	Watershed Definition is for floodplain management purposes as it pertains to this ordinance.	No Action
12	Arizona Game and Fish Department	Section 2.05, pg 20	Add definition of "Wildlife Corridor." Per these comments, "wildlife corridor" will be used in-lieu of "critical wildlife connectivity zones" that is currently used in this document. As defined by Arizona Game and Fish Department: " 153. Wildlife Corridor: <i>Natural features such as riparian areras, canyons, ridgelines, and other landscapes features that constrain wildlife movements in more restricted paths. Sometimes called wildlife linkage.</i> "	We can add this	New Definition added.
13	Arizona Game and Fish Department	Section 4.10.060, pg 28	Can Arizona Game and Fish Department be notified along with ADWR when there is alteration or relocation of watercourse? This will be critical in effectively implementing the review tools that we are currently developing for Pinal County.	While we agree that coordination with AZ Game and Fish is important, it's beyond the scope of this Ordinance Update at this time. The ADWR notification is already part of the code. We would suggest developing standard operating procedures within the permting process rather than having this put in the code at this time.	No Action

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14	Arizona Game and Fish Department	Section 5.05.070, pg 34	Please add references to other Pinal County planning documents. Change to "...with the Pinal County Comprehensive Plan (2009), Pinal County Open Space and Trails Master Plan (2007), and Pinal County Development Services Code (2018), Pinal County Flood Control encourages the protection of..."	We can add these references	Added additional references.
15	Arizona Game and Fish Department	Section 5.05.070, pg 34	Replace term "critical wildlife linkage zone" with "wildlife corridor." Shuld read, "...and fissure zones, areas of steep slope, and wildlife corridors ."	We can add this	Section Changed
16	Arizona Game and Fish Department	Section 5.05.070, pg 34	What does "special consideration during the development design process mean"? Is there a consultation process for these special considerations? If AGFD would like to be integrated into this process as part of our on-going efforts with the Pinal County riparian area mapping tool.	The intent of this section is to encourage land developers to consider impacts to environmentally sensitive areas as it pertains to the natural and beneficial functions of the floodplain. It's important to note that a naturally functioning floodplain may offer benefits to developers that could be on par with a constructed floodplain when all things are considered. While there are no specific requirements here, any land developers would need to consult with other agencies as required by their respective codes and regulations in addition to adhering to the referenced plans that have been adopted by the Pinal County Board of Supervisors. We would suggest developing standard operating procedures within the permting process rather than having this put in the code at this time.	No Action
17	Arizona Game and Fish Department	Section 6.20.050, pg 39	"...subject to flooding..."	Noted	Change made
18	Arizona Game and Fish Department	Section 6.20.050, pg 39	Change to "...and location of riparian areas and all facilities proposed to alleviate..."	This is separate issue and goes beyond the the scope of this ordinance.	No Action
19	Wood/Patel & Associates	Section 6.20.040	<p>The first comment is pertaining to the "Flood Control Structures: (levees, dams, dikes, berms, embankments)" as defined in the proposed ordinance. For simplicity, we have referred to these structures as levee or levee-like in this letter. To complete the proposed ordinance review, we also reviewed similar levee related policy by the major counties in Arizona including Maricopa, Pima, Yavapai, and Mohave. Note, none of these counties prohibit levees or levee-like structures. They all recommend the levees be designed using sound engineering practices, and that if needed, FEMA floodplain and levee design guidelines should be followed including the CLOMR and LOMR processes.</p> <p>Please realize if the proposed ordinance is approved, the County and the Board of Supervisors may be constantly dealing with appeals for their approval of the levee/leveelike structures. We have seen hundreds of levee-like structures whether they are a simple roadway embankment to go over railroad or other cross road or canal or simply trying to meet the traffic related design issues. Numerous culverts and bridge crossings also create levee-like structures and may fall into the County's proposed levee policy. These types of embankments typically create a ponding or backwater and may fall into the proposed levee policy also and create a huge bureaucracy for the approval process. We are not sure the Board is aware of these critical issues. Clarification is needed if the County will be regulating the levee-like structures by ADOT and the railroads. If you are concerned about the levee maintenance issues, that burden should be placed on the City or Town dealing with the levee/levee like structure issues. We appreciate this opportunity to provide our comments. We also urge you to get feedback from the local cities, communities, County's different departments (mainly street and traffic) as well as the development communities. I am sure you may hear similar comments from the various groups.</p>	The use of above ground flood control structures to protect residential properties comes at a significant cost and with a significant risk to Pinal County. In addition to the residual flood risk associated with these types of structures, there are also increased operation and maintenance requirements, certification and permitting requirements, as well as requirements for insurance, among other things. Currently in Pinal County there are 2 certified Levees and several dams. These existing structures would not be impacted by this section of the Ordinance. Pinal County has received very few of these proposals in the past. The intent here is not to prevent these types of projects outright, but instead to bring them to the attention of the Board so that the elected officials have an opportunity to review the proposal and understand the risks, financial implications, advantages, and disadvantages that come with protecting residential properties from flooding using levees, dams, berms, etc. In this way, the Board would make an informed decision on this issue rather than the Floodplain Administrator.	Change section 6.20.40 from "...protect new residential structures or residential lots from flooding or to revise the current FIRM panels is prohibited unless specifically authorized by the Flood Control District Board of Directors." to "...protect new residential structures or residential lots from flooding or to revise the current FIRM panels requires specific authorization by the Flood Control District Board of Directors before a plan of development, Floodplain Use Permit, Conditional Letter of Map Revision, or Letter of Map Revision will be approved. Such flood control structures, if authorized by the Flood Control Board of Directors, shall meet all applicable Federal Emergency Management Agency (FEMA) and Army Corps of Engineers engineering standards."

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20	Wood/Patel & Associates	Section 4.10.110.B	<p>The second comment is about limiting the validity of CLO MR for a 5-year period from its approval date by FEMA. The proposed ordinance may limit the validity of a CLOMR to a 5-year period. I think that may be okay for a small project but some projects like the Lower Santa Cruz Wash Channel in Pinal County are too big to have the improvements in place within a 5-year period. Typically, these larger regional projects are built in phases. Please note even when the project is built, developing as-built/record construction drawings, TSDN submittal and approval for a LOMR can require more than 6 to 8 months. We have seen several projects take over 10 years to complete, and that kind of condition may cause a huge CLOMR management issue. A couple of questions come to mind relating to this issue. Would an applicant have to resubmit the CLOMR documentation to the County potentially multiple times if the project wasn't fully constructed within five (5) years of the initial approval? If FEMA has approved a CLOMR and the County voids the CLOMR after five (5) years, is there a conflict between federal and local jurisdiction? Again, we appreciate the opportunity to provide feedback on the proposed ordinance. Please do not hesitate to e-mail or call if you would like to discuss in further detail.</p>	<p>This issue was discussed at length. Given that a CLOMR is Conditionally approved by both FEMA and Pinal County, the approval remains contingent upon A) the plan of development remaining unchanged from what was proposed when the CLOMR was originally approved and B) That the conditions of floodplain have not changed since the time the CLOMR was approved. Furthermore, approval of a CLOMR specifically deals with a proposal to revise the Flood Insurance Rate Maps and does not actually authorize construction of any improvements. Construction authorization is given with the issuance of a Floodplain Use Permit. With that said, we feel comfortable deleting 4.10.110.B</p>	<p>Section 4.10.110.B has been removed.</p>
21	Arizona Rock Products Association	Section 6.50	<p>[Summary Based on Phone Conversation] There are some significant concerns with the proposed language in section 6.50, Standards for Sand and Gravel Operations. There are some items, especially with regards to bonding, reclamation plans, and vegetation control that are of particular concern. ARPA would have a problem with these regulations as written and could not support the proposed changes. We request a meeting to discuss further.</p>	<p>Given the concerns noted, we will change the standards and requirements noted in section 6.50 back to what they were in the currently effective ordinance.</p>	<p>Revised Section 6.50 to match 2006 Ordinance Language</p>
22	Arizona Rock Products Association	Section 2.05, Definition 7	<p>[Summary Based on Phone Conversation] The definition of Adverse Impact is of significant concern to ARPA. As written it would appear to give preference to the first Sand & Gravel operation that submits a permit application in a particular area. In addition, it would also appear that the definition would create ambiguity with what constitutes "anticipated development" which could potentially have a big effect on permitting an operation. As written, ARPA could not support this definition. Note that ARPA has been working with FCDMC on this specific for a number years. We request a meeting to discuss further.</p>	<p>Given the concerns noted, we will remove the definition of Adverse Impact from the Ordinance while we continue to meet and work on this issue. Removal of the definition does not fundamentally change the Ordinance and, as a whole, the proposed regulation would still meet minimum federal requirements.</p>	<p>Removed definition of "Adverse Impact"</p>