



COCONINO
COUNTY ARIZONA
COUNTY MANAGER'S OFFICE

James Jayne
County Manager

December 13, 2020

Lucinda Andreani
Deputy County Manager

Dear Fort Valley Community,

Joanne Keene
Deputy County Manager

Thank you for your communications about your concerns relative to home construction in the Fort Valley area. Your communications have provided an opportunity for the County to develop this comprehensive response to your concerns. Our intention with this communication is to provide a specific response to the request for a building moratorium in the Fort Valley area, and in addition provide the history and current regulatory frameworks relative to both regulating wastewater systems and managing the FEMA Special Flood Hazard Area in Fort Valley.

Dr. Marie Peoples
Deputy County Manager

As noted, the communication from some community members included a request to the Board of Supervisors to impose a building moratorium in the Fort Valley area. The Board of Supervisors sought an opinion from the County Attorney's Office regarding the extent of its authority to enact a building moratorium or to impose other regulations to address the concerns coming out of the Fort Valley community. As a political subdivision of the State of Arizona, the County only has the authority explicitly granted to it through statute.

According to A.R.S. § 11-833, the County may impose a building moratorium in very limited circumstances. In the case of a rural area such as the Fort Valley community, a moratorium is authorized upon a demonstration of a compelling need for public facilities (or perhaps more aptly, *public services*) *other than* essential public facilities. Thus, a moratorium could only be based on a compelling need for services like police and fire facilities, not essential services such as water, sewer, and water resources. As the request for a moratorium from the Fort Valley neighborhood is based on water resources, an essential public facility according to A.R.S. § 11-833, the County does not have the authority to issue a building moratorium under these circumstances.

Further, the County has very little authority to take any action with regard to water quality or adequacy issues as the State, through both the Arizona Department of Environmental Quality (ADEQ) and Arizona Department of Water Resources (ADWR), have exclusive authority to regulate in those areas. The County, through a delegation agreement with the State, is authorized to enforce certain ADEQ regulations and does so through its wastewater system permitting process. To the extent the Arizona State Legislature has provided counties any ability to address conditions specific to their jurisdictions, the County does not believe the

circumstances in Fort Valley fit the very narrow criteria relative to invoking a moratorium.

The document attached to this letter provides additional detail that outlines the history of and describes the current regulatory frameworks for regulating wastewater systems and managing the FEMA Special Flood Hazard area in the Fort Valley. I encourage you to review this document and share it with others in the community.

Thank you again for your communication.

Sincerely,



Lucinda Andreani
Deputy County Manager
Public Works Director
Flood Control District Administrator



Permitting of Wastewater Systems and Floodplain Management in Fort Valley December 2020

The purpose of this document is to provide the history of and current regulatory frameworks for regulating wastewater systems and managing the FEMA Special Flood Hazard Area in the Fort Valley area.

Brief Overview of State Regulatory Frameworks for Water Quality and Water Production

The Arizona Department of Environmental Quality (ADEQ) establishes standards for Aquifer Water Quality and Surface Water Quality. This state agency establishes requirements for onsite wastewater systems in order to meet those standards. The administration of that program is delegated to Coconino County for all systems with a flow of less than 24,000 gpd, which is all the current systems in Fort Valley. ADEQ also establishes requirements for public water systems, which there is only one in Fort Valley. Per ADEQ, a public water system serves at least 15 connections or 25 people. More information on ADEQ's regulations can be found at:

ADEQ Web site: <http://www.azdeq.gov/>

ADEQ Laws and Rules: <http://www.azdeq.gov/LawsAndRules>

Delegation Agreements: <http://www.azdeq.gov/delegation>

(ADEQ was created in 1986. Before that the Arizona Department of Health Services (ADHS) was the applicable state regulatory agency.

The Arizona Department of Water Resources (ADWR) establishes standards and requirements regarding ground and surface water resources (i.e., quantity as opposed to quality of water). The use of water is heavily regulated in Active Management Areas. Neither Fort Valley nor Flagstaff is an Active Management Area. Therefore, the regulatory control by ADWR is minimal. As a result, there is no delegation to Coconino County, which means that the County has basically no authority to require water adequacy relative to single-family development outside of subdivisions. The County does support the ADWR well permitting process by performing a field review of well locations to confirm the 100-foot setback to onsite wastewater systems is met. The ADWR regulations can be found at:

ADWR Web site: <https://new.azwater.gov/>

Site Conditions in Fort Valley

The Rio de Flag, an intermittent stream, passes through Fort Valley. The slope is flatter and the water soaks into the ground, first into a zone of seasonal saturation/shallow groundwater (less than 30 feet) that can be present for significant periods but is



unsuitable for human consumption without water treatment as it is under the direct influence of surface water. There is a deeper groundwater aquifer (100 feet +/-) that is suitable for human consumption without further treatment.

There are two main site limiting issues for onsite wastewater systems in Fort Valley:

1. Vertical separation from seasonal saturation and shallow groundwater. There must be an adequate depth of unsaturated soil below the disposal system to assure the effluent is treated adequately before it is released into the environment. The depth required is dictated by the level of treatment performance provided by the treatment system.
2. Horizontal setback from a wash or intermittent stream. There must be adequate distance between the onsite wastewater system and water bodies to protect the water quality in the water bodies.

The History of Wastewater System Regulation in Fort Valley

Below is a chronological history of wastewater systems and the regulation of wastewater systems in the Fort Valley area focusing on the major milestones. However, before the chronology begins it is important to note that the ADEQ delegation of authority to Coconino County also was changed.

Prior to 1986, the Coconino County Health Department held the delegation agreement with Arizona Department of Health Services (ADHS) and therefore was responsible for administering and regulating wastewater systems throughout the County including in Fort Valley. Around 2015 Coconino County shifted the Environmental Quality staff out of the Health Department and into the Community Development Department, which was a seamless process with little more than new titles for the staff performing the work. The ADEQ delegation agreement is currently held by the Coconino County Community Development Department, which is now responsible for administering and regulating wastewater systems throughout the County and in Fort Valley.

1997 Groundwater Study:

A groundwater study was performed by the Arizona Department of Environmental Quality (ADEQ) titled "The Impacts of Septic Systems on Water Quality of Shallow Perched Aquifers: A Case Study of Fort Valley, Arizona" dated February 1997. The groundwater was in compliance with ADEQ water quality requirements except for two very shallow wells. The study identified that some groundwater was affected by septic tank leach field systems. The study considered the replacement of those systems. Although the recommendation was considered, ADEQ then decided to reject the recommendation. A number of recommendations regarding site investigation, soil classification, and vertical separation were made. All of those recommendations made it into the ADEQ rule in 2001. Coconino County implemented the rule revision.



The link to the 1997 is

Web Link: <https://www.coconino.az.gov/DocumentCenter/View/40066/Fort-Valley-Groundwater-Study>

1962 to 1989 ADHS/ADEQ Engineering Bulletin 12 Guidelines:

While technically the Engineering Bulletins were guidelines as opposed to requirements, the program was administered by Coconino County as a requirement. Bulletins in 1962, 1974, and 1976 focused solely on septic tank leach fields. Some alternative systems were approved by ADHS/ADEQ and in 1989 Bulletin 12 included guidelines for alternative systems. Horizontal separation was consistent, but the definitions became more detailed. The vertical separation to groundwater became more specific as well.

2001 Arizona Administrative Code, R18-9-Article 3:

In 2001 ADEQ adopted requirements in the Administrative Code for onsite wastewater systems with more alternative systems and adopted the ASTM (American Society for Testing and Materials) International standard for soil classification system, which allowed the site investigator to identify seasonal saturation that might not actually be present at the time the site investigation is done. For example, a site investigation in some areas of Fort Valley in the spring is likely to encounter shallow groundwater at or near the ground surface, but a site investigation at the same location in the summer would not encounter any water.

Because of variations in the site investigations performed by private sector practitioners and the issues identified in the above-mentioned groundwater study, Coconino County established a site investigation permit so that all soil classifications were done by County staff. Administration of the program varies county by county in Arizona, but Coconino County is the only county to use County staff exclusively to perform soil classifications, which results in more consistent and unbiased soil classification.

It is very important to note that a traditional wastewater system (septic tank and leach field) has **not been permitted in the Baderville section of Fort Valley since 2001.** There have been traditional wastewater systems permitted near the boundary of what is seen as the Fort Valley area, but there have been none permitted in the area that has been the focus of concerns.

2005 AAC, R18-9-Article 3 revisions:

In 2005 ADEQ revised the rules but there were no significant changes for the onsite wastewater program.



2015 Fort Valley Initial Engineering Assessment:

Coming out of the Schultz Flood experience, the Coconino County Flood Control District initiated updated hydrology studies for four of the five FEMA Special Flood Hazard Areas (SFHA) in the County including the SFHA in the Fort Valley area. The current FEMA approved floodplain map for the area was created in 1968 and the technology now available to study both the hydrology (the volume of floodwater) and the hydraulics (the velocity, depth and other characteristics of the floodwater) had advanced significantly. The area was mapped with 1-foot contours, which allows for a much more detailed modeling of the floodplain. In 2015 two engineering firms, Civiltec Engineering and J.E. Fuller Hydrology and Geomorphology completed the Fort Valley Initial Engineering Assessment (IEA). The study utilized FLO2D modeling of the 100 year and the 10-year flood events.

With regard to the new floodplain mapping, the 10-year flood event is the event required by ADEQ to be used when siting wastewater systems. The new 10-year map began being used in 2015 and continues to be used to site wastewater systems in Fort Valley. The required setback from an intermittent stream was set at 100 feet from the 10-year event in 2001 by ADEQ and the County requires compliance with that requirement. This requirement did not change as a result of the new flood mapping, but the new 10-year flood map provides a more accurate determination and significantly expanded the property that did not meet the required horizontal setback.

The floodplain modeling conducted during the IEA shows sheet flow conditions throughout the basin, which is possible with the current computer hardware and software capabilities. A 10 year flood event modeling over the entire basin shows more shallow sheet flow over a larger area. Some of this sheet flow is beyond the normal drainage diversion berms or ditches provided to protect an onsite wastewater system. The County requires that data to be used in the design of the onsite wastewater system to assure it is not flooded by that sheet flow even when the setbacks to a stream or wash are met. This is another added benefit to the new floodplain modeling.

The IEA information is found in the library of the Engineering Division web page. Two subdivisions have included exhibits, which used the IEA to delineate setback.

IEA Report: [Fort-Valley-IEA-FINAL \(az.gov\)](https://www.coconino.gov/1155/Engineering)

Engineering: <https://www.coconino.gov/1155/Engineering>



IEA 10: <https://coconino.az.gov/DocumentCenter/View/11855/Ft-Valley-Initial-Engineering-Assessment-Appendix-D-10-yr-Depths?bidId=>

IEA 100: <https://coconino.az.gov/DocumentCenter/View/11856/Ft-Valley-Initial-Engineering-Assessment-Appendix-D-100-yr-Depths?bidId=>

Ranch at the

Peaks: <https://coconino.az.gov/DocumentCenter/View/23526/Ranch-at-the-Peaks-Floodplain--Setback-Exhibit?bidId=>

Majestic View

Estates: <https://www.coconino.az.gov/DocumentCenter/View/28243/Majestic-View-Estates-Floodplain-and-Septic-Setback-Exhibit?bidId=>

FEMA Information: <https://www.coconino.az.gov/1638/Floodplain-Management>

2019 to Date Coconino County Community Development Substantive Policies:

There have been variations in the application of ADEQ rules so beginning in September 2019 substantive policies were developed by the Community Development Department to clarify the rules and provide consistency of interpretation. The added clarity is a benefit to the public and to anyone considering construction or development.

Substantive Policy EQ-2019-01, Wash and Intermittent Stream Setback explains how ADEQ rules, U.S. Geological Survey definitions and the IEA are used to identify setbacks applicable to onsite wastewater systems throughout the County including Fort Valley.

Link: <https://www.coconino.az.gov/DocumentCenter/View/30718/EQ-2019-001-Wash-and-Intermittent-Stream-Setback-190927>

Substantive Policy EQ-2019-03, Shallow Groundwater Design goes through the design issues for sites where the groundwater is near or at the surface of the ground. These are areas that typically require advanced treatment beyond the conventional septic tank, which could include Peat Filter (GP 4.11), Textile Filter (GP 4.12) or an Aerobic System (GP 4.15) and it must discharge to a Wisconsin Mound (GP 4.08) that provides the required vertical separation.

Link: <https://www.coconino.az.gov/DocumentCenter/View/31474/EQ-2019-03-Shallow-Groundwater-191127>

The Engineering Division of Community Development has also developed some substantive policies that coordinate with Environmental Quality's requirements and can be found on their page at the link above.



2020 AAC, R18-9-Article 3 revisions:

ADEQ has recently initiated a 5-year planning process to improve the onsite wastewater program and the rules that govern it. Coconino County is represented on the stakeholder group, Wastewater Disposal Advisory Group (WDAG). A rule revision for uncontroversial changes is underway at this time and may produce results in a year or two. A rule revision for controversial changes will come later and may not produce results for 4 or 5 years. Some of these changes will impact the Fort Valley region, including the existing systems, but they are unlikely to prohibit the development of any parcel based upon the current zoning.

2020 Groundwater Quality Study

A groundwater quality study by Northern Arizona University is currently underway. Some initial results have been provided but a formal report has not been issued.

Current Permitting Practice

The current wastewater system permitting process is described in a brochure, which can be found here: [Onsite-Wastewater-Process-Overview-2020 \(az.gov\)](https://www.coconino.gov/DocumentCenter/View/5404/Onsite-Wastewater-Process-Overview-2020). The process requires that a Site Investigation Permit be issued to determine the site conditions for the design. After the site is investigated and the design reviewed, an Onsite Wastewater Permit (Notice of Intent to Discharge (NOI)) is issued if there are no issues identified. The submittals for the onsite wastewater permit are reviewed and Construction Authorization is issued if it is determined to be in compliance with the ADEQ rule as delegated to Coconino County. The owner then completes construction, which includes one or more inspections. A request for discharge authorization is made. If the request complies with ADEQ rule and the system passed all inspections, then a discharge authorization is issued. There is essentially no regulatory oversight of the operation and maintenance of the onsite wastewater system unless a failure is reported.

The submittal must address ADEQ requirements including the two main site limiting conditions of vertical separation and horizontal setback mentioned above. The ADEQ rule, R18-9-A312(G), does provide a procedure for Request for Approval of an Alternative Design, Setback, Installation or Operational Feature. A link for the ADEQ rules is provided above. The form the County uses can be found on the web site.

Link: <https://www.coconino.az.gov/DocumentCenter/View/5404/Alternative-Feature-A312G-Form?bidId=>



Although septic tank leach fields are not prohibited anywhere in Coconino County, the site conditions in Fort Valley make it almost impossible to find a parcel with 5 feet of unsaturated soil below the disposal component that can be used to adequately treat septic tank effluent before it is released into the environment. The performance standard in ADEQ rule for septic tank treatment is 75 mg/l of TSS (Total Suspended Solids), 150 mg/l of BOD (Biochemical Oxygen Demand), 53 mg/l of TN (Total Nitrogen), and 100,000,000 CFU (colony forming units) / 100 ml. of Total Coliform hence the need for 5 feet of unsaturated soil to provide further treatment before it is released into the environment.

Most of the systems permitted since 2001 in Fort Valley, as stated above consist of advanced treatment, which provide a performance standard of at most 30 mg/l TSS, 30 mg/l BOD, 15 to 53 mg/l TN, and 300,000 CFU/100 ml of Total Coliform so substantially under the ADEQ requirements. A Wisconsin Mound is then used for effluent disposal and to provide the required vertical separation based upon the specific level of treatment achieved. These systems generally have a construction cost of \$30,000 to \$50,000, which assumes a three-bedroom house with some depth of unsaturated soil. Larger houses on lots with little or no unsaturated soil will be more expensive.

When site conditions effectively prohibit the construction of onsite wastewater systems, the system of last resort is a vault and haul. The construction cost is much less at \$5,000 to \$10,000 but the hauling costs, especially for a full-time residence are extremely high and estimated at \$400 to \$1,000 monthly for a three-bedroom home. CCCD Environmental Quality now requires that hauling cost to be calculated in the submittal so that the owner is aware of the cost especially if the possibility of any other alternative system exists. There are a number of undesirable issues with a vault and haul system per ADEQ staff nevertheless it is an option in rule.

It is important to note once again that the ADEQ rule only requires that the 100-year flood plain be shown on the plans but does **not** prohibit the construction of an onsite wastewater system in the 100-year floodplain. It only requires a setback from the 10-year flood event per the ADEQ delegation. The County Board of Supervisors could pass an ordinance to use the 100-year floodplain for wastewater permitting purposes. However, the ADEQ waiver process through R18-9-A312(G) is still available. The use of the 100-year floodplain is not expected to impact to any real degree the reality that most of the properties in the Fort Valley area (commonly referred to as the meadow area) remaining to be developed could still install a non-discharging alternative system.

Existing Systems:

Prior to ADEQ adopting rules covering onsite wastewater systems in 2001, the depth to seasonal saturation was not adequately determined. Therefore, most of the onsite wastewater systems being installed in Fort Valley were conventional septic tank leach



fields that lacked the adequate depth of soil to treat septic tank effluent before it reaches shallow groundwater. In some cases, the leach fields were constructed in the shallow groundwater such that residences cannot do laundry for a month or two in the spring because the wash water would simply not go down the drain.

The new ADEQ rules adopted in 2001 specifically covered all existing operating systems with a discharge authorization that does not expire. Unless a failure is observed then the system can continue to operate (a failure usually means surfacing effluent that is hard to detect during the spring even when the staff may realize it is there). Basically, the only time CCCD EQ can require an upgrade is when the owner expands the usage on the property.

Coconino County, Community Development Department, Environmental Quality Division provides a considerable amount of information for the onsite wastewater program online, which can be accessed through:

Web page: <https://www.coconino.az.gov/1156/Environmental-Quality-Permitting>

Process: <https://www.coconino.az.gov/DocumentCenter/View/33223/Onsite-Wastewater-Process-Overview-2020>

Options to Address Long-Term Water and Wastewater Concerns

Annexation to or Creation of a New Domestic Water Improvement District

A Domestic Water Improvement District (DWID) could be formed to provide water and/or sewer services to the properties in Fort Valley. A larger wastewater treatment plant could provide a higher level of treatment and would have qualified operators to assure the effluent met requirements. The larger system would be covered by an Individual Aquifer Protection Permit, which would be issued and monitored by ADEQ.

The formation of a DWID is a citizen driven process, which involves residents organizing and securing petitions so the Board of Supervisors can be asked to create a new local government under the State of Arizona. There are many details to this process, which can be reviewed in the Arizona Revised Statutes, Chapter 48 and any legal advice would need to be addressed through a private attorney. There are attorneys in Arizona that provide these services. The DWID is governed by a local board of directors, which must own property within the DWID. The DWID is not governed nor regulated by the County.

The Fort Valley area already has a DWID serving a portion of the Fort Valley area, the Majestic View Domestic Water Improvement District. Another option would be to annex to that existing DWID. Those discussions would take place with the Board of Directors



for the Majestic View DWID. This DWID has a very deep well that currently operates and provides water in the area and is regulated by ADEQ.

The issue of an improvement district will ultimately be an economic decision made by the local property owners. Many of those owners have expended substantial money to provide for their own wastewater treatment and disposal needs so they will have little incentive to spend more. Only a portion of Fort Valley is developed at a density of one residence per acre. Generally, sewer service is not economically feasible unless the parcel size is less than one acre. An initial engineering feasibility study would clarify those costs for decision makers (property owners).

DWIDs are authorized to secure low-interest financing for capital projects. Generally financing is usually sought through the Water Infrastructure Finance Authority of Arizona (WIFA). WIFA also has funds that can offset some costs of a project. They allocate these funds annually, which come from the federal Environmental Protection Agency (EPA) to reduce the amount of the loan. USDA Rural Development may also provide grants and loans applicable to a DWID.

Web: <https://www.azwifa.gov/>

Web: <https://www.rd.usda.gov/programs-services/all-programs/water-environmental-programs>

Conclusion:

Key messages from this review of the regulatory framework for permitting wastewater systems in the Fort Valley area include:

- All systems issued permits by CCCD EQ meet the requirements of the ADEQ rule.
- No systems are approved by CCCD EQ that were not in compliance with ADEQ rules at the time they were approved.
- CCCD EQ uses soil classification procedures during a site investigation to accurately determine the seasonal saturation/shallow groundwater.

CCCD EQ uses the latest and most accurate modeling to determine the 10-year intermittent stream flow and other drainage issues to determine compliance with ADEQ requirements.



Floodplain Management within Fort Valley

Overview of Flood Control District & Floodplain Management

In Arizona, the Federal Emergency Management Agency (FEMA) has delegated Flood Control Districts as the authorities to manage development within FEMA Special Flood Hazard Areas (SFHA) in the unincorporated areas of the county and municipalities that choose not to manage floodplains in their jurisdiction ([ARS § 48-3602](#)).

The County Board of Supervisors serves as the Board of Directors of the Coconino County Flood Control District (FCD). The Coconino County [Floodplain Management Overlay Zone \(FPOZ\)](#) regulates development in the SFHA. The [Engineering Design and Construction Manual](#) and [Coconino County Drainage Design Criteria](#) guide design and construction.

As required per [Arizona Revised Statute 48-3603](#), there is a FCD Floodplain Administrator, who reports to the FCD Board of Directors. Supporting the Floodplain Administrator are the County Engineer (who officially serves as the District's Engineer), County Hydrologist, and Engineering Supervisor who manage and permit all development of land, construction of residential, commercial, or industrial structures or future development and uses of any kind conducted on land areas located in a FEMA SFHA.

The Arizona Department of Water Resources (ADWR) serves as the FEMA's National Flood Insurance Program (NFIP) liaison with the FCD. ADWR supports the FCD's participation in the [Community Rating System \(CRS\)](#). The CRS is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum program requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS:

1. Reduce flood damage to insurable property,
2. Strengthen and support the National Flood Insurance Program, and
3. Encourage a comprehensive approach to floodplain management

A SFHA includes Zones A, AH, AO, AE, and AE Regulatory Floodway. The NFIP requires property owners with structures in an SFHA to carry flood insurance if they hold a mortgage on the property.



Fort Valley Area Flood Studies

An understanding of the single-family home floodplain permitting requirements in the Fort Valley area begins with a summary of the history of drainage studies of the area.

U.S. Army Corps of Engineers Feasibility Report & Final Environmental Impact Study (September 2000)

http://friendsoftheriodeflag.org/docs/flood_control/Feasibility%20Report.pdf

This report includes hydrologic modeling for the portion of the Rio de Flag watershed that impacts Fort Valley. It also provides references to previous studies completed by other agencies and historic gauge data for the Rio de Flag.

FEMA Flood Insurance Study (FIS) (September 3, 2010)

The Fort Valley area was studied by FEMA, which in 2010 resulted in a new FIS and Flood Insurance Rate Map (FIRM) for the area. The primary flow paths are identified as the “Baderville Tributary to Rio de Flag” and “Rio de Flag” and the area contains [Zone AE](#) and [shaded Zone X \(0.2% annual chance flood\)](#).

[Flood Insurance Study Number: 04005CV001A and 04005CV002A FIRM 04005C6440G](#)

[FEMA defines Zone AE Floodway](#) as areas of the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Communities must regulate development in these floodways to ensure that there are no increases in upstream flood elevations. For streams and other watercourses where FEMA has provided Base Flood Elevations (BFEs), but no floodway has been designated, the community must review floodplain development on a case-by-case basis to ensure that increases in water surface elevations do not occur, or identify the need to adopt a floodway if adequate information is available.

FEMA defines [Zone AE](#) as areas subject to inundation by the 1-percent-annual-chance flood event (100-year flood event) determined by detailed methods. Base Flood Elevations (BFEs) are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply. As noted above, there is a Zone AE in the Fort Valley area.

FEMA defines [Zone X \(shaded\)](#) as areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded). There is a Zone X within the Fort Valley area.



Fort Valley Initial Engineering Analysis (2015) by Civiltec Engineering, Inc. and J. E. Fuller Hydrology and Geomorphology

The [Fort Valley IEA](#) was prepared to help the Flood Control District to understand the nature of the floodplain using the newest technology, to understand a full range of potential options for addressing flood impacts, and to prioritize potential, future capital improvement projects. The Flood Control District collects a very limited amount of funding annually and thus projects would likely not be funded for many, many years. Furthermore, coming out of a FEMA funded Post-Wildfire Study and the County's experience with post-wildfire flooding in the aftermath of the Schultz Fire in 2010, the FCD Board of Directors identified post-wildfire flooding as the number one public safety threat as well as the catastrophic impacts this flooding has on private properties, public infrastructure, and our economy. With this as a key priority for the District, the Board has now prioritized targeted investments in forest restoration to reduce this serious threat. The result is that only one project that surfaced during the IEA process has been budgeted for and completed. Other areas like Fort Valley will likely be considered once the forest restoration investments to reduce post-wildfire flooding are addressed.

The Fort Valley IEA recommendations specifically related to floodplain permitting included:

- No National Flood Insurance Program map revisions. Although the IEA 100-year flood event map shows a greater area of flood inundation (larger area of flooding), the flood depth in that additional area is considered shallow, sheet flow and thus revising the maps was not recommended.
- Use the new 100-year flood event study map as the best available information to assist property owners with development within the 100-year event flood limits.

Fort Valley Floodplain Management Permitting Process

The District strongly recommends to property owners in the Fort Valley area that the lowest floor elevations for proposed homes be elevated one (1) foot above the maximum flood depth shown on the Fort Valley IEA 100-year, 24-hour storm event map. For example, if the proposed building is within an area of 1-foot maximum flood depth, then the lowest floor would be constructed two feet above the highest adjacent grade. Although the District did not update the 2010 FEMA FIRM Maps, the District to date has had 100% compliance with the recommended one foot above the maximum flood depth.

The Fort Valley IEA and the FEMA Special Flood Hazard Area (SFHA) maps guide the District's lowest floor requirements for Fort Valley development and building improvements as summarized below:

TABLE ON NEXT PAGE



Fort Valley Construction Guidelines (in the following order of precedence)

Order of Precedence	Location of Proposed Improvements	Lowest Floor Recommendation	Lowest Floor Requirement
1.	FEMA SFHA Zone AE, Floodway	n/a	Elevate (1) foot above the BFE* and provide a “No-Rise” analysis
2.	FEMA SFHA Zone AE	n/a	Elevate (1) foot above the BFE
3.	Areas of 100-year ponding depth on the IEA	Elevate one (1) foot above the 100-year flood depth shown on the IEA 100-Year Flood Map	Elevate six (6) inches above the highest adjacent grade per the 2018 IRC
4.	Areas not impacted by the IEA	Elevate eight (8) inches above the highest adjacent grade (Substantive Policy PZ-16-001)	Elevate six (6) inches above the highest adjacent grade per the 2018 IRC

*BFE – Base Flood Elevation