



## MEETING #5 MINUTES – DRAFT ACTION PLAN

### Floodplain Management Plan 2020 Update

Thursday, January 16, 2020

9:00 a.m. – 12:00 p.m.

OPS Building Conference Rooms - 2801 West Durango Street

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#### 1. Introduction

- Safety Moment
  - Stretching at the workstation
    1. Micro breaks each hour to stand up and/or stretch.
    2. Look away from the screen occasionally and focus your eye on an object far away.
- Opening Business Comments
  - Kelli Sertich and Sharon McGuire retired in December 2019
    1. Michael Fulton and Tim Murphy will be joining the FMP Committee to help wrap up the project.
  - FMP Committee Introductions (Refer to attached sign-in sheet for attendees)
- Presentation
  - Flood Control District Use of Geographic Information Systems (GIS) – Kevin LaVallee (GIS Supervisor for Flood Control/Maricopa Department of Transportation)
    - What is GIS
      - Simplest answer, Cartography – map making
    - FIRM Panels at the Beginning
      - Originally utilized a digitizer to digitize the FIRM panels to create the original map layers. Used the FIRM panels to follow the floodplain boundaries, cross sections, base flood elevations (BFEs). 1988 was the first year Maricopa County was digitized in its entirety. Helped standardize the documentation of floodplains.
    - Early Issues in Digitizing FIRM Panels
      - Only point of reference was streets and could easily place someone within a floodplain by placing a floodplain boundary since no parcels were provided on the FIRM panels.
    - Progress in FIRM Panels
      - Lined up floodplains feature that cross over different FIRM panels.
      - Only reference was FEMA section references, not Maricopa County references.
    - Improvements in Early 2000's
      - Noticing many areas that have errors and the only way to correct them is with a LOMR.
      - Digital FIRM (DFIRM) panels were starting to be developed. Flood Control District of Maricopa County (FCDMC) approached FEMA asking if FCDMC could develop DFIRMs.
    - 2005 DFIRMs for Maricopa County
      - Created easier view of floodplains (colored blue) and included a background aerial to provide better guidance and reference.
      - Added ability to provide FIRM Panels to FEMA digitally and do any other revisions digitally.
    - GIS ArcMap
      - Now utilized by FCDMC with approximately 40 users.

- Regulatory Initial Inquiry
  - Resident calls and request information to build when their property may be near or within a portion within floodplain.
  - GIS helps provide more accurate answers to the residents.
- Flood Control GIS Database
  - Aerial information for parts of Maricopa County dating back to the 1930s.
  - Yearly aerial photography coverage starting in 1999.
  - Refer to Maricopa County Historic Aerials for reference and coverage applicability.
  - Available to the public to review historical aerials
- Floodplain Viewer (Online)
  - Anyone can access this map to locate properties of interest and determine the location of a floodplain around the property.
- Web Applications
  - Web links
    - GIS Mapping Applications main page
      - <https://www.maricopa.gov/3942/GIS-Mapping-Applications>
    - Floodplain Viewer
      - <https://gis.maricopa.gov/FCD/FloodplainViewer/>
    - Historical Aerials
      - <https://gis.maricopa.gov/GIO/HistoricalAerial/index.html>
- Kevin provided a live demonstration of accessing different web applications – starting with main GIS webpage for Maricopa County.
  - Floodplain Map Viewer also includes access to view Elevation Certificates
- Questions from the Committee
  - (Patti Trites) How does the aerial imagery definition (down to 4-inches) correlate to the FLO-2D models developed?
    - The models do not get down to this definition because the models would take a very, very long time to run.
    - (Mark Fountain) Models are developed usually around the 20- to 50-foot grid level.
  - (Patti Trites) Builder of my property said they elevated the homes in the area.
    - Property is not within a floodplain and no Elevation Certificate provided within FCDMC Floodplain Viewer, why?
    - (Tim Murphy) FCDMC does not have all the Elevation Certificates for the entire county. Different municipalities may have them. FCDMC does not collect Elevation Certificates unless the property is within the floodplain.
    - If the property is located within City of Phoenix, seek to obtain elevation certificate from them.
  - (Patti Trites) If there is an intense 100-year event, runoff will get to areas that previously were not shown as a potential hazard.
    - (Tim Murphy) Communities and FEMA try to remove as many properties from the floodplain. There are many areas still subject to flooding outside the FEMA floodplains because not every wash has been delineated or identified on a FEMA FIRM panel. Other issues come along with delineating and

- adding properties into the floodplain (property values, flood insurance, etc.).
- (Tice Supplee) When there are large storm events in the mountains, the runoff is not defined anywhere, and communities are impacted.
  - (Patti Trites) Neighborhood flooded in 2014, 2015, 2016, 2017, and 2018 before things were done to help prevent. This isn't an isolated event because it is happening in other communities that are not within a floodplain.
  - (Tim Murphy) We have to be careful with how things are phrased. Not every area that is subject to flooding is identified as a floodplain on the FIRM panel. There are still areas subject to flooding outside the floodplain. There are other issues that come about when delineating floodplains through a developed area.
- (Patti Trites) The City of Phoenix came in to develop basins in the area to help protect the homes.
  - (Michael Fulton) With support from FCDMC.
- (Pattie Trites) As people move from elsewhere, they may not be aware of the risks in the area.
- (Ed Taylor) Why do we not incorporate the different municipalities flood plans with what we are doing?
  - (Kevin LaValle) FCDMC works with the different cities to identify areas for delineations. All FEMA delineated floodplains are shown on the FCDMC Floodplain Viewer, whether delineated by FCDMC or by others.
  - (Tim Murphy) FCDMC has ADMSs and ADMPs to identify local flood issues throughout the county. Looking at a watershed and working with cities to identify problems. The ADMPs help to develop potential solutions to the flooding problems in the watershed. Small Project Assistance Program (SPAP) is a FCDMC program offered to help cities with localized problems.
  - (Ed Taylor) Seems more reactive than proactive.
  - (Tim Murphy) As part of the studies, hydrology and hydraulics are done to identify areas at risk to flooding and develop solutions for the area.
  - (Patti Trites) My neighborhood had historical flooding that was not designated by the City of Phoenix and then developers bought the land and built on it. Neighbors did not have flood insurance to help with impacts to home from flooding. No one wants to get their home designated in floodplain after the fact.
- (Michael Fulton) The real opportunity is getting ahead of development and determine flood risks before construction. Examples include area on the fringes of the county to determine existing flood risks. Some cities act as their own floodplain managers and they are responsible for doing this for their jurisdiction (Example: City of Phoenix). There is a cost of knowing a property is a flood risk. It is a challenge. Working to avoid flooding issues that have happened in the past.
- (Brandon Espinoza) Does the map viewer show areas they do not oversee?

- The designation of cities are displayed as different colors to show jurisdictions. The unincorporated area of Maricopa County is not shaded.
- Group Summary - There is a plethora of information to show where risks are or may be present. GIS mapping helps to identify areas for future projects to mitigate flooding at individual properties. FCDMC continuously looks to delineate and re-delineate floodplains as studies and structural projects are completed. The delineation with studies before construction comes in helps to get ahead of development to identify and inform developers where they should build and how to protect the proposed features. The jurisdiction that manages the floodplain is responsible for whether they choose to move forward with creating a new floodplain delineation.

## 2. Review of Online FMP Survey Results

- Overview of Feedback
  - 59 surveys completed from October 24, 2019 to December 6, 2019
    1. Note: Not all survey participants answered every question
  - Response Theme: Flooding Hazards / Drainage Problems
    1. Impassible Roads and Street Closures
      - Evident in most responses
    2. Overwhelming Drainage
      - Individual properties not providing enough drainage relief/storage
    3. Adverse Development Impacts
      - Maintain forward thinking to mitigate risks
- Summary of Findings (Review of responses)
  - How do you receive information about flooding?
    1. Social media is the largest response, followed by television/news station and radio stations.
      - Social media used to send information out to neighbors, example road closures.
    2. FCDMC Mobile Tools was the lowest response – future opportunity.
  - Have you used FCDMC's Mobile Tools?
    1. 9 yes and 9 no
    2. 39 of the 57 responses were unaware of the tools available.
    3. (Brandon Espinoza) People are not thinking about these tools because of the priority of the other items they use on their phones. They don't need it until monsoon season so they do not think about it.
    4. Do not think of the risks until it is already monsoon season.
    5. Opportunity for FCDMC to provide more information to show these tools are available for public use.
  - Have you used the Floodplain Viewer on the FCDMC website to check if your home is in a FEMA designated floodplain?
    1. 27 of the 58 responses were unaware of the tool.
      - Mark Fountain provided a reference to a query (outside of engineering) if individuals knew of the tool, they reported they were generally unaware of the tool or how to use it.
    2. The information can be linked to each jurisdictions webpage, which helps tie into the Community Rating System (CRS) program.

- Question for damage to structure, purchased flood insurance, improved property to prevent flooding, live in a FEMA floodplain, experienced flooding in your home.
  1. 10 have improved their property to prevent flooding while 7 have purchased flood insurance.
  2. 4 experienced flooding in their homes – missed opportunity to provide more information on Report-a-Flood.
  3. (Patti Trites) At December HOA meeting, 15 homes in neighborhood had flooding. FCDMC staff came to the meeting. 14 residents showed up, but only 2 of them were flooded. Even though people know they are at risk they do not show up to be educated.
- Have you ever been stranded trying to leave or return from home due to flooding?
  1. 39 people said they have not been stranded compared to 18 who have been
    - Without information for where the people who responded live, it is tough to evaluate these physical drivers for their responses.
    - With the number 1 risk being transportation, the risk is not at their home, but it is somewhere else within the surrounding areas. Additional clarification may be needed for future public surveys.
- Have emergency services been delayed to your area due to flooding?
  1. 41 responded no and 12 yes
    - Perhaps some of the “no” responses may be are linked to not needing emergency services during flooding and not heard from neighboring properties.
- Is there anything else you would like us to know to help shape the Floodplain Management Plan?
  1. Expanded responses from surveys that indicate the different reoccurring themes. Refer to meeting minute attachments for survey reference.
- Question
  1. (Brandon Espinoza) Does information go out to properties now that they would be in a floodplain?
    - (Mark Fountain) Studies require a varying amount of public outreach to communicate changes to the floodplain. Public meetings are held to get feedback on the changes and again when the changes are completed. However, public meetings are usually poorly attended. Tough to get public participation to help raise awareness.
    - (Brandon Espinoza) In Gila Bend, homes were previously not in a floodplain as it was near their homes/school but with an update, the new mapping indicated 3 or 4 feet into properties. Are these parcels notified?
      - (Mark Fountain) When the floodplain is changed through FEMA notification to residents is required as part of the process.
      - (Michael Fulton) When a delineation is done, FCDMC works to spread the information to the public. They provide information to people if they are going to be within a floodplain due to a change from re-delineation. FCDMC offers Elevation Certificates to be done, free of charge, for homes that are put within a floodplain from re-delineation.

As our understanding of the environment changes, it is FCDMC's obligation to present the risk to the public and help people adjust to that change.

### **3. Break**

### **4. Remarks from Michael Fulton – Director of FCDMC**

- Thank you for participation throughout the series of FMP Committee Meetings. FCDMC plans to take the responses and implement them. This is an eye opener for him as he has been at FCDMC for around a year and a half. The efforts conducted within this committee help to develop budgets and other plans for Maricopa County. He looks forward to sharing the results with the management team and identifying how to respond to what is developed within the FMP update.

### **5. Review of Meeting #1-4**

- Meeting #1
  - Review of Existing Programs (FCD Staff Presentations)
    1. Hazard Identification Studies and Plans, Programs/Projects – Don Rerick
    2. Operations and Maintenance – Charlie Klenner
    3. Permitting and Delineations – Kathy Register
    4. Engineering Division Program Highlights – Scott Vogel
    5. ALERT and Flood Response Plans – Steve Waters
  - Review of Hazard in 2015 Plan
    1. 21 total identified hazards within four categories – structural, regulatory, natural, and human-caused
  - Status of 2015 Plan Goals & Action Plan
    1. Success of a number of objectives completed in 2015 FMP
- Meeting #2 – Identify Hazards
  - Review of Featured District Programs
    1. District Budget – Karen Scott
    2. Communications and Public Outreach – Lisa Blyler
  - Group breakout to define “flood threat” and identify flood hazards
    1. Each group provided information as to what they feel a “flood threat” is.
    2. Flood hazards were identified as part of the group breakout for each FMP watershed.
    3. District Project Managers came in to answer particular questions about the watersheds being evaluated for flood hazards.
    4. Flood hazards included, but not limited to: alluvial fans, wildcat development, unmaintained drainage facilities, transportation corridors (loss of crossings/washout), invasive species of vegetation, amongst other group inputs.
- Meeting #3 – Set Goals
  - Review of Maricopa County Department of Emergency Management (MCDEM)
    1. Jesus Haro provided background into MCDEM
  - Review of definitions provided for “flood threat”
    1. Group discussion on the different definitions from each group. The FMP team took the comments to provide a concise definition in FMP Meeting #4.

- Finalized the Flood Hazards identified by each group
  1. Allowed groups to revisit the list they previously provided to include new flood hazards not thought of previously or remove ones they did not agree with anymore.
- Brainstorm FMP 2020 Goals
  1. Review of the 6 main goals within the 2015 FMP
  2. Group breakout to provide new goals for the 2020 FMP Update
- Meeting #4 – Review of Possible Activities
  - Presentations
    1. Maricopa County Parks and Recreation Department – Ken Vonderscher provided a review of how the Parks and Recreation Department interacts with the District
    2. Central Arizona Conservation Alliance (CAZCA) – Dr. Aireona Raschke provided information about multi-use potential for floodplains and tools that CAZCA has for future land use planning
  - Finalized definition of “Flood Threat”
    1. Potential risk to life, property, environment, economy, structures, or infrastructure anticipated from a flood event which causes interruptions to a normal operating condition or way of life.
  - Review of Potential 2020 FMP Goals
    1. REVISED Goal 1: The District will work with transportation agencies and the communities to address public concerns on transportation routes that result in interruptions to normal operating conditions, delays of emergency services, negatively impact the economy, or pose safety risks due to flooding.
    2. REVISED Goal 2: The District shall work in partnership with stakeholders to evaluate its various programs, fiscal opportunities, and funding processes to assure funds continue to be invested back into the communities.
    3. REVISED Goal 3: The District shall work with stakeholders and local organizations on consistent county-wide technical and educational materials for flood preparedness with materials available in physical locations as well as electronically.
    4. REVISED Goal 4: The District shall continue pursuing nature-based solutions for flood mitigation, working with stakeholders, to identify and acquire open space in conjunction with flood control projects.
    5. REVISED Goal 5 – The District shall continue to perform duties as the regional leader in floodplain management. District shall provide and communicate information, guidelines, and regulations to agencies and communities throughout Maricopa County and to adjacent Counties.
  - Discussion of Possible Activities
    1. Goal 1: Transportation and low water crossing mitigation
      - Identify locations of risk/concern – categorize
      - Design and funding options
      - Triggers or warning to let the public know to avoid area
      - Evaluate areas of impact
      - Cost sharing partnerships
      - Matrix of prioritization

- Partnership with Emergency Services
  - Coordination with transportation agencies for crossing risks
2. Goal 2: Finding evaluation of process and dedicated sources
    - District to communicate availability of Federal funding
    - IGAs for fiscal partners
    - Regular review for funding status and how they are evaluated to the communities
    - Funding based communication to the community
    - Particular definition of process and evaluation
  3. Goal 3: Education and Technical Resources
    - Identifying additional physical locations for documents
    - Combine technical resource materials with emergency service information – Federal resources, local know hazards for each city, etc.
    - Utilities and Points of Contact (city and service area specific)
    - Outreach to HOAs for flood preparedness and wash management
    - How to maintain drainage infrastructure after it is built
    - Illustrative literature and “how to” maintenance videos
    - Home and garden show booth to present and educate
    - Support check dams and water retention for recharge
    - Distribution of Green Infrastructure and Low Impact Development literature
    - Characterization of acceptable vegetation within wash corridors
    - Adverse impacts of walls
    - Citizen rain gage program
  4. Goal 4: Managed Open Space
    - Coordination and cooperation with communities and stakeholders
    - Prioritization for areas poised for risk
    - Prioritizing the locations where floodplain delineations and re-delineations are needed
    - Additional identification of flood risks
    - Best practice for groundwater recharge locations
    - Connectivity of open space
    - Coordination with the General Plans of different communities
  5. Goal 5: Regional Leadership
    - Annual meeting and communication of changes in regulation and policies
    - Review current information and guidelines available
    - Define a review cycle for literature
    - Identify regulatory authority
    - Incorporating agency best practices
    - Permitting enforcement and regulation
    - Changes of Section 404 and protection of open space

## **6. Recommend Action Items by Category – Matrix Results**

- FMP Committee participated in an active working session (on-screen) utilizing an Excel spreadsheet to populate a matrix, defining which action items pair to the defined goals and action item categories – refer to attached sheet for matrix of FMP Committee input
- Action Item Categories
  - Preventative
  - Property Protection
  - Natural Resource Protection
  - Emergency Services
  - Structural Projects
  - Public Information

## **7. Prioritize Recommended Action Items**

- Solicit Feedback and Establish Ranking
  - The FMP Committee reviewed the Matrix Results and identified which action items obtained the most votes and applied to the most Categories.
  - Upon review the FMP Committee discussed the priority of Action Item IDs. The formal recommendation of the FMP Committee was recorded as Matrix ID 1, 27, 35/36, 18, 31.
  - Priority of Action Items (from matrix results and open discussions):
    1. #1 Identify and categorize location of risks and concern.
    2. #27 Prioritize locations where floodplain delineation and re-delineation are needed.
    3. #35/36 Incorporate agency best practices/Permitting enforcement and regulation.
    4. #18 How to maintain drainage infrastructure after it is built.
    5. #31 Annual meeting and communication of changes in regulations and policies.

## **8. Next Steps**

- Draft Floodplain Management Plan Update 2020 – February 2020
- Committee and Public Review of Draft FMP – Feb/March 2020
- Public Meeting #2 February 13, 2020
- Update Completion Process
- Flood Control Advisory Board – March/April 2020
- Boards of Directors/Supervisors – June 2020

