



Flood Control District of Maricopa County

Flood Control Advisory Board

Meeting Minutes March 24, 2021

Board Members Present: Richard Schaner, Chairman; Hemant Patel, DeWayne Justice, Daniel Worth and Ray Dovalina

Staff Members Present: Michael Fulton, Director; Wayne Peck, General Counsel; Kristine Rabe; Clerk of the Board

1) CALL TO ORDER

Chairman Schaner called the meeting of the Flood Control Advisory Board (FCAB) to order at 2:00 p.m. on Wednesday, March 24, 2021.

2) ACTION ITEM - APPROVE THE MINUTES OF DECEMBER 2, 2020 MEETING

ACTION: It was moved by Mr. Dovalina and seconded by Mr. Patel to approve the minutes as submitted. The motion carried unanimously, and the minutes were approved.

3) ACTION ITEM – INTERGOVERNMENTAL AGREEMENT FCD 2020A025 FOR THE DEVELOPMENT OF UPDATED DEPTH-AREA REDUCTION FACTORS FOR ARIZONA

Presented by Stephanie Gerlach, P.E., Special Projects Branch Manager

The National Oceanic and Atmospheric Administration (NOAA) developed point rainfall depths for use in Arizona. The depths are used to evaluate flood hazards and design drainage facilities (culverts, basins, bridges, etc.). They should not be used over the entire study because the rainfall will be overestimated. A depth-area reduction factor (DARF) is used to convert the point rainfall to an equivalent uniform depth over the watershed. As the area of the storm increases, the average precipitation intensity decreases.

Ms. Gerlach went on to explain how DARFs are used. NOAA point precipitation rainfall depth is multiplied by the DARF. The new precipitation value is then used to estimate the runoff. Runoff values are used to design new drainage facilities. If the DARF is overly conservative, the new drainage facility may be larger than necessary, which may be a waste of money.

Ms. Gerlach shared the Flood Control District's current method which for local storms (six-hour duration), the curve was developed by the US Army Corps of Engineers for the August 19, 1954 Queen Creek Storm. For the 24-hour general storm, the curve was obtained from the National Weather Service HYDRO-40 (Zehr & Myers, 1984). These are quite old and since then we have a larger period of record and many more gages in our watershed. We also have new methodology to use such as rainfall radar.

The original study boundary included Maricopa County and areas draining into the County. The Flood Control District initially approached the National Weather Service and asked them to complete the study for us. They provided an estimate of \$380,000. After realizing how much of the state was being covered in the study, the District thought it would be nice to study the entire state. The District approached the Arizona Department of Transportation and they agreed to do the rest of the state.

The final study boundary includes the entire state of Arizona as well as areas draining into the state. The maximum size of the watershed was limited to 1,500 square miles or less.

Details of the Intergovernmental Agreement (IGA) Provisions include that the project partners are the Flood Control District of Maricopa County and Arizona Department of Transportation (ADOT). ADOT will fund \$60,000. The Flood Control District will fund the rest of the study, approximately \$380,000, and will take the lead for the consultant contract and study review.

Once the study is completed, the District will update the Drainage Design Manuals so the new factors are available for engineers, developers and city partners.

STAFF RECOMMENDS THE FOLLOWING ACTION: It is moved that the Flood Control Advisory Board endorses and recommends that the Board of Directors approve IGA FCD 2020A025 between the Flood Control District of Maricopa County and Arizona Department of Transportation for developing depth-area reduction factors for Arizona.

Mr. Justice asked if the study will take into account the 22-year drought that Arizona is still in? Ms. Gerlach replied that the study looks at actual storm events that have affected the state of Arizona and will be using actual storms that have hit Maricopa County and other counties around us. It is not necessarily looking at the fact that we have been in a dry period for so long, just that we can use the actual storms that hit us to determine these factors.

Mr. Fulton asked what is the period of record that we look at the DARFs? Ms. Gerlach responded that we have a very large period of record, some of our gages go back almost 100 years. We've also had numerous storm events that have hit the county that have caused record rainfall and flooding. Even though we are in a dry period we are still getting storm events we can use and develop information from, as well as those from prior to the drought.

Mr. Schaner asked if the study is looking at major events or an average of events. Ms. Gerlach responded that the study will focus on major events and not just those within the state of Arizona but also those areas that drain into the state.

Mr. Patel asked if the study would plug the holes in our data that we have since we have experienced microbursts in the last decade or two. Ms. Gerlach responded that we will be able to use gage data, which may miss some of the microbursts; however, we can use rainfall radar from various sources such as the National Weather Service so we can capture those types of storms and how it would effect these factors.

ACTION: Mr. Patel moved to approve the IGA. Mr. Dovalina seconded the motion. The motion carried unanimously.

4) ACTION ITEM – INTERGOVERNMENTAL AGREEMENT FCD 2021A001 FOR THE DESIGN, RIGHT-OF-WAY ACQUISITIONS AND UTILITY RELOCATIONS OF THE DETROIT BASIN AREA DRAINAGE IMPROVEMETNS

Presented by Mr. Dan Frank, P.E., Project Manager

The project is located within the City of Chandler and is in the vicinity of Detroit Basin (aka Gazelle Meadows Park). The project is east of Arizona Avenue (SR-87) and north of Chandler Boulevard.

Mr. Frank shared background information on the project. In 2006, the City of Chandler Storm Water Master Plan Update was completed. The City submitted proposed improvements to the District's CIPPP and received a favorable rating and was recommended for inclusion in CIP budgets. On July 8, 2008, Resolution FCD 2008R0041 was adopted by the Board of Directors, authorizing the District to enter an IGA with the City. The City completed Candidate Assessment Report in 2009 to further define improvements.

Elements of the Project include a collector channel, a storm drain on Galveston Street and on Erie Street. There will also be an outfall storm drain to existing in Chandler Boulevard. The Project will reduce the flood hazard in the area by capturing and conveying the 10-year storm.

Mr. Frank went on to outline the Intergovernmental Agreement (IGA) Provisions. The project partners are the Flood Control District of Maricopa County and the City of Chandler. Cost share of the project is 50%/50%. The City is to take the lead for design, right-of-way acquisition and utility relocations. Estimated costs are \$426,000 for design, \$500,000 for right-of-way acquisition, and \$250,000 for utilities. Total for the IGA is \$1,200,000.

STAFF RECOMMENDS THE FOLLOWING ACTION: It is moved that the Flood Control Advisory Board endorses and recommends that the Board of Directors of the Flood Control District of Maricopa County approve IGA FCD 2021A001 between the District and City of Chandler for the design, right-of-way acquisitions and utility relocations of the Detroit staff recommendations associated with the Fiscal Year 2021/2022 CIP Prioritization Procedure.

Board member, Mr. Dovalina asked Mr. Frank if there was a consideration to look at a higher level of protection, perhaps a 100-year storm. Mr. Frank responded that the Stormwater Master Plan was done back in 2009 and this was the recommendation at the time.

ACTION: Mr. Worth moved that the Board approve the recommendations. Mr. Justice seconded the motion. The motion carried unanimously.

5) **ACTION ITEM – INTERGOVERNMENTAL AGREEMENT FCD 2020A029 FOR THE DESIGN, RIGHT-OF-WAY ACQUISITIONS AND UTILITY RELOCATIONS OF PHASE II OF THE GRANITE REEF WASH DRAINAGE IMPROVEMENTS**

Presented by Mr. Dan Frank, P.E., Project Manager

Mr. Frank started by sharing background information on the Project. Granite Reef Wash Drainage Master Plan was completed in 2002. On July 7, 2010, the Board of Directors adopted Resolution FCD 2010R002. Phase I improvements are nearing completion (IGA's FCD 2014A015 and FCD 2017A017). Phase II improvements will consist of a regional large-diameter storm drain with an outfall to the Salt River. The Project is a cooperative effort with the Pima Road Improvement Project in partnership with the City of Scottsdale and the Salt River Pima-Maricopa Indian Community.

The Project is located within the City of Scottsdale and on the Salt River Pima-Maricopa Indian Community and begins just north of Thomas Road. The Project ends at the Salt River at the existing double 10' x 10' box culvert.

Elements of the Project include design of a regional large-diameter storm drain, right-of-way acquisition, and utility relocations. Estimated costs are \$1,300,000 for design, \$1,600,000 for right-of-way acquisition, and \$600,000 for utilities, for a total of \$3,500,000 for this IGA.

Mr. Frank went on to outline the Intergovernmental Agreement (IGA) Provisions. The Project partners are the Flood Control District and the City of Scottsdale and the cost-share is 50%/50%. The City of Scottsdale is splitting their share with the Salt River Pima-Maricopa Indian Community, 40%/60%.

The Project partners are the Flood Control District and the City of Scottsdale. Cost-share is 50%/50% and the City will take the lead for design, right-of-way acquisition and utility relocations.

Mr. Frank outlined the benefits of the Project. They include flood hazard reduction as well as a reduction in mandatory insurance requirements in the area. Once complete, all but one of the 373 structures will be removed from the AE floodplain.

STAFF RECOMMENDS THE FOLLOWING ACTION: It is moved that the Flood Control Advisory Board endorses and recommends that the Board of Directors of the Flood Control District of Maricopa County approve IGA FCD2020A029 between the District and City of Scottsdale for the design, right-of-way acquisitions, and utility relocations of the Phase II of the Granite Reef Wash Drainage Improvements Project.

There were no questions from the Board.

ACTION: Mr. Patel moved the recommendation for adoption by the Board of Directors and it was seconded by Mr. Justice. The motion carried unanimously.

6) FISCAL YEAR 2021 MID-YEAR FINANCIAL UPDATE

PURPOSE: Information and discussion item only. No formal action required.

Presented by Karen Scott, Finance and Contracts Division Manager

Ms. Scott started by sharing the Fiscal Year 2021 Revenues Year-to-date total which is \$46,144,391. This came from \$43,699,409 in property tax, \$1,315,570 Intergovernmental, \$503,727 Interest, \$338,325 Permits, \$209,703 Miscellaneous, and \$77,657 Grants.

A small portion of revenue comes from right-of-way permits but these have big impacts in other ways. The District Right-of-Way permits generated \$134,290 and 117 permit applications were received, 35 permits were issued, and 261 plan submittals reviewed. The percent of plan submittal reviews meeting time standards is 96%. Floodplain Permits also made up the permit portion of the revenue. There were 131 Floodplain Use Permits issued and 198 new permit applications.

Year-to-date expenditures for Fiscal Year 2021 total \$32,154,357. Capital Improvements account for \$16,824,145, with O&M at \$3,789,515 and Admin at \$2,888,230. Other expenditures include Planning and Project Management at \$2,381,677, Engineering at \$1,861,909, and Floodplain Permitting at \$1,260,489. Other categories of expenditures include Real Estate, Executive, GIS, ITC, One-Time Operating, Vehicles, Facilities Maintenance, Grants and Major Maintenance.

Ms. Scott went on to share that our Fund Balance was around \$118,000,000 but more would be shared about that in the next Flood Control Advisory Board Meeting.

Ms. Scott then shared several highlights from different divisions in the District. In addition to issuing right-of-way permits, the Engineering Division updated the Flood Warning Report. The Floodplain Permitting Division granted 131 permits, answered over 1,000 customer inquiries, performed over 350 inspections, reviewed 41 right-of-way permit requests, as well as planning and design studies. The Delineation branch had six studies that became effective on FEMA's flood map.

Ms. Scott then shared several projects that were completed by the Planning and Project Management Division such as the White Tank FRS #4 outlet, East Maricopa Floodway low flow channel concrete liner which was finished three months ahead of schedule, the Mandan Street Drainage Improvements, ACDC fence repairs, and the Cave Buttes Dam tunnel. The Planning Branch has 14 studies underway.

The Operations and Maintenance Division armored a portion of the East Mesa Floodway at the Loop 202 with fractured rock and geo tech material to mitigate erosion. They also replaced nine drop inlets.

There were no questions from the Board.

7) COMMENTS FROM THE DIRECTOR

Presented by Michael Fulton, Director

PURPOSE: Information and discussion item only. No formal action required.

Mr. Fulton welcomed new Board Member, Daniel Worth, to the Flood Control Advisory Board. Mr. Worth represents Supervisor District 2. Mr. Worth shared a little of his background with his fellow Board members.

Mr. Fulton shared that in follow-up to the internal IGA audit that per the recommendation of the auditors, questionnaires were sent out to project partners asking them to recommit to the operations and maintenance of structures. Responses were received for most IGA's. Mr. Fulton will share more on this subject in a future meeting.

8) SUMMARY OF RECENT ACTIONS BY THE BOARD OF DIRECTORS

Presented by Michael Fulton, Director

PURPOSE: Information and discussion item only. No formal action required.

At the Board of Directors meeting on December 9, 2020, the Board of Directors approved the Bids and Award for Chandler Heights Basin Excavation. The project will excavate and haul away about approximately 511k CY of material from Chandler Heights Detention Basin as is necessary to progress toward completion of the Basin and allow for the eventual development of recreational amenities.

On January 6, 2021, the Board accepted the resignation of Gregg Monger from the Flood Control Advisory Board. The effective date of resignation is December 7, 2020.

On January 13, 2021, the Board of Directors approved IGA with the City of Peoria for the Pinnacle Peak and 67th Avenue Drainage Improvements Project. This IGA is for the design, rights-of-way acquisition, and utility relocations for the Project. The estimated total Project cost for these activities is \$5,300,000.

The Board of Directors also approved IGA with the City of Glendale for the Bethany Home Road Storm Drain 43rd to 51st Avenue Project. This IGA is for the design, rights-of-way acquisition, and utility relocations for the Project. The estimated total Project cost for these activities is \$1,600,000.

The IGA for Paradise Ridge Drainage Improvements Project was also approved. The Paradise Ridge Channel was identified in the Pinnacle Peak West Area Drainage Master Study as being a necessary component to control the alluvial fan flooding in the area. This Project will reduce the flood hazard in the area and complete the final step of a comprehensive solution to this drainage corridor. The estimated total Project cost is \$32,000,000.

The IGA with the City of Phoenix for 19th Avenue and Dobbins Road Project was approved as well for the design, construction, utility relocations, right-of-way acquisitions, construction management, and operation and maintenance of flood mitigation project.

The Board of Directors also approved the contract for Queen Creek/East Mesa Area Drainage Master Study/Plan Update (QC/EM ADMS/P U) to JE Fuller to provide professional engineering services. The QC/EM ADMS/P U will identify and quantify the flood hazards and risks in a 110-square mile area in southeastern Maricopa County.

At the Board of Directors meeting on January 27, 2021, the Board of Directors approved Joint Use Agreement for the Passive Recreational Use at New River Dam between the City of Peoria and the Flood Control District of Maricopa County.

At the Board of Directors meeting on March 10, 2021, the Board of Directors approved IGA for Sun City West Area Channel Crossings Project between the Flood Control District

of Maricopa County and the Maricopa County Department of Transportation regarding cost sharing, design, construction and permitting of the Project.

9) OTHER BUSINESS AND COMMENTS FROM THE PUBLIC

Mr. Fulton did remind the Board that the Vice Chairman seat that was vacated when Mr. Monger resigned from the Board needs to be filled and the Board should consider who they will appoint.

There were no comments by members of the public.

Chairman Schaner adjourned the meeting at 2:58 p.m.