

**MINUTES OF THE SPECIAL
MEETING OF THE MOORE CITY COUNCIL
MOORE PUBLIC WORKS AUTHORITY
MOORE RISK MANAGEMENT BOARD AND
THE MOORE ECONOMIC DEVELOPMENT AUTHORITY
MAY 14, 2021 – 4:00 P.M.**

The City Council of the City of Moore met at Moore City Hall in the City Council Chambers, 301 North Broadway, Moore, Oklahoma on May 14, 2021 at 4:00 p.m. with Vice-Mayor Mark Hamm presiding.

*Adam Webb
Councilman, Ward I*

*Danielle McKenzie
Councilwoman, Ward I*

*Melissa Hunt
Councilwoman, Ward II*

*Mark Hamm
Councilman, Ward II*

*Jason Blair
Councilman, Ward III*

*Louie Williams
Councilman, Ward III*

APPEARED IN PERSON: McKenzie, Blair, Hunt, Williams, Webb, Hamm
APPEARED BY VIDEOCONFERENCE: None
ABSENT: Lewis

STAFF MEMBERS PRESENT: City Manager, Brooks Mitchell; Assistant City Manager, Jerry Ihler; City Clerk, Vanessa Kemp; Community Development Director, Elizabeth Weitman; Finance Director, Betty Koehn; and Manager of Information Technology, David Thompson

Agenda Item Number 2 being:

DISCUSSION REGARDING PROPOSED ADOPTION OF "STORMWATER MANAGEMENT CRITERIA UPDATE" MANUAL AS THE DRAINAGE REGULATIONS FOR THE CITY OF MOORE.

Elizabeth Weitman, Community Development Director, began the meeting by giving a short presentation. Ms. Weitman stated that the current Drainage Regulations were approved in 2002 and there have been no significant updates since that time. She advised that one of the top complaints received by the City was drainage concerns regarding both old and new construction. Ms. Weitman indicated that the proposed updates would have an impact on floodplain and future map updates. The Moore Master Drainage Plan maps out the flood plain for the City using modeling, which in some cases increased and in other cases decreased the flood plain. Those will eventually be turned into FEMA for the next map update for the community. Ms. Weitman felt that the City's drainage criteria should use the same modeling process so that everything was consistent.

Ms. Weitman stated that the burden of fixing drainage problems falls on the City and the taxpayers or on private property owners. She used Southmoore High School's detention pond as an example. The pond overflowed during the 2015 rains and, along with some other storm sewer issues, caused 4 to 5 residences to be flooded with around two-feet of water. The cost to fix the problem was estimated to be around \$700,000. She advised that staff was looking for grant funds to fund the project; however, situations such as this one was the reason for the discussion.

The Drainage Criteria update process began in June 2019. The committee met six times in person. The proposed criteria was much more comprehensive than the current regulations and looks at the whole of drainage such as subdivision development, lot development, and maintenance. Ms. Weitman stated that emphasis was placed on stormwater quality benefits to satisfy the Lake Thunderbird TMDL. The plan does introduce some flexibility. Staff felt it was important for developers to be able to pick and choose allowable options in order to meet their requirements. Staff allows an option for parking lot detention and for small commercial projects where they might not have adequate land for a detention pond. It also encourages best management practices in new developments by reducing creek buffering requirements if they include storm water quality improvement methods.

Ms. Weitman noted that Council asked that staff compromise with the development community when possible. Compromises were made in the following areas:

- Easement size for detention ponds was reduced from 20' to 15'
- Instead of builders being responsible for showing drainage for lots on building permit applications City staff would look at development plans to ensure lot drainage was adequate.
- Use of current urbanization levels for determining stormwater run-off.
- Allowing HydroCAD program for calculations in modeling.
- Allowing Rational Method for smaller drainage areas.

Ms. Weitman stated that the City's consultant, Janet Meshek with Meshek and Associates, would be appearing by video-conference to give examples of the different calculation methods. She noted that Engineer Kyle Miller was driving to the meeting from Tulsa, Oklahoma but had not yet arrived.

Janet Meshek with Meshek and Associates stated that a Rational Method calculation was compared to the Soil Conservation Service ("SCS") Hydrograph Method which is an industry standard. The SCS Hydrograph Method was used to model all of the drainage basins within the City of Moore for the Master Drainage Plan. They obtained high water marks and measured rainfall amounts from the 2015 storm to calibrate their models which resulted in a very good tolerance. They feel using the SCS Method, even though the flow rates were considerably higher than the Rational Method, was more in touch with reality.

Computed Rational Method Flow Rates, Unit Hydrograph Flow Rates, and in most cases the Rational Method computes a flow rate anywhere from 40% to 60% of the SCS Method. Ms. Meshek felt the Rational Method flow rates were too small. All over the City there is stormwater infrastructure which is too small with development putting even more water into it.

The Modified Rational Method is a hydrograph method that is not the industry standard. You compute a storm that is only as long as the time of concentration of the water shed, or the amount of time it takes water from every point in the water shed to reach the point where you are measuring the flow. Meshek is involved in many communities in the Community Rating System which is much like an ISO rating. The Community Rating System takes a look at the stormwater program and rates the community from 10 to 1 with 1 being the best. For every 500 points the community is dropped to the next level. The rating allows property owners to receive discounts on flood insurance premiums. In their recently released addendum they deduct points for allowing the use of the Modified Rational Method.

Ms. Meshek advised that the HydroCAD website states that since a hydrograph produced by the Rational Method does not reflect the total run-off or intensity variations of a real storm, it is not recommended for design and analysis of detention ponds. Ms. Meshek added that the Stormwater Detention section of the ODOT Roadway Drainage Manual dated November 2018 stated that the use of the Hypothetical Rainfall Distribution Hydrograph, the SCS Simplified Hydrograph, and the Modified Rational Method Triangular Hydrograph are not accepted. Ms. Meshek felt the Modified Rational Method was the method used in the

design of detention pond at Southmoore High. Meaning it was only designed for a storm length equal to the time of concentration of the water shed. This creates a smaller detention pond that easily fills and overflows.

Ms. Meshek stated the Fully Urbanized design requirement was eliminated because the developers and engineers requested it. In the place of that they raised the freeboard requirement from 1' to 2'. New subdivisions have residential buildings that flooded in 2015. That storm was smaller than a 100-year storm. They should have had a 1' of freeboard above urbanization and they didn't. Because of the flooding that occurred she believed they must go to Fully Urbanized Discharges or adding an additional 1' of freeboard to 2'.

She indicated that a conversation occurred with the developers regarding overland flowing. They use the National Engineering Handbook prepared by the National Resource Conservation Service ("NRCS"). The velocity method where the time of concentration is equal to a number of segments called sheet flow, followed by shallow concentrated flow, then open channel flow. They recommended on the overland flow a more conservative method of computation which produced shorter times of concentration with higher peak flows. Ms. Meshek stated that there was complaints issued with this so they went back to what the National Engineering Handbook says about calculating overland flow. Although it was a less conservative method she believed it was appropriate for the smaller water sheds. They had set the maximum overland flow length to be 100'. In the updated version of the National Engineering Handbook it states that the overland flow length should be limited based on the slope of the land and the N value. Therefore, the criteria was changed to use the method in the National Engineering Handbook exactly by utilizing the equation for computing overland flow. This was a less conservative method than what was originally posed.

Ms. Meshek stated that one of the reasons the Modified Rational Method had fallen from grace was that it was based on a smaller amount of rainfall. The industry standard was to use a 24-hour storm that begins with at a low intensity with high intensity rainfall in the middle. The Modified Rational Method uses only a portion of the rainfall. Councilwoman McKenzie asked if the information in the handbook was last updated 11 years ago. She wanted confirmation that the information had been around for some time. Ms. Meshek confirmed that the information was updated within the last 10 to 15 years but was certainly 50 or 60 years old from its inception.

Ms. Meshek felt that the biggest thing to remember was if the City continued to allow use of the Modified Rational Method to compute detention ponds they would be too small and would fill up and overflow. They are attempting to set the criteria to prevent flooding problems. The only mitigation measure a homeowner has is flood insurance. The City would be so much better off if flooding problems could be prevented from the very beginning. She stated that they modernized the standards to reduce the flood risk and compared them to Edmond, Norman and other local communities and did not believe the methods were onerous.

Councilman Webb thanked Ms. Meshek for her presentation. Councilwoman McKenzie asked what the next steps would be as far as proposed implementation. Ms. Weitman advised that the proposed criteria was published and a meeting was held with developers and engineers. She stated that 50 notices were sent out with approximately 10 people in attendance. A few spoke on behalf of Marvin Haworth who expressed concerns with the proposed regulations. Ms. Weitman felt part of the reason for holding the special meeting was to work through some of those concerns. She stated that the proposed Stormwater Management Criteria Update to the City's Drainage Regulations would be presented for consideration at a future City Council Meeting. If Council votes to adopt the proposed regulations, they would go into effect for any new development in 30 days. She noted that for those developments that have already been started the changes would apply at the Final Plat stage; however, there will likely be issues with developers that must be worked out during a transition period.

Marvin Haworth, 2800 Shady Creek Lane, stated that he had been a home builder and developer in Moore since 1960. Mr. Haworth felt that the proposed drainage regulations were too strict. He looked at the flood study that was prepared by Meshek and Associates and disagreed with their opinion that a lot of the flooding occurred in new construction areas. He felt most of the flooding was in the older areas. Mr. Haworth did not feel that the ordinance would fix any of the problems. The storm that was studied happened in 2015. His property was flooded during that storm and he still was not in favor of the ordinance. Mr. Haworth mentioned Gene Seiter who lives in the area of 34th and Sunnylane. Mr. Seiter has lived in Moore his entire life and was 80 years old. Mr. Seiter told him he had never seen that much water come through the valley since 1949. He felt the City was attempting to fix a problem that would likely only occur every 70 years and would not fix problems with old subdivisions. The subdivisions that were constructed in the last few years were not causing the flooding problems and were engineered using the Modified Rational Method. It was used in Blue Stern which did not flood. Mr. Haworth felt that the ordinance would result in the smaller parcels of land not being develop because of the detention and storm pipes that would be required. It would force the homebuilding community to leave Moore.

Councilman Blair asked for specific areas of the proposed ordinance Mr. Haworth felt were extreme and would like changed. Mr. Haworth stated that the ordinance proposed a different method of calculating the flood water other than the Modified Rational Method. He stated that there are cities that allow the Modified Rational Method, including Oklahoma City. He asked that the City Council take the time to review the flood study and take note of where the flooding occurred and the developments constructed over the past 20 years that were under the current regulations. He felt it would be apparent the new developments were not creating today's problems. The 2015 storm created a lot of water which he believed was more than a 100-year flood. Mr. Haworth felt that the biggest problem was the stream that starts at First Baptist Church has very little detention because everything has been developed around it. The study indicated there was no place for detention to help with the problem. He advised that he spoke with an engineer about a plan involving purchasing 60 acres in the floodplain north and east of 19th and Bryant and turning it into a dirt pit in order to eventually make a detention pond out of it, but found it was not large enough to have an impact on the issue. Mr. Haworth felt that the ordinance was over the top and should be toned down. He agreed that the current drainage criteria could be improved by requiring the builders to fix the lots to drain to the streets instead of the neighbors. He stated that the ordinance might be good for 160 acre developments that would create a tremendous amount of water.

Councilman Williams stated that the City has had flooding problems in newer developments that utilized the Modified Rational Method. An example was The Waters Addition located north of 27th and east of Eastern that was less than five years old and was flooding people downstream. He felt it was unacceptable and something must be done to fix the situation. He stated that maybe other adjustments could be made to the ordinance but to simply say that the Modified Rational Method was acceptable in all cases was not satisfactory to him. Councilwoman McKenzie understood that Mr. Haworth did not like the method being proposed but wanted to hear additional details on things that he felt was wrong with the plan that might be more negotiable. Mr. Haworth agreed with Councilman Williams that there could be issues with some of the newer developments. But felt it was an entirely different thing if subdivisions were causing problems on a regular basis as opposed to extreme situations similar to the one in 2015. The flood study was done right after the severe storm. He stated that he had attended the meetings at The Station and participated throughout the process. Mr. Haworth advised that they were given the concession of utilizing the Modified Rational Method on 20 acres, but then an additional foot was added to the requirement for detention ponds. In that scenario he didn't feel they were given anything. People want to live in Moore and it is a great community. However, he asked the City Council to study the issue further or give him additional time to consultant with his engineer regarding items to negotiate.

Councilman Williams stated that he appreciated the effort that Meshek & Associates put into helping the City Council find a way to keep this from continuing to happen. He agreed with Mr. Haworth that some of the problems were occurring in older neighborhoods and there was not very much that could be done to

correct those problems. However, he believed there were many new developments less than ten years old that are continuing to flood the City today. The Modified Rational Method has not corrected the problem so there has to be something better than that. Councilwoman McKenzie did not want to discount the fact that the City was attempting to prepare for a 100-year flood because the City of Moore routinely has significant severe weather. Councilman Williams stated that the issue was not only about the area being developed but the impacts the development would have around it. Although everything cannot be fixed he felt it had to be better than what was occurring today.

Muhammad Khan, SMC Consulting, 815 W. Main, Oklahoma City, expressed his appreciation to the City Council for allowing their comments and to City staff and Meshak for allowing them to be a part of the team. Mr. Khan spoke on behalf of Mr. Haworth. He stated that he wouldn't go into detail since Mr. Haworth already spoke regarding the issue. They agree with the low impact development feature of the ordinance. They also appreciate the fact that the City was looking into improving the floodplain, floodway, and creeks because it helps the flood insurance rates for those citizens who live in the flood zone. There were only a few points with a different perspective from a practicing community of engineers working in this area. Industry standards is a misterm because every city uses different methods to do their different practices. Things labeled in the ordinance as an industry standard, is not because Oklahoma City, Norman, and Edmond use different methods. He did not feel that the City should pick from each community the most conservative part of their standard and lump it together and make it a standard for one community. Mr. Khan stated that so much discussion had been about the Modified Rational Method. For clarification the rational method was supposed to be used for design of storm sewer systems, channels, culverts, and creeks. The system was in place for decades and decades and then it was modified for design of detention ponds. That is how the name became the Modified Rational Method. When someone uses the term they are talking about using the method for design of a detention pond. If someone uses the term Rational Method they are speaking of design of the storm system a drainage conveyance system which carries the flow from point A to point B. The Modified Rational Method and the SCS Method are two different methods and both have been used by local communities. In example, Oklahoma City uses the Modified Rational Method for design of detention ponds up to 200 acres. Ms. Haworth was talking about 40 acres. His perspective from his engineering community was somewhere between 20 and 40 acres was a good range. Mr. Khan stated that making a distinction between a smaller area and a larger area was necessary because on a smaller area you do not experience a 24-hour storm which is a storm duration in a NRCS Method or SCS Method. In a one to five acre development you will not see a 24-hour storm that stays on one constant point and continuously rains for a 24-hour period. What you see on a much larger area when a storm moves from point A to point B to point C and it takes up to 24-hours in the worst case scenario. Mr. Khan felt that for a larger area 40 acres plus it may be reasonable to use a 24-hour storm duration with NRCS Method. For a smaller area where it may rain for 45 minutes to an hour before moving on to a different spot, there is no need for a very large detention pond. The difference between design of a detention pond using the Modified Rational Method and the NRCS Method is the volume of the runoff. There has been numerous publications where the people who wrote the methods for the NRCS Method have said this method was really meant for the agricultural field, but over the decades this method has been used for a smaller urban area. Its suitability is for a larger area not for a smaller area. As a case study they found the flows was pretty much the same, the difference was the storm duration. On a smaller area there was a smaller storm duration and on a larger area a 24-hour flow. The other reason is the Time of Concentration Method. They would propose using the method currently used by MWC, Norman, Oklahoma City and ODOT. They are not using the TR55 time of concentration method. They are using the method they are proposing. The characteristics of the drainage basin needs to be uniform with the surrounding cities. That is where they get the example of the Time of Concentration and the NRCS Method. There were a few other points that could be discussed in detail another time. They did have issues with the frequency method they are suggesting in the ordinance is for freeboard capacities. None of the cities in this area consider analyzing a 500-year storm there. In the drainage ordinance in Table 2 it is being proposed to also analyze a 500-year storm.

Councilman Webb asked Ms. Meshek if she found any issues with utilizing one method for 40-acre lots and another for 160 acres. He also asked if it would create problems with everyone using a different method or if they are symbiotic. Ms. Meshek did not feel it made sense to use a different method on a smaller area because it is still applicable. A 100-year 24-hour storm can produce 9-inches of rainfall but it takes 8 hours to get up to one inch of rain. It is the center part of the storm which is the most intense and that is what the Modified Rational Method uses. Even on small basins you can get 3 or 4 hours of rainfall that can fill up a stormwater detention facility and it won't have time to release all of the water before the intense rainfall occurs. No storms happen exactly according to the rainfall pattern because it is hypothetical but they do know that all storms have a very intense portion in the center. But if we don't allow for those less intense rainfall portions of the storm to be accommodated and routed through the detention pond then we will fill them up and overflow them. You look at peak flow at that time of concentration to size the structures. But you deal with a lot more volume if you have a larger storm. It may not be quite as intense but that much water still has to be accommodated. We want the pond to be able to discharge into areas that can accommodate it and not overtop a spillway that was not intended to be used for a 100-year storm.

Councilman Blair asked if staff could look at options to the plan before it was submitted for approval. Ms. Weitman indicated that the plan did not have to be approved until the City Council felt the criteria was ready for adoption. Vice-Mayor Hamm asked Ms. Weitman to summarize the developer's concerns with a list of items that could and could not be compromised on. Ms. Weitman stated that she would be interested in hearing some proposals from Mr. Khan. Councilwoman McKenzie stated that there should be a hard deadline for submittal of items for compromise. She suggested that all suggestions from the development community be submitted to staff by June 1, 2021. She noted that not every suggestion would be accepted.

Councilwoman Hunt asked that the study Mr. Haworth referenced be sent to the City Council electronically for their review.

The City Council thanked those individuals who spoke for their comments and participation in the meeting.

Agenda Item Number 3 being:

DISCUSSION REGARDING THE PROPOSED 2021-2022 FISCAL YEAR BUDGET.

Brooks Mitchell, City Manager, stated that he would be giving a short summary of the proposed budget since he had already met with the council members individually to review it in more detail. Mr. Mitchell indicated that the only comment he received was regarding the proposed \$75,000 funding for the RTA. He stated that Steve Eddy, the City's representative on the Regional Transportation Authority Board of Directors would be making a presentation at the June 7, 2021 City Council Meeting.

Mr. Mitchell detailed proposed changes to the budget since he held meetings with Council. He stated that sales tax was projected to be \$29,175,000 which was an increase of \$1,144,000 and 4% over the current year budget. He stated that a final adjustment for Costco would be made when the financing agreement was approved. An item was on the May 17, 2021 City Council Meeting for consideration. Use tax is projected to be \$4,260,000 which is an increase of \$1,450,000 and a 52% over the current year budget. The sales tax was the actual amount of revenue received in the first 11 months of FY 21 plus the budgeted amount for the month of June. The use tax was the amount in June 2020. He stated it was a status quo sales tax budget; however, it reflected a large increase over the previous year. This was an artificial increase since revenue projections for the current fiscal year were conservative due to concern over the pandemic. Mr. Mitchell stated that a 1.4% cost-of-living adjustment for all non-union employees was proposed. Six new uniformed positions and two new civilian positions were budgeted for the Police

Department. Four firefighters and a Training Chief position for the Fire Department. One Kennel Tech. for Animal Control. Two additional Recreation Specialists for Parks and Recreation. He stated that \$225,000 was budgeted in the Public Works Capital Outlay budget for a pothole truck. He indicated that \$100,000 was added to the budget for design of a new library with an additional \$100,000 to be requested in FY 23. Mr. Mitchell advised that \$150,000 was added to Parks and Recreation for additions to the equipment storage facility at Buck Thomas Park. He indicated that \$100,000 had been previously budgeted and would be funded using the ¼ cent sales tax. Mr. Mitchell stated that the last two pending issues before finalizing the budget for Council consideration was obtaining direction on funding for the Regional Transit Authority and Council action on the Costco financing.

Councilwoman Hunt asked if the \$100,000 was for a study or design of a new library. She felt it was not sufficient money for design of a facility. Mr. Mitchell stated that he was waiting on clarification from Branch Manager, Chris Manna, who would be discussing the issue with the Library Board. He noted that an additional \$100,000 was also requested for FY 23. Councilwoman Hunt stated that the City would own the building and the library would use it. She asked if a City representative would be on the Board or a building committee. Mr. Mitchell felt that the City would have input and representation when moving into the design phase of the project. Vice-Mayor Hamm stated that the City has one representative on the Board. It was requested that the City have more input into who served as the City's representative on the Board. Councilwoman Hunt also asked about the selection process for an architect. Mr. Mitchell stated his opinion that the City should work with the Library Board; however, it should ultimately be the City's decision since the City would own the building that would be constructed using taxpayer funds. Councilwoman Hunt stated that her comments were not meant to be taken as her position on the subject of a new building. She wanted to ensure Council did what was best for the City.

Agenda Item Number 4 being:

ADJOURNMENT

Councilman Blair moved to adjourn the special joint meeting, second by Councilman Webb. Motion carried unanimously.


Ayes: McKenzie, Blair, Hunt, Williams, Webb, Hamm
Nays: None
Absent: Lewis

The meeting was adjourned at 5:22 p.m.

TRANSCRIBED BY:


RHONDA BAXTER, Executive Assistant

FOR:


ADAM WEBB, MPWA/MEDA Secretary

These minutes passed and approved as noted this 6 day of July, 2020.

ATTEST:


VANESSA KEMP, City Clerk

