

CITY COMMISSION AGENDA MEMO
August 4, 2021

FROM: Brian D. Johnson, P.E., City Engineer

MEETING: August 17, 2021

SUBJECT: 2021 Stormwater Review

PRESENTER: Brian D. Johnson, P.E., City Engineer

BACKGROUND

Stormwater - Rate Structure Principles

A Cost of Services Study (COS) was conducted in 2017 for the City of Manhattan's stormwater rate structure. The study recommended use of an Equivalent Residential Unit (ERU) method of assessing stormwater. This methodology of measurement is common and used throughout various cities within the state of Kansas. **The ERU method requires each property to pay the same amount based on their properties impervious area, which is the area on a property that does not allow fluid to pass through it, regardless of the use or size of the property. The City Commission adopted the ERU method in December 2017 and a five-year flattening program was implemented.**

Stormwater - Modeling Results and Recommendations

From the COS, an average impervious area on a residential lot in the City is 3,625 square feet. This includes the house, driveways, patios, accessory buildings or anything else that is not impervious.

To keep the balance of the Stormwater Fund positive and to accomplish the projects and goals identified in current and future Capital Improvement Program (CIP) budgets, the stormwater fee will need to be increased through a five-year flattening program. The City of Manhattan is currently in its fourth year of flattening, with 2022 being the fifth and final year. The current fee of \$6.92 per unit for residential properties and \$6.42 per unit for commercial properties, not including the \$1.66 levee surcharge will flatten to a fee of \$7.55 per unit for both residential and commercial properties by 2022. Thereafter, annual increases in the \$0.50 to \$0.75 range is needed to keep the Stormwater Fund sustainable to offset costs and CIP.

**Approved Five-Year Flattening Funding Rates Programming
(No Levee Surcharge of \$1.66)**

TABLE 1

2018	2019	2020	2021	2022	
\$3.96	\$4.65	\$5.47	\$6.42	\$7.55	Commercial
\$5.34	\$5.82	\$6.34	\$6.92	\$7.55	Residential

DISCUSSION

Revenue for the Stormwater Fund slightly exceed anticipated budgeted amounts in 2020, while expenses where also slightly above anticipated budgeted amounts. Every year since the adoption of the ERU system, revenue has exceeded anticipated amounts.

With the adoption of the ERU system and its implementation on July 1, 2018, the financial health of the Stormwater Fund has increased considerably; However, two costs, one being, personnel and the other being contract mowing have increased substantially since the adoption of the ERU system and have had a negative impact on the fund balance.

Year	2015	2016	2017	2018	2019	2020
Anticipated Personnel Costs	184,000	229,000	304,000	310,000	326,000	343,000
Actual Personnel Costs	183,000	209,000	358,000	413,000	445,000	643,000
Personnel	2 FTE	2 FTE	4 FTE	5 FTE	6 FTE	11 FTE, 7 PT

In 2021, nearly \$800,000.00 is anticipated in personnel services. The FTE personnel include 5 maintenance workers at the Street Department, 3 Street Sweeper operators, 2 Stormwater Engineers, and a Stormwater officer. The 7 partial personnel include customer service and billing personnel.

In addition to the additional expense thru personnel, this year Public Works has budgeted \$200,000.00 for mowing and maintenance of waterways that was under the purview of

Parks and Recreation. With their personnel cuts, we have budgeted those costs in stormwater.

Those areas include detention ponds that are city maintenance, the levee system, Marlatt ditch waterway as well as the tie-back levee near good food place, the ditch along US 24/TCB is also maintained.

In total, those items add about \$900,000.00 per year to the expenses paid out of this fund. For reference, \$900,000.00 per year is approximately \$1.88 per ERU in fees.

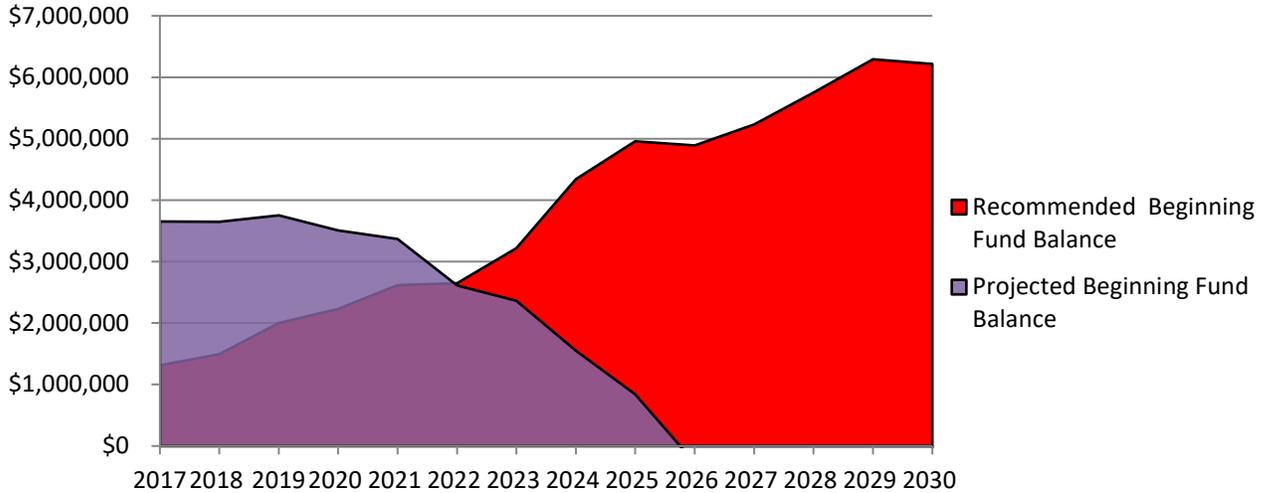
From Table 1, \$1.88 per ERU is the entire rate increase since 2018.

Starting in 2021, an additional \$1.66 per ERU has been assessed as a Levee Surcharge. This surcharge is the revenue needed to offset the future payments for a 20-year bond for the levee project. This \$1.66 will not be increased in the out years, since the future bond payment for the levee is the same amount every year.

After the completion of the flattening in 2022, the long-held goal of an equitable fee structure will be accomplished. A square foot of impervious area at Wal-Mart will cost the same amount as a square foot of impervious area in a residential driveway.

After the completion of the flattening in 2022, stormwater increases of \$0.50 to \$0.75 will be needed to keep the stormwater fund solvent. Increases less than that will have to be offset with either personnel being moved back into the general fund, or projects to reduce flooding will have to be cut or moved back into out years.

**2021 FUND BALANCE DETAIL
(With Levee Impacts and \$1.66 Surcharge)
TABLE 2**



With the \$1.66 levee surcharge and completing the flattening program in 2022, shortfalls in the fund are expected in 2026. Fund increases of \$0.50 to \$0.75 per year are needed to stabilize the fund after the 2022 flattening is complete.

After 2022, the fund will have achieved equitability, which was a common goal of the flattening program. Residential and commercial rates will be equal and be based upon the impervious area of the property.

As shown in Table 3 below, Manhattan stormwater rates are comparable to other cities in Kansas with the \$1.66 surcharge being included.

Table 3 – Equivalent Stormwater Fees per City*/Current \$6.42+\$1.66 Surcharge rate
***Fees shown in the table below do not include:**
Wichita which has 2 Mils dedicated to Stormwater.
Overland Park which has .961 Mils dedicated to Stormwater
Lenexa which has a Development Surcharge paid with each building permit. \$1,133 per ERU.

(2021 Rates)

	Hutchinson	Wichita	Lawrence	MHK (Proposed \$6.42/ERU+ \$1.66 Surcharge)	Overland Park	Topeka	Lenexa
El Patron	\$9.50	\$5.50	\$13.50	\$8.08	\$5.74	\$10.76	\$18.16
Irvin-Parkview Funeral Home	\$42.75	\$25.50	\$94.25	\$56.56	\$31.52	\$69.94	\$90.80
Old Chicago	\$57.00	\$35.50	\$139.82	\$80.80	\$42.98	\$96.75	\$119.69
Homecare & Hospice	\$95.00	\$59.50	\$237.70	\$137.36	\$71.64	\$166.78	\$208.84
Woodrow Wilson Elementary	\$123.50	\$77.50	\$307.61	\$177.76	\$94.82	\$215.20	\$263.32
AIB	\$294.50	\$181.50	\$741.88	\$428.24	\$223.51	\$516.48	\$635.60
Kansas Farm Bureau	\$536.75	\$331.50	\$1,348.04	\$783.76	\$406.91	\$941.50	\$1162.24
Walmart	\$945.25	\$581.50	\$2,370.38	\$1,381.68	\$716.38	\$1,657.04	\$2,052.08

Fees shown in table 3 for comparative cities are 2021 rates.

Several stormwater projects are currently under construction or in design in the downtown east and west watersheds. Examples of those are shown below in Table 4.

Table 4- Current Budgeted Future CIP projects.

Project Name	Project Year	Project Cost	Project Goal
TCB North Channel Project	2024	\$3,000,000	Under design and will be completed when the Levee Rehabilitation Project is completed. This project is the outfall for all of Bluemont Avenue, Urban Density Area, MFRO area and Aggieville.
Casement Road	2024	\$2,200,000	Enclose open ditch drainage. Project moved back one year due to lack of grant opportunities.
S. Manhattan Interceptor	2025	\$8,900,000	Negotiating a design contract. This project will reduce flooding in Aggieville, along Bluemont Avenue, along Poyntz Avenue as well as in the Ward District.
Kearney Street/3 rd Street outfall	2030	\$5,250,000	Outfall for Kearney Street interceptor will help to alleviate flooding around 3 rd Street and Tuttle Creek Boulevard and in the MFRO district.
14 th Street Interceptor	2026	\$3,500,000	Intercept storm overflows at 14 th Street and Anderson Avenue as well as Bluemont Avenue, Aggieville and the MFRO area.
Middle Kearney	2032	\$7,000,000	Intercept stormwater overflow from Campus Creek as well as along N. Manhattan Avenue, Bluemont Avenue and in the Urban Density Area and the MFRO areas.

Fee In Lieu of Detention in the downtown watershed

In the summer of 2020, Public Works approached the commission about a development in the downtown watershed with a Fee payment in to the stormwater fund, in Lieu of detention. Thru various studies, it is well know that detention in the downtown watershed is not a useful way of reducing flooding. This area has several challenges that make it an unsuitable area for detention. It is at the bottom of the watershed with several thousand acres of impervious area above it, it is very flat which does not lend to good detention, and it has very little existing stormwater infrastructure to accomplish underground detention.

In lieu of requiring detention, Public Works is recommending a fee system based on the additional impervious area that will be developed. After reviewing the needed infrastructure in the downtown basin, a fee of \$1.43 per additional impervious square foot is recommended with a fixed rate to account for the developers reduction in design fees. A typical detention system can cost between \$5,000 and \$10,000 to design.

With Commission concurrence, Public Works will bring forth a final policy for adoption at the December rate legislative session.

FINANCING

As shown in Table 2 above, with the proposed five-year flattening program, the current Stormwater Fund balance in the near term will become negative.

To keep the Stormwater Fund equitable and solvent, the recommendations are as follows:

1. A fifth year of flattening should be implemented. (Rates listed below)
 - Residential rates should be \$7.55
 - Commercial rates should be \$7.55

With the recommendations listed above, the Stormwater Fund will achieve equality, a goal of the flattening program. In out years, rate increases of \$0.50 to \$0.75 per year will be needed to keep the fund balance positive . These recommendations will allow for the Public Works Department to keep the identified and planned projects shown in **Table 4 Current Budgeted Future CIP project** on schedule to be completed.

As an additional note, none of the costs for any improvements on Wildcat Creek are included in future expenses. Should the Commission want to move forward with any improvements on Wildcat Creek, including buyouts, or detention structures, an additional rate increase should be imposed to maintain the Stormwater Fund balance.

RECOMMENDATION

No motion is required.

POSSIBLE MOTION

No motion is required.

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