



City of Kansas City, Missouri

Docket Memo

Ordinance/Resolution #: 240019

Submitted Department/Preparer: Water

Revised 11/01/23

Docket memos are required on all ordinances initiated by a Department Director. More information can be found in [Administrative Regulation \(AR\) 4-1](#).

Executive Summary

Authorizing a \$161,801.00 Amendment No. 1 cooperative agreement joint funding agreement for the City's share of a water resources investigations with the United States Department of the Interior U.S. Geological Survey (DOI USGS), for the Value-Added Flood Inundation Mapping along the Blue River, Indian Creek, and Brush Creek project in which the DOI USGS agreed to match an additional \$81,999.00, within Kansas City, Missouri, for a total agreement amount of \$785,600.00.

Discussion

Project Justification/Description

The City executed a cooperative agreement joint funding agreement for water resources investigations on May 11, 2022 with the United States Department of the Interior U.S. Geological Survey (USGS), for the Value-Added Flood Inundation Mapping along the Blue River, Indian Creek, and Brush Creek within Kansas City, Missouri project.

The City's share on the original agreement was \$399,999.00, and USGS's share on this agreement was **\$141,801.00**, totaling **\$541,800.00**.

The existing USGS Flood Inundation Mapper does not provide all of the information needed for Kansas City, Missouri's emergency management needs. It is limited to Stage and linked to flood depth data with limited sites using discharge.

The proposed amendment work will develop an updated Hec-Ras 2D version 6.3+, which will include all of the following deliverables for emergency management, public safety, and engineering use:

- Flood Stage
- Flood Elevation – to Hec-Ras 2D mesh resolution (~ 500 to 14,000 square feet)
- Flood Depth – to 10.76 square foot resolution
- Total Crest Travel Time from upstream to the raster cell selected, Hr:Min:Sec – to Hec-Ras 2D mesh resolution (~ 500 to 14,000 square feet)

- Total accumulated peak Discharge – to Hec-Ras 2D mesh resolution (~ 500 to 14,000 square feet)
- Hec-Ras 2D ver. 6.3+ – validation using the two 2017 rain event floods

The above deliverables online will allow rapid identification of NWS river forecast office flood crest forecasts and will verify if these are accurate and on track or if they are over or under predicting.

As additional rains and discharges occur, the National Weather Service River Forecast Office, Cities, Counties and USGS will be able to see the changes needed in real-time and make them in order to predict downstream flood risks and the time remaining to take action before they occur and changes in forecast can rapidly be done.

The City's proposed share on this agreement's amendment will be \$161,801.00, and USGS's share on this agreement's amendment will be \$81,999.00, which will total **\$243,800.00**.

The reason for this proposed amendment is due to the City's existing cooperative agreement with USGS required FEMA to complete modeling updates for Indian Creek and Blue River and then provide these to the USGS. FEMA has been delayed and will not complete this acceptably in the time needed by the USGS and the City for our Flood Inundation Mapper public safety updates. Consequently, the City has elected to not wait for or use FEMA modeling for Indian Creek and Blue River, but to instead have USGS develop the modeling needed for all of the above themselves focused on accuracy vs. conservation.

Project Cost Summary

Original Agreement:	\$399,999.00 (City) + \$141,801.00 (USGS) = \$541,800.00
Proposed Amendment No. 1:	\$161,801.00 (City) + \$81,999.00 (USGS) = \$243,800.00
<u>Totals</u>	\$561,800.00 (City) + \$223,800.00 (USGS)
	Total (KCMO + USGS) = \$785,600.00

Fiscal Impact

1. Is this legislation included in the adopted budget? ☒ Yes ☐ No
2. What is the funding source?
24-8200-802331-610300 = \$161,801.00
Stormwater Flood Monitoring; Stormwater fund
3. How does the legislation affect the current fiscal year?
This ordinance is supported by the Fiscal Year 24 Water Services CIP.

4. Does the legislation have a fiscal impact in future fiscal years? Please notate the difference between one-time and recurring costs.
No.
5. Does the legislation generate revenue, leverage outside funding, or deliver a return on investment?
No.

Office of Management and Budget Review

(OMB Staff will complete this section.)

1. This legislation is supported by the general fund. ☐ Yes ☒ No
2. This fund has a structural imbalance. ☐ Yes ☒ No
3. Account string has been verified/confirmed. ☒ Yes ☐ No

Additional Discussion (if needed)

Click or tap here to enter text.

Citywide Business Plan (CWBP) Impact

1. View the [FY23 Citywide Business Plan](#)
2. Which CWBP goal is most impacted by this legislation?
Infrastructure and Accessibility (Press tab after selecting.)
3. Which objectives are impacted by this legislation (select all that apply):
 - ☐ Engage in thoughtful planning and redesign of existing road networks to ensure safety, access, and mobility of users of all ages and abilities.
 - ☐ Enhance the City's connectivity, resiliency, and equity through a better-connected multi-modal transportation system for all users.
 - ☐ Build on existing strengths while developing a comprehensive transportation plan for the future.
 - ☒ Develop environmentally sustainable infrastructure strategies that improve quality of life and foster economic growth.
 - ☐ Ensure adequate resources are provided for continued maintenance of existing infrastructure.
 - ☐ Focus on delivery of safe connections to schools.

Prior Legislation

N/A

Service Level Impacts

Improvement on maintenance and responsiveness of barricades and isolation of streams in rain events to provide a maximum lead time before forecast flood risks occur, with detailed specifics on what will occur when and where and what is needed to remove the public from risk of flooding.

The City's Emergency Management SOP and the Barricade Team SOP, the Flood Warning System and its monitor manage and coordinate these items with the Emergency Management Office, their Duty Officer, Water Services' Dispatch and Barricade Teams with specific requirements.

Other Impacts

1. What will be the potential health impacts to any affected groups?
Citizens will be evacuated out of the City's flood risk areas to protect life and property with additional lead time.
2. How have those groups been engaged and involved in the development of this ordinance?
N/A as this ordinance only modifies timing of the City's response to evacuate flood prone areas. Since the method of evacuation is not changing, these residents have not been engaged.
3. How does this legislation contribute to a sustainable Kansas City?
The sites use solar power and batteries. All data comes in from green resources.
4. Does this legislation create or preserve new housing units?
No (Press tab after selecting)

N/A

Click or tap here to enter text.

5. Department staff certifies the submission of any application Affirmative Action Plans or Certificates of Compliance, Contractor Utilization Plans (CUPs), and Letters of Intent to Subcontract (LOIs) to CREO prior to, or simultaneously with, the legislation entry request in Legistar.

No - CREO's review is not applicable (Press tab after selecting)
Please provide reasoning why not:

N/A

6. Does this legislation seek to approve a contract resulting from an Invitation for Bid?

No(Press tab after selecting)

N/A

7. Does this legislation seek to approve a contract resulting from a Request for Proposal/Qualification (RFP/Q)?

No(Press tab after selecting)