



Public Works and Safety Committee
Standing Committee Meeting Agenda
Monday, November 27, 2023
5:00 PM

Location: HYBRID

We invite you to view the meeting in person in the 5th Floor Conference Room, Suite 515, Municipal Office Building, 701 N. 7th Street, Kansas City, Kansas, or virtually via a Zoom webinar.

Please click this URL to join. <https://us02web.zoom.us/j/83334678353>

Or One tap mobile:

+12532050468,84681629526# US

+12532158782,84681629526# US (Tacoma)

Or join by phone:

Dial (for higher quality, dial a number based on your current location):

US: +1 253 205 0468 or +1 253 215 8782 or +1 346 248 7799 or +1 669 444 9171 or +1 669 900 9128 or +1 719 359 4580 or +1 305 224 1968 or +1 309 205 3325 or +1 312 626 6799 or +1 360 209 5623 or +1 386 347 5053 or +1 507 473 4847 or +1 564 217 2000 or +1 646 558 8656 or +1 646 931 3860 or +1 689 278 1000 or +1 301 715 8592 or 877 853 5257 (Toll-Free) or 888 475 4499 (Toll-Free)

Webinar ID: 833 3467 8353

International numbers available: <https://us02web.zoom.us/j/kcLlElOpDZ>

<u>Name</u>	<u>Absent</u>
Commissioner Melissa Bynum, Chair	☐
Commissioner Christian Ramirez	☐
Commissioner Harold Johnson	☐
Commissioner Angela Markley	☐
Commissioner Mike Kane	☐
Tom Groneman, BPU Board Member	☐

- I.** **Call to Order/Roll Call**
- II.** **Revisions to November 27, 2023 Agenda**
- III.** **Approval of standing committee minutes from (no minutes available)**

IV. Committee Agenda

Item No. 1 - RESOLUTION: VIOLENCE AGAINST WOMEN'S ACT FISCAL YEAR 2024

Synopsis: Approval of a resolution authorizing acceptance of a Violence Against Women's Act grant via the Kansas Governor's Office in the amount of \$110,604, submitted by Wendy Medina, Police Department. Matching funds will be allocated from the existing department budget.

It is requested that this item be fast-tracked to the November 30, 2023, full commission meeting.

Approve request to apply for the grant

Tracking #: 212838

Item No. 2 - REPORT: FEMA FLOODPLAIN COMMUNITY RATING SYSTEM 2023

Synopsis: The FEMA Floodplain Community Rating System (CRS) 2023 report is an update of the current 5-year plan. Prior to the development and approval of the next 5-year plan, this update includes a revised repetitive loss area analysis, submitted by Gunnar H. Hand, AICP, Director of Planning and Urban Design.

Approve request

Tracking #: 212774

Item No. 3 - RESOLUTION: KAW POINT MODERNIZATION PROJECT

Synopsis: Approval of a resolution authorizing the Public Works Department to accept a grant in the amount of \$17.8M from the United States Department of Agriculture and to implement the grant immediately upon its adoption, submitted by Jeff Fisher, Executive Director of Public Works.

Approve resolution

Tracking #: 212791

Item No. 4 - PRESENTATION: COMMUNITY BASED PARTNERSHIP

Synopsis: Presentation from Corvias Infrastructure Services regarding the Community-Based partnership framework and success metrics, submitted by Jeff Fisher, Executive Director of Public Works.

For Information Only

Tracking #: 212850

Item No. 5 - REPORT: PARKS & RECREATION QUARTERLY UPDATE

Synopsis: The Parks and Recreation Department will provide a quarterly update on projects, programming and other initiatives, submitted by Nichole Marlowe, Parks and Recreation Department.

For Information Only

Tracking #: 212845

V. **Public Agenda**

VI. **Adjourn**

Commission Agenda Item Report

Title: FY24 VAWA Application by KCKPD

Proposed Agenda Date: Oct 23, 2023 PWS Standing Committee

Presented by: Wendy Medina, KCKPD

BACKGROUND:

- Seeking approval to apply for Violence Against Women's Act grant (VAWA) for FY 24
- ICJR grant is ending on December 31st, 2023
- New funding source is required for continuing the lethality assessment program
- Continued funding for Program Coordinator's salary and fringe benefits
- Applying for VAWA grant via KS Governor's Grants Office
- Support use of multi-disciplinary teams, High Risk Team (HRT) and Coordinated Community Response, to enhance robust response and safety outcomes for DV victims
- Officers can continue to implement lethality assessments in the field
 - Immediate advocacy and confidential shelter via partnership with Friends of Yates

BUDGET IMPACTS / FINANCIAL CONSIDERATIONS:

- Federal Request: \$110,604
- Match: \$31,460
 - 15 % of salary from Captain S. Smith and 10% of salary from Capt. Yarsulik reported as in-cash match (not requesting additional funds)
- (Meets match requirement of 25%)
- Total Project: 142,064

POLICY CONSIDERATIONS:

PROCUREMENT CONSIDERATIONS:

LEGAL CONSIDERATIONS:

RECOMMENDED ACTION:

- Approve

COUNTY ADMINISTRATION COMMENTS:

Approved [Signature] 11/16/2023

MAYOR AGENDA DIRECTION:

APPROVED: [Signature] 11-10-23

RESOLUTION NO. _____

A RESOLUTION authorizing the Kansas City, Kansas Police Department through the Unified Government of Wyandotte County/Kansas City, Kansas to submit an application to the Kansas Governor's Office for its federal S.T.O.P. Violence Against Women Act grant and to accept and administer such grant.

WHEREAS, the Kansas Governor's Office administers the federal S.T.O.P. Violence Against Women Act grant; and

WHEREAS, an application has been prepared to request funding for personnel, training and supplies to provide services to victims of domestic violence including continuation of the lethality assessment program and support of the Coordinated Community Response (CCR) and High Risk Team (HRT); and

WHEREAS, these programs are currently funded by the Improving Criminal Justice Response (ICJR) grant, which is due to end on December 31, 2023; and

WHEREAS, the amount sought for the grant is \$109,056.12, with a matching amount required of twenty-five percent (25%) of the amount awarded.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE UNIFIED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS:

1. That the Unified Government of Wyandotte County/Kansas City, Kansas is authorized to submit an application for the federal S.T.O.P. Violence Against Women Act grant.

2. That the County Administrator and/or his or her designee is hereby authorized to accept such grant if awarded, on behalf of the Unified Government and to take the steps he or she deems necessary to fulfill the conditions of the grant and execute documents in furtherance of the application and/or grant.

ADOPTED BY THE BOARD OF COMMISSIONERS OF THE UNIFIED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS,

THIS _____ DAY OF _____, 2023.

Unified Government Clerk



Report to Public Works & Safety

MEETING DATE	PRESENTER	DEPARTMENT
November 27, 2023	Gunnar Hand, Director	Planning and Urban Design
AGENDA ITEM #IV.2.		
REPORT: FEMA FLOODPLAIN COMMUNITY RATING SYSTEM 2023		
BACKGROUND		
The FEMA Floodplain Community Rating System (CRS) 2023 report is an update of the current 5-year plan. Prior to the development and approval of the next 5-year plan, this update includes a revised repetitive loss area analysis, submitted by Gunnar H. Hand, AICP, Director of Planning and Urban Design.		
RECOMMENDATION		
Approve		
BUDGET IMPACTS / FINANCIAL CONSIDERATIONS		
11/27/23		
IT/POLICY CONSIDERATIONS		
PROCUREMENT CONSIDERATIONS		
LEGAL CONSIDERATIONS		
ATTACHMENTS		
KCK 2023 RLAA Update_Progress Report FINALv2		

Approved by Mayor and Administrator to add to agenda:

David Johnston, County Administrator

Dated: 10/18/2023



Department of Planning + Urban Design

Unified Government of Wyandotte County • Kansas City, Kansas

701 N 7th Street, Suite 423
Kansas City, Kansas 66101
www.wycokck.org/planning

Phone: (913) 573-5750
Fax: (913) 573-5796
Email: planninginfo@wycokck.org

Repetitive Loss Area Analysis Kansas City, Kansas

Executive Summary:

This report has been prepared by staff from the Department of Urban Planning and Land Use of the Unified Government of Wyandotte County/ Kansas City, Kansas (Unified Government). The purpose of this report is to help property owners reduce their risk of future flooding by providing an understanding of flood risk, flooding sources and resources for mitigation. The Repetitive Loss Area Analysis (RLAA) has been conducted as part of the City's participation in the National Flood Insurance Programs (NFIP) Community Rating System (CRS). This report is provided as one part of the City's overall floodplain management program, which is currently being updated to improve internal alignment in order to realize a more efficient and effective process for the City.

Twelve Repetitive Loss Areas (RLA) have been identified within the city limits of Kansas City, Kansas. The RLAs are identified as:

1. Merriam Lane between Roe Lane and South Mill Street
2. Southwest Blvd between 1-35 and South 5th Street
3. South 39th Street and South 38th Street north of Argentine Boulevard
4. South 12th Street between the railway and Kansas River
5. Kansas Avenue near KCS railway
6. Intersection of Stanley Road and East Donovan Road
7. Intersection of North 29th Street and Freeman Avenue
8. Intersection of North 37th Street and Haskell Avenue
9. Intersection area of North 49th Drive and Sortor Drive
10. Intersection area of North 53rd Street and Georgia Avenue
11. Intersection area of North 57th Drive and Nogard Avenue
12. Intersection area of South 65th Street near Kaw Drive

This report will provide analysis for all twelve areas.

General Problem Statement:

Flooding is a hazardous occurrence that can damage homes, infrastructure and personal property. Flooding can also lead to deaths and its effects can have lasting health impacts. Damage to property can have a high cost for both the City and residents.

Kansas City, Kansas, experiences flooding from several sources and of multiple types. One common type

of flooding in Kansas City, Kansas, is the overflow of rivers and streams into the floodplain. A second common source of flooding in Kansas City is when stormwater runoff exceeds the capacity of the drainage system.

As a community, flood hazard and damage can be mitigated through regulation, preparedness and foresight. This report aims to help property owners reduce their personal flood risk by identifying the sources offloading and potential solutions. A specific problem statement is provided for each repetitive loss area.

Local flood sources for Kansas City, Kansas

- Missouri River
- Kansas River
- Turkey Creek
- Jersey Creek
- Brenner Heights Creek
- Stormwater runoff

Additional information specific to each flooding source is provided within the pertinent sections of this report.

National Flood Insurance Program (NFIP):

The National Flood Insurance Program is a Federal program, managed by the Federal Emergency Management Administration. The NFIP has three components: providing flood insurance, improving floodplain management and development of maps in flood hazard zones. As a partnership between FEMA and communities, the NFIP allows property owners in participating communities to buy insurance to protect against flood losses. As an additional aspect of this partnership, communities are required to establish management regulations to reduce future flood damage. Kansas City, Kansas, participates in the NFIP, making flood insurance available to residents within the city.

Community Rating System (CRS):

The Community Rating System is a national program administered by FEMA. The CRS is a voluntary program that communities can participate in to provide reduced premiums on flood insurance policies for policy holders. Communities are rewarded based on points achieved by doing more to reduce flood damage than meeting the minimum NFIP standards. Flood insurance premium rates can be reduced up to 45%.

CRS also provides benefits by promoting floodplain management activities that enhance public safety and welfare, reduce potential damages to property and infrastructure and protect the natural environment.

Repetitive Loss:

A Repetitive Loss (RL) property is any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978. A Repetitive Loss property may or may not currently be insured by NFIP.

Other structures near the RL property may have experienced similar flooding but were not covered by

flood insurance at the time. Surrounding properties with the same exposure to repeated flood damage make up the **Repetitive Loss Area (RLA)**. The RLA is a portion or portions of a community that includes buildings on FEMA's list of repetitive losses and nearby properties subject to the same flooding conditions. Communities with one or more repetitive loss properties on FEMA's list must delineate Repetitive Loss Areas in accordance with the criteria of Section 503 of the CRS Coordinator's Manual.

Repetitive Loss Area Analysis:

A five-step process is followed for developing a Repetitive Loss Area Analysis (RLAA).

Step 1. Advise all the properties in the repetitive loss area that the analysis will be conducted and request their input on the hazard and recommended actions.

Step 2. Contact agencies or organizations that may have plans or studies that could affect the cause or impacts of the flooding.

Step 3. Inspect each building in the repetitive loss area and collect basic data. Adequate information can be collected by observing the building from the street.

Step 4. Review alternative approaches and determine whether any property protection measures or drainage improvements are feasible. The review must look at all of the property protection measures relevant for the buildings being affected, including preventative activities, property protection activities, natural resource protection activities, emergency services measures, structural projects, and public information activities. The Unified Government of is currently working to improve and better align this process internally in order to make it more efficient and effective.

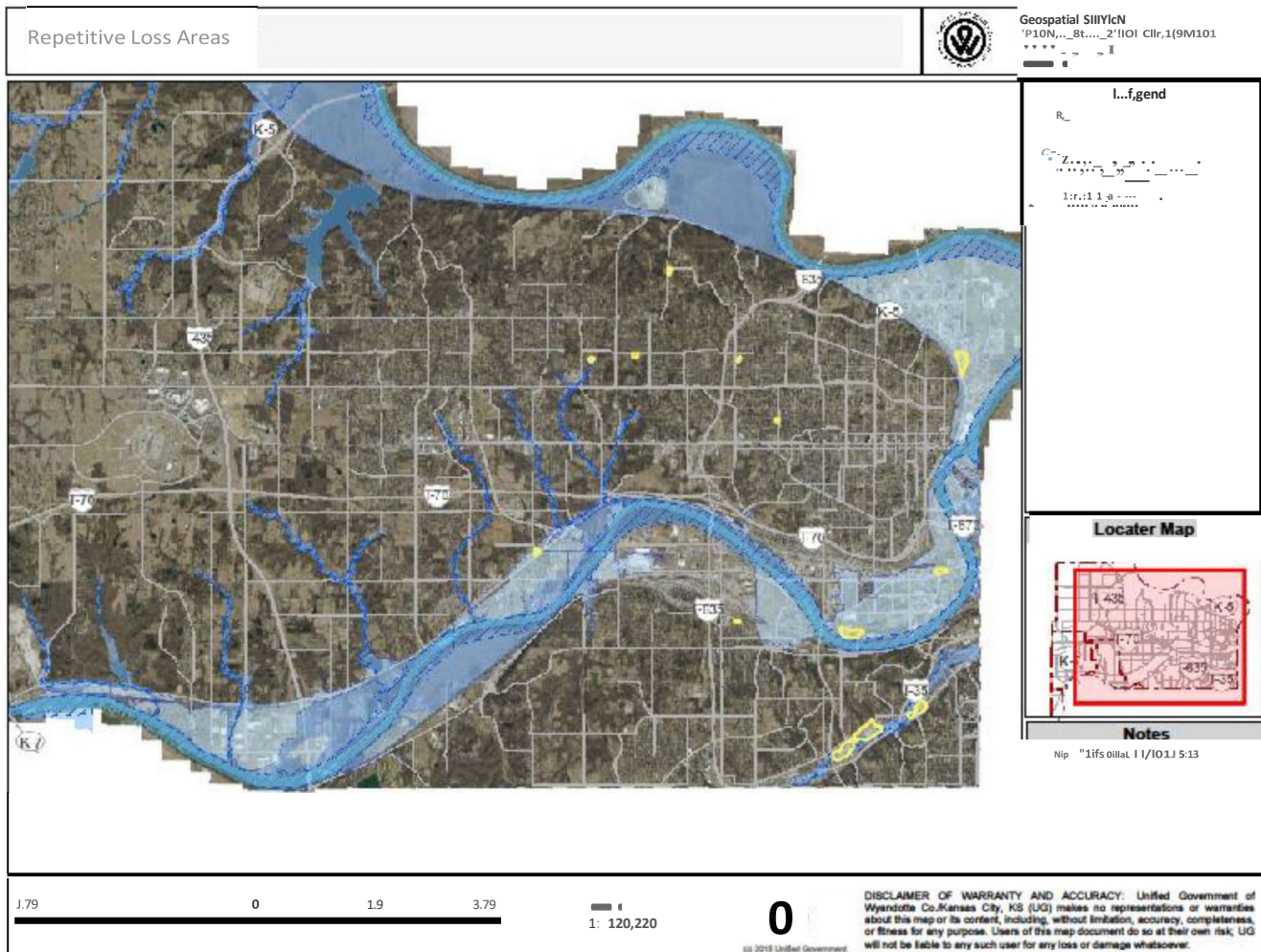
Step 5. Document the findings with a separate analysis for each area. The report should include a summary of the process and how property owners were involved, the problem statement with a map of the affected area, a list or table showing basic information for each building in the area, the alternative approaches reviewed, and a list of action items identifying the responsible party, when the action should be completed and how it will be funded.

Additional criteria must also be met:

- The repetitive loss area analysis report must be submitted to the community's governing body and made available to the media and public.
- The community must prepare an annual evaluation report for its area analyses.
- The community must update its repetitive loss area analyses in time for each CRS cycle verification visit.

Repetitive Loss Area Analysis

A repetitive loss area analysis was conducted for the loss areas identified in Kansas City, Kansas. Each area has unique sources of flooding which will be discussed later in this report. Repetitive loss properties are shown in yellow on the map below.



Step 1-Advise the residents

Residents in all 12 loss areas were notified in the same way. Properties within the repetitive loss area were identified by plotting all the properties on FEMA's repetitive loss list and defining the areas with similar loss conditions. The city of Kansas City, Kansas, is overall an urban area with some agricultural uses and undeveloped areas on the western portion of the City. All 12 repetitive loss areas are located on the eastern half of the city, where development is denser.

A notification letter was sent to property owners in the RLA in September 2017. The letter advised that a repetitive loss area analysis was being conducted and requested input on flood hazard and recommended actions. The letter also identified how draft copies would be made available and provided contact information for the local floodplain administrator.

Step 2- Contact agencies and organizations

The local floodplain administrator contacted external agencies and internal departments that might have plans, studies or information that could affect the cause or impacts of flooding within the repetitive loss area. Those agencies contacted are listed below.

- FEMA- Flood Insurance Study (FIS)
- Unified Government of Wyandotte County/ KCK Public Works Department
- Unified Government of Wyandotte County/ KCK Emergency Management Department
- Fairfax Drainage District of Wyandotte County, Kansas
- Kaw Valley Drainage District
- Kansas Department of Agriculture, Division of Water Resources

Repetitive Loss Area 1

Step 3- Site Visit and Repetitive Loss Area 1 Analysis

Problem Statement

Repetitive Loss Area 1 is located along Merriam Lane between Roe Lane and South Mill Street. Multiple repetitive loss properties are located within this area. Turkey Creek runs parallel to Merriam Lane for a portion of this stretch. The affected properties represent a mix of commercial and single- family residential homes, built primarily between 1920 and 1970. Flooding in this area is caused by overflowing waters from Turkey Creek. A portion of the RLA lies within the boundaries of the one percent annual chance flood as well as the floodway for Turkey Creek. Due to the mixed-use nature of this area, flooding can have impacts on business operation as well as damage to personal property. There is also a safety hazard presented for anyone attempting to drive or walk through the affected areas during flooding.

Step 4: Recommendations and Alternatives Review

Alternatives review looked at floodplain management alternatives through preventive actions, property protection, natural resource protection, emergency services, structural projects, and public information. The most feasible options for this RLA are highlighted below.

1. Preventative Measures:

- The Unified Government of Wyandotte County/ KCK regulates all development within the floodplain through the permitting process. The use and development of flood-prone areas is limited through regulation by the Building Inspections and the Planning and Urban Design departments, floodplain regulations, building codes, and storm water management. A floodplain development permit shall be required for all proposed construction or other development, including the placement of manufactured homes, in the areas described in Section 27-550, Subsection (a) of the Unified Government of Wyandotte County/ KCK Code of Ordinances. No person, firm, corporation, or unit of government shall initiate any development or substantial-improvement or cause the same to be done without first obtaining a separate floodplain development permit for each structure or other development. This permit may be incorporated into the regular building permit provided there is a check box indicating floodplain review is necessary and that proper documentation of review is kept in the approval file and verified during post construction inspection by staff or a third-party engineer or surveyor. The Unified Government has also adopted a regulatory floodway designed to carry the waters of the base flood without

increasing the water surface elevation of that flood more than one foot at any point. Additional provisions apply to work done in the floodplain, as listed described in Section 27-552, Subsection (f) of the above-mentioned code of ordinances. The Unified Government is currently working to improve and better align this process internally in order to make it more efficient and effective. The Unified Government is currently working to improve and better align this process internally in order to make it more efficient and effective. The Unified Government will continue to enforce applicable floodplain zoning ordinance requirements.

Action Items

- o The Planning and Urban Design Department, the Building Inspections Department and the local floodplain administrator are responsible for continued implementation of these requirements. A process is currently underway to review the Unified Government's flood permitting process in order to best align Department and partner agencies to make the program more efficient and effective.
 - o These requirements are current and will continue to be maintained.
 - o Funding is covered under the current staffing budget.
- Floodplain mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". <http://www.wycokck.org/GSS/DotMaps.aspx>

Action Items

- o Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
 - o These requirements are current and will continue to be maintained.
 - o Funding is covered under the current staffing budget.

2. Property Protection:

Property owners in this area should take action to protect their property from future flooding hazards.

- Property owners should prepare for flooding by purchasing flood insurance coverage.
- Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office.

Action Items

- o Property owners are responsible for the implementation of property protection measures.
 - o Property owners can begin implementation immediately.
 - o Projects can be privately funded by property owner.
 - o Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that

can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

3. Emergency Services:

There is currently a water level gauge along Turkey Creek at Mill Street and 1-35. This gauge was funded by the U.S. Army Corp of Engineers, with the Unified Government agreeing to fund maintenance as required. Additional gauges would increase flood protection.

Action Items

- o The existing gauge is monitored by the Emergency Services department.
- o This gauge is currently operational and will continue to be.
- o The gauge was funded through a partnership with the U.S. Army Corps of Engineers. Monitoring is funded under the current staffing budget.

4. Structural Projects:

The Unified Government of Wyandotte County/ KCK has been working in conjunction with the U.S. Army Corps of Engineers on the Turkey Creek Project. This is a multi-phased project aimed at alleviating flooding from Turkey Creek along Merriam Lane and Southwest Boulevard. This project is the final phase and consists of floodwall and levees along Turkey Creek, storm sewer modifications, and utility relocations. Additional information can be found at http://www.usace.army.mil/Missions/Civil-Works/Project-Planning/Civil-Works-Review-Board/upper_turkey/

Action Items

- o The Public Works Department, Stormwater Management and U.S. Army Corps of Engineers are coordinating this project.
- o This project is anticipated to be completed in 2018-2019.
- o This project has been funded through allocation of Federal funds and non-Federal funds.

5. Public Information:

The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- An annual notice is sent to all property owners located within the repetitive loss areas. This notice provides suggestions of property and personal protection, as well as information on obtaining floodplain insurance and local hazards.
- Floodplain boundary maps are available to the public through the "DotMaps" web mapping application.
- An annual notice is sent to real estate agents, lenders and banking institutions with information on Floodplain Management within Kansas City, Kansas.

Action Items

- o The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- o The outreach programs mentioned above are current and will continue to be maintained.
- o Funding is covered under the current staffing budget.

Repetitive Loss Area 2

Step 3- Site Visit and Repetitive Loss Area 2 Analysis

Problem Statement

Repetitive Loss Area 2 is located along Southwest Boulevard from just east of South Tremont Street to South 5th Street. There are multiple repetitive loss properties located within this area. Turkey Creek flows through the RLA and continues in close proximity to the properties. Portions of the RLA are within the floodway and AE Zone for Turkey Creek. This area is commercial in nature with retail space, warehouses, and office buildings. Overbank flooding from Turkey Creek has been a problem in this area. This area also experiences flooding due to runoff from areas that are at a higher elevation to the southeast. Water collects along Southwest Boulevard where the land becomes flat. The Wyandotte County Major Street Plan identifies Southwest Boulevard as a Class B Thoroughfare. Flooding in this area can cause disruption of travel and business and can be hazardous for anyone trying to drive along Southwest Boulevard.

Step 4: Recommendations and Alternatives Review

Alternatives review looked at floodplain management alternatives through preventive actions, property protection, natural resource protection, emergency services, structural projects, and public information. The most feasible options for this RLA are highlighted below.

1. Preventative Measures:
 - The Unified Government of Wyandotte County/ KCK regulates all development within the floodplain through the permitting process. The use and development of flood-prone areas is limited through regulation by Building Inspections and Planning and Urban Design departments, floodplain regulations, building codes, and storm water management. A floodplain development permit shall be required for all proposed construction or other development, including the placement of manufactured homes, in the areas described in Section 27-550, Subsection (a) of the Unified Government of Wyandotte County/ KCK Code of Ordinances. No person, firm, corporation, or unit of government shall initiate any development or substantial-improvement or cause the same to be done without first obtaining a separate floodplain development permit for each structure or other development. This permit may be incorporated into the regular building permit provided there is a check box indicating floodplain review is necessary and that proper documentation of review is kept in the approval file and verified during post construction inspection by staff or a third-party engineer or surveyor. The Unified Government has also adopted a regulatory floodway designed to carry the waters of the base flood without increasing the water surface elevation of that flood more than one foot at any point. Additional provisions apply to work done in the floodplain, as listed described in Section 27-552, Subsection (f) of the above-mentioned code of ordinances. The Unified Government is currently working to improve and better align this process internally in order to make it more efficient and effective. The Unified

Government will continue to enforce applicable floodplain zoning ordinance requirements.

Action Items

- o The Planning and Urban Design Department, the Building Inspections Department and the local floodplain administrator are responsible for continued implementation of these requirements.
 - o These requirements are current and will continue to be maintained.
 - o Funding is covered under the current staffing budget.
- Floodplain mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". <http://www.wycokck.org/GSS/DotMaps.aspx>

Action Items

- o Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
- o These requirements are current and will continue to be maintained.
- o Funding is covered under the current staffing budget.

2. Property Protection:

Property owners in this area should take action to protect their property from future flooding hazards.

- Property owners should prepare for flooding by purchasing flood insurance coverage.
- Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office.

Action Items

- o Property owners are responsible for the implementation of property protection measures.
- o Property owners can begin implementation immediately.
- o Projects can be privately funded by the property owner.
- o Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

3. Emergency Services:

There is currently a water level gauge along Turkey Creek at Mill Street and 1-35. This gauge was funded by the U.S. Army Corp of Engineers, with the Unified Government agreeing to fund maintenance as required. Additional gauges would increase flood protection.

Action Items

- o The existing gauge is monitored by the Emergency Management Department.
- o This gauge is currently operational and will continue to be.
- o The gauge was funded through a partnership with the U.S. Army Corps of Engineers. Monitoring is funded under the current staffing budget.

4. Structural Projects:

The Unified Government has been working in conjunction with the U.S. Army Corps of Engineers on the Turkey Creek Project. This is a multi-phased project aimed at alleviating flooding from Turkey Creek along Merriam Lane and Southwest Boulevard. This project is the final phase and consists of floodwall and levees along Turkey Creek, storm sewer modifications, and utility relocations. Additional information can be found at http://www.usace.army.mil/Missions/Civil-Works/Project-Planning/Civil-Works-Review-Board/upper_turkey/

Action Items

- o The Public Works Department, Stormwater Management and U.S. Army Corps of Engineers are coordinating this project.
- o This project is anticipated to be completed in 2018-2019.
- o This project has been funded through allocation of Federal funds and non-Federal funds.

5. Public Information:

The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- An annual notice is sent to all property owners located within the repetitive loss areas. This notice provides suggestions of property and personal protection, as well as information on obtaining floodplain insurance and local hazards.
- Floodplain boundary maps are available to the public through the "DotMaps" web mapping application.
- An annual notice is sent to real estate agents, lenders and banking institutions with information on Floodplain Management within Kansas City, Kansas.

Action Items

- o The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- o The outreach programs mentioned above are current and will continue to be maintained.
- o Funding is covered under the current staffing budget.

Repetitive Loss Area 3

Step 3- Site Visit and Repetitive Loss Area 3 Analysis

Problem Statement:

Repetitive Loss Area 3 is located north of Argentine Boulevard between South 39th Street and South 37th Street. Four repetitive loss properties are located within this area. This area is not located within the regulatory Special Flood Hazard Area (SFHA), however has experienced multiple flooding events with losses reported. The affected buildings are single-family homes, mostly with partial/ full basements or crawlspaces. Flooding in this area has been identified as surface runoff flooding, usually occurring during or after flash flood rain events. A flash flood is defined as a sudden, local flood typically due to heavy rain. The area outlined is very flat with grade changes no more than two feet within the RLA boundaries. Storm sewers along South 39th Street flow north to a drainage ditch located on private property. This ditch has adjacent trees along the bank and has experienced blockage from natural debris in the past. South 38th Street and South 37th Street do not have storm sewers and rely on natural drainage, the flat land leads to water pooling. These elements combined lead to flooding problems when large rain events have an intensity that exceeds the evaporation, infiltration and natural runoff capacity of the soil. Increases in impervious surfaces can exacerbate problems with runoff.

A response was received from one resident in the neighborhood living near the 3800 block of Argentine Boulevard. Although the last loss claim for the repetitive loss properties in this area was in 2004, it was confirmed that flooding is still an issue for residents in the neighborhood.

A follow-up telephone conversation with the sender revealed that the flooding occurs only in the basement of their home but that several items of value are stored in the basement. In addition, the water heater is in the basement.

Step 4: Recommendations and Alternatives Review

Alternatives review looked at floodplain management alternatives through preventive actions, property protection, natural resource protection, emergency services, structural projects, and public information. The most feasible options for this RLA are highlighted below.

1. Preventative Measures:

- The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak run-off from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land.

Action Items

- The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits.
- These requirements are current and will continue to be maintained.

- o Funding is covered under the current staff budget.
- Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and the location of sewer and sanitary lines are available through this service: <http://www.wycokck.org/GSS/DotMaps.aspx>

Action Items

- o The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
- o These requirements are current and will continue to be maintained.
- o Funding is covered under the current staffing budget.

2. Property Protection:

Property owners in this area should act to protect their property from future flooding hazards.

- Property owners should prepare for flooding by purchasing flood insurance coverage.
- Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office.
- Items of value and utilities such as water heaters and HVAC equipment that are stored in basements should be moved to a higher floor.

Action Items

- o Property owners are responsible for the implementation of property protection measures.
- o Property owners can begin implementation immediately.
- o Projects can be privately funded by the property owner.
- o Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

3. Natural Resource Protection:

Due to the nature of flooding and drainage within this area, preservation of natural drainage patterns is a key element in mitigation.

- Property owners should ensure all ditches within their property boundaries remain free and clear of debris to allow for maximum drainage flow during heavy rain events.

Action Items

- o Property owners are responsible for maintaining clearance of natural drainage areas on private property.
- o Property owners can begin implementation immediately.
- o Projects will be funded by property owners.

4. Structural Projects:

The City is currently working with Benesch Consulting on a study to determine feasible solutions for flooding in this area, including what can be done structurally to alleviate localized flooding.

Action Items

- o The Public Works Department and Benesch Consulting are undertaking this study.
- o The study is anticipated to be completed in 2018-2019.
- o Funds for this study have already been allocated.

5. Public Information:

The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- An annual notice is sent to all property owners located within the repetitive loss areas. This notice provides suggestions of property and personal protection, as well as information on obtaining floodplain insurance and local hazards.
- Floodplain boundary maps are available to the public through the "DotMaps" web mapping application.
- An annual notice is sent to real estate agents, lenders and banking institutions with information on Floodplain Management within Kansas City, Kansas.

Action Items

- o The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- o The outreach programs mentioned above are current and will continue to be maintained.
- o Funding is covered under the current staffing budget.

Repetitive Loss Area 4

Step 3- Site Visit and Repetitive Loss Area 4 Analysis

Problem Statement

Repetitive Loss Area 4 is located along South 12th Street between KCS Railway and the Kansas River. There is one repetitive loss property within this area. This area is entirely within the Zone X- .2% annual chance flood and abuts the floodway. The last loss was reported in 1993, during which time Kansas City experienced record flooding. This area is a levee protected by the Armourdale Levee operated by the Kaw Valley Drainage District. This area is commercial and industrial in use with warehousing, office space, storage and railcar services. Flooding in the past has likely been caused by extreme rain events

which inundated the area. This area does not have much change in grade which could lead to water pooling in such an event where water is not able to flow away from the area fast enough to keep up with downfall. To the north there is significant buildout, however surrounding the RLA are some parcels with open space which if maintained can help alleviate runoff. The City operates a pump station on 12th Street.

When flood gates to the Kansas River are closed the City uses the pump station to move excess water to the Kansas River to prevent flooding.

Step 4: Recommendations and Alternatives Review

Alternatives review looked at floodplain management alternatives through preventive actions, property protection, natural resource protection, emergency services, structural projects, and public information. The most feasible options for this RLA are highlighted below.

1. Preventative Measures:

- The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak run-off from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land.

Action Items

- o The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits.
- o These requirements are current and will continue to be maintained.
- o Funding is covered under the current staff budget.
- Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and the location of sewer and sanitary lines are available through this service. <http://www.wycokck.org/GSS/DotMaps.aspx>

Action Items

- o The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
 - o These requirements are current and will continue to be maintained.
 - o Funding is covered under the current staffing budget.
- 2. Property Protection:**

Property owners in this area should act to protect their property from future flooding hazards.

- Property owners should prepare for flooding by purchasing flood insurance coverage.
- Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website.

Additionally, some FEMA publications are available at the Building Inspections office.

Action Items

- Property owners are responsible for the implementation of property protection measures.
- Property owners can begin implementation immediately.
- Projects can be privately funded by the property owner.
- Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

3. Natural Resource Protection:

Natural drainage can be aided by the availability of open space.

- Property owners should maintain natural open space as much as possible to allow for higher water infiltration rates. Maintaining natural vegetation is recommended.

Action Items

- Property owners are the responsible party for maintaining open space areas on private property.
- Property owners can begin implementation immediately.
- Projects will be funded by property owners.

4. Structural Projects:

- Maintain the levee to prevent any failures.

Action Items

- The Kaw Valley Drainage District is responsible for maintenance of the Armourdale Levee.
- The Kaw Valley Drainage District is currently maintaining the levee and will continue to do so in the future.
- A "Levee Tax" applied to properties protected by the levee is used to fund maintenance.

5. Public Information:

The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- An annual notice is sent to all property owners located within the repetitive loss areas. This notice provides suggestions of property and personal protection, as well as information on obtaining floodplain insurance and local hazards.
- Floodplain boundary maps are available to the public through the "DotMaps" web mapping

application.

- An annual notice is sent to real estate agents, lenders and banking institutions with information on Floodplain Management within Kansas City, Kansas.

Action Items

- o The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- o The outreach programs mentioned above are current and will continue to be maintained.
- o Funding is covered under the current staffing budget.

Repetitive Loss Area 5

Step 3- Site Visit and Repetitive Loss Area 5 Analysis

Problem Statement

Repetitive Loss Area 5 is located along Kansas Avenue near the KCS Railway. There is one repetitive loss property in this area. The last loss was in 1993, during which time Kansas City experienced record flooding. This area is in Zone X, protected from the Kansas River by the Armourdale Levee operated by the Kaw Valley Drainage District. There are no properties within the designated special flood hazard area or floodway. The City-Wide Master plan designates this area as heavy industrial. Current uses match with zoning as warehouse and storage space. Construction is brick and block with basements unknown. Buildings appear to be in poor condition with some windows boarded. The site visit noted that this area is highly impervious. There is one storm water inlet present along the street, however curb and gutter are deteriorated/ missing. The site visit also notes several low-lying openings present; including low placed windows and dock doors at grade. The most likely source of flooding in this area is accumulation of storm water runoff during large rain events that is able to enter into buildings through low-lying openings.

Step 4: Recommendations and Alternatives Review

Alternatives review looked at floodplain management alternatives through preventive actions, property protection, natural resource protection, emergency services, structural projects, and public information. The most feasible options for this RLA are highlighted below.

1. Preventative Measures:

- The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak run-off from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land.

Action Items

- The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits.
 - These requirements are current and will continue to be maintained.
 - Funding is covered under the current staff budget.
- Floodplain mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". <http://www.wycokck.org/GSS/DotMaps.aspx>

Action Items

- Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
- These requirements are current and will continue to be maintained.
- Funding is covered under the current staffing budget.

2. Property Protection:

Property owners in this area should act to protect their property from future flooding hazards.

- Property owners should prepare for flooding by purchasing flood insurance coverage.
- It is recommended that dock doors at grade and low-lying windows be adequately sealed and maintained to prevent water entry. Items of value should not be stored in areas with low-lying openings.
- Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office.

Action Items

- Property owners are responsible for the implementation of property protection measures.
- Property owners can begin implementation immediately.
- Projects can be privately funded by the property owner.
- Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

3. Structural Projects:

- Maintain the levee to prevent any failures.

Action Items

- The Kaw Valley Drainage District is responsible for maintenance of the Armourdale Levee.
 - The Kaw Valley Drainage District is currently maintaining the levee and will continue to do so in the future.
 - A "Levee Tax" applied to properties protected by the levee is used to fund maintenance.
- Road improvements to fix or replace deteriorated or missing curb are recommended. In addition, maintenance of the storm sewer inlet to keep it free of debris is recommended.

Action Items

- The Public Works Department Engineering Division and Stormwater Runoff Management are responsible for infrastructure updates.
 - Repairs, replacement and maintenance should be done when funding becomes available and after completion of higher priority budgeted items.
 - Funds are appropriated for Capital Maintenance Improvement Projects by the Unified Government's Board of Commissioners, as available.
- 4. Public Information:

The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

 - An annual notice is sent to all property owners located within the repetitive loss areas. This notice provides suggestions of property and personal protection, as well as information on obtaining floodplain insurance and local hazards.
 - Floodplain boundary maps are available to the public through the "DotMaps" web mapping application.
 - An annual notice is sent to real estate agents, lenders and banking institutions with information on Floodplain Management within Kansas City, Kansas.

Action Items

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
 - The outreach programs mentioned above are current and will continue to be maintained.
 - Funding is covered under current staffing budget.

Repetitive Loss Area 6

Step 3- Site Visit and Repetitive Loss Area 6 Analysis

Problem Statement

Repetitive Loss Area 6 is located near the intersection of Stanley Road and East Donovan Road. There is one repetitive loss property in this area. The City-Wide Master plan designates this area as heavy

industrial. The affected buildings are used for industrial purposes; manufacturing, warehousing and storage. This RLA is protected from the Missouri River by the Fairfax Levee, operated by the Fairfax Drainage District. There are no properties within the designated Special Flood Hazard Area (SFHA) or floodway. The site visit noted that the area has been heavily built out with little to no impervious area visible. The curb appears well maintained with multiple storm water inlets nearby. The site visit also noted low-lying openings present on several buildings. Flooding in this area is attributed to accumulation of storm water during large rain events that can enter buildings through low-lying openings.

Step 4: Recommendations and Alternatives Review

Alternatives review looked at floodplain management alternatives through preventive actions, property protection, natural resource protection, emergency services, structural projects, and public information. The most feasible options for this RLA are highlighted below.

1. Preventative Measures:

- The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak run-off from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land.

Action Items

- o The Planning-Engineering department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits.
- o These requirements are current and will continue to be maintained.
- o Funding is covered under the current staff budget.
- Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and the location of sewer and sanitary lines are available through this service. <http://www.wycokck.org/GSS/DotMaps.aspx>

Action Items

- o Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
- o These requirements are current and will continue to be maintained.
- o Funding is covered under the current staffing budget.

2. Property Protection:

Property owners in this area should act to protect their property from future flooding hazards.

- Property owners should prepare for flooding by purchasing flood insurance coverage.
- It is recommended that dock doors at grade and low-lying windows be adequately sealed and maintained to prevent water entry. Items of value should not be stored in areas with low-lying

openings.

- Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office.

Action Items

- Property owners are responsible for the implementation of property protection measures.
- Property owners can begin implementation immediately.
- Projects can be privately funded by the property owner.
- Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

3. Structural Projects:

- Maintain the levee to prevent any failures.

Action Items

- The Fairfax Drainage District is responsible for maintenance of the Armourdale Levee.
- The Fairfax Drainage District is currently maintaining the levee and will continue to do so in the future.
- A "Levee Tax" applied to properties protected by the levee is used to fund maintenance.

4. Public Information:

The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- An annual notice is sent to all property owners located within the repetitive loss areas. This notice provides suggestions of property and personal protection, as well as information on obtaining floodplain insurance and local hazards.
- Floodplain boundary maps are available to the public through the "DotMaps" web mapping application.
- An annual notice is sent to real estate agents, lenders and banking institutions with information on Floodplain Management within Kansas City, Kansas.

Action Items

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.

- o The outreach programs mentioned above are current and will continue to be maintained.
- o Funding is covered under the current staffing budget.

Repetitive Loss Area 7

Step 3- Site Visit and Repetitive Loss Area 7 Analysis

Problem Statement

Repetitive Loss Area 7 is located near the intersection of North 29th Street and Freeman Avenue. There is one repetitive loss property in this area. A source of flooding in this area has been identified as Jersey Creek, which originates near 36th Street and Everett Avenue and flows east. The creek is conveyed through open ditches as well as channelized underground as part of the storm sewer system in the area. The portion of Jersey Creek nearest the RLA is an open ditch on private property. This is an urbanized area that is heavily built out with little to no open space in the immediate area. A second source of flooding is identified as runoff from rain events.

The buildings in this area are single and multi-family residential. The site visit noted properties that have sub-grade living areas with sub-grade patios. Heavy or moderate rainfalls likely will result in accumulation of water for these properties. The sub-grade construction of these units is considered a factor in the cause of flooding.

Step 4: Recommendations and Alternatives Review

Alternatives review looked at floodplain management alternatives through preventive actions, property protection, natural resource protection, emergency services, structural projects, and public information. The most feasible options for this RLA are highlighted below.

1. Preventative Measures:

- The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas, through the "Storm Drainage Criteria for Private Developments." Peak run-off from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land.

Action Items

- o The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits.
- o These requirements are current and will continue to be maintained.
- o Funding is covered under the current staff budget.
- Floodplain mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Although this area is not in a designated Special Flood Hazard Area, the online mapping tool can be used to view approximate contours, aerial

views and waterways. <http://www.wycokck.org/GSS/DotMaps.aspx> **Action Items**

- Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
- These requirements are current and will continue to be maintained.
- Funding is covered under the current staffing budget.

2. Property Protection

- Removal of sub-grade units would likely mitigate flooding. If removal is not possible, modification to limit excess water flow and pooling from the porch is recommended.
- Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office.
- Property owners should prepare for flooding by purchasing flood insurance coverage.

Action Items

- Property owners are responsible for the implementation of property protection measures.
- Property owners can begin implementation immediately.
- Projects can be privately funded by the property owner.
- Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

3. Natural Resource Protection:

Due to the nature of flooding and drainage within this area, preservation of natural drainage patterns is a key element in mitigation.

- Property owners should ensure all ditches within their property boundaries remain free and clear of debris to allow for maximum drainage flow during heavy rain events.

Action Items

- Property owners are responsible for maintaining clearance of natural drainage areas on private property.
- Property owners can begin implementation immediately.
- Projects will be funded by property owners.

4. Public Information:

The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the

local designated floodplain manager.

- An annual notice is sent to all property owners located within the repetitive loss areas. This notice provides suggestions of property and personal protection, as well as information on obtaining floodplain insurance and local hazards.
- Floodplain boundary maps are available to the public through the "DotMaps" web mapping application.
- An annual notice is sent to real estate agents, lenders and banking institutions with information on Floodplain Management within Kansas City, Kansas.

Action Items

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- The outreach programs mentioned above are current and will continue to be maintained.
- Funding is covered under the current staffing budget.

Repetitive Loss Area 8

Step 3- Site Visit and Repetitive Loss Area 8 Analysis

Problem Statement

Repetitive Loss Area 8 is located near the intersection of North 37th Street and Haskell Avenue. There is one repetitive loss property in this area. This area is not within the regulated special flood hazard area, floodway or .2 percent annual chance flood area. This area is designated by the City-Wide Master Plan as low-density residential. The area is comprised of single-family residential units with brick, wood, and metal construction. The residential units have full basements or crawlspaces. Flooding in this area is attributed to storm water run-off during large rain events. Since the last dated flood loss, the City has undergone separation of combined storm and sanitary lines. Reduced flooding in this area is attributed to the separation and creation of two separate lines. Site visit noted HVAC systems at grade and low-lying basement windows. Utilities and equipment at grade are more likely to be damaged than elevated equipment. Low-lying windows provide an entry point for water.

Step 4: Recommendations and Alternatives Review

Alternatives review looked at floodplain management alternatives through preventive actions, property protection, natural resource protection, emergency services, structural projects, and public information. The most feasible options for this RLA are highlighted below

1. Preventative Measures:

- The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak run-off

from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land.

Action Items

- The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits.
- These requirements are current and will continue to be maintained.
- Funding is covered under the current staff budget.

2. Property Protection

- The addition of window wells to prevent water entry into basements is recommended.
- Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office.
- Property owners should prepare for flooding by purchasing flood insurance coverage.

Action Items

- Property owners are responsible for the implementation of property protection measures.
- Property owners can begin implementation immediately.
- Projects can be privately funded by the property owner.
- Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

3. Public Information:

The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- An annual notice is sent to all property owners located within the repetitive loss areas. This notice provides suggestions of property and personal protection, as well as information on obtaining floodplain insurance and local hazards.
- Floodplain boundary maps are available to the public through the "DotMaps" web mapping application.
- An annual notice is sent to real estate agents, lenders and banking institutions with

information on Floodplain Management within Kansas City, Kansas.

Action Items

- o The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- o The outreach programs mentioned above are current and will continue to be maintained.
- o Funding is covered under the current staffing budget.

Repetitive Loss Area 9

Step 3- Site Visit and Repetitive Loss Area 9 Analysis

Problem Statement

Repetitive Loss Area 9 is located near the intersection of North 49th Drive and Sortor Drive. There is one repetitive loss property in this area. This area is not within the regulated special flood hazard area, floodway or .2 percent annual chance flood area. This area is designated by the City-Wide Master Plan as low-density residential. The area is comprised of single-family residential units of brick or wood frame construction with full basements. North 49th Drive is in a depression with hills to the east and west.

There is significant grade change as direction moves along Sortor Drive, with runoff water flowing towards north 49th Drive and the RLA. The site visit and aerial overview noted that there is a tree-lined ditch running between two properties. Use of topographic maps showed that one home is at grade level with the ditch. When water runoff from the surrounding areas accumulates in the ditch it will overflow in the direction of the home. Review of Unified Government of Wyandotte County/ KCK utility maps determined there is no stormwater network along North 49th Drive. Flooding in this area is attributed to the natural contours of the area combined with run-off and easy points of entry for water into basements.

Step 4: Recommendations and Alternatives Review

Alternatives review looked at floodplain management alternatives through preventive actions, property protection, natural resource protection, emergency services, structural projects, and public information. The most feasible options for this RLA are highlighted below

1. Preventative Measures:

- The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas, through the "Storm Drainage Criteria for Private Developments." Peak run-off from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land.

Action Items

- The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits.
- These requirements are current and will continue to be maintained.
- Funding is covered under the current staff budget.

2. Property Protection

- The addition of window wells to prevent water entry into basements is recommended. Homes with walk-out basements should have waterproof doors. Valuable items, utilities and equipment should be moved from basements to a higher location.
- Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office.
- Property owners should prepare for flooding by purchasing flood insurance coverage.

Action Items

- Property owners are responsible for implementation of property protection measures.
- Property owners can begin implementation immediately.
- Projects can be privately funded by the property owner.
- Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

3. Natural Resource Protection:

Due to the nature of flooding and drainage within this area, preservation of natural drainage patterns is a key element in mitigation.

- Property owners should ensure all ditches within their property boundaries remain free and clear of debris to allow for maximum drainage flow during heavy rain events.

Action Items

- Property owners are responsible for maintaining clearance of natural drainage areas on private property.
- Property owners can begin implementation immediately.
- Projects will be funded by property owners.

4. Structural Projects:

- Installation of stormwater infrastructure along north 49th Drive is recommended.

Action Items

- The Public works Department Engineering Division and Stormwater Runoff Management are responsible for infrastructure updates.
- Installation and maintenance should be done when funding becomes available and after completion of higher priority budgeted items.
- Funds are appropriated for Capital Maintenance Improvement Projects by the Unified Government's Board of Commissioners.

5. Public Information:

The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- An annual notice is sent to all property owners located within the repetitive loss areas. This notice provides suggestions of property and personal protection, as well as information on obtaining floodplain insurance and local hazards.
- Floodplain boundary maps are available to the public through the "DotMaps" web mapping application.
- An annual notice is sent to real estate agents, lenders and banking institutions with information on Floodplain Management within Kansas City, Kansas.

Action Items

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- The outreach programs mentioned above are current and will continue to be maintained.
- Funding is covered under the current staffing budget.

Repetitive Loss Area 10

Step 3- Site Visit and Repetitive Loss Area 10 Analysis

Problem Statement

Repetitive Loss Area 10 is located near the intersection of North 53rd Street and Georgia Avenue. There is one repetitive loss property located in this area. This area is not within the regulated special flood hazard area, floodway or .2 percent annual chance flood area. This area is designated by the City-Wide Master Plan as low-density residential. The area is comprised of single-family residential units of brick or wood frame construction with full basements. North 53rd Street is located at the bottom of a hill, with runoff drainage coming from Rowland Avenue and Georgia Avenue. Flooding in this area has been attributed to stormwater run-off. Since the last flood loss recorded, the UG Public Works Department has installed new storm drainage lines along North 53rd Street and along North Georgia Avenue. Storm

water is now captured and piped into a drainage swale. The installation of storm lines has mitigated flood risk in this area.

Step 4: Recommendations and Alternatives Review

Alternatives review looked at floodplain management alternatives through preventive actions, property protection, natural resource protection, emergency services, structural projects, and public information. The most feasible options for this RLA are highlighted below

1. Preventative Measures:

- The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas, through the "Storm Drainage Criteria for Private Developments." Peak run-off from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land.

Action Items

- The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits.
- These requirements are current and will continue to be maintained.
- Funding is covered under the current staff budget.
- Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and location of sewer and sanitary lines are available through this service.

<http://www.wycokck.org/GSS/DotMaps.aspx>

Action Items

- Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
 - These requirements are current and will continue to be maintained.
 - Funding is covered under the current staffing budget.
- ##### **2. Property Protection**
- The addition of window wells to prevent water entry into basements is recommended.
 - Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office.
 - Property owners should prepare for flooding by purchasing flood insurance coverage.

Action Items

- Property owners are responsible for the implementation of property protection

measures.

- o Property owners can begin implementation immediately.
- o Projects can be privately funded by property owner.
- o Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

3. Public Information:

The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- An annual notice is sent to all property owners located within the repetitive loss areas. This notice provides suggestions of property and personal protection, as well as information on obtaining floodplain insurance and local hazards.
- Floodplain boundary maps are available to the public through the "DotMaps" web mapping application.
- An annual notice is sent to real estate agents, lenders and banking institutions with information on Floodplain Management within Kansas City, Kansas.

Action Items

- o The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- o The outreach programs mentioned above are current and will continue to be maintained.
- o Funding is covered under the current staffing budget.

Repetitive Loss Area 11

Step 3- Site Visit and Repetitive Loss Area 11 Analysis

Problem Statement

Repetitive Loss Area 11 is located near the intersection of North 57th Drive and Nogard Avenue. There is one repetitive loss property in this area. Portions of this area are within the floodplain AE zone as well as zone x .2 percent annual chance flood hazard. This area is designated by the City-Wide Master Plan as low-density residential. The area is comprised of single-family residential units of brick or wood frame

construction with full basements. The flood source in this area is identified as Brenner Heights Creek. Brenner Heights Creek originates near Leavenworth Road and North 56th Street and flows into the Kansas River. A portion of Brenner Heights Creek runs parallel to North 58th Street. Across North 58th Street and perpendicular to Brenner Heights Creek is a ditch that runs in between two rows of houses. This ditch has a tree-lined bank. The Public Works Department has noted an accumulation of trash and debris in Brenner Heights Creek and the adjacent ditch.

Step 4: Recommendations and Alternatives Review

Alternatives review looked at floodplain management alternatives through preventive actions, property protection, natural resource protection, emergency services, structural projects, and public information. The most feasible options for this RLA are highlighted below

1. Preventative Measures:

- The Unified Government of Wyandotte County/ KCK regulates all development within the floodplain through the permitting process. The use and development of flood-prone areas is limited through regulation by Building Inspections and Planning and Urban Design departments, floodplain regulations, building codes, and storm water management. A floodplain development permit shall be required for all proposed construction or other development, including the placement of manufactured homes, in the areas described in section 27-550, subsection (a) of the Unified Government of Wyandotte County/ KCK Code of Ordinances. No person, firm, corporation, or unit of government shall initiate any development or substantial-improvement or cause the same to be done without first obtaining a separate floodplain development permit for each structure or other development. This permit may be incorporated into the regular building permit provided there is a check box indicating floodplain review is necessary and that proper documentation of review is kept in the approval file and verified during post construction inspection by staff or a third-party engineer or surveyor. The Unified Government has also adopted a regulatory floodway designed to carry the waters of the base flood without increasing the water surface elevation of that flood more than one foot at any point. Additional provisions apply to work done in the floodplain, as listed described in section 27-552, subsection (f) of the above-mentioned code of ordinances. The Unified Government is currently working to improve and better align this process internally to make it more efficient and effective. The Unified Government will continue to enforce applicable floodplain zoning ordinance requirements.

Action Items

- The Planning and Urban Design Department, the Building Inspections Department and the local floodplain administrator are responsible for continued implementation of these requirements.
 - These requirements are current and will continue to be maintained.
 - Funding is covered under the current staffing budget.
- Floodplain mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". <http://www.wycokck.org/GSS/DotMaps.aspx>

Action Items

- o Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
- o These requirements are current and will continue to be maintained.
- o Funding is covered under the current staffing budget.

2. Property Protection

- The addition of window wells to prevent water entry into basements is recommended.
- Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office.
- Property owners should prepare for flooding by purchasing flood insurance coverage.

Action Items

- o Property owners are responsible for the implementation of property protection measures.
- o Property owners can begin implementation immediately.
- o Projects can be privately funded by the property owner.
- o Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

3. Natural Resource Protection:

Due to the nature of flooding and drainage within this area, preservation of natural drainage patterns is a key element in mitigation.

- Property owners should ensure all ditches within their property boundaries remain free and clear of debris to allow for maximum drainage flow during heavy rain events.

Action Items

- o Property owners are responsible for maintaining clearance of natural drainage areas on private property.
- o Property owners can begin implementation immediately

Projects will be funded by property owners

4. Public Information:

The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- An annual notice is sent to all property owners located within the repetitive loss areas. This notice provides suggestions of property and personal protection, as well as information on obtaining floodplain insurance and local hazards.
- Floodplain boundary maps are available to the public through the "DotMaps" web mapping application.
- An annual notice is sent to real estate agents, lenders and banking institutions with information on Floodplain Management within Kansas City, Kansas.

Action Items

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- The outreach programs mentioned above are current and will continue to be maintained.
- Funding is covered under the current staffing budget.

Repetitive Loss Area 12

Step 3- Site Visit and Repetitive Loss Area 12 Analysis

Problem Statement

Repetitive Loss Area 12 is located near South 65th Street and Kaw Drive. There is one repetitive loss property in this area. This area is located within the Zone X .2 percent annual chance flood hazard. This area is designated by the City-Wide Master Plan as Industrial. Uses in this area are primarily commercial with mixed retail and single family residential. Building construction is mixed in this area with block, metal building, wood and some unknown. Flooding in this area is attributed to a drainage ditch that runs along Highway K32, collecting drainage from the area north of this RLA. Normal flow drains to the Kansas River. This area has experienced backflow from the river when it is high. In 2008 a flap gate was installed at 59th Street to prevent river water backing up into this area during high times. Installation of the flap gate has alleviated the primary source of flooding in this area.

Step 4: Recommendations and Alternatives Review

Alternatives review looked at floodplain management alternatives through preventive actions, property protection, natural resource protection, emergency services, structural projects, and public information. The most feasible options for this RLA are highlighted below

1. Preventative Measures:

- The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak run-off from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land.

Action Items

- o The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits.
 - o These requirements are current and will continue to be maintained.
 - o Funding is covered under the current staff budget.
- Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and the location of sewer and sanitary lines are available through this service. <http://www.wycokck.org/GSS/DotMaps.aspx>

Action Items

- o Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
- o These requirements are current and will continue to be maintained.
- o Funding is covered under the current staffing budget.

2. Property Protection

- Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office.
- Property owners should prepare for flooding by purchasing flood insurance coverage.

Action Items

- o Property owners are responsible for the implementation of property protection measures.
- o Property owners can begin implementation immediately.
- o Projects can be privately funded by the property owner.
- o Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

3. Public Information:

The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- An annual notice is sent to all property owners located within the repetitive loss areas. This notice provides suggestions of property and personal protection, as well as information on obtaining floodplain insurance and local hazards.

- Floodplain boundary maps are available to the public through the "DotMaps" web mapping application.
- An annual notice is sent to real estate agents, lenders and banking institutions with information on Floodplain Management within Kansas City, Kansas.

Action Items

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- The outreach programs mentioned above are current and will continue to be maintained.
- Funding is covered under current staffing budget.

i Information on Repetitive Loss Properties comes from FEMA NFIP annual community update for 2017. Additional areas have previously been mitigated and for that reason have not been included in this analysis.

ii National Flood Insurance Program: Frequently Asked Questions October 2005
https://www.fema.gov/txt/rebuild/repetitive_loss_faqs.txt

APPENDIX A

2023 Repetitive Loss Area Analysis 5-Year Update



Repetitive Loss Area Analysis

2023 Progress Report/5-Year Update

City of Kansas City, KS

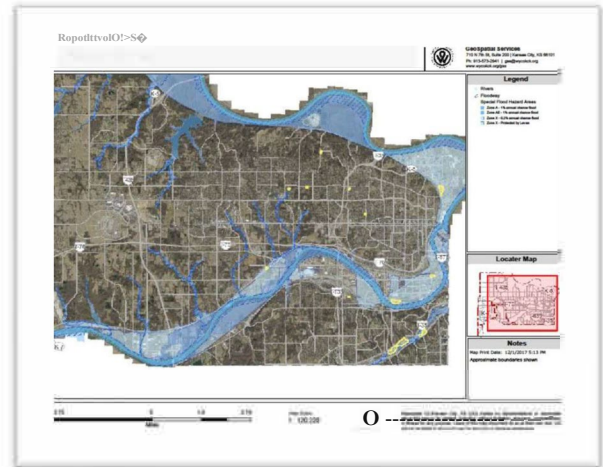
October 2023

Background

The City of Kansas City, Kansas (UG) joined the National Flood Insurance Program (NFIP) on November 1, 1974. FEMA's Community Rating System (CRS) is a voluntary program available for communities in good standing with the NFIP. Participation results in a flood insurance discount to NFIP policyholders within the corporate limits of the City of Kansas City. The UG entered the CRS program in 2012.

Repetitive Loss Area Analysis Summary

The UG completed a Repetitive Loss Area Analysis (RLAA) following the 2017 CRS Coordinator's Manual credit criteria in 2018. At the time of the 2023 Annual Progress Report, the 2017 CRS Coordinator's Manual and 2021 CRS Addendum were referenced. The Privacy Act of 1974 protects personally identifiable information related to NFIP flood insurance policyholders related to the data utilized for CRS reporting purposes. Protected data includes specific names, addresses, and claim information such as the amounts of claims. The UG follows the guidelines of the Privacy Act in reports associated with the CRS program.



Reports and Distribution

The redacted 2018 RLAA can be requested by contacting the

Department of Planning and Urban Design at planninginfo@wycokck.org. The Annual Progress Report/5-Year Update will be made available on the UG's Flood Information webpage at <https://www.wycokck.org/Departments/Planning-Urban-Design/Floodplain-Management>.

UG ordinances and resolutions can be viewed online at <http://public.wycokck.org/sites/ugordinancesresolutions/>.

2023 Annual Progress Report/5-Year Update

For CRS participating communities, Activity 500 Flood Damage Reduction Activities is a program prerequisite. The following dates pertain to the two CRS reporting periods for 2023 documentation:

CRS Progress Reporting Period from December 15, 2022 - December 15, 2023

CRS 5-Year Verification Period from February 23, 2018 - November 9, 2023

The UG has maintained a CRS Repetitive Loss Category B designation since entering the CRS program in 2012. For this reporting period, the UG has combined the Annual Progress Report with the required 5-year RLAA Update to meet the CRS credit criteria.

Repetitive Flood Loss Properties

In the United States there are over 195,000 **repetitive loss properties**, i.e., properties that have had two or more claims of more than \$1,000 paid by the NFIP within any 10-year period since 1978. Although some of these properties have had mitigation measures applied to them, most remain at risk of flooding.

To focus resources on those properties that represent the best opportunities for mitigation, Congress defined a subset called "**Severe Repetitive Loss Properties**" when it passed the Flood Insurance Reform Act of 2004. Severe Repetitive Loss Properties are those 1-4 family properties that have had four or more claims of more than \$5,000 or two to three claims that cumulatively exceed the building's value.

FEMA is directed by the Act to define Severe Repetitive Loss Property for multi-family buildings. For the purposes of the CRS, the Severe Repetitive Loss Property subset also includes non- residential buildings that meet the same criteria as for 1-4 family

(1) Category A: A community that has no repetitive loss properties, or whose repetitive loss properties all have been mitigated. A Category A community has no special requirements except to submit information to update its repetitive loss list, as needed.

(2) Category B: A community with at least one, but fewer than 50, repetitive loss properties that have not been mitigated. At each verification visit, a Category B community must

- (a) Prepare a map of the repetitive loss area(s) (see Section 503),
- (b) Review and describe its repetitive loss problem,
- (c) Prepare a list of the addresses of all properties with insurable buildings in those areas, and
- (d) Undertake an annual outreach project to those addresses (see Section 504). A copy of the outreach project is submitted with each year's recertification.

(3) Category C: A community with 50 or more repetitive loss properties that have not been mitigated. A Category C community must

- (a) Do the same things as a Category B community, and
- (b) Prepare and adopt a repetitive loss area analysis for all repetitive loss areas or prepare and adopt a floodplain management plan that includes full credit for planning Step S(c). Repetitive loss area analyses and floodplain management plans are described under Activity 510 (Floodplain Management Planning).

Review of Action Items by Repetitive Loss Area

The 2018 RLAA identified 12 repetitive loss areas (RLAs) based on the 2017 data provided by FEMA via Insurance Services Office. Table 2 represents the reported 2018 RLA assessment and problem statements for the source of flooding/flooding history in each RL area.

Recommendation for New Projects of Revised Recommendations

Based on the 2023 RL data provided by FEMA, there **are not any changes to the identified 12 RL areas or changes to the 2018 recommendations**. All RLAs, problem statements, preventative measures, property protection recommendations, and action items were reviewed under the 5-year update/annual progress report exercise and are represented in Table 3. Status updates to the reported actions items to meet the update/annual progress report exercise are provided.

The 2023 Annual Progress Report/5-Year Update was prepared by Ms. Melissa Mitchell, CFM with Tetra Tech, and in coordination with the UG Departments of Planning and Urban Design and Public Works.

UG Staff Participation

Mr. Gunnar Hand	Director/CRS Coordinator	Department of Planning and Urban Design
Ms. Alyssa	Long Range Community Planner	Department of Planning and Urban Design
Mr. Jonathan Wiles, CFM	Collections Systems Engineering Manager	Public Works Department
Mrs. Sarah White, PE	Project Engineer	Public Works Department

Table 2: 2018 Identified Repetitive Loss Areas

Repetitive Loss Area	Problem Statement
1. <i>Merriam Lane between Roe Lane and South Mill Street</i>	Repetitive Loss Area 1 is located along Merriam Lane between Roe Lane and South Mill Street. Multiple repetitive loss properties are located within this area. Turkey Creek runs parallel to Merriam Lane for a portion of this stretch. The affected properties represent a mix of commercial and single- family residential homes, built primarily between 1920 and 1970. Flooding in this area is caused by overflowing waters from Turkey Creek. A portion of the RLA lies within the boundaries of the one percent annual chance flood as well as the floodway for Turkey Creek. Due to the mixed-use nature of this area, flooding can have impacts on business operation as well as damage to personal property. There is also a safety hazard presented for anyone attempting to drive or walk through the affected areas during flooding.
2. <i>Southwest Blvd between I-35 and South 5th Street</i>	Repetitive Loss Area 2 is located along Southwest Boulevard from just east of South Tremont Street to South 5th Street. There are multiple repetitive loss properties located within this area. Turkey Creek flows through the RLA and continues in close proximity to the properties. Portions of the RLA are within the floodway and AE Zone for Turkey Creek. This area is commercial in nature with retail space, warehouses, and office buildings. Overbank flooding from Turkey Creek has been a problem in this area. This area also experiences flooding due to runoff from areas that are at a higher elevation to the southeast. Water collects along Southwest Boulevard where the land becomes flat. The Wyandotte County Major Street Plan identifies Southwest Boulevard as a Class B Thoroughfare. Flooding in this area can cause disruption of travel and business and can be hazardous for anyone trying to drive along Southwest Boulevard.
3. <i>South 39th Street and South 38th Street north of Argentine Boulevard</i>	Repetitive Loss Area 3 is located north of Argentine Boulevard between South 39th Street and South 37th Street. Four repetitive loss properties are located within this area. This area is not located within the regulatory Special Flood Hazard Area (SFHA), however has experienced multiple flooding events with losses reported. The affected buildings are single-family homes, mostly with partial/ full basements or crawlspaces. Flooding in this area has been identified as surface runoff flooding, usually occurring during or after flash flood rain events. A flash flood is defined as a sudden, local flood typically due to heavy rain. The area outlined is very flat with grade changes no more than two feet within the RLA boundaries. Storm sewers along South 39th Street flow north to a drainage ditch located on private property. This ditch has adjacent trees along the bank and has experienced blockage from natural debris in the past. South 38th Street and South 37th Street do not have storm sewers and rely on natural drainage, the flat land leads to water pooling. These elements combined lead to flooding problems when large rain events have an intensity that exceeds the evaporation, infiltration and natural runoff capacity of the soil. Increases in impervious surfaces can exacerbate problems with runoff.
4. <i>South 12th Street between the railway and Kansas River</i>	Repetitive Loss Area 4 is located along South 12th Street between KCS Railway and the Kansas River. There is one repetitive loss property within this area. This area is entirely within the Zone X- .2% annual chance flood and abuts the floodway. The last loss was reported in 1993, during which time Kansas City experienced record flooding. This area is levee protected by the Armourdale Levee operated by the Kaw Valley Drainage District. This area is commercial and industrial in use with warehousing, office space, storage and railcar services. Flooding in the past has likely been caused by extreme rain events which inundated the area. This area does not have much change in grade which could lead to water pooling in such an event where water is not able to flow away from the area fast enough to keep up with downfall. To the north there is significant buildout, however surrounding the RLA are some parcels with open space which if maintained can help alleviate runoff. The City operates a pump station on 12th

	Street. When flood gates to the Kansas River are closed the City uses the pump station to move excess water to the Kansas River to prevent flooding.
5. <i>Kansas Avenue near KCS railway</i>	Repetitive Loss Area 5 is located along Kansas Avenue near the KCS Railway. There is one repetitive loss property in this area. The last loss was in 1993, during which time Kansas City experienced record flooding. This area is in Zone X, protected from the Kansas River by the Armourdale Levee operated by the Kaw Valley Drainage District. There are no properties within the designated special flood hazard area or floodway. The City-Wide Master plan designates this area as heavy industrial. Current uses match with zoning as warehouse and storage space. Construction is brick and block with basements unknown. Buildings appear to be in poor condition with some windows boarded. The site visit noted that this area is highly impervious. There is one storm water inlet present along the street, however curb and gutter are deteriorated/ missing. The site visit also note several low-lying openings present; including low placed windows and dock doors at grade. The most likely source of flooding in this area is accumulation of storm water runoff during large rain events that is able to enter into buildings through low-lying openings.
6. <i>Intersection of Stanley Road and East Donovan Road</i>	Repetitive Loss Area 6 is located near the intersection of Stanley Road and East Donovan Road. There is one repetitive loss property in this area. The City-Wide Master plan designates this area as heavy industrial. The affected buildings are used for industrial purposes; manufacturing, warehousing and storage. This RLA is protected from the Missouri River by the Fairfax Levee, operated by the Fairfax Drainage District. There are no properties within the designated Special Flood Hazard Area (SFHA) or floodway. The site visit noted that the area has been heavily built out with little to no impervious area visible. Curb appears well maintained with multiple storm water inlets nearby. The site visit also noted low-lying openings present on several buildings. Flooding in this area is attributed to accumulation of storm water during large rain events that can enter buildings through low-lying openings.
7. <i>Intersection of North 29th Street and Freeman Avenue</i>	Repetitive Loss Area 7 is located near the intersection of North 29th Street and Freeman Avenue. There is one repetitive loss property in this area. A source of flooding in this area has been identified as Jersey Creek, which originates near 36th Street and Everett Avenue and flows east. The creek is conveyed through open ditches as well as channelized underground as part of the storm sewer system in the area. The portion of Jersey Creek nearest the RLA is open ditch on private property. This is an urbanized area that is heavily built out with little to no open space in the immediate area. A second source of flooding is identified as runoff from rain events.
8. <i>Intersection of North 37th Street and Haskell Avenue</i>	Repetitive Loss Area 8 is located near the intersection of North 37th Street and Haskell Avenue. There is one repetitive loss property in this area. This area is not within the regulated special flood hazard area, floodway or .2 percent annual chance flood area. This area is designated by the City-Wide Master Plan as low-density residential. The area is comprised of single-family residential units with brick, wood, and metal construction. The residential units have full basements or crawlspaces. Flooding in this area is attributed to storm water run-off during large rain events. Since the last dated flood loss, the City has undergone separation of combined storm and sanitary lines. Reduced flooding in this area is attributed to the separation and creation of two separate lines. Site visit noted HVAC systems at grade and low-lying basement windows. Utilities and equipment at grade are more likely to be damaged than elevated equipment. Low-lying windows provide an entry point for water.
	Repetitive Loss Area 9 is located near the intersection of North 49th Drive and Sortor Drive. There is one repetitive loss property in this area. This area is not within the regulated special flood hazard area, floodway or .2 percent annual

9. <i>Intersection area of North 49th Drive and Sortor Drive</i>	chance flood area. This area is designated by the City-Wide Master Plan as low-density residential. The area is comprised of single-family residential units of brick or wood frame construction with full basements. North 49th Drive is in a depression with hills to the east and west. There is significant grade change as direction moves along Sortor Drive, with runoff water flowing towards north 49th Drive and the RLA. The site visit and aerial overview noted that there is a tree-lined ditch running between two properties. Use of topographic maps showed that one home is at grade level with the ditch. When water runoff from the surrounding areas accumulates in the ditch it will overflow in the direction of the home. Review of Unified Government of Wyandotte County/ KCK utility maps determined there is no stormwater network along North 49th Drive. Flooding in this area is attributed to the natural contours of the area combined with run-off and easy points of entry for water into basements.
10. <i>Intersection area of North 53rd Street and Georgia Avenue</i>	Repetitive Loss Area 10 is located near the intersection of North 53rd Street and Georgia Avenue. There is one repetitive loss property located in this area. This area is not within the regulated special flood hazard area, floodway or .2 percent annual chance flood area. This area is designated by the City-Wide Master Plan as low-density residential. The area is comprised of single-family residential units of brick or wood frame construction with full basements. North 53rd Street is located at the bottom of a hill, with runoff drainage coming from Rowland Avenue and Georgia Avenue. Flooding in this area has been attributed to stormwater run-off. Since the last flood loss recorded, the UG Public Works Department has installed new storm drainage lines along North 53rd Street and along North Georgia Avenue. Storm water is now captured and piped into a drainage swale. The installation of storm lines has mitigated flood risk in this area.
11. <i>Intersection area of North 57th Drive and Nogard Avenue</i>	Repetitive Loss Area 11 is located near the intersection of North 57th Drive and Nogard Avenue. There is one repetitive loss property in this area. Portions of this area are within the floodplain AE zone as well as zone x .2 percent annual chance flood hazard. This area is designated by the City-Wide Master Plan as low-density residential. The area is comprised of single-family residential units of brick or wood frame construction with full basements. The flood source in this area is identified as Brenner Heights Creek. Brenner Heights Creek originates near Leavenworth Road and North 56th Street and flows into the Kansas River. A portion Brenner Heights Creek runs parallel to North 58th Street. Across North 58th Street and perpendicular to Brenner Heights Creek is a ditch that runs in between two rows of houses. This ditch has a tree-lined bank. Public Works Department has noted an accumulation of trash and debris in Brenner Heights Creek and the adjacent ditch.
12. <i>Intersection area of South 65th Street near Kaw Drive</i>	Repetitive Loss Area 12 is located near South 65th Street and Kaw Drive. There is one repetitive loss property in this area. This area is located within the Zone X .2 percent annual chance flood hazard. This area is designated by the City-Wide Master Plan as Industrial. Uses in this area are primarily commercial with mixed retail and single family residential. Building construction is mixed in this area with block, metal building, wood and some unknown. Flooding in this area is attributed to a drainage ditch that runs along Highway K32, collecting drainage from the area north of this RLA. Normal flow drains to the Kansas River. This area has experienced backflow from the river when it is high. In 2008 a flap gate was installed at 59th Street to prevent river water backing up into this area during high times. Installation of the flap gate has alleviated the primary source of flooding in this area.

Table 2: 2018 Identified Repetitive Loss Areas

RL Area	Action Items	Status
Repetitive Loss Area 1 Merriam Lane between Roe Lane and South Mill Street	Preventative Measures: Enforcement of UG regulations for development within the floodplain/floodway ▪ The Planning and Urban Design Department, the Building Inspections Department, and the local floodplain administrator are responsible for continued implementation of these requirements. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under current staffing budget Floodplain mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". ▪ Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under the current staffing budget. Property Protection: Property owners in this area should take action to protect their property from future flooding hazards. ▪ Property owners are responsible for the implementation of property protection measures. ▪ Property owners can begin implementation immediately. ▪ Projects can be privately funded by the property owner. ▪ Funding assistance is available through grant and loan programs. ○ HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k ○ FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at https://www.fema.gov/flood-mitigation-assistance-grant-program Emergency Services: There is currently a water level gauge along Turkey Creek at Mill Street and 1-35. This gauge was funded by the U.S. Army Corp of Engineers, with the Unified Government agreeing to fund maintenance as required. Additional gauges would increase flood protection. ▪ The existing gauge is monitored by the Emergency Services department. ▪ This gauge is currently operational and will continue to be. ▪ The gauge was funded through a partnership with the U.S. Army Corps of Engineers. Monitoring is funded under the current staffing budget. Structural Projects: The Public Works Department, Stormwater Management and U.S. Army Corps of Engineers are coordinating this project. ▪ This project is anticipated to be completed in 2018-2019. ▪ This project has been funded through allocation of Federal funds and non-Federal funds. The Unified Government of Wyandotte County/ KCK has been working in conjunction with the U.S. Army Corps of Engineers on the Turkey Creek Project. This is a multi-phased project aimed at alleviating flooding from	Preventative Measures: No change Property Protection: No change Emergency Services: No change Structural projects: Ongoing This section of the Turkey Creek Flood Control project was completed in 2019. The UG is in the process of completing a LOMR-F for this project. When approved by FEMA, the UG will complete an updated AW-501 form to request to remove this RL parcel from the inventory based on the completed mitigation actions of the flood control project Public Information: No change

Turkey Creek along Merriam Lane and Southwest Boulevard. This project is the final phase and consists of floodwall and levees along Turkey Creek, storm sewer modifications, and utility relocations. Additional information can be found at http://www.usace.army.mil/Missions/Civil-Works/Project-Planning/Civil-Works-Review-Board/upper_turkey/

- The Public Works Department, Stormwater Management and U.S. Army Corps of Engineers are coordinating this project.
- This project is anticipated to be completed in 2018-2019.
- This project has been funded through allocation of Federal funds and non-Federal funds.

Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- The outreach programs mentioned above are current and will continue to be maintained.
- Funding is covered under current staffing

Repetitive Loss Area 2 Southwest Blvd between 1-35 and South 5th Street	Preventative Measures: Enforcement of UG regulations for development within the floodplain/floodway ■ The Planning and Urban Design Department, the Building Inspections Department, and the local floodplain administrator are responsible for continued implementation of these requirements. ■ These requirements are current and will continue to be maintained. ■ Funding is covered under current staffing budget Floodplain mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". ■ Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ■ These requirements are current and will continue to be maintained. ■ Funding is covered under current staffing budget. Property Protection: Property owners in this area should take action to protect their property from future flooding hazards. ■ Property owners are responsible for the implementation of property protection measures. ■ Property owners can begin implementation immediately. ■ Projects can be privately funded by the property owner. ■ Funding assistance is available through grant and loan programs. - o HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k - o FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at https://www.fema.gov/flood-mitigation-assistance-grant-program Emergency Services: There is currently a water level gauge along Turkey Creek at Mill Street and 1-35. This gauge was funded by the U.S. Army Corp	Preventative Measures: No change Property Protection: No change Emergency Services: No change Structural projects: Ongoing This section of the Turkey Creek Flood Control project was completed in 2019. The UG is in the process of completing a LOMR-F for this project. When approved by FEMA, the UG will complete an updated AW-501 form to request to remove this RL parcel from the inventory based on the completed mitigation actions of the
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	of Engineers, with the Unified Government agreeing to fund maintenance as required. Additional gauges would increase flood protection. ■ The existing gauge is monitored by the Emergency Services department. ■ This gauge is currently operational and will continue to be. ■ The gauge was funded through a partnership with the U.S. Army Corps of Engineers. Monitoring is funded under current staffing budget. Structural Projects: The Public Works Department, Stormwater Management and U.S. Army Corps of Engineers are coordinating this project. ■ This project is anticipated to be completed in 2018-2019. ■ This project has been funded through allocation of Federal funds and non-Federal funds. The Unified Government of Wyandotte County/ KCK has been working in conjunction with the U.S. Army Corps of Engineers on the Turkey Creek Project. This is a multi-phased project aimed at alleviating flooding from Turkey Creek along Merriam Lane and Southwest Boulevard. This project is the final phase and consists of floodwall and levees along Turkey Creek, storm sewer modifications, and utility relocations. Additional information can be found at http://www.usace.army.mil/Missions/Civil-Works/Project-Planning/Civil-Works-Review-Board/upper_turkey/ ■ The Public Works Department, Stormwater Management and U.S. Army Corps of Engineers are coordinating this project. ■ This project is anticipated to be completed in 2018-2019. ■ This project has been funded through allocation of Federal funds and non-Federal funds. Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager. ■ The local floodplain administrator or floodplain manager is responsible for public outreach efforts. ■ The outreach programs mentioned above are current and will continue to be maintained. ■ Funding is covered under current staffing	flood control project Public Information: No change
Repetitive Loss Area 3 South 39th Street and South 38th Street north of Argentine Boulevard	Preventative Measures: The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land. ■ The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. ■ These requirements are current and will continue to be maintained. ■ Funding is covered under current staff budget. Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx	Preventative Measures: No change Property Protection: No change Emergency Services: No change Structural projects: Ongoing 2023 Cooperating Technical Partner (CTP) funding has been received by

	▪ The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under the current staffing budget. Property Protection: Property owners in this area should act to protect their property from future flooding hazards. Property owners should prepare for flooding by purchasing flood insurance coverage. Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office. Items of value and utilities such as water heaters and HVAC equipment that are stored in basements should be moved to a higher floor. ▪ Property owners are responsible for the implementation of property protection measures. ▪ Property owners can begin implementation immediately. ▪ Projects can be privately funded by the property owner. ▪ Funding assistance is available through grant and loan programs. ▪ HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance the rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k ▪ FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate the long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at https://www.fema.gov/flood-mitigation-assistance-grant-program Natural Resource Protection: Due to the nature of flooding and drainage within this area, preservation of natural drainage patterns is a key element in mitigation. Property owners should ensure all ditches within their property boundaries remain free and clear of debris to allow for maximum drainage flow during heavy rain events. ▪ Property owners are responsible for maintaining clearance of natural drainage areas on private property. ▪ Property owners can begin implementation immediately ▪ Projects will be funded by property owners. Structural Projects: The City is currently working with Benesch Consulting on a study to determine feasible solutions for flooding in this area, including what can be done structurally to alleviate localized flooding. ▪ The Public Works Department and Benesch Consulting are undertaking this study. ▪ The study is anticipated to be completed in 2018-2019. ▪ Funds for this study have already been allocated. Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager. ▪ The local floodplain administrator or floodplain manager is responsible for public outreach efforts.	the State of Kansas Department of Water Resources to study this specific RL area and to identify/model flooding sources and potential mitigation actions Public Information: No change
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	▪ The outreach programs mentioned above are current and will continue to be maintained. ▪ Funding is covered under current staffing budget.	
Repetitive Loss Area 4 South 12th Street between the railway and Kansas River	Preventative Measures: The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land. ▪ The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under the current staff budget. Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and the location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx ▪ The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under the current staffing budget. Property Protection: Property owners in this area should act to protect their property from future flooding hazards. Property owners should prepare for flooding by purchasing flood insurance coverage. Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office. Items of value and utilities such as water heaters and HVAC equipment that are stored in basements should be moved to a higher floor. ▪ Property owners are responsible for the implementation of property protection measures. ▪ Property owners can begin implementation immediately. ▪ Projects can be privately funded by the property owner. ▪ Funding assistance is available through grant and loan programs. ▪ HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance the rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k ▪ FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate the long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at https://www.fema.gov/flood-mitigation-assistance-grant-program Natural Resource Protection: Due to the nature of flooding and drainage within this area, preservation of natural drainage patterns is a key element	Preventative Measures: No change Property Protection: No change Emergency Services: No change Structural projects: No change to Kaw Valley Drainage District maintenance responsibilities Area is included in the \$500 million KC Levee Enhancement project that is underway and increasing the levee protection level to 750 year. Project is anticipated to be complete 2026 Public Information: No change

	in mitigation. Property owners should ensure all ditches within their property boundaries remain free and clear of debris to allow for maximum drainage flow during heavy rain events. - Property owners are responsible for maintaining clearance of natural drainage areas on private property. - Property owners can begin implementation immediately - Projects will be funded by property owners. Structural Projects: Maintain the levee to prevent any failures. - The Kaw Valley Drainage District is responsible for maintenance of the Armourdale Levee. - The Kaw Valley Drainage District is currently maintaining the levee and will continue to do so in the future. - A "Levee Tax" applied to properties protected by the levee is used to fund maintenance. Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager. - The local floodplain administrator or floodplain manager is responsible for public outreach efforts. - The outreach programs mentioned above are current and will continue to be maintained. - Funding is covered under current staffing budget.	
Repetitive Loss Area 5 Kansas Avenue near KCS railway	Preventative Measures: The Unified Government of Wyandotte County/KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land. - The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. - These requirements are current and will continue to be maintained. - Funding is covered under current staff budget. Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx - The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. - These requirements are current and will continue to be maintained. - Funding is covered under current staffing budget. Property Protection: Property owners in this area should act to protect their property from future flooding hazards. Property owners should prepare for flooding by purchasing flood insurance coverage. Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building	Preventative Measures: No change Property Protection: No change Emergency Services: No change Structural projects: No change to Kaw Valley Drainage District maintenance responsibilities Area is included in the \$500 million KC Levee Enhancement project that is underway and increasing the levee protection level to 750 year. Project is anticipated to be complete 2026

	Inspections office. Items of value and utilities such as water heaters and HVAC equipment that are stored in basements should be moved to a higher floor. - Property owners are responsible for the implementation of property protection measures. - Property owners can begin implementation immediately. - Projects can be privately funded by the property owner. - Funding assistance is available through grant and loan programs. - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance the rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate the long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at https://www.fema.gov/flood-mitigation-assistance-grant-program Structural Projects: Maintain the levee to prevent any failures. - The Kaw Valley Drainage District is responsible for maintenance of the Armourdale Levee. - The Kaw Valley Drainage District is currently maintaining the levee and will continue to do so in the future. - A "Levee Tax" applied to properties protected by the levee is used to fund maintenance. - The Public Works Department Engineering Division and Stormwater Runoff Management are responsible for infrastructure updates. - Repairs, replacement and maintenance should be done when funding becomes available and after completion of higher priority budgeted items. - Funds are appropriated for Capital Maintenance Improvement Projects by the Unified Government's Board of Commissioners, as available. - Road improvements to fix or replace deteriorated or missing curb are recommended. In addition, maintenance of the storm sewer inlet to keep it free of debris is recommended. Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager. - The local floodplain administrator or floodplain manager is responsible for public outreach efforts. - The outreach programs mentioned above are current and will continue to be maintained. - Funding is covered under current staffing budget.	Public Information: No change
Repetitive Loss Area 6 Intersection of Stanley Road and East Donovan Road	Preventative Measures: The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land	Preventative Measures: No change Property Protection: No change

	disturbance permits are required for any site disturbing greater than 1 acre of land. ▪ The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under current staff budget. Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and the location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx ▪ The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under current staffing budget. Structural Projects: Maintain the levee to prevent any failures. ▪ The Kaw Valley Drainage District is responsible for maintenance of the Armourdale Levee. ▪ The Kaw Valley Drainage District is currently maintaining the levee and will continue to do so in the future. ▪ A "Levee Tax" applied to properties protected by the levee is used to fund maintenance. Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager. ▪ The local floodplain administrator or floodplain manager is responsible for public outreach efforts. ▪ The outreach programs mentioned above are current and will continue to be maintained. ▪ Funding is covered under current staffing budget.	Emergency Services: No change Structural projects: No change Area is included in the \$500 million KC Levee Enhancement project that is underway and increasing the levee protection level to 750 year. Project is anticipated to be complete 2026 2022-2026 Capital Maintenance & Improvement Program has identified stormwater renewal and replacement and stormwater enhancements project opportunities throughout the UG Public Information: No change
Repetitive Loss Area 7 Intersection of North 29th Street and Freeman Avenue	Preventative Measures: The Unified Government of Wyandotte County/KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land. ▪ The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under current staff budget. Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic	Preventative Measures: No change Property Protection: No change Emergency Services: No change Structural projects: No change 2022-2026 Capital

maps and location of sewer and sanitary lines are available through this service. <http://www.wycokck.org/GSS/DotMaps.aspx>

- The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
- These requirements are current and will continue to be maintained.
- Funding is covered under current staffing budget.

Property protection: Removal of sub-grade units would likely mitigate flooding. If removal is not possible, modification to limit excess water flow and pooling from the porch is recommended.

- Retrofitting can be done to minimize the impact of flooding.

Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building

Inspections office.

- Property owners should prepare for flooding by purchasing flood insurance coverage.

- Property owners are responsible for the implementation of property protection measures.
- Property owners can begin implementation immediately.
- Projects can be privately funded by property owner.
- Funding assistance is available through grant and loan programs.
- HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
- FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

Natural Resource Protection: Due to the nature of flooding and drainage within this area, preservation of natural drainage patterns is a key element in mitigation. Property owners should ensure all ditches within their property boundaries remain free and clear of debris to allow for maximum drainage flow during heavy rain events.

- Property owners are responsible for maintaining clearance of natural drainage areas on private property.
- Property owners can begin implementation immediately.
- Projects will be funded by property owners.

Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- The outreach programs mentioned above are current and will continue to be maintained.
- Funding is covered under current staffing budget.

Maintenance & Improvement Program has identified stormwater improvements in the Jersey Creek watershed basin

Public Information: No change

Repetitive Loss Area 8	Preventative Measures: The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak run-	Preventative Measures: No change
Intersection of North 37th Street and Haskell Avenue	off from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land. ▪ The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under current staff budget. Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and the location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx ▪ The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under current staffing budget. Property Protection: Addition of window wells to prevent water entry into basements is recommended. • Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office. ▪ Property owners should prepare for flooding by purchasing flood insurance coverage. ▪ Property owners are responsible for the implementation of property protection measures. ▪ Property owners can begin implementation immediately. ▪ Projects can be privately funded by the property owner. ▪ Funding assistance is available through grant and loan programs. ○ HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k ○ FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at https://www.fema.gov/flood-mitigation-assistance-grant-program	Property Protection: No change Emergency Services: No change Structural projects: No change 2022-2026 Capital Maintenance & Improvement Program has identified stormwater improvements in the Jersey Creek watershed basin Public Information: No change

	▪ The outreach programs mentioned above are current and will continue to be maintained. ▪ Funding is covered under current staffing budget.	
	Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager. ▪ The local floodplain administrator or floodplain manager is responsible for public outreach efforts.	
Repetitive Loss Area 9 Intersection area of North 49th Drive and Sortor Drive	Preventative Measures: The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land. ▪ The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under current staff budget.	Preventative Measures: No change Property Protection: No change Emergency Services: No change Structural projects: No change
	Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx ▪ The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under the current staffing budget. Property Protection: Addition of window wells to prevent water entry into basements is recommended. • Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office. ▪ Property owners should prepare for flooding by purchasing flood insurance coverage. ▪ Property owners are responsible for the implementation of property protection measures. ▪ Property owners can begin implementation immediately. ▪ Projects can be privately funded by the property owner. ▪ Funding assistance is available through grant and loan programs. - o HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k - o FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood	2022-2026 Capital Maintenance & Improvement Program has identified stormwater renewal and replacement and stormwater enhancements project opportunities throughout the UG Public Information: No change

	damage to structures insured under the NFIP. Additional information can be found at https://www.fema.gov/flood-mitigation-assistance-grant-program	
	Natural Resource Protection: Due to the nature of flooding and drainage within this area, preservation of natural drainage patterns is a key element in mitigation. Property owners should ensure all ditches within their property boundaries remain free and clear of debris to allow for maximum drainage flow during heavy rain events. - Property owners are responsible for maintaining clearance of natural drainage areas on private property. - Property owners can begin implementation immediately. - Projects will be funded by property owners. Structural Projects: Installation of stormwater infrastructure along north 49th Drive is recommended. - The Public works Department Engineering Division and Stormwater Runoff Management are responsible for infrastructure updates. - Installation and maintenance should be done when funding becomes available and after completion of higher priority budgeted items. - Funds are appropriated for Capital Maintenance Improvement Projects by the Unified Government's Board of Commissioners. Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager. - The local floodplain administrator or floodplain manager is responsible for public outreach efforts. - The outreach programs mentioned above are current and will continue to be maintained. - Funding is covered under current staffing budget.	

Repetitive Loss Area 10 Intersection area of North 53rd Street and Georgia Avenue	Preventative Measures: The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land. ■ The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. ■ These requirements are current and will continue to be maintained. ■ Funding is covered under current staff budget. Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx ■ The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ■ These requirements are current and will continue to be maintained. ■ Funding is covered under current staffing budget. Property Protection: Addition of window wells to prevent water entry into basements is recommended. Retrofitting can be done to minimize impact of flooding. Retrofitting projects can include but are not limited to	Preventative Measures: No change Property Protection: No change Emergency Services: No change Structural projects: No change 2022-2026 Capital Maintenance & Improvement Program has identified stormwater renewal and replacement and stormwater enhancements project opportunities
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	elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office. - Property owners should prepare for flooding by purchasing flood insurance coverage. - Property owners are responsible for the implementation of property protection measures. - Property owners can begin implementation immediately. - Projects can be privately funded by the property owner. - Funding assistance is available through grant and loan programs. - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sflh/203k - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at https://www.fema.gov/flood-mitigation-assistance-grant-program Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager. - The local floodplain administrator or floodplain manager is responsible for public outreach efforts. - The outreach programs mentioned above are current and will continue to be maintained. - Funding is covered under current staffing budget.	throughout the UG Public Information: No change
Repetitive Loss Area 11 Intersection area of North 57th Drive and Nogard Avenue	Preventative Measures: Enforcement of UG regulations for development within the floodplain/floodway - The Planning and Urban Design Department, the Building Inspections Department, and the local floodplain administrator are responsible for continued implementation of these requirements. - These requirements are current and will continue to be maintained. - Funding is covered under current staffing budget Floodplain mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". - Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. - These requirements are current and will continue to be maintained. - Funding is covered under the current staffing budget. Property Protection: Addition of window wells to prevent water entry into basements is recommended. Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office. Property owners should prepare for flooding by purchasing flood insurance coverage.	Preventative Measures: No change Property Protection: No change Emergency Services: No change Structural projects: No change 2022-2026 Capital Maintenance & Improvement Program has identified stormwater renewal and replacement and stormwater enhancements

	- Property owners are responsible for the implementation of property protection measures. - Property owners can begin implementation immediately. - Projects can be privately funded by the property owner. - Funding assistance is available through grant and loan programs. - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at https://www.fema.gov/flood-mitigation-assistance-grant-program Natural Resource Protection: Due to the nature of flooding and drainage within this area, preservation of natural drainage patterns is a key element in mitigation. Property owners should ensure all ditches within their property boundaries remain free and clear of debris to allow for maximum drainage flow during heavy rain events. - Property owners are responsible for maintaining clearance of natural drainage areas on private property. - Property owners can begin implementation immediately - Projects will be funded by property owners Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager. - The local floodplain administrator or floodplain manager is responsible for public outreach efforts. - The outreach programs mentioned above are current and will continue to be maintained. - Funding is covered under current staffing budget.	project opportunities throughout the UG Public Information: No change
Repetitive Loss Area 12 Intersection area of South 65th Street near Kaw Drive	Preventative Measures: The Unified Government of Wyandotte County/KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land. - The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. - These requirements are current and will continue to be maintained. - Funding is covered under current staff budget. Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and the location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx	Preventative Measures: No change Property Protection: No change Emergency Services: No change Structural projects: No change 2023 Cooperating Technical Partner (CTP) funding has been received by

	▪ The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under the current staffing budget. Property Protection: Retrofitting can be done to minimize impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office. Property owners should prepare for flooding by purchasing flood insurance coverage. ▪ Property owners are responsible for the implementation of property protection measures. ▪ Property owners can begin implementation immediately. ▪ Projects can be privately funded by the property owner. ▪ Funding assistance is available through grant and loan programs. ○ HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k ○ FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at https://www.fema.gov/flood-mitigation-assistance-grant-program Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager. ▪ The local floodplain administrator or floodplain manager is responsible for public outreach efforts. ▪ The outreach programs mentioned above are current and will continue to be maintained. ▪ Funding is covered under current staffing budget.	the State of Kansas Department of Water Resources to study this specific RL area and to identify/model flooding sources and potential mitigation actions. Public Information: No change
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CRS Annual Progress Report and CRS Required 5-Year Update:

The Unified Government of Wyandotte County, Kansas City, Kansas will reference the CRS Manual in place at the time of the required CRS annual recertification progress report and the required 5-year verification update to ensure the progress reports continue to meet the credit criteria.

The UG will request updated RL data from FEMA Region 7 once per year and will review data with each CRS RLAA Annual Progress Report. An Information Sharing Access Agreement (IASS) between the UG and FEMA may be required to obtain RL data from FEMA Region. Contact FEMA Region 7, Insurance Program Specialist for additional information regarding an IASS agreement.

Chris Parsons

Insurance Program Specialist | Mitigation Division | FEMA Region VII (816) 283-7980 Desk | (202)702-7012 Cell

Christopher.parsons@fema.dhs.gov

APPENDIX B

2024-2029 Repetitive Loss Area Analysis Progress Report Template

Background

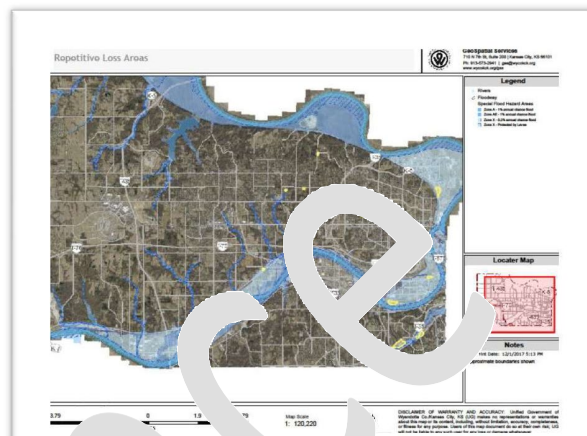
The City of Kansas City, Kansas (UG) joined the National Flood Insurance Program (NFIP) on November 1, 1974. FEMA's Community Rating System (CRS) is a voluntary program available for communities in good standing with the NFIP. Participation results in a flood insurance discount to NFIP policyholders within the corporate limits of the City of Kansas City. The UG entered the CRS program in 2012.

Repetitive Loss Area Analysis Summary

The UG completed a Repetitive Loss Area Analysis (RLAA) following the 2017 CRS Coordinator's Manual credit criteria in 2018. At the time of the----- Annual Progress Report, the -----

CRS Coordinator's Manual and----- CRS Addendum were

referenced. The Privacy Act of 1974 protects personally identifiable information related to NFIP flood insurance policyholders related to the data utilized for CRS reporting purposes. Protected data includes specific names, addresses, and claim information such as the amounts of claims. The UG follows the guidelines of the Privacy Act in reports associated with the CRS program.



Reports and Distribution

The redacted 2018 RLAA can be requested by contacting the Department of Planning and Urban Design at planninginfo@wycokck.org. The annual progress report will be made available on the UG's Flood Information webpage at -----

UG Ordinances and resolution can be viewed online at -----

Annual Program Report

For RS participating communities, Activity 500 Flood Damage Reduction Activities is a program requisite. The following date pertain to the two CRS reporting periods for ----- documentation:

CRS Progress Reporting Period from -----

CRS 5-Year Verification Period from -----

UG has ----- a CRS Repetitive Loss ----- designation since ----- the CRS Program in 2012.

Repetitive Flood Loss Properties

In the United States there are over 195,000 **repetitive loss properties**, i.e., properties that have had two or more claims of more than \$1,000 paid by the NFIP within any 10-year period since 1978. Although some of these properties have had mitigation measures applied to them, most remain at risk of flooding.

To focus resources on those properties that represent the best opportunities for mitigation, Congress defined a subset called "**Severe Repetitive Loss Properties**" when it passed the Flood Insurance Reform Act of 2004. Severe Repetitive Loss Properties are those 1-4 family properties that have had four or more claims of more than \$5,000 or two to three claims that cumulatively exceed the building's value.

FEMA is directed by the Act to define Severe Repetitive Loss Property for multi-family buildings. For the purposes of the CRS, the Severe Repetitive Loss Property subset also includes non-residential buildings that meet the same criteria as for 1-4 family

(1) Category A: A community that has no repetitive loss properties, or whose repetitive loss properties all have been mitigated. A Category A community has no special requirements except to submit information to update its repetitive loss list, as needed.

(2) Category B: A community with at least one, but fewer than 50, repetitive loss properties that have not been mitigated. At each verification visit, a Category B community must

- (a) Prepare a map of the repetitive loss area(s) (see Section 503),
- (b) Review and describe its repetitive loss problem,
- (c) Prepare a list of the addresses of all properties with insurable buildings in those areas, and
- (d) Undertake an annual outreach project to those addresses (see Section 504). A copy of the outreach project is submitted with each year's recertification.

(3) Category C: A community with 50 or more repetitive loss properties that have not been mitigated. A Category C community must

- (a) Do the same things as a Category B community, and
- (b) Prepare and adopt a repetitive loss area analysis for all repetitive loss areas or prepare and adopt a floodplain management plan that includes full credit for planning Step S(c). Repetitive loss area analyses and floodplain management plans are described under Activity 510 (Floodplain Management Planning).

Review of Action Items by Repetitive Loss Area

The 2018 RLAA identified 12 repetitive loss areas (RLAs) based on the 2017 data provided by FEMA via Insurance Services Office. Table 2 represents the reported 2018 RLA assessment and problem statements for the source of flooding/flooding history in each RL area.

Recommendation for New Projects of Revised Recommendations

Based on the RL data provided by FEMA, there (insert summary of changes to RL count). All RLAs, problem statements, preventative measures, property protection recommendations, and action items were reviewed under the annual progress report exercise and are represented in Table 3. Status updates to the reported actions items to meet the annual progress report exercise are provided.

The----- Annual Progress Report was prepared by the UG Departments of Planning and Urban Design and Public Works.

Table 2: 2018 Identified Repetitive Loss Areas

Repetitive Loss Area	Problem Statement
1. <i>Merriam Lane between Roe Lane and South Mill Street</i>	Repetitive Loss Area 1 is located along Merriam Lane between Roe Lane and South Mill Street. Multiple repetitive loss properties are located within this area. Turkey Creek runs parallel to Merriam Lane for a portion of this stretch. The affected properties represent a mix of commercial and single-family residential homes, built primarily between 1920 and 1970. Flooding in this area is caused by overflowing waters from Turkey Creek. A portion of the RLA lies within the boundaries of the one percent annual chance flood as well as the floodway for Turkey Creek. Due to the mixed-use nature of this area, flooding can have impacts on business operation as well as damage to personal property. There is also a safety hazard presented for anyone attempting to drive or walk through the affected areas during flooding.
2. <i>Southwest Blvd between 1-35 and South 5th Street</i>	Repetitive Loss Area 2 is located along Southwest Boulevard from just east of South Tremont Street to South 5th Street. There are multiple repetitive loss properties located within this area. Turkey Creek flows through the RLA and continues in close proximity to the properties. Portions of the RLA are within the floodway and AE Zone for Turkey Creek. This area is commercial in nature with retail space, warehouses, and office buildings. Overbank flooding from Turkey Creek has been a problem in this area. This area also experiences flooding due to runoff from areas that are at a higher elevation to the southeast. Water collects along Southwest Boulevard where the land becomes flat. The Wyandotte County Major Street Plan identifies Southwest Boulevard as a Class B Thoroughfare. Flooding in this area can cause disruption of travel and business and can be hazardous for anyone trying to drive along Southwest Boulevard.
3. <i>South 39th Street and South 38th Street north of Argentine Boulevard</i>	Repetitive Loss Area 3 is located north of Argentine Boulevard between South 39th Street and South 37th Street. Four repetitive loss properties are located within this area. This area is not located within the regulatory Special Flood Hazard Area (SFHA), however has experienced multiple flooding events with losses reported. The affected buildings are single-family homes, mostly with partial/full basements or crawlspaces. Flooding in this area has been identified as surface runoff flooding, usually occurring during or after flash flood rain events. A flash flood is defined as a sudden, local flood typically due to heavy rain. The area outlined is very flat with grade changes no more than two feet within the RLA boundaries. Storm sewers along South 39th Street flow north to a drainage ditch located on private property. This ditch has adjacent trees along the bank and has experienced blockage from natural debris in the past. South 38th Street and South 37th Street do not have storm sewers and rely on natural drainage, the flat land leads to water pooling. These elements combined lead to flooding problems when large rain events have an intensity that exceeds the evaporation, infiltration and natural runoff capacity of the soil. Increases in impervious surfaces can exacerbate problems with runoff.
4. <i>South 12th Street between the railway and Kansas River</i>	Repetitive Loss Area 4 is located along South 12th Street between KCS Railway and the Kansas River. There is one repetitive loss property within this area. This area is entirely within the Zone X-.2% annual chance flood and abuts the floodway. The last loss was reported in 1993, during which time Kansas City experienced record flooding. This area is levee protected by the Armourdale Levee operated by the Kaw Valley Drainage District. This area is commercial and industrial in use with warehousing, office space, storage and railcar services. Flooding in the past has likely been caused by extreme rain events which inundated the area. This area does not have much change in grade which could lead to water pooling in such an event where water is not able to flow away from the area fast enough to keep up with downfall. To the north there is significant buildout, however surrounding the RLA are some parcels with open space which if maintained can help alleviate runoff. The City operates a pump station on 12th

	Street. When flood gates to the Kansas River are closed the City uses the pump station to move excess water to the Kansas River to prevent flooding.
5. <i>Kansas Avenue near KCS railway</i>	Repetitive Loss Area 5 is located along Kansas Avenue near the KCS Railway. There is one repetitive loss property in this area. The last loss was in 1993, during which time Kansas City experienced record flooding. This area is in Zone X, protected from the Kansas River by the Armourdale Levee operated by the Kaw Valley Drainage District. There are no properties within the designated special flood hazard area or floodway. The City-Wide Master plan designates this area as heavy industrial. Current uses match with zoning as warehouse and storage space. Construction is brick and block with basements unknown. Buildings appear to be in poor condition with some windows boarded. The site visit noted that this area is highly impervious. There is one storm water inlet present along the street, however curb and gutter are deteriorated/ missing. The site visit also note several low-lying openings present; including low placed windows and dock doors at grade. The most likely source of flooding in this area is accumulation of storm water runoff during large rain events that is able to enter into buildings through low-lying openings.
6. <i>Intersection of Stanley Road and East Donovan Road</i>	Repetitive Loss Area 6 is located near the intersection of Stanley Road and East Donovan Road. There is one repetitive loss property in this area. The City-Wide Master plan designates this area as heavy industrial. The affected buildings are used for industrial purposes; manufacturing, warehousing and storage. This RLA is protected from the Missouri River by the Fairfax Levee, operated by the Fairfax Drainage District. There are no properties within the designated Special Flood Hazard Area (SFHA) or floodway. The site visit noted that the area has been heavily built out with little to no impervious area visible. Curb appears well maintained with multiple storm water inlets nearby. The site visit also noted low-lying openings present on several buildings. Flooding in this area is attributed to accumulation of storm water during large rain events that can enter buildings through low-lying openings.
7. <i>Intersection of North 29th Street and Freeman Avenue</i>	Repetitive Loss Area 7 is located near the intersection of North 29th Street and Freeman Avenue. There is one repetitive loss property in this area. A source of flooding in this area has been identified as Jersey Creek, which originates near 36th Street and Everett Avenue and flows east. The creek is conveyed through open ditches as well as channelized underground as part of the storm sewer system in the area. The portion of Jersey Creek nearest the RLA is open ditch on private property. This is an urbanized area that is heavily built out with little to no open space in the immediate area. A second source of flooding is identified as runoff from rain events.
8. <i>Intersection of North 37th Street and Haskell Avenue</i>	Repetitive Loss Area 8 is located near the intersection of North 37th Street and Haskell Avenue. There is one repetitive loss property in this area. This area is not within the regulated special flood hazard area, floodway or .2 percent annual chance flood area. This area is designated by the City-Wide Master Plan as low-density residential. The area is comprised of single-family residential units with brick, wood, and metal construction. The residential units have full basements or crawlspaces. Flooding in this area is attributed to storm water run-off during large rain events. Since the last dated flood loss, the City has undergone separation of combined storm and sanitary lines. Reduced flooding in this area is attributed to the separation and creation of two separate lines. Site visit noted HVAC systems at grade and low-lying basement windows. Utilities and equipment at grade are more likely to be damaged than elevated equipment. Low-lying windows provide an entry point for water.
	Repetitive Loss Area 9 is located near the intersection of North 49th Drive and Sortor Drive. There is one repetitive loss property in this area. This area is not within the regulated special flood hazard area, floodway or .2 percent annual

9. <i>Intersection area of North 49th Drive and Sortor Drive</i>	chance flood area. This area is designated by the City-Wide Master Plan as low-density residential. The area is comprised of single-family residential units of brick or wood frame construction with full basements. North 49th Drive is in a depression with hills to the east and west. There is significant grade change as direction moves along Sortor Drive, with runoff water flowing towards north 49th Drive and the RLA. The site visit and aerial overview noted that there is a tree-lined ditch running between two properties. Use of topographic maps showed that one home is at grade level with the ditch. When water runoff from the surrounding areas accumulates in the ditch it will overflow in the direction of the home. Review of Unified Government of Wyandotte County/ KCK utility maps determined there is no stormwater network along North 49th Drive. Flooding in this area is attributed to the natural contours of the area combined with run-off and easy points of entry for water into basements.
10. <i>Intersection area of North 53rd Street and Georgia Avenue</i>	Repetitive Loss Area 10 is located near the intersection of North 53rd Street and Georgia Avenue. There is one repetitive loss property located in this area. This area is not within the regulated special flood hazard area, floodway or .2 percent annual chance flood area. This area is designated by the City-Wide Master Plan as low-density residential. The area is comprised of single-family residential units of brick or wood frame construction with full basements. North 53rd Street is located at the bottom of a hill, with runoff drainage coming from Rowland Avenue and Georgia Avenue. Flooding in this area has been attributed to stormwater run-off. Since the last flood loss recorded, the UG Public Works Department has installed new storm drainage lines along North 53rd Street and along North Georgia Avenue. Storm water is now captured and piped into a drainage swale. The installation of storm lines has mitigated flood risk in this area.
11. <i>Intersection area of North 57th Drive and Nogard Avenue</i>	Repetitive Loss Area 11 is located near the intersection of North 57th Drive and Nogard Avenue. There is one repetitive loss property in this area. Portions of this area are within the floodplain AE zone as well as zone x .2 percent annual chance flood hazard. This area is designated by the City-Wide Master Plan as low-density residential. The area is comprised of single-family residential units of brick or wood frame construction with full basements. The flood source in this area is identified as Brenner Heights Creek. Brenner Heights Creek originates near Leavenworth Road and North 56th Street and flows into the Kansas River. A portion Brenner Heights Creek runs parallel to North 58th Street. Across North 58th Street and perpendicular to Brenner Heights Creek is a ditch that runs in between two rows of houses. This ditch has a tree-lined bank. Public Works Department has noted an accumulation of trash and debris in Brenner Heights Creek and the adjacent ditch.
12. <i>Intersection area of South 65th Street near Kaw Drive</i>	Repetitive Loss Area 12 is located near South 65th Street and Kaw Drive. There is one repetitive loss property in this area. This area is located within the Zone X .2 percent annual chance flood hazard. This area is designated by the City-Wide Master Plan as Industrial. Uses in this area are primarily commercial with mixed retail and single family residential. Building construction is mixed in this area with block, metal building, wood and some unknown. Flooding in this area is attributed to a drainage ditch that runs along Highway K32, collecting drainage from the area north of this RLA. Normal flow drains to the Kansas River. This area has experienced backflow from the river when it is high. In 2008 a flap gate was installed at 59th Street to prevent river water backing up into this area during high times. Installation of the flap gate has alleviated the primary source of flooding in this area.

Table 3: Action Item Status

RL Area	Action Items	Status
Repetitive Loss Area 1 Merriam Lane between Roe Lane and South Mill Street	Preventative Measures: Enforcement of UG regulations for development within the floodplain/floodway - The Planning and Urban Design Department, the Building Inspections Department, and the local floodplain administrator are responsible for continued implementation of these requirements. - These requirements are current and will continue to be maintained. - Funding is covered under current staffing budget Floodplain mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". - Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. - These requirements are current and will continue to be maintained. - Funding is covered under current staffing budget. Property Protection: Property owners in this area should take action to protect their property from future flooding hazards. - Property owners are responsible for the implementation of property protection measures. - Property owners can begin implementation immediately. - Projects can be privately funded by the property owner. - Funding assistance is available through grant and loan programs. - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at https://www.fema.gov/flood-mitigation-assistance-grant-program Emergency Services: There is currently a water level gauge along Turkey Creek at Mill Street and 1-35. This gauge was funded by the U.S. Army Corp of Engineers, with the Unified Government agreeing to fund maintenance as required. Additional gauges would increase flood protection. - The existing gauge is monitored by the Emergency Services department. - This gauge is currently operational and will continue to be. - The gauge was funded through a partnership with the U.S. Army Corps of Engineers. Monitoring is funded under current staffing budget. Structural Projects: The Public Works Department, Stormwater Management and U.S. Army Corps of Engineers are coordinating this project. - This project is anticipated to be completed in 2018-2019. - This project has been funded through allocation of Federal funds and non-Federal funds.	Preventative Measures: ----- Property Protection: ----- Emergency Services: ----- Structural projects: ----- Public Information:-----

	The Unified Government of Wyandotte County/ KCK has been working in conjunction with the U.S. Army Corps of Engineers on the Turkey Creek Project. This is a multi-phased project aimed at alleviating flooding from Turkey Creek along Merriam Lane and Southwest Boulevard. This project is the final phase and consists of floodwall and levees along Turkey Creek, storm sewer modifications, and utility relocations. Additional information can be found at http://www.usace.army.mil/Missions/Civil-Works/Project-Planning/Civil-Works-Review-Board/upper_turkey/ ■ The Public Works Department, Stormwater Management and U.S. Army Corps of Engineers are coordinating this project. ■ This project is anticipated to be completed in 2018-2019. ■ This project has been funded through allocation of Federal funds and non-Federal funds. Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager. ■ The local floodplain administrator or floodplain manager is responsible for public outreach efforts. ■ The outreach programs mentioned above are current and will continue to be maintained. ■ Funding is covered under current staffing	
Repetitive Loss Area 2 Southwest Blvd between 1-35 and South 5th Street	Preventative Measures: Enforcement of UG regulations for development within the floodplain/floodway ■ The Planning and Urban Design Department, the Building Inspections Department, and the local floodplain administrator are responsible for continued implementation of these requirements. ■ These requirements are current and will continue to be maintained. ■ Funding is covered under current staffing budget Floodplain mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". ■ Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ■ These requirements are current and will continue to be maintained. ■ Funding is covered under current staffing budget. Property Protection: Property owners in this area should take action to protect their property from future flooding hazards. ■ Property owners are responsible for the implementation of property protection measures. ■ Property owners can begin implementation immediately. ■ Projects can be privately funded by the property owner. ■ Funding assistance is available through grant and loan programs. - o HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k - o FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at https://www.fema.gov/flood-mitigation-assistance-grant-program	Preventative Measures: ----- Property Protection: ----- Emergency Services: ----- Structural projects: ----- Public Information:-----

	Emergency Services: There is currently a water level gauge along Turkey Creek at Mill Street and 1-35. This gauge was funded by the U.S. Army Corp of Engineers, with the Unified Government agreeing to fund maintenance as required. Additional gauges would increase flood protection. ■ The existing gauge is monitored by the Emergency Services department. ■ This gauge is currently operational and will continue to be. ■ The gauge was funded through a partnership with the U.S. Army Corps of Engineers. Monitoring is funded under the current staffing budget. Structural Projects: The Public Works Department, Stormwater Management and U.S. Army Corps of Engineers are coordinating this project. ■ This project is anticipated to be completed in 2018-2019. ■ This project has been funded through allocation of Federal funds and non-Federal funds. The Unified Government of Wyandotte County/ KCK has been working in conjunction with the U.S. Army Corps of Engineers on the Turkey Creek Project. This is a multi-phased project aimed at alleviating flooding from Turkey Creek along Merriam Lane and Southwest Boulevard. This project is the final phase and consists of floodwall and levees along Turkey Creek, storm sewer modifications, and utility relocations. Additional information can be found at http://www.usace.army.mil/Missions/Civil-Works/Project-Planning/Civil-Works-Review-Board/upper_turkey/ ■ The Public Works Department, Stormwater Management and U.S. Army Corps of Engineers are coordinating this project. ■ This project is anticipated to be completed in 2018-2019. ■ This project has been funded through allocation of Federal funds and non-Federal funds. Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager. ■ The local floodplain administrator or floodplain manager is responsible for public outreach efforts. ■ The outreach programs mentioned above are current and will continue to be maintained. ■ Funding is covered under current staffing	
Repetitive Loss Area 3 South 39th Street and South 38th Street north of Argentine Boulevard	Preventative Measures: The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land. ■ The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. ■ These requirements are current and will continue to be maintained. ■ Funding is covered under current staff budget. Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and location of sewer and sanitary lines are available through this	Preventative Measures: ----- Property Protection: _____ Emergency Services: ----- Structural projects: ----- Public Information:-----

service. <http://www.wycokck.org/GSS/DotMaps.aspx>

- The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
- These requirements are current and will continue to be maintained.
- Funding is covered under the current staffing budget.

Property Protection: Property owners in this area should act to protect their property from future flooding hazards. Property owners should prepare for flooding by purchasing flood insurance coverage. Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office. Items of value and utilities such as water heaters and HVAC equipment that are stored in basements should be moved to a higher floor.

- Property owners are responsible for the implementation of property protection measures.
- Property owners can begin implementation immediately.
- Projects can be privately funded by the property owner.
- Funding assistance is available through grant and loan programs.
- HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance the rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
- FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate the long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

Natural Resource Protection: Due to the nature of flooding and drainage within this area, preservation of natural drainage patterns is a key element in mitigation. Property owners should ensure all ditches within their property boundaries remain free and clear of debris to allow for maximum drainage flow during heavy rain events.

- Property owners are responsible for maintaining clearance of natural drainage areas on private property.
- Property owners can begin implementation immediately
- Projects will be funded by property owners.

Structural Projects: The City is currently working with Benesch Consulting on a study to determine feasible solutions for flooding in this area, including what can be done structurally to alleviate localized flooding.

- The Public Works Department and Benesch Consulting are undertaking this study.
- The study is anticipated to be completed in 2018-2019.
- Funds for this study have already been allocated.

Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.

	▪ The outreach programs mentioned above are current and will continue to be maintained. ▪ Funding is covered under current staffing budget.	
Repetitive Loss Area 4 South 12th Street between the railway and Kansas River	Preventative Measures: The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land. ▪ The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under current staff budget. Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and the location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx ▪ The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under current staffing budget. Property Protection: Property owners in this area should act to protect their property from future flooding hazards. Property owners should prepare for flooding by purchasing flood insurance coverage. Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office. Items of value and utilities such as water heaters and HVAC equipment that are stored in basements should be moved to a higher floor. ▪ Property owners are responsible for the implementation of property protection measures. ▪ Property owners can begin implementation immediately. ▪ Projects can be privately funded by the property owner. ▪ Funding assistance is available through grant and loan programs. ▪ HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance the rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k ▪ FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate the long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at https://www.fema.gov/flood-mitigation-assistance-grant-program Natural Resource Protection: Due to the nature of flooding and drainage within this area, preservation of natural drainage patterns is a key element	Preventative Measures: ----- Property Protection: ----- Emergency Services: ----- Structural projects: ----- Public Information:-----

in mitigation. Property owners should ensure all ditches within their property boundaries remain free and clear of debris to allow for maximum drainage flow during heavy rain events.

- Property owners are responsible for maintaining clearance of natural drainage areas on private property.
- Property owners can begin implementation immediately
- Projects will be funded by property owners.

Structural Projects: Maintain the levee to prevent any failures.

- The Kaw Valley Drainage District is responsible for maintenance of the Armourdale Levee.
- The Kaw Valley Drainage District is currently maintaining the levee and will continue to do so in the future.
- A "Levee Tax" applied to properties protected by the levee is used to fund maintenance.

Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- The outreach programs mentioned above are current and will continue to be maintained.
- Funding is covered under current staffing budget.

Repetitive Loss Area 5

Kansas Avenue near KCS railway

Preventative Measures: The Unified Government of Wyandotte County/KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land.

- The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits.
- These requirements are current and will continue to be maintained.
- Funding is covered under current staff budget.

Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and location of sewer and sanitary lines are available through this service. <http://www.wycokck.org/GSS/DotMaps.aspx>

- The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
- These requirements are current and will continue to be maintained.
- Funding is covered under current staffing budget.

Property Protection: Property owners in this area should act to protect their property from future flooding hazards. Property owners should prepare for flooding by purchasing flood insurance coverage. Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building

Preventative Measures:-----

Property Protection: -----

Emergency Services: -----

Structural projects: -----

Public Information:-----

Inspections office. Items of value and utilities such as water heaters and HVAC equipment that are stored in basements should be moved to a higher floor.

- Property owners are responsible for the implementation of property protection measures.
- Property owners can begin implementation immediately.
- Projects can be privately funded by the property owner.
- Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance the rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate the long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

Structural Projects: Maintain the levee to prevent any failures.

- The Kaw Valley Drainage District is responsible for maintenance of the Armourdale Levee.
- The Kaw Valley Drainage District is currently maintaining the levee and will continue to do so in the future.
- A "Levee Tax" applied to properties protected by the levee is used to fund maintenance.
- The Public Works Department Engineering Division and Stormwater Runoff Management are responsible for infrastructure updates.
- Repairs, replacement and maintenance should be done when funding becomes available and after completion of higher priority budgeted items.
- Funds are appropriated for Capital Maintenance Improvement Projects by the Unified Government's Board of Commissioners, as available.
- Road improvements to fix or replace deteriorated or missing curb are recommended. In addition, maintenance of the storm sewer inlet to keep it free of debris is recommended.

Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- The outreach programs mentioned above are current and will continue to be maintained.
- Funding is covered under current staffing budget.

Repetitive Loss Area 6	Preventative Measures: The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site	Preventative Measures:-----
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	disturbance permits are required for any site disturbing greater than 1 acre of land. ▪ The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under current staff budget. Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx ▪ The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under current staffing budget. Structural Projects: Maintain the levee to prevent any failures. ▪ The Kaw Valley Drainage District is responsible for maintenance of the Armourdale Levee. ▪ The Kaw Valley Drainage District is currently maintaining the levee and will continue to do so in the future. ▪ A "Levee Tax" applied to properties protected by the levee is used to fund maintenance. Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager. ▪ The local floodplain administrator or floodplain manager is responsible for public outreach efforts. ▪ The outreach programs mentioned above are current and will continue to be maintained. ▪ Funding is covered under current staffing budget.	Emergency Services:----- Structural projects: ----- Public Information:-----
Repetitive Loss Area 7 Intersection of North 29th Street and Freeman Avenue	Preventative Measures: The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land. ▪ The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. ▪ These requirements are current and will continue to be maintained. ▪ Funding is covered under current staff budget. Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and the location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx ▪ The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.	Preventative Measures: ----- Property Protection: ----- Emergency Services: ----- Structural projects: ----- Public Information:-----

- These requirements are current and will continue to be maintained.
- Funding is covered under the current staffing budget.

Property protection: Removal of sub-grade units would likely mitigate flooding. If removal is not possible, modification to limit excess water flow and pooling from the porch is recommended.

- Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office.

- Property owners should prepare for flooding by purchasing flood insurance coverage.

- Property owners are responsible for the implementation of property protection measures.
- Property owners can begin implementation immediately.
- Projects can be privately funded by the property owner.
- Funding assistance is available through grant and loan programs.
- HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
- FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

Natural Resource Protection: Due to the nature of flooding and drainage within this area, preservation of natural drainage patterns is a key element in mitigation. Property owners should ensure all ditches within their property boundaries remain free and clear of debris to allow for maximum drainage flow during heavy rain events.

- Property owners are responsible for maintaining clearance of natural drainage areas on private property.
- Property owners can begin implementation immediately.
- Projects will be funded by property owners.

Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- The outreach programs mentioned above are current and will continue to be maintained.
- Funding is covered under the current staffing budget.

Repetitive Loss Area 8 Intersection of North 37th Street and Haskell Avenue	Preventative Measures: The Unified Government of Wyandotte County/KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site disturbance permits are required for any site disturbing greater than 1 acre of land. ■ The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. ■ These requirements are current and will continue to be maintained. ■ Funding is covered under the current staff budget. Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and the location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx ■ The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ■ These requirements are current and will continue to be maintained. ■ Funding is covered under the current staffing budget.	Preventative Measures: --- Property Protection: -- Emergency Services: --- Structural Projects: ---- Public Information: -
	Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and the location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx ■ The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ■ These requirements are current and will continue to be maintained. ■ Funding is covered under current staffing budget.	

Property Protection: Addition of window wells to prevent water entry into basements is recommended.

- Retrofitting can be done to minimize the impact of flooding.

Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office.

- Property owners should prepare for flooding by purchasing flood insurance coverage.
- Property owners are responsible for the implementation of property protection measures.
- Property owners can begin implementation immediately.
- Projects can be privately funded by property owner.
- Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- The outreach programs mentioned above are current and will continue to be maintained.
- Funding is covered under current staffing budget.

Repetitive Loss Area 9 Intersection area of North 49th Drive and Sortor Drive	Preventative Measures: The Unified Government of Wyandotte County/KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land. ■ The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. ■ These requirements are current and will continue to be maintained. ■ Funding is covered under current staff budget. Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and the location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx ■ The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. ■ These requirements are current and will continue to be maintained. ■ Funding is covered under current staffing budget. Property Protection: Addition of window wells to prevent water entry into basements is recommended. • Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office. ■ Property owners should prepare for flooding by purchasing flood insurance coverage. ■ Property owners are responsible for the implementation of property protection measures. ■ Property owners can begin implementation immediately. ■ Projects can be privately funded by the property owner. ■ Funding assistance is available through grant and loan programs. - o HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k - o FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at https://www.fema.gov/flood-mitigation-assistance-grant-program Natural Resource Protection: Due to the nature of flooding and drainage within this area, preservation of natural drainage patterns is a key element in mitigation. Property owners should ensure all ditches within their	Preventative Measures: ---- Property Protection: ---- Emergency Services: ---- Structural projects: ---- Public Information:----
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property boundaries remain free and clear of debris to allow for maximum drainage flow during heavy rain events.

- Property owners are responsible for maintaining clearance of natural drainage areas on private property.
- Property owners can begin implementation immediately.
- Projects will be funded by property owners.

Structural Projects: Installation of stormwater infrastructure along north 49th Drive is recommended.

- The Public works Department Engineering Division and Stormwater Runoff Management are responsible for infrastructure updates.
- Installation and maintenance should be done when funding becomes available and after completion of higher priority budgeted items.
- Funds are appropriated for Capital Maintenance Improvement Projects by the Unified Government's Board of Commissioners.

Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- The outreach programs mentioned above are current and will continue to be maintained.
- Funding is covered under current staffing budget.

Repetitive Loss Area 10

Intersection area of North 53rd Street and Georgia Avenue

Preventative Measures: The Unified Government of Wyandotte County/ KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land.

- The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits.
- These requirements are current and will continue to be maintained.
- Funding is covered under current staff budget.

Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and the location of sewer and sanitary lines are available through this service. <http://www.wycokck.org/GSS/DotMaps.aspx>

- The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
- These requirements are current and will continue to be maintained.
- Funding is covered under current staffing budget.

Property Protection: Addition of window wells to prevent water entry into basements is recommended. Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can

Preventative Measures:-----

Property Protection -----

Emergency Services: -----

Structural projects: -----

Public Information:-----

be found on their website. Additionally, some FEMA publications are available at the Building Inspections office.

- Property owners should prepare for flooding by purchasing flood insurance coverage.
- Property owners are responsible for the implementation of property protection measures.
- Property owners can begin implementation immediately.
- Projects can be privately funded by the property owner.
- Funding assistance is available through grant and loan programs.
- HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
- FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- The outreach programs mentioned above are current and will continue to be maintained.
- Funding is covered under current staffing budget.

Repetitive Loss Area 11

Intersection area of North 57th Drive and Nogard Avenue

Preventative Measures: Enforcement of UG regulations for development within the floodplain/floodway

- The Planning and Urban Design Department, the Building Inspections Department, and the local floodplain administrator are responsible for continued implementation of these requirements.
- These requirements are current and will continue to be maintained.
- Funding is covered under current staffing budget

Floodplain mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps".

- Geospatial Services Department maintains the "Dot Maps" and UG online mapping services.
- These requirements are current and will continue to be maintained.
- Funding is covered under current staffing budget.

Property Protection: Addition of window wells to prevent water entry into basements is recommended. Retrofitting can be done to minimize the impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office. Property owners should prepare for flooding by purchasing flood insurance coverage.

- Property owners are responsible for the implementation of property protection measures.
- Property owners can begin implementation immediately.

Preventative Measures: ----

Property Protection: ----

Emergency Services: ----

Structural projects: ----

Public Information:----

- Projects can be privately funded by the property owner.
- Funding assistance is available through grant and loan programs.
 - o HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - o FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

Natural Resource Protection: Due to the nature of flooding and drainage within this area, preservation of natural drainage patterns is a key element in mitigation. Property owners should ensure all ditches within their property boundaries remain free and clear of debris to allow for maximum drainage flow during heavy rain events.

- Property owners are responsible for maintaining clearance of natural drainage areas on private property.
- Property owners can begin implementation immediately
- Projects will be funded by property owners

Repetitive Loss Area 12 Intersection area of South 65th Street near Kaw Drive	Preventative Measure: The Unified Government of Wyandotte County/KCK regulates runoff for all private development in Kansas City, Kansas through the "Storm Drainage Criteria for Private Developments." Peak runoff from new development shall be no greater than the runoff from the site in its pre-development condition. In addition, all commercial developments are required to provide erosion control measures on site and land disturbance permits are required for any site disturbing greater than 1 acre of land. • The Planning-Engineering Department reviews development projects to ensure Storm Drainage Criteria, erosion control measures, and runoff regulations are met. The Public Works Department reviews and approves land disturbance permits. • These requirements are current and will continue to be maintained. • Funding is covered under the current staff budget. • Digital mapping information is made available online to the public through the Unified Government's online mapping tool, "Dot Maps". Topographic maps and location of sewer and sanitary lines are available through this service. http://www.wycokck.org/GSS/DotMaps.aspx • The Geospatial Services Department maintains the "Dot Maps" and UG online mapping services. • Funding is covered under the current staffing budget.	Preventative Measures: ---- Property Protection: ---- Emergency Services: ---- Structural Projects: ---- Public Information: ----
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Property Protection: Retrofitting can be done to minimize impact of flooding. Retrofitting projects can include but are not limited to elevating utilities and buildings and dry or wet-floodproofing. FEMA provides informational resources on floodproofing at retrofitting that can be found on their website. Additionally, some FEMA publications are available at the Building Inspections office. Property owners should prepare for flooding by purchasing flood insurance coverage.

- Property owners are responsible for the implementation of property protection measures.
- Property owners can begin implementation immediately.
- Projects can be privately funded by the property owner.
- Funding assistance is available through grant and loan programs.
 - HUD 203(k) Rehab Mortgage Insurance enables homebuyers and homeowners to finance rehabilitation of an existing home, including projects for mitigation of flood risk. Additional information can be found at https://www.hud.gov/program_offices/housing/sfh/203k
 - FEMA Flood Mitigation Assistance Program (FMA) is a grant program that can be applied to through the Unified Government Emergency Management Department for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP. Additional information can be found at <https://www.fema.gov/flood-mitigation-assistance-grant-program>

Public Information: The City engages in outreach projects to educate and advise the public about the hazards and natural and beneficial function of floodplains. Outreach efforts are coordinated by the local designated floodplain manager.

- The local floodplain administrator or floodplain manager is responsible for public outreach efforts.
- The outreach programs mentioned above are current and will continue to be maintained.
- Funding is covered under current staffing budget.

CRS Annual Progress Report and CRS Required 5-Year Update:

The Unified Government of Wyandotte County, Kansas City, Kansas will reference the CRS Manual in place at the time of the required CRS annual recertification progress report and the required 5-year verification update to ensure the progress reports continue to meet the credit criteria.

The UG will request updated RL data from FEMA Region 7 once per year and will review data with each CRS RLAA Annual Progress Report. An Information Sharing Access Agreement (IASS) between the UG and FEMA may be required to obtain RL data from FEMA Region. Contact FEMA Region 7, Insurance Program Specialist for additional information regarding an IASS agreement.

Chris Parsons

Insurance Program Specialist | Mitigation Division | FEMA Region VII

(816) 283-7980 Desk | (202) 702-7012 Cell

Christopher.parsons@fema.dhs.gov

APPENDIX C

Draft UG Board of Commissioners Resolution Template

RESOLUTION NO. _____

A RESOLUTION adopting the 2023-2028 Repetitive Loss Area Analysis Update

WHEREAS, on _____, the _____ for the Unified Government of Wyandotte County/Kansas City, Kansas (“_____”) held a public hearing and recommended approval of the 2023-2028 Repetitive Loss Area Analysis Update, a copy of which is on file with the Secretary of the Planning Commission and the Unified Government Clerk; and

WHEREAS, after the public hearing on _____, a majority of the _____ voted to recommend adoption of the Repetitive Loss Area Analysis Update, 2023-2028; and

WHEREAS, pursuant to K.S.A. 12-747(b), the Planning Commission is required to adopt the 2023-2028 Repetitive Loss Area Analysis Update by resolution, and send notice thereof to the governing body as set forth below.

NOW, THEREFORE, BE IT RESOLVED BY THE _____ COMMISSION OF

THE UNIFIED GOVERNMENT OF WYANDOTTE COUNTY/

KANSAS CITY, KANSAS, AS FOLLOWS:

Section 1. The _____ Commission hereby adopts the 2023-2028 Repetitive Loss Area Analysis Update, incorporated by reference herein.

Section 2. The _____ Commission hereby requests that the Secretary of the _____ Commission, and any other such employees, officials and agents of the Unified Government as may be necessary, submit a copy of this Resolution, a certified copy of the 2023-2028 Repetitive Loss Area Analysis Update, and a written summary of the public hearing held on _____, to the Unified Government Board of Commissioners.

Section 3. This Resolution shall take effect and be in full force immediately after its adoption.

**ADOPTED BY THE _____ COMMISSION OF THE UNIFIED
GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS**

THIS _____.

Secretary of the _____ Commission



Report to

MEETING DATE	PRESENTER	DEPARTMENT
December 29, 2023	Jeff Fisher, Exec. Dir. of Public Works	Public Works
AGENDA ITEM #		
RESOLUTION: KAW POINT MODERNIZATION PROJECT		
BACKGROUND		
The Unified Government has received notice that the Kaw Point Treatment Plant Modernization Project has been awarded a 25/75 grant that is estimated at \$17.8M by the United States Department of Agriculture (USDA) under the Fertilizer Production Expansion Program (FPEP) with the understanding the award and requirements are based upon 80 percent of the total project costs. The Public Works Department is seeking approval to accept the USDA grant to implement it immediately upon its adoption.		
RECOMMENDATION		
Approve		
BUDGET IMPACTS / FINANCIAL CONSIDERATIONS		
10/23/2023		
IT/POLICY CONSIDERATIONS		
PROCUREMENT CONSIDERATIONS		
10/26/2023		
LEGAL CONSIDERATIONS		
ATTACHMENTS		
USDA Grant Summary (1), 2. Project Narrative - Biosolids Improvements Project (2), USDA Grant Resolution		

Approved by Mayor and Administrator to add to agenda:

David Johnston, County Administrator

Dated:

11/15/2023

US Dept of Ag Grant Award

11-15-23



**PUBLIC WORKS
WATER POLLUTION CONTROL**

Water Pollution Control P: (913) 573-1300
50 Market Street F: (913) 573-1351
Kansas City, KS 66118 E: info@wycokck.org

TO	Jeff Fisher, Public Works Director
FROM	Alan Howze, Assistant County Administrator
DATE	Jeff Miles, WPC Director
RE	October 16, 2023
ATTACHMENTS	Grant Approval
	Grant Application & USDA Approval

MEMORANDUM

We are delighted to announce that the United States Department of Agriculture (USDA) has officially granted the Unified Government of Wyandotte Co. funding under the Fertilizer Production Expansion Program (FPEP) for our Kaw Point Modernization/Bio-Solids project.

Numerous Kansas governmental agencies and private companies submitted applications to the USDA, with only two being selected for grants: the Unified Government of Wyandotte Co. and the City of Olathe. Our application, which was submitted in late 2022, requested the maximum allowable amount of 25% of the total qualified cost. Remarkably, the USDA approved 80% of our request, resulting in an impressive award of approximately \$17.8 million for the Unified Government of Wyandotte Co.

Over a period of nine months, the USDA diligently conducted an extensive vetting and review process of our application, assessing proven technologies, processes, and industry standards. After successfully advancing through the initial review stage, we were asked to provide a comprehensive overview and history of the land designated for this project.

The Kaw Point Treatment Plant was built in the 1960's and was largely funded by the Federal dollars, now 55 years later, upgrades to this plant will once again be assisted with federal assistance. I believe this speaks volumes to everyone involved at the UG in our diligence in finding assistance with much needed infrastructure upgrades.

This grant, in conjunction with the \$2 million earmark from Representative Sharice Davids Office and the anticipated tax credits, will significantly reduce the overall project cost, bringing it below the approved budgeted authority amount. The estimated cost of the project is at \$100M and so the two new sources combine at \$19.8M, resulting in a reduction to \$80.2M. It is also worth noting that the Inflation Reduction Act created tax credits for local government to access for projects just like this. Staff expects to receive somewhere between \$3M and \$26M in reimbursement when the project is complete. This directly reduces the total, final cost of the project. As you are well aware, the Consent Decree mandates a strategic investment in our aging infrastructure, and with these savings, we can now allocate resources to address numerous other pressing needs in the future.

This is a historic accomplishment for everyone involved with this grant.



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UNIFIED GOVERNMENT OF WYANDOTTE COUNTY AND KANSAS CITY, KANSAS

Biosolids Improvements Project



Project Title | Unified Government of Wyandotte County and Kansas City, Kansas
Biosolids Improvements Project

Project Location | 50 Market Street, Kansas City, Kansas 66118

Funding Opportunity Title | Fertilizer Production Expansion Program

Funding Opportunity Number | RD-RBS-22-01-FPEP

Assistance Listing Number | 10.383

Total Project Cost | \$89,234,000

Grant Funding Request | \$22,308,500

Matching Funds Available | \$66,925,500

Contact information

Trenton Foglesong | Senior Engineer | tfoglesong@wycokck.org

SAM Identification | PD76T7LUCLS2

Project Narrative

A Executive Summary

The Unified Government of Wyandotte County and Kansas City, Kansas (Unified Government) Biosolids Improvement Project will utilize anaerobic digestion technology to convert municipal wastewater sludge into a biosolids fertilizer nutrient alternative. Anaerobic digestion is a sustainable technology that generates renewable fertilizer for significant acreages of cropland while returning organic matter to the nutrient cycle and reduces agricultural producer fertilizer costs. Additionally, the project will divert material from landfill disposal and generate pipeline quality renewable natural gas.

There are currently over 1,200 wastewater treatment plants (WWTPs) in the United States using anaerobic digesters to treat wastewater. These facilities generate over 1.15-million dry metric tons of treated biosolids that are applied to agricultural land annually.^{1,2} The widespread implementation of this technology demonstrates its technical merit and nation-wide impact.

The Unified Government operates three municipal WWTPs that currently dispose of over 31,000 wet tons of residual wastewater sludge at a nearby landfill, annually. Upon completion of project construction in 2025, the anaerobic digesters will convert this sludge, rich in nitrogen, phosphorus, sulfur, and potassium, into EPA certified Class B biosolids fertilizer. The biosolids will be suitable to benefit up to 2,775 acres of United States farmland annually.³ The project will also provide a disposal solution for commercially generated high strength organic wastes (HSOW) such as byproducts of agricultural, dairy, or livestock processing.

WWTP biosolids fertilizer can provide approximately 50% of the nutrient content that corn, soybeans, hay, alfalfa, winter wheat, and milo crops require at reduced costs compared to chemical fertilizers. A leading regional biosolids land application specialist confirms a reduction in fertilizer cost of 25-35% to farmers who land apply biosolids.

¹ <https://www.epa.gov/anaerobic-digestion/types-anaerobic-digesters#:~:text=In%20the%20United%20States%2C%20over,wastewater%20solids%20and%20produce%20biogas>

² <https://www.epa.gov/biosolids/basic-information-about-biosolids>

³ Assumes a minimum application rate of 2 dry tons per acre.

The project will include design and construction of three anaerobic digesters, a control building, biosolids holding and screening equipment, HSOW receiving stations, biogas processing equipment, and associated site improvements. The digestion process will also generate 500,000 cubic feet per day of methane biogas which will be reclaimed as pipeline quality renewable natural gas (RNG). Renewable natural gas reduces the impacts to climate change over fossil fuel-based natural gas. The current and future sludge management process is depicted in Figure 1.

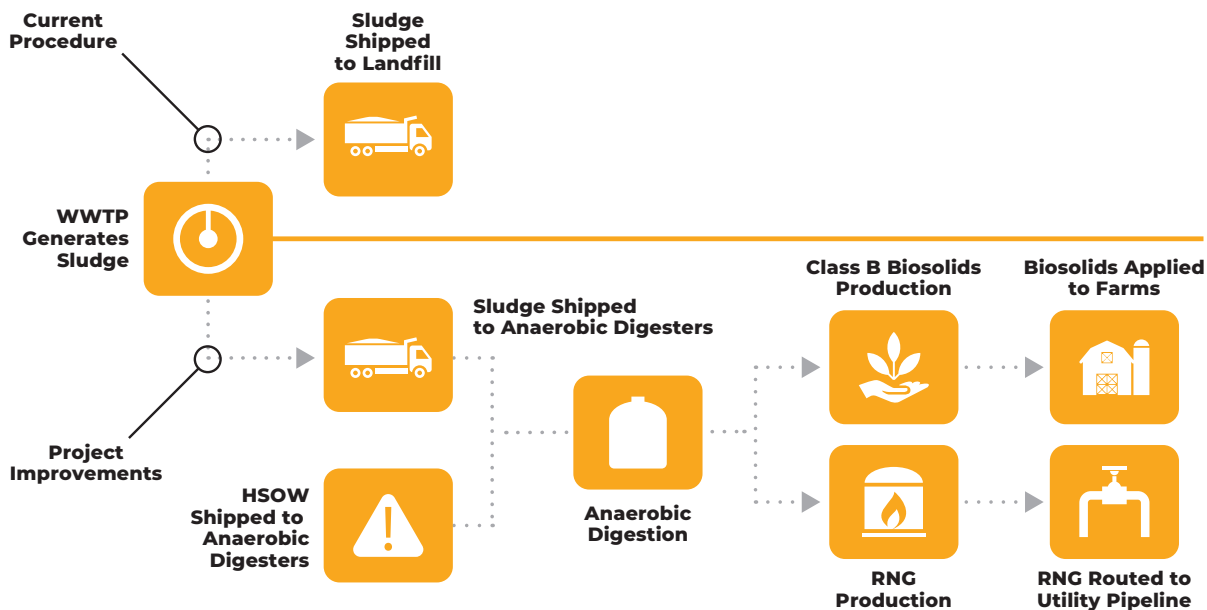


Figure 1 – Current and Future Sludge Management Processes

The Unified Government Board of Commission granted approval for \$80,000,000 to be obtained via bond funds. However, project construction costs have risen sharply in recent years with unprecedented inflation and cost escalation. While the Board is pursuing budget revisions to fully cover the project cost escalations, grant funding could also provide project cost relief, allowing the project to immediately proceed expeditiously to implementation.

The Unified Government has a highly qualified team to successfully execute the project including the design, construction, and operation of this sustainable domestic fertilizer production facility that supports the American farmer through the beneficial reuse of materials previously landfilled.

B Applicant Information

The City of Kansas City, Kansas was incorporated in 1886 and has a long history of being a very diverse community which welcomes all and promotes quality of life in a family-oriented community. Kansas City, Kansas is the third largest city

in the state of Kansas and is the county seat of Wyandotte County. In 1997, voters unanimously approved to consolidate the governments of the City of Kansas City, Kansas and Wyandotte County into one jurisdiction—known as the Unified Government of Wyandotte County/Kansas City, Kansas (Unified Government). The Unified Government covers 156 square miles, located on the eastern border of the State of Kansas and situated at the confluence of the Missouri and Kansas rivers. The Unified Government is part of a greater metropolitan area of nearly 2 million people which encompasses a bistate region which also includes Kansas City, Missouri and Overland Park, Kansas among others.

Wastewater collection, conveyance, and treatment is provided by the Unified Government's Water Pollution Control Division as an enterprise funded through user fees. The Unified Government Kaw Point Wastewater Treatment Plant Biosolids Improvements Project (Biosolids Improvement Project) will be operated within and is physically located in the U.S. The project site is located at 50 Market Street, Kansas City, Kansas 66118 on the Kaw Point Wastewater Treatment Plant (WWTP) site operated by the Water Pollution Control Division.

Compliance: The Unified Government plans to generate biosolids fertilizer as part of a new wastewater treatment process facility in accordance with all federal, state, Tribal and local regulations governing fertilizer and nutrient manufacturing, processing, storage, distribution, and waste management. The Kaw Point WWTP is currently regulated by and in compliance with the United States Environmental Protection Agency (USEPA) and United States Department of Justice (DOJ) Consent Decree, Kansas Department of Health and Environment (KDHE) National Pollution Discharge Elimination System (NPDES) Permits, and KDHE MS4 Storm Sewer Permits.

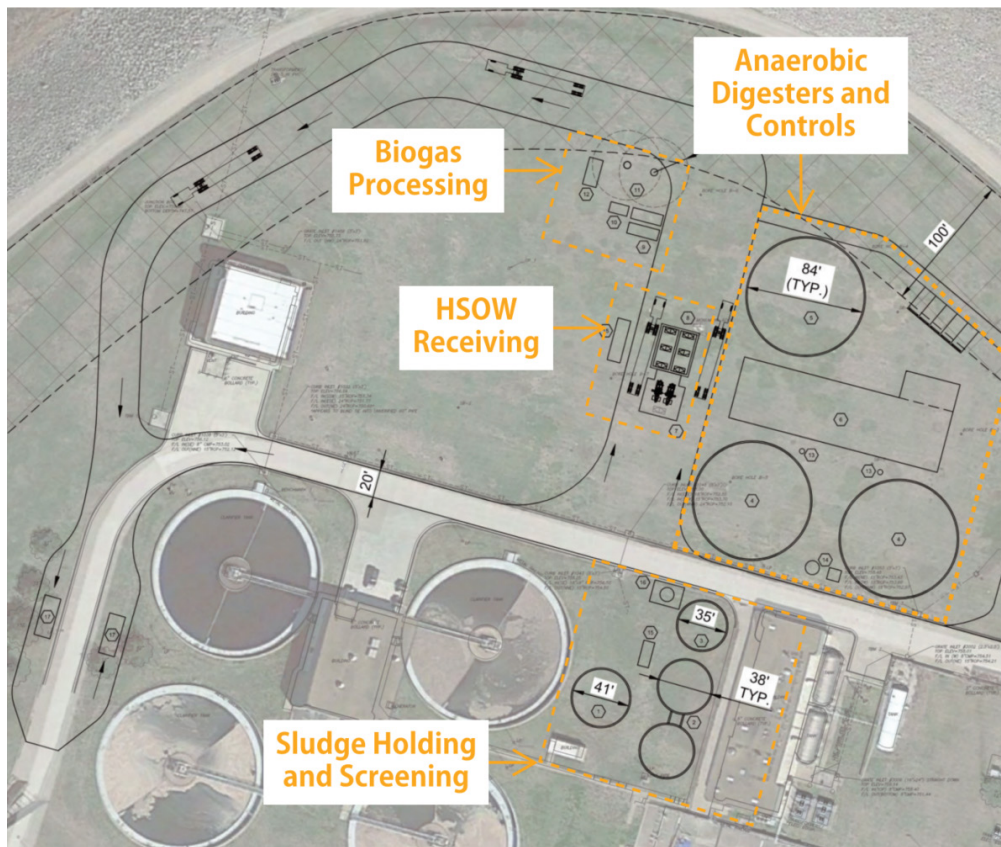
The Unified Government is registered in the System for Award Management (SAM) and will maintain annual SAM registration while an application is active and through the term of an award. The Unified Government SAM Identification Number is PD76T7LUCL52.

Market Share: The Unified Government does not hold a market share (in either production or distribution) greater than or equal to the entity that holds the fourth largest share of that market for any of the following nutrients or components: nitrogen, phosphate, potash, or any combination thereof. The Unified Government certifies that it does not hold a market share (either globally or domestically) greater than or equal to the top four manufacturers or processors or distributors as applicable in nitrogen, phosphate, potash, or any combination thereof, as applicable. The Unified Government does not hold any minority partners or side agreements regarding any distribution or marketing plans.

C Project Information

The Unified Government operates three significant WWTPs to treat its municipal sewage. The primary outputs of the treatment process are treated wastewater and sludge. Sludge is the solid and semisolid component of the wastewater, rich in nitrogen, phosphorus, sulfur, and potassium. This sludge is currently hauled to a landfill; however, this project aims to reclaim this valuable source of nutrients and make it available to agricultural commodity providers for land application. In addition to sludge, the anaerobic digesters will receive high strength organic waste (HSOW) such as industrial food production byproducts and fats, oils, and grease (FOG). The sludge and HSOW will be converted into nutrient rich Class B biosolids fertilizer and methane gas utilizing the anaerobic digestion process. The methane gas will be cleaned and further refined before injection into a natural gas pipeline. The digestion process is depicted in Figure 1 in the Executive Summary.

The project will include design and construction of three anaerobic digesters, an anaerobic digester control building, biosolids holding and screening equipment, HSOW receiving and storage stations, biogas processing equipment, and associated site improvements. The general location of these facility upgrades are depicted in a high-level overview of the concept design in Figure 2, below.



*Figure 2 –
Facility
Upgrades
Site Layout*

The anaerobic digesters will take in sludge and HSOW, break down the organic compounds, and stabilize the solids. This process will remove several pathogens and harmful components of the sludge so that it meets biosolids Class B regulations and may be safely land applied as fertilizer. The anaerobic digester control building will contain major equipment associated with the digesters, including pumps, heat exchangers, and controls, whereby WWTP operators and technicians may monitor and control the system.

The HSOW receiving stations will enable the Unified Government to receive additional waste streams (feedstocks) to increase the volatile solids to the anaerobic digester, creating more biosolids fertilizer and gas by-product. The equipment included in the design will allow the WWTP to track the quantity and quality of HSOW received and store the material so that it may be fed into the digesters in a steady stream to maintain stable operations and optimize the digestion process.

A byproduct of the digestion process is large quantities of biogas, primarily consisting of methane. This gas will be captured, processed, and routed into the natural gas utility pipeline as renewable natural gas (RNG). Therefore, not only will the project produce a sustainable source of fertilizer but will also enable generation of RNG.

Details specific to the project process and equipment are provided in the engineering Basis of Design Report (BODR), attached as part of the grant application.



The design and construction of the project are projected to cost \$100,000,000 in total. To date, \$10,766,000 have been spent designing the project and prepping the site for construction, leaving \$89,234,000 in costs to be spent. The Unified Government requests \$22,308,500 in funding from the USDA and will provide \$66,925,500 in matching funds. These costs have been divided into their associated tasks in addition to their anticipated timeline for completion and may be seen below:

Task 1 – Engineering and Design Fees

- Total Cost: **\$1,400,000**
- Anticipated Timeline: 8/25/22 – 8/15/23

Task 2 – Owner’s Representative

- Total Cost: **\$2,000,000**
- Anticipated Timeline: 8/25/22 – 9/24/25

Task 3 – Site Work

- Total Cost: **\$9,633,000**
- Anticipated Timeline: 8/15/23 – 9/24/25

Task 4 – Construction

- Task Includes: Concrete, Masonry, Metals, Thermal & Moisture Protection, Doors and Windows, Finishes, Specialties, Mechanical & Plumbing, Electrical, and Control Systems
- Total Cost: **\$54,453,000**
- Anticipated Timeline: 8/15/23 – 9/24/25

Task 5 – Equipment

- Total Cost: **\$15,152,000**
- Anticipated Procurement Timeline:
8/15/23 – 10/22/24

Task 6 – Project Contingencies

- Total Cost: **\$6,596,000**

Activity	Cost	Percent
Task 1: Engineering and Design	\$1,400,000	
Task 2: Owners Representative	\$2,000,000	
Task 3: Site Work	\$9,633,000	
Task 4: Construction	\$54,453,000	
Task 5: Equipment	\$15,152,000	
Task 6: Project Contingencies	\$6,596,000	
Total Project Cost	\$89,234,000	
USDA FPEP Grant Request	\$22,308,500	25%
Unified Government Match	\$66,925,500	75%

D Land Ownership and Access

The Unified Government owns the land where the project is to be located. The property is currently controlled by the Unified Government as an operating WWTP. The project consists of improvements to the existing WWTP to begin fertilizer production, and therefore will not require a change in land ownership or control to execute the project. The property is in Kansas City, Kansas, and is not located on Tribal Lands.

E Performance Metrics

1 The Unified Government plans to achieve the following performance metrics through project execution::

- a. Increase the domestic availability of fertilizer (nitrogen, phosphate, potash) and nutrient alternatives to agricultural producers for use in crop years 2023, 2024, and thereafter:

The Biosolids Improvements Project will increase the domestic availability of fertilizer and nutrient alternatives to agricultural producers. The construction is anticipated to be complete in 2025 and will begin making biosolids available to agricultural producers shortly thereafter. The project is anticipated

to produce up to 5,550 dry tons of biosolids fertilizer annually. Biosolids generated from WWTPs typically contain nutrients essential for plant growth including nitrogen and phosphorous, as well as essential micro nutrients such as nickel, zinc, and copper.⁴

Class B biosolids are permitted to be applied to agricultural land used for growing animal feed crops including corn, soybeans, hay, alfalfa, winter wheat, and milo crops. The standard application rate for biosolids application varies depending on the nutrient needs of the crop and ranges from 2 to 20 dry tons per acre⁴. This project will generate biosolids fertilizer annually for approximately 2,775 acres annually. Biosolids provide an average of 50% of the nutrient needs for the anticipated crops listed above and are available to farmers at 25-35% less the cost of chemical fertilizers. Additionally, biosolids return organic matter to the soil which is retained in the plow layer further reducing nutrient runoff.

Sludge may be combined with HSOW waste streams to increase biosolids production. The Unified Government has received interest from several HSOW generators and haulers and is committed to acquiring additional partnerships with other HSOW producers.

b. Provide agricultural producers with more domestic options for fertilizer and nutrient alternatives:

The Biosolids Improvements Project will provide agricultural producers with domestic options for fertilizer and nutrient alternatives. The Unified Government does not currently produce fertilizer or nutrient alternatives and will become a new domestic supplier of biosolids in the fourth quarter of 2025. The Unified Government has initiated discussions with a local biosolids brokerage company which connects generators of biosolids with agricultural producers, manages the logistics of the transaction, and physically applies the biosolids to the soil.

c. Reduce the impacts of climate change through the manufacturing and processing of or the use of sustainable, innovative, increased, and efficient fertilizer and nutrient alternatives production and use:

The Biosolids Improvements Project will utilize sustainable and innovative technologies to increase the efficiency and overall production of domestic

⁴ https://www3.epa.gov/npdes/pubs/land_application.pdf

fertilizer and nutrient alternatives. The project will divert approximately 31,000 wet tons per year, which equates to 85 wet tons of sludge per day from the landfill. In addition to recovering organic material and nutrients for fertilizer, this project will generate biogas. The digestion of the sludge and HSOW will result in the capture of 500,000 cubic feet per day of biogas that will be processed into RNG and distributed through the pipeline.

Renewable natural gas reduces the impacts to climate change over fossil fuel-based natural gas. Sequestering and cleaning biogas to produce RNG for injection into the natural gas utility pipeline provides a method for generating natural gas while avoiding industrial processes known to release large quantities of methane into the atmosphere, such as coal mining and the production and refinement of natural gas and petroleum systems in the energy industry.^{5,6} Methane is a significantly harmful greenhouse gas, over 25 times as harmful as carbon dioxide. Reducing the amount of methane in the atmosphere helps to reduce global warming and the impacts of climate change.⁷

F Evaluation Criteria

1 Financial Viability, Technical Merit, and Readiness

This project is budgeted to cost \$100,000,000. The Unified Government hired the Unified Government Water Partners (UG Water Partners), a collaboration between Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) and CAS Constructors LLC (CAS Constructors) to design and construct the Biosolids Improvement Project. Burns & McDonnell has over 100 years of experience in design, procurement, and construction within the water industry. CAS Constructors have executed over 400 water industry projects since their founding in 1985. The project budget was developed utilizing the experience and judgement of these professional consultants combined with information from their historic projects, vendors, and published sources. Additionally, the Unified Government is utilizing HDR Engineering as their “owner’s representative”, which brings additional technical expertise and project delivery capacity to the team.

⁵ <https://www.epa.gov/natural-gas-star-program/primary-sources-methane-emissions#:~:text=Methane%20emissions%20occur%20in%20all%20sectors%20of%20the,emissions%20occur%20through%20intentional%20venting%20and%20unintentional%20leaks.>

⁶ <https://www.epa.gov/cmop/about-coal-mine-methane>

⁷ <https://www.epa.gov/gmi/importance-methane>

The Unified Government Board of Commissioners approved the project and funding for \$80,00,000 to be obtained via bond funds. The unprecedented inflation and cost escalations of the past 3 years has increased the cost of the project and the Unified Government is currently evaluating options to address this cost increase. Funding from this USDA program would allow for expedited implementation of the project by utilizing the previously approved funding as the matching funds for the grant.

a. Strength of financial projections

The Unified Government Board of Commissioners approved an \$80,000,000 budget on the Biosolids Improvement Project. The financial viability for the project is based on the beneficial use of biosolids as fertilizer to avoid paying ever increasing tipping fees related to disposal at landfill(s), and the potential future closure of the closest landfill. The Unified Government anticipates funding the operation of the project through a combination of bonds and grants. The bonds will be paid off through a combination of utility user fees and revenues generated from the fee HSOW disposal fees and the sale of RNG to the utility pipeline.

b. Demonstrated track record of performance of technologies

Anaerobic digestion technology first emerged in the 1970s out of the energy crisis. During the early stages of this technology development, many design challenges were met and have been overcome.^{8,9} There are currently over 1,200 WWTPs in the United States using anaerobic digesters to treat wastewater solids, generating over 1.15-million dry metric tons of treated biosolids that are land applied to agricultural land.^{10,11}

c. Risk Mitigation

The Unified Government has anticipated and implemented mitigation strategies for several types of risks to project success, including the following:

⁸ <https://extension.psu.edu/a-short-history-of-anaerobic-digestion>

⁹ <https://www.sciencedirect.com/science/article/pii/S0960852417315456>

¹⁰ <https://www.epa.gov/anaerobic-digestion/types-anaerobic-digesters#:~:text=In%20the%20United%20States%2C%20over,wastewater%20solids%20and%20produce%20biogas>

¹¹ <https://www.epa.gov/biosolids/basic-information-about-biosolids>

Available Equipment Risks

The United States is currently experiencing significant delays in the delivery of electrical transformers for some new developments. These delays can be anywhere from 50-100 weeks according to the Unified Government's local electrical utility. The Kaw Point site already contains a transformer of sufficient size and recently upgraded their facility to provide room, both physically and capacity wise, for this planned project to mitigate this risk.

Labor Risks

The Unified Government has not been immune to the nation-wide labor shortage that has created widespread challenges to maintain full occupancy in domestic labor positions. The nationwide labor shortage is a stressor for many organizations in the United States; however, the Unified Government and UG Water Partners have taken the following measures to reduce the risk of limited labor availability on the project:

- Establishment of prevailing wages when estimating project costs to ensure the UG Water Partners offer competitive compensation to contractors;
- Spreading the scope of work for the construction of the project across multiple subcontractors to spread the risk of labor shortage across several organizations and thereby reducing the risk to the project overall;
- Maintaining the Unified Government's contracts with local labor unions to supply labor after construction during operation of the anaerobic digester;
- Offering a competitive benefits package to future hires at the Unified Government; and
- The Unified Government anticipates recruiting two new WWTP operators upon completion of the project to operate the anaerobic digesters. However, should these positions be challenging to fill, the Kaw Point WWTP is already staffed with similarly trained employees who may transition to a shift schedule to cover operational needs. A portion of current operations may be reduced with the new process, leaving current staff available to assist with the digestion process.

Access to Operating Capital Risks

The Kaw Point WWTP is an enterprise fund, fully funded by user fees for wastewater collection and treatment services. The Unified Government continuously evaluates their 25-year financial horizon and regularly conducts audits on their user rates to ensure they are sufficient to support operations.

In addition to user fees, the Unified Government intends to charge HSOW generators for disposing of their waste stream at the anaerobic digesters and sell RNG to the utility pipeline. Both of these practices generate revenue for the Unified Government to pay back project bonds and maintain operating capital, thereby reducing the effective price of the project and reducing the impact to user fees.

Loss of Market Risks

The Unified Government does not anticipate significant risks associated with the loss of its feedstock. The anaerobic digesters will take in sludge and HSOW to generate biosolids fertilizer. The Unified Government does not currently have competition for municipal wastewater treatment services and is therefore not concerned about maintaining an adequate supply of sludge. Furthermore, the Unified Government has seen an unpredictable increase in the cost of sending sludge to the landfill, the current disposal practice. Therefore, they are financially motivated to provide a more economical, predictable, and sustainable way of processing sludge. The project will help manage the risk of growing sludge disposal costs which increase as local landfill capacity is reduced, requiring sludge to be transported to further away landfills.

The Unified Government is not overly concerned with the loss of a market for biosolids, as WWTPs are typically a financially feasible source of fertilizer for local farmers.¹² As stated in previous sections, over a thousand other WWTPs around the United States are deploying over a million tons of treated biosolids to agricultural land. The widespread implementation of this technology demonstrates its technical merit and nation-wide impact. The vast amount of agricultural land use in close proximity to the project site at the Kaw Point WWTP, including land in both Kansas and Missouri, present many options for land application of biosolids for the foreseeable future. Many WWTPs in the region utilize land application for biosolids, further validating the merits of this project.

Legal Risk

Like many river communities, the Unified Government has worked with the United States Environmental Protection Agency and Department of Justice (USEPA/DOJ) to come to an agreement relative to long term planning and compliance with all Federal requirements which was memorialized as a partial Consent Decree in 2013 and ultimately a full Consent Decree in

¹² <https://www.in.gov/idem/waste/waste-industries/septage-management/land-application>

2018/2020. The USEPA/DOJ team joins the UG in promoting that fully 100% of the requirements have been met since that time. During Consent Decree negotiations, the Biosolids Improvements Project was highlighted as a critical infrastructure upgrade and included in the approved financial model. Without this project, the Unified Government is at increased risk for infractions of USEPA regulations at any time the landfill becomes unavailable. The project overall will reduce significant regulatory risks for the Unified Government

d. Maturity of the project

The following categories describe the milestones both achieved and planned for implementation of the Biosolids Improvement Project:

Real Estate Acquisition Maturity

The Unified Government owns and operates the three WWTPs and corresponding land parcels associated with the project, so no real estate will need to be acquired.

Permit Acquisition Maturity

The project was approved on February 2, 2022 by the Kansas State Historical Society to proceed with construction after confirming an absence of conflicts with the Kansas Preservation Act and corresponding regulations. In addition to this achieved permit milestone, the Unified Government plans to acquire the following permits:

Federal Permits

- FAA Advisory Circular: To be requested 90-120 days prior to construction
- US Army Corps Individual Permit: To be submitted to Kaw Valley Drainage District 8-10 weeks prior to construction;
- EPA National Pollutant Discharge Elimination System (NPDES) permit: Existing Kaw Point WWTP Permit to be amended 180 prior to the expiration of the current permit, and 180 days prior to any new discharge;

State Permits

- Kansas Department of Health and Environment Construction Stormwater Permit: To be requested 30 days prior to construction;
- Kansas Department of Wildlife, Parks, and Tourism Action Permit: To be requested 30 days prior to construction and reviewed 40 days after submission;

Local Permits

- Urban Planning and Land Use Preliminary and Final Development Permit: To be requested 80 days prior to construction;
- Operating Air Quality Permit: To be requested 90-180 days prior to construction; and
- Construction Air Quality Permit: To be requested 60-90 days prior to construction.

Outreach to Local, State, and Federal Partners

The Unified Government has engaged with HSOW haulers in the area to gauge the capacity for diverting HSOW to the anaerobic digesters. Numerous HSOW/FOG haulers in the area have expressed interest in engaging the Unified Government on this ability when possible and expressed a desire to begin this partnership sooner rather than later.

The project leads at the Kaw Point WWTP presented the project to the Unified Government Board of Commission and obtained support for the project and funding approval.

Design Maturity

The Unified Government has contracted UG Water Partners to complete a 60% design and develop a not-to-exceed price for the project prior executing a Phase 2 contract for final design, procurement, and construction of the project as design-build. UG Water Partners have generated design documents (Piping and Instrumentation Diagrams, construction drawings, site plans, and a basis of design report) up to a 30% design level and are moving toward 60% design of the project to allow development of a guaranteed maximum construction price in order to meet the stated schedule.

e. Financing and capital

The Unified Government has committed \$80,000,000, to be obtained via bond funds, to cover the cost-matching portion of the project. This spend was approved by the Unified Government's Board of Commission

2 Market Impact and Opportunities

a. Adequacy, plan, and mechanisms for input procurement

The Unified Government operates three significant WWTPs which receive a steady stream of incoming waste and does not have competition for providing municipal water treatment services for its residents. The anaerobic digester facility will reside at the Kaw Point WWTP and the other two WWTPs (Plant 20 and Wolcott) will haul their sludge to the Kaw Point. The three combined WWTPs are anticipated to divert approximately 31,000 tons of sludge from the landfill to the Kaw Point digesters annually to produce 5,550 dry tons of Class B biosolids fertilizer annually.

b. Projected production capacity for fertilizer to be made available for use in the production of agricultural commodities in crop year 2023, crop year 2024, and crop year 2025.

The Biosolids Improvement Project is planned to begin production of biosolids fertilizer in the fourth quarter of 2025. The Unified Government anticipates annual production rates of up to 5,550 dry tons of biosolids fertilizer annually. As previously stated, Class B biosolids are permitted to be applied to agricultural land used for growing animal feed crops including corn, soybeans, hay, alfalfa, winter wheat, and milo crops. The standard application rate for biosolids application varies depending on the nutrient needs of the crop and ranges from 2 to 20 dry tons per acre⁴. This project will generate biosolids fertilizer annually for approximately 2,775 acres annually.

c. The current and anticipated number of agricultural producers benefitting from the project

The land application of the biosolids fertilizer is likely to occur locally, having a direct benefit to the immediate farming community. The number of agricultural producers benefitting from the project will depend on the size of the farm it will be supporting and the nutrient requirements of the crops. The USDA 2017 Census of Agriculture for the Unified Government boundary includes 158 farms accounting for over 12,000 acres. This project may support over 20% of the acres in agricultural production for the Unified Government.

All of the crops that are permitted for application of Class B biosolids are commonly grown in the Unified Government boundaries and surrounding counties; several types of producers may benefit from the project.

The biosolids production may also benefit farmers financially. Based upon information provided to UG Water Partners from a regional biosolids land application specialist, biosolids typically can replace 50% of their fertilizer needs and provide a 25-35% reduction in their overall cost of fertilizer.

d. Current or prospective end-user commitments, including potential or identified markets (regional and national), and the potential amount of output to be sold

The Unified Government has engaged with a regional biosolids land application specialist as a potential partner to manage the logistics and transaction of biosolids fertilizer with end-users. While the Unified Government does not have any end-user commitments at this early stage of the project, it anticipates a high demand for use of the biosolids as fertilizer by regional farmers as indicated in conversations with the specialist. Numerous biosolids brokers operate in the Kansas City Region and the Unified Government will select one through a public procurement process at the appropriate time.

3 Climate Impacts and Sustainability

a. Expected type, scale, and longevity of benefits from greenhouse gas emission mitigation resulting directly from the project and project attributes that reduce the impacts of climate change.

The anaerobic digestion of the sludge and HSOW will result in the capture of 500,000 cubic feet per day of biogas that will be processed into RNG. Sequestering and cleaning biogas to produce RNG for injection into the natural gas utility pipeline provides a method for generating natural gas while avoiding industrial processes known to often release large quantities methane into the atmosphere, such as coal mining and the production and refinement of natural gas and petroleum systems in the energy industry.^{13,14} Methane is a significantly harmful greenhouse gas, over 25 times as harmful as carbon dioxide. Reducing the amount of methane in the atmosphere would help to reduce global warming and the impacts of climate change.¹⁵

¹³ <https://www.epa.gov/natural-gas-star-program/primary-sources-methane-emissions#:~:text=Methane%20emissions%20occur%20in%20all%20sectors%20of%20the,emissions%20occur%20through%20intentional%20venting%20and%20unintentional%20leaks.>

¹⁴ <https://www.epa.gov/cmop/about-coal-mine-methane>

¹⁵ <https://www.epa.gov/gmi/importance-methane>

b. Expected type, scale, and longevity of benefits from greenhouse gas emission mitigation resulting indirectly from the project and project attributes that reduce the impacts of climate change including but not limited to supply chain and agricultural producers.

The generation of RNG by the project may help support a nation-wide effort to become less dependent on non-renewable fuels that are responsible for significant greenhouse gas emissions. The project will generate RNG for the foreseeable future and may support the U.S. overall energy transition.

c. Other (non-greenhouse gas) environmental benefits, such as water quality, soil quality, localized air pollution, and wildlife habitat, of sustainable fertilizer production.

The project will divert approximately 31,000 wet tons of organic matter per year from a landfill and return it to a useful state in the nutrient cycle. The use of organics-based fertilizer as opposed to a raw chemical fertilizer improves soil and groundwater quality. The organic matter in the biosolids help to retain nutrients within the plow layer of the soil, improving the nutrient content of the soil and preventing leaching of nutrients into the groundwater that can pollute local watersheds.

The Biosolids Improvement Project is also included in the Unified Government's Consent Decree with the USEPA/DOJ. Additionally, the Kaw Point WWTP currently has a six-year Platinum award from the National Association of Clean Water Agencies recognizing zero permit exceedances during that period. The Biosolids Improvement Project will continue to support the environmental improvements to the Unified Government wastewater and stormwater management programs.

4 Regional Impact and Support

The Unified Government Board of Commission approved an \$80,000,000 spend on the project to improve the environmental and economic effectiveness of the three WWTPs within Wyandotte County. This demonstrates local government support and investment in the project.

The Unified Government has received support and interest from several licensed HSOH haulers in the area to dispose of their HSOH via the project's anaerobic digester. UG Water Partners conducted a survey of additional potential suppliers of HSOH and identified additional potential sources within a 50-mile radius of the Kaw Point Wastewater Treatment plant.

The Unified Government is also home to over 350 restaurants, all HSOW producers, and therefore potential sources of community partnership.

5 Personnel

The full resumes of the project team are attached as part of the grant application.



Jeff Fisher | Unified Government | Jeff Fisher is the Public Works Director and is responsible to organizing staff and initiatives to meet the goals and needs of the community and organization. Jeff will ensure resources are available to promote project success. Jeff will lead negotiations for long-term agreements and financing related to the biosolids project.



Trenton Foglesong | Unified Government | Trenton is a Senior Engineer at the Unified Government and is responsible for providing leadership to the overall project direction and ensuring adequate resources are available for the project's design, implementation, and future operations. Trenton has over 23 years of experience in project management and engineering of similar projects. He also has significant experience at the Unified Government in personnel management, budgeting, strategic planning, program development, and process improvement. He has successfully managed the 10+ year negotiation and implementation of the EPA Consent Decree resulting in numerous WWTP improvements.



Kristofer Finger | Unified Government | Kristofer is an engineer and project manager for the Biosolids Improvement Project. His role includes monitoring the project schedule and coordinating between the design team and Unified Government staff to relay necessary information. Kristofer has over 10 years of experience in engineering at the municipality level and has been assisting with the management of the EPA Consent Decree since 2015.

Samuel Her | Unified Government | Samuel is the Fiscal Officer for the Unified Government and is responsible for the financial reporting aspects of the project. Samuel develops, amends, and maintains the Public Works Department budget and manages fiscal elements for over 300 team members. He has over six years of experience at the Unified Government managing its financial affairs.



Patrick Young | HDR | Patrick offers engineering support on behalf of the United Government to align the design and construction teams with the United Government's goals for the project. He has extensive experience working on the design, construction, and start-up commissions of wastewater projects. Patrick is serving as the Principal in Charge, providing alternative project delivery and wastewater treatment plant solids engineering expertise. Patrick serves as HDR's Water Business Group Manager and has a broad understanding of current state-of-the-art advanced wastewater treatment.



Travis Stryker | CAS Constructors | Travis is the Construction Manager for the Biosolids Improvement Project. Travis will use his 18 years of experience in the design-build wastewater industry to bridge the pre-construction and design work to the field work during the construction and commissioning phase of the project. His experience and technical background give him the ability to manage complex issues and create successful collaborative team environments.



Ryan Rutkowski | CAS Constructors | Ryan serves as the lead estimator for the Biosolids Improvement Project and will be responsible for developing the overall project costs. Ryan also assists in the pre-construction work, coordinating with the design team and establishing the project's team of subcontractors and suppliers. Ryan has over 12 years of experience in project estimating and has a strong technical background in water and wastewater projects.



Trevor Cooke | Burns & McDonnell | Trevor is a 28-year engineer specializing in wastewater treatment including biosolids processing to make Class A and Class B biosolids. Trevor is the design manager for the project and is responsible for providing the engineered design of the facility.



Bryan Canzoneri | Burns & McDonnell | Bryan is the Design-Build Project Manager for the Biosolids Improvement Project. In this role, Bryan manages the alignment of the design and construction teams with the project's goals. Bryan has 17 years of experience executing water and wastewater projects for municipal clients across the United States.

Operational Staff

The Unified Government is a top 5 employer in Wyandotte County with approximately 2,300 full-time jobs. The Unified Government offers a fair, employee friendly environment to support our diverse community and provides great benefits

to all employees and support for workers' rights including organizing into collective bargaining units. The Unified Government offers a free and fair opportunity for workers to join a Labor Union.



Labor Unions Include

- American Federation of State, County, and Municipal Employees Local 1294
- Carpenters Local 61
- Construction and Laborers Local 1290
- Fraternal Order of Police Lodge 4
- Fraternal Order of Police Lodge 40
- International Association of Fire Fighters 64
- International Brotherhood of Electrical Workers Local 53
- Laborers International Union of North America Local 1290
- Painters District Council Local 3
- Plumbers Local 8
- Service Employees International Union Local 1
- Teamsters Local 955
- United Food and Commercial Workers Local 2



Benefits

- UG sponsored clinic as option for Employee and family
- Deferred Compensation sponsored plans including 457 and Roth IRA
- Dental Insurance for Employee with family options
- Employee Assistance Program
- Flexible Spending Plans
- Holiday pay for 12 days each year
- Life Insurance for Employee with family options
- Health Insurance for Employee either traditional or high deductible with health savings plan, both with family option with discounted premiums
- Parking at no cost for Employee
- Retirement plans through Kansas Public Employees Retirement System and Kansas Police and Firemen's Retirement System
- Sick leave for Employee
- United Way program available through payroll deductions
- Vacation leave for Employee
- Vision Plan for Employee with family option

6 Administrator Points

This project supports the Biden-Harris Administration priorities to assist rural communities recover, ensuring all rural residents have equitable access to benefits from government funded projects, and increases resilience to the impacts of climate change. While the Unified Government is located in urban Kansas City, the benefits of the project will extent to the immediate rural communities in the heart of the agricultural region of the country.

This project aligns with the Mayor's Environmental Sustainability & Green Energy Task Force which aims to address green design, renewable energy, and sustainable resource management through innovative policies and strategies.

The Unified Government is one of the most diverse communities in the nation, with no ethnic majority. The Unified Government's population is approximately 40 percent white, 30 percent Hispanic, 23 percent Black or African American, five percent Asian, and two percent Pacific Islander/American Indian/Native Alaskan according to the 2020 US Census. While there is pride in the community's diversity, it ranks 103 out of 105 counties in the state by per capita income, which is \$22,335.

Figure 4 displays the socioeconomic stress of the various communities across the Unified Government. It is critical for underserved communities to create resiliency as they are disproportionately impacted by the effects of climate change, yet, they have the least capacity to actively respond. Not only will the project promote climate resiliency by reducing the greenhouse gas emissions associated with sludge transportation, but it will create economic resilience by removing the Unified Government's dependence on a third-party landfill. In the long term, this will stabilize and reduce WWTP user-fees for low-income community members.

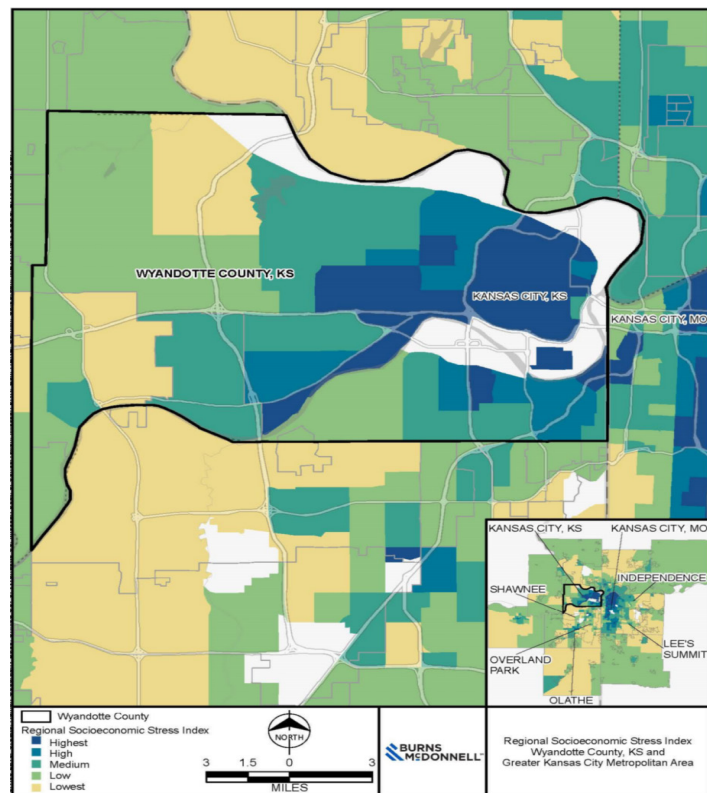


Figure 4 – Socioeconomic Stress Map for the Kansas City Metropolitan Area

RESOLUTION NO. R-_____

**A RESOLUTION AUTHORIZING FUNDING FOR THE KAW POINT
MODERNIZATION PROJECT**

WHEREAS, the Kaw Point Treatment Plant (KPTP) was constructed in the 1960's; and

WHEREAS, the KPTP requires numerous improvements to bring it into compliance with current standards; and

WHEREAS, the UG intends to make certain other environmental improvements to the KPTP that will also produce renewable gas and fertilizer; and

WHEREAS, the UG Code of Ordinances regulates the handling of fats, oil, and greases (FOG) by commercial and industrial customers without provision of a local and economical disposal means, and recognizing that the additional processes will provide local generators of FOG with local and cost-effective means of disposal; and

WHEREAS, the Unified Government (UG) has received notice that it has been awarded a 25/75 grant that is estimated at \$17.8 M by the United States Department of Agriculture (USDA) under the Fertilizer Production Expansion Program (FPEP) with the understanding the award and requirements are based upon 80 percent of the total project costs; and

WHEREAS, the UG accepts the grant in the estimated amount of \$17.8 M; and

WHEREAS, the USDA has seen value and proven technology of proposed process being used in the Kaw Point Modernization Project, presented in the application of the grant; and

WHEREAS, the Unified Government commits to satisfy the remaining 75% of the eligible project costs required for this grant along with the additional 20% project funding to complete the project utilizing a combination of available funding sources including, but not limited to, State Funds; Federal Grants; Local Funds; and other sources that are applicable to the project.

**NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BODY
OF THE UNIFIED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS
CITY, KANSAS:**

Section 1. Authorization. That the County Administrator is hereby authorized to accept the USDA (FPEP) funding estimated at \$17.8 M and is hereby authorized to negotiate the terms and execute in the name of the Unified Government all such contracts, documents, certificates, and instruments as may be necessary or desirable to carry out and comply with the intent of this Resolution.

Section 2. Further Action. The Mayor/CEO, County Administrator, and other officers, agents, and employees of the Unified Government are hereby further authorized and directed to take such further action as may be appropriate or desirable to accomplish the purpose of this Resolution.

Section 3. Effective Date. This Resolution shall take effect and be in full force immediately after its adoption by the Governing Body of the Unified Government.

**ADOPTED BY THE BOARD OF COMMISSIONERS OF WYANDOTTE
COUNTY/KANSAS CITY, KANSAS, THIS ____ DAY OF _____ 2023.**

UNIFIED GOVERNMENT CLERK

Approved as to Form:

Chief Counsel



Report to

MEETING DATE	PRESENTER	DEPARTMENT
December 29, 2023	Jeff Fisher, Exec. Dir. of Public Works	Public Works
AGENDA ITEM #		
PRESENTATION: COMMUNITY BASED PARTNERSHIP		
BACKGROUND		
• Consent Decree Program has mandated measures for water quality through sewer separation and combined sewer system overflow reduction • Stormwater Program in conjunction with the consent decree identifies overflow reduction support projects • Water Infrastructure Finance and Innovation Act (WIFIA) is an opportunity to fund the projects with a low interest long term loan • Community Based Partnership was presented within the application as the innovative component of the program proposal. • The Community Based Partnership RFP was awarded to Corvias Infrastructure Services (CIS) • The CIS team will present the CBP framework and success metrics for information to the Public Works Standing Committee		
RECOMMENDATION		
For information only		
Information Only		
BUDGET IMPACTS / FINANCIAL CONSIDERATIONS		
• The CBP is budgeted within the Consent Decree and WIFIA program project budgets. These projects are funded by the Stormwater and the Sanitary Sewer Enterprise Funds.		
IT/POLICY CONSIDERATIONS		
• No policy considerations for this item.		
PROCUREMENT CONSIDERATIONS		
• Procurement of Consent Decree and WIFIA Program will follow the UG policies and requirements.		
LEGAL CONSIDERATIONS		

- There are no legal considerations to be presented at this time. The CBP Contract will undergo legal review prior to authorized signature by David Johnston, County Administrator.

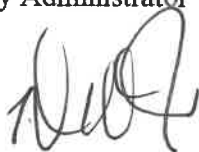
ATTACHMENTS

2023-11-27 UG-KCK_STORMUTILITYCBP_11-01-23

Approved by Mayor and Administrator to add to agenda:

David Johnston, County Administrator

Dated:



11/15/2023

You should find
presentation
interesting.
Other cities ~~in~~ in Maryland
and Pennsylvania have
used C15 on similar
work.

APPROVED Jy 2 & A
11-15-23



A Public Vision

Reduce overflow volume and localized flooding.

Accelerate removal of pollutants from waterways

Focus on “vulnerable communities that have historic or contemporary barriers to economic and social opportunities”.

Commitment to social equity considerations in placement, design, and impact of Green Infrastructure

Community Based Partnerships

- Developed in collaboration with the EPA to deliver piecemealed compliance projects at a programmatic level.
- Leverage a regulatory requirement
- Optimize the environmental and economic benefits
- Develop and hire local disadvantaged businesses and residents as the backbone of the Community's economy.



Financing Green Infrastructure - Is a Community-Based Public-Private Partnerships (CBP3) Right for You? | US EPA





Timeline:

Date	Activity
July 2022	RFP #32831 Issuance for CBP
August 2022	Proposal Submissions
September 2022	Proposal Evaluation Committee
March 2023	Notice of Award
July 2023	Transition Planning (Partnership Development Phase)
December 2023	MPA (Contract) Start
February 2030	MPA (Contract) Complete

AWARDED PARTNER WITH PROVEN INDUSTRY CBP EXPERIENCE

Corvias Infrastructure Solutions has demonstrated experience with;

- Growing the local economy through local subcontractor inclusion and capacity development,
- Strategizing implementation to leverage efficiencies and cost saving to commitments to community benefits,
- Involving public, private and nonprofit entities for property reclamation,
- Share risk with public through a performance-based contracting structure!



Prince George's County, MD Clean Water Partnership

\$500M+ in green infrastructure retrofits, water quality and pollution reduction targets surrounding the Chesapeake Bay



2013

Chester, PA Stormwater Authority Partnership

\$53M in pollution & volume reduction of both the separate and combined sewer areas



2015

Los Angeles, CA Green Streets & Alleys

\$79M+ green streets retrofits for public safety, water conservation and infiltration objectives



2018

Milwaukee, WI Milwaukee Metropolitan Sewerage District (MMSD)

\$50M+ in green infrastructure retrofits to achieve 20M gallons of runoff, pollution and flooding reduction targets



2020

Seattle, WA Seattle Public Utilities Rain City Partnership

\$15M+ pilot in green infrastructure retrofits to achieve 20M gallons of runoff, pollution and flooding reduction targets



2022



VISION: Turn a Regulatory Mandate into an Opportunity

Revitalization of Physical Infrastructure



\$85M+ in capital investments to address flooding and regulatory requirements

Increase surety of pricing and schedule
Increased resources for capital sourcing and administration
Efficient competitive procurement and quick pay.

Generate greater local purchasing power



Build local small minority business enterprise capacity

Reduce barriers to entry for contracting opportunities
Mentor protégé programs to build capacity
% commitment to target class local small businesses

Develop local economy



Reclaim land bank properties into catalyst for local development opportunities

Reduce % of properties in land bank through land reclamation
Conservation easements and other structures to transition land bank properties to CBO's for development opportunities.

APPROACH: Outcomes Based Delivery

- **Aggregation:** Bundling geographically disbursed stormwater infrastructure projects into a performance-based program with measurable cost, schedule, environmental and social outcomes.
- **Local Contractor Capacity Development:** Lowering barriers to entry for increasing capacity, small business utilization, and inclusion in the local community;
- **Accountability –** Compensation is connected to the achievement of public goals Incentivizing the Integration of Community and Regulatory Requirements.



PROCESS: Where are we Today?



Program Critical Path

Local / political timelines
Regulatory timelines
WIFIA Funding timelines
Risk
Stakeholder Identification
Data Gathering

**RESULT: Program Schedule w/
Critical Milestones**



Legal Structure

Vision / Goals
Governance
Planning Framework
Technical Standards
Funding Strategy
Performance Metrics
Legal Structure

**RESULT: Master Program
Agreement w/KPIs**



Program Mobilization

Project Prioritization
Market / Resource Assessment
Social Program Development
Capacity Building
Community Outreach
Property Access
Annual Plan (1-3 yr. Rolling Plan)

**RESULT: Program Management
Plan w/Pro-Forma**



Program Execution!

Preconstruction
Project Controls
Permitting
Procurement
Field Management
QC
Asset Mgmt. / O&M

RESULT: KPIs / Outcomes

ANNUAL PROGRAMMING:

BUDGET & GOALS planned for the forth coming year prepared annually.

- Written narrative/plan for the design, development, construction, installation and Substantial Completion of the Proposed Program and for the performance of O&M Work;
- Budget setting forth the estimated costs and expenses to be incurred by UG/KCK and the Manager, and associated Manager Fees, in connection with Budgeted Program and O&M Work; and
- Program Requirements, Projected Metrics, Community Engagement and Outreach, Capacity Development, and Maximum Annual Program Costs for the subject period.

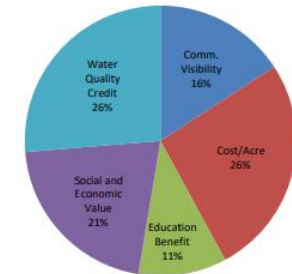
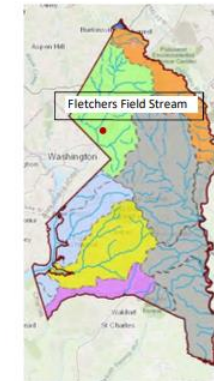
BUDGET BOOKS:

Written document setting forth, with respect to each Budgeted Project within the Annual Program:

- Project location and scope with economic, social, and environmental benefits summary;
- Local economic impact analysis
- Drawings & Specs of infrastructure to be constructed or installed on the Project Site;
- Schedule of Permits;
- Contractor Buyout w/target class participation;
- Site plan for the Project at the Project Site;
- Milestone Schedule;
- Schedule of any Payment and Performance Bonds to be required and included in the Construction Price;
- Maximum Project Price;
- Construction Commencement Date;
- Substantial Completion Date;
- UG/KCK or EPA metrics and/or requirements that are to be realized by the Budgeted Project;
- Maintenance Plan with estimated annual O&M Cost.

Prince George's County, Maryland
Budget Book SR007
Projects: Fletchers Field Stream Restoration

Projects	MDE Tracking #	Permit #	Acres Credit
Fletchers Field Stream	PG18RST102910	26344-2019-0	101.43
		TOTAL	101.43
Total Construction Cost	Construction Cost Per Acre	Number of Devices	Construction Cost Per Device
\$1,168,917	\$11,524	1	\$1,168,917
TOTAL Project Cost including design and fees:			\$1,761,997



1. Fletchers Field Stream Restoration: 5200 Kenilworth Avenue, Hyattsville, MD 20737

KPIs: Incentivized Performance

1- Land Reclamation, Rehabilitation, and Reutilization Incentive – Meeting the specified Reclamation, Rehabilitation, and Reutilization Incentive of **minimum (2) properties per year** returned to productive use - *assessed annually* (landbank parcels, vacant/underutilized parcels, reinvestment)

2- Mentor-Protégé Program Incentive – Meeting the specified Mentor-Protégé Program participation goal of a **minimum of (2) mentor-protéges per year** - *assessed annually*

3- Local Contractor Utilization Incentive – Meeting the specified Local Contractor Utilization participation goal of **minimum 20% *target class** - *assessed annually*

4- Timely Completion Incentive – Meeting the specified dates, schedules, and timelines outlined in each Budget Book assessed upon Substantial Completion of the relevant Approved Project

5- Budgeted Cost Incentive – Completing each Project within the budgeted cost as specified in each Budget Book assessed upon Substantial Completion of the relevant Approved Project.

***target class to be defined by program with LSMBE certification**

Community Engagement

Integrating Environmental and Socioeconomic Impacts into Project Delivery

Community Champions

Involve NBR's w/custom programs.

- GI Curriculum (Non-Profits)
- Participation Incentives (Private Property Owners)
- Land Bank reclamation, rehabilitation, and reutilization opportunities.



Local Disadvantaged Business Utilization

Lower the Barriers to Entry through

- Incubator Program
- Emerging Landscaper's Program
- Mentor – Protégé



CBP Manager

Partner to integrate silos and manage risk.

- Planning & Prioritization
- Administration & Funding mgmt.
- Long term maintenance & asset management
- Socio economic and environmental compliance
- Pilot Project Carveouts
- Quick Pay™



Environmental Stewardship

Greening, flood mitigation, beautification

- Community Plantings
- Environmental Workshops
- Community Maintenance Program
- Resident Utilization



Delivery and Asset Management



Unified Government/Kansas City, KS

- Driver(s): CSO Overflow, Watershed Management, Social Equity, Economic Resiliency
- Project Participant(s): EPA, State Orgs; Public Utilities; Community Based Organizations; Private Property Owners;
- Framework: Community Based Partnership Financing and Delivery
- Funding: Federal and State Programs; Utility Fees; Grants; Sponsorship \$
- Strategies & Commitments: Regulatory Compliance, Innovative Delivery and 7-Year Maintenance Program, Mentor-Protégé, NBR, Local LSMBE Inclusion and Capacity Development

Program Examples

Case studies of successful strategies and community commitments

Prince George's County, MD



- Driver(s): MS4 NPDES Consent Decree Compliance; Climate Resiliency & Economic Growth
- Project Participants: State & County Gov't; MDE (SRF); (29) Municipalities; Private Property; Faith Based Community, Community Based Organizations
- Framework: “Performance Based” Guaranteed Max Price and Schedule
- Funding: SRF; Stormwater Utility Fee; Grants
- Strategies: 51%+ resident inclusion; 50%+ utilization of disadvantaged contractors; Mentor Protégé Program; Faith Based Community Program; Public Schools Program; 30 Year Maintenance and Asset Management



**\$350
MILLION**
TOTAL
DEVELOPMENT
COST



24
MUNICIPALITIES



**5,975
ACRES**
MANAGED



79%
OF ALL FUNDS
AWARDED TO
TARGET-CLASS
BUSINESSES



63%
OF HOURS
WORKED
BY COUNTY
RESIDENTS



Chester, PA



- Driver(s): Localized Flooding; Public Health; and Environmental Justice
- Participant(s): State Chartered Municipal Stormwater Authority (Creation of Stormwater Utility Fee); PennVest (SRF); Community Based Organizations.
- Framework: “Performance Based” Guaranteed Max Price and Schedule
- Funding: SRF; Grant based; and Sponsorship \$
- Strategies: to 35%+ inclusion and utilization of LSMBE contractors; “At Risk” Private Sponsorship Financing and Delivery secured by SRF funding; Optional 30 Year Maintenance and Asset Management (project specific)

 MORE THAN
1,700
ASSETS

 **\$46**
MILLION
TOTAL
DEVELOPMENT
COST

 **\$149**
MILLION
TOTAL LOCAL
ECONOMIC
OUTPUT

 MORE THAN
50%
OF COMPANIES
CONTRACTED
WERE MINORITY-
OWNED FIRMS

Milwaukee, WI



- Driver(s): CSO Overflow (720M Gallons) & Community Resiliency
- Project Participants: Regional Utility; (25) Municipalities; Private Property Owners; Community Based Organizations, Faith Based Community
- Framework: “At Risk” Private Sponsorship Financing and Delivery secured by SRF funding
- Funding: SRF; Grants; Private Property Owner & Sponsorship \$
- Strategies: to 35%+ inclusion and utilization of LSMBE contractors; 11 year conservation easements; 5 Year Vegetation & Establishment / Warranty Program secured by SRF funding

 **8 YEARS**
2020-2028

 **\$29.2 MILLION**
DEVELOPMENT COST

 **19 MUNICIPALITIES**

 **11.5 MILLION GALLONS**
OF GREEN INFRASTRUCTURE PROJECTS

 **90%**
OF PROJECTS ARE LOCATED ON PRIVATE PROPERTY

 **MORE THAN 50%**
OF PROJECTS LOCATED IN LOW-TO-MODERATE INCOME AREAS

Los Angeles, CA



- Driver(s): Capture & Recharge
- Project Participant(s): Council Districts; Watershed Districts; Community Based Organizations; Private Property Owners
- Framework: “Performance Based” Guaranteed Max Price and Schedule
- Funding: Utility Fees; Grants; Private Property Owner & Sponsorship \$
- Strategies: to 35%+ inclusion and utilization of LSMBE contractors; 5 Year Vegetation & Establishment / Warranty Program; Integrated Community Center Development – “Slauson Connect”; Integrated Green Alleys and Sidewalks with Streets Bureau; Groundwater Recharge/Sale to LADWP



4 YEARS
2019-2022



\$14.2
MILLION
AT-RISK
DEVELOPMENT
COST



354
ACRE FEET
PER YEAR



MORE THAN
50%
OF COMPANIES
CONTRACTED
WERE SMWBE FIRMS



MORE THAN
50%
OF FIRMS
CONTRACTED
WERE LOCAL



Seattle, WA

- Driver(s): CSO Overflow (700M Gallons) and Social Equity Objective
- Project Participant(s): State Orgs; Public Utilities; Community Based Organizations; Private Property Owners;
- Framework: “At Risk” Private Sponsorship Financing and Delivery
- Funding: Utility Fees; Grants; Private Property Owner & Sponsorship \$
- Strategies: BIPOC inclusion and utilization; Community Based Development and Integrated Infrastructure; 5 Year Vegetation & Establishment / Warranty Program

Commission Agenda Item Report

Title: Parks & Recreation Quarterly Update

Proposed Agenda Date: November 27, 2023 Public Works and Safety Standing Committee

Presented by: Angel Ferrara, Parks & Recreation Department

BACKGROUND:

- The Parks and Recreation Department will provide a quarterly update on projects, programming and other initiatives.

BUDGET IMPACTS / FINANCIAL CONSIDERATIONS:

- N/A

POLICY CONSIDERATIONS:

- N/A

PROCUREMENT CONSIDERATIONS:

- N/A

LEGAL CONSIDERATIONS:

- N/A

RECOMMENDED ACTION:

- For information only

COUNTY ADMINISTRATION COMMENTS:

-  11/15/2023

MAYOR AGENDA DIRECTION:

-  Approved Lynne Arney
11-15-23



QUARTERLY REPORT

November 2023

Presented By:
Parks & Recreation



WYCO/KCK PARKS AND RECREATION
DEPARTMENT PRESENTS

DONUTS WITH SANTA

Fun for all, activities will include inflatables, face painting,
holiday crafts, donuts and hot chocolate, and pictures with
Santa. (While supplies last)

DECEMBER 9, 2023

9:00AM - 12:00 PM

MEMORIAL HALL

600 N. 7TH ST. KANSAS CITY, KS 66101

Sponsored by
Wyandotte County Parks Foundation



Recreation Division



☎ 913-573-8327

📷 @WYCOPARKS

📍 Wyandotte County/KCK Parks and Recreation



**PARKS &
RECREATION**

Assessments

1

Recreation Facility Study

TBD

2

Aquatics Facility Assessment

TBD

3

Gym Floor Maintenance

Repairs/improvements to five community center floors are currently underway



Parks Division



Project Updates



1

Eisenhower Tennis Court

Maintenance repairs to court completed

2

Kaw Point Park

Total ramp reconstruction completed

3

Clifton Splash Pad

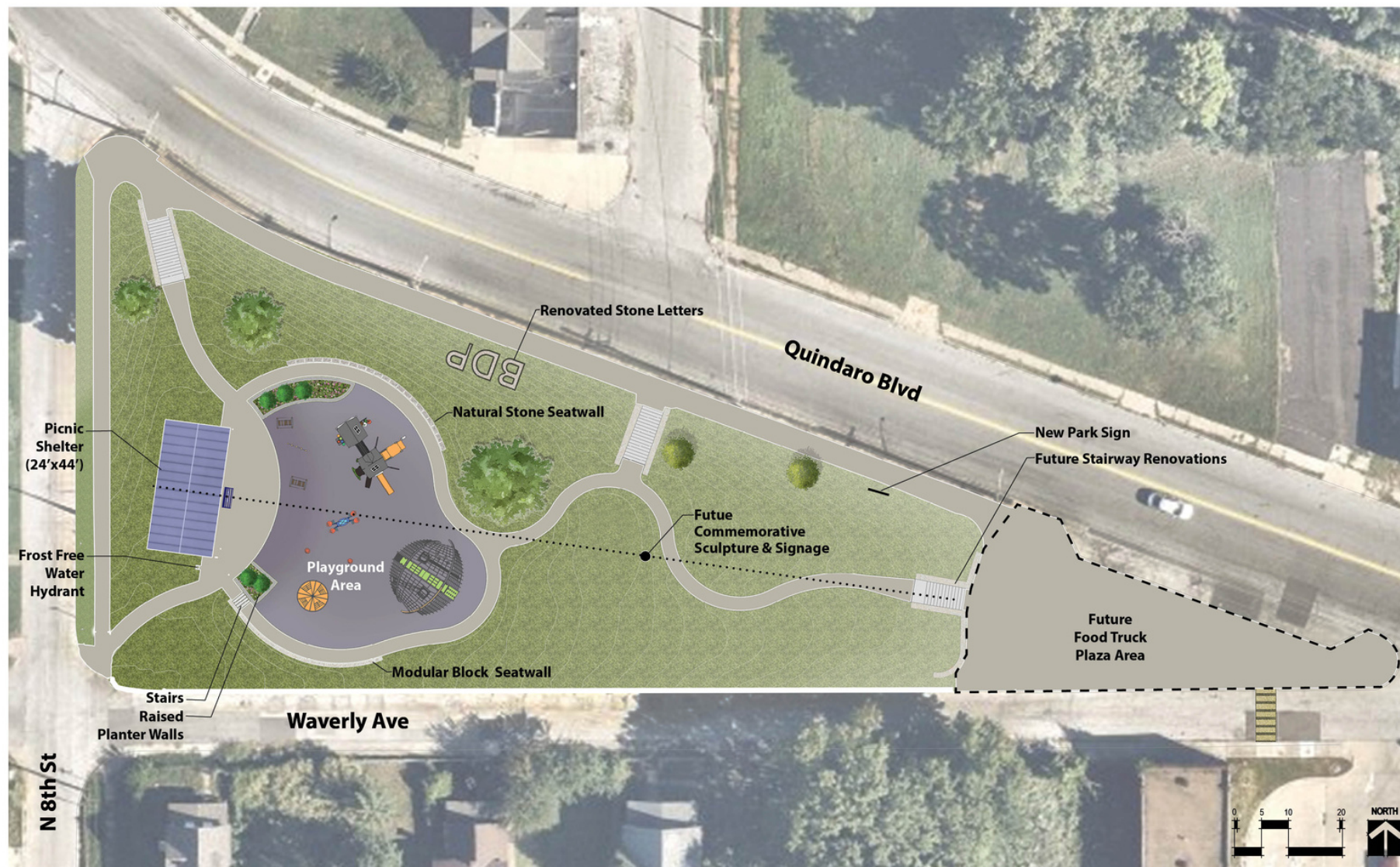
Project is in construction phase, grand opening spring 2024

4

Pickleball Courts

Four new pickleball courts have been constructed at WYCO Lake

Project Updates



Boston Daniels Park - Master Plan

vireo

5

Boston Daniels Park

Project is in final design, spring 2024 construction

6

Trail Maintenance

Parkwood, Welborn and Thomson Park trails will be overlaid

7

Rock Wall

Consulting with Terracon for Geotech services to determine best path forward

8

Klamm Park Trail

Awaiting final approval from the Federal Government for funding

Project Updates



9

St. Margaret's Trail

Construction of a 5ft. wide walking loop approx .33 miles beginning in November

10

Piper Park

Conversations with community partners are taking place

11

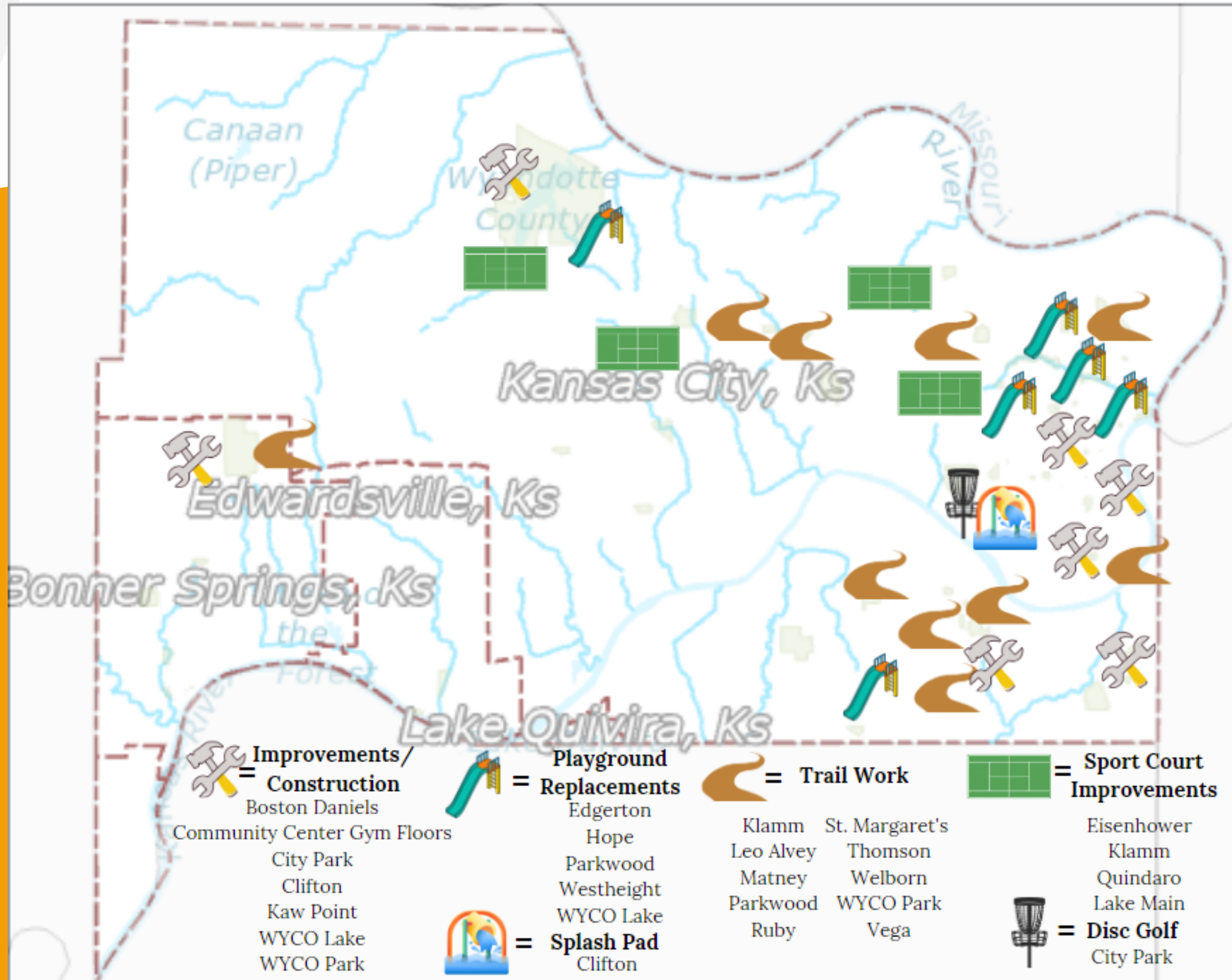
Quindaro Sport Court Project

Community engagement completed

12

Annual Shelter Program

The Department's annual Shelter Maintenance Program will kick off this winter



QUESTIONS

