Goals & Objectives

Mitigation

Stablize banks

Appropriate development for existing developments

floodplain regulations to prevent new development

Consider updating FEMA floodplain maps

Account or understand lose of natural floodplains

Reduce flows in tributaries that go into Wildcat Creek

Onsite BMP program (Wichita program)

Careful siting of detention basins

Upper reaches stormwater infrastructure

Preparation

More information online about flood risks

More warning systems in upper reaches

Ft. Riley & KSU orientation addresses flood risks

Public education events

Response

Better multi-media for flood warning

Get IPAWS

Hardwire public alert systems

More weather radios

Rebounding Forward

Work with NRCS & The Nature Conservancy to help put green infrastructure & help offset ag producers loss revenue

Work with USDA & Dept. Of Ag for similar partnership

MATC & KSU

NOTE: What did KC do on Brush Creek

Mitigation

Goal 1	**Address future land uses that are impacted by flood.**
Objective 1	Review floodplain development regulations.
Objective 2	New development must capture more water than runs off
Objective 3	
Goal 2	Capture water
Objective 1	Build detention basins to slow water release during extreme events
Objective 2	Allow overflow into unimproved areas
Objective 3	
Goal 3	Acquire more at risk properties
Objective 1	Use acquired property for goal 2
Objective 2	Seek out additional funds either through grants or budgeting to expand program
Objective 3	

Preparation

Goal 1	Increase understanding of flood risks for residents; especially those in vulnerable areas.
Objective 1	
Objective 2	
Objective 3	
Goal 2	Train insurance agents on Flood Insurance
Objective 1	Offer training class annually for new agents or as refreshers
Objective 2	Urge agents to suggest flood insurance if the property is in or near the zone
Objective 3	
Goal 3	Provide a resource of possible flood prevention improvements that property owners can make
Objective 1	Designate a staff person to be the one to respond to queries
Objective 2	Partner with the university to develop a website hosting improvement ideas on prevention
Objective 3	

Response

Goal 1	Improve evacuation procedures.
Objective 1	Work with Emergency Service Personnel to update flood evacuation plan.
Objective 2	
Objective 3	
Goal 2	
Objective 1	
Objective 2	
Objective 3	
Goal 3	
Objective 1	
Objective 2	
Objective 3	

Rebounding Forward

Goal 1	Restore natural environments capacity to deal with flooding.
Objective 1	Increase bank stabilization with natural elements like trees, plants, and stones to slow erosion.
Objective 2	
Objective 3	
Goal 2	
Objective 1	
Objective 2	
Objective 3	
Goal 3	
Objective 1	
Objective 2	
Objective 3	

Mitigation

Goal 1	**Address future land uses that are impacted by flood.**
Objective 1	Review floodplain development regulations.
Objective 2	Require increased water retention "upstream" in future development if studies determine this would be beneficial.
Objective 3	
Goal 2	**Utilize non-flood land areas that could be utilized to lessen the impact of floodplain areas.**
Objective 1	Identify non-flood land areas for use.
Objective 2	
Objective 3	
Goal 3	
Objective 1	
Objective 2	
Objective 3	

Preparation

Goal 1	**Increase understanding of flood risks for residents; especially those in vulnerable areas.**
Objective 1	Increase prominence on the City website of flooding and where flooding has occurred in the past events.
Objective 2	Direct mail addresses and property owners that have been affected in the past.
Objective 3	
Goal 2	**Add flood sirens in flood prone areas.**
Objective 1	
Objective 2	
Objective 3	
Goal 3	
Objective 1	
Objective 2	
Objective 3	

Response

Goal 1	**Improve evacuation procedures.**
Objective 1	Work with Emergency Service Personnel to update flood evacuation plan.
Objective 2	
Objective 3	
Goal 2	
Objective 1	
Objective 2	
Objective 3	
Goal 3	
Objective 1	
Objective 2	
Objective 3	

Rebounding Forward

Goal 1	Restore natural environments capacity to deal with flooding.
Objective 1	Increase bank stabilization with natural elements like trees, plants, and stones to slow erosion.
Objective 2	Buyout properties that are in flood prone areas and return them to a natural environment.
Objective 3	
Goal 2	Increase capacity of existing watershed to better handle large-scale rain events.
Objective 1	Add retaining ponds.
Objective 2	Increase size and depth of existing retaining ponds.
Objective 3	Increase capacity of Wildcat Creek and eliminate bottlenecks: depth/width, Fort Riley Blvd bridge, train tracks south of Fort Riley Blvd.
Goal 3	
Objective 1	
Objective 2	
Objective 3	

Resilient
Wildcat Creek

Mitigation

Goal 1	Address future land uses impacted by flood
Objective 1	Review floodplain development regulations. → FFE 3' above BFE (?)
Objective 2	Buy flood insurance
Objective 3	
Goal 2	Reduce the demand for response after an event — Find areas most at risk for flooding
Objective 1	Elevate properties, Buy properties, Build walls to protect properties
Objective 2	Build dams
Objective 3	
Goal 3	
Objective 1	
Objective 2	
Objective 3	

Resilient
Wildcat Creek

Preparation

Goal 1 Increase understanding of flood risks for residents; especially those in vulnerable areas

Objective 1

Objective 2

Objective 3

Goal 2 Build, sustain & improve the capability of a community to be ready to respond to a disaster

Objective 1 Have evacuation plans

Objective 2 Actively involve area stakeholders

Objective 3 Install flood warning systems

Goal 3

Objective 1

Objective 2

Objective 3

Resilient
Wildcat Creek

Response

Goal 1	Improve evacuation procedures
Objective 1	Work w/ Emergency Service Personnel to update flood evacuation plan.
Objective 2	
Objective 3	
Goal 2	Execution of emergency plans & actions to support short-term recovery
Objective 1	Use emergency natural gas generators, as-needed
Objective 2	Partner w/ churches & charitable organizations to be able to quickly set up & provide relief
Objective 3	
Goal 3	
Objective 1	
Objective 2	
Objective 3	

Resilient
Wildcat Creek

Rebounding Forward

Goal 1	Restore natural environments capacity to deal w/ flooding
Objective 1	Increase bank stabilization w/ natural elements like trees, plants & stones to slow erosion
Objective 2	
Objective 3	
Goal 2	Take advantage of opportunities to mitigate future disasters & build a more resilient community.
Objective 1	Get financial assistance
Objective 2	Utilize new bridges on K-18 (Fort Riley Blvd) over Wildcat Crk as part of Linear Trail to be able to remove low water crossing behind Four Points Hotel
Objective 3	Remove rock wall shielding Optimist Park ballfields
Goal 3	
Objective 1	
Objective 2	
Objective 3	

Mitigation

Goal 1	Address future land uses that are impacted by flood.
Objective 1	Review floodplain development regulations.
Objective 2	Place moratorium on further development around Wildcat Creek, particularly in Scenic Drive area.
Objective 3	Monitor/evaluate/control upstream development and land use that could potentially impact flooding.
Goal 2	Aggressively pursue large-scale stormwater management and detention to control flooding, to include both designs/proposed solutions and funding
Objective 1	Partner with Fort Riley and aggressively pursue active partnership, encouraging them to take ownership and help solve the problem.
Objective 2	Identify solutions to relieve flooding along Wildcat Creek to include upstream stormwater detention. (Note: Understand one potential structure previously identified would control upper 25% of water shed that comes through to Manhattan. Pursue this to make it happen!)
Objective 3	Aggressively pursue funding to implement identified solutions that will have the greatest impact.
Objective 4	Revisit all previously-proposed solutions and share with CAT. Conduct follow-up analyses and information-gathering, as needed, to determine viability, potential impact, funding needs, etc.
Goal 3	Control and clear debris/potential debris
Objective 1	Work with all partners (city, county, landowners) to identify, control, and clear bottle-neck debris or brush/trees that could potentially become debris along Wildcat Creek

Objective 2	(Related to #1) Create handout/flyer/web page for landowners along Wildcat Creek with specific steps they can to help control debris/potential debris
Objective 3	(Related to #1) Assess and identify any debris bottlenecks or potential bottlenecks along Wildcat Creek. Work to clear. Allocate city and county resources to help clearing debris/potential debris and preventing debris.
Objective 4	Provide mini-grants to landowners and residents along Wildcat Creek related to debris control, and potentially also streambank stabilization. Provide information to landowners and residents about potential funding sources and low cost/no cost solutions and mitigation options (e.g., trees from forestry department, grant opportunities, etc.)

Preparation

Goal 1	**Increase understanding of flood risks for residents; especially those in vulnerable areas.**
Objective 1	Show residents how to look up Wildcat Creek data and how to sign up for USGS Water Alerts such that they can get emergency notifications on their phone. Make sure citizens understand heights of impact to them and potential rates of water rising.
Objective 2	Create template to help citizens create their own emergency plan and "go kit" so they know what to do when the water starts rising. (Make sure they understand how quickly Wildcat Creek can rise and how quickly they can be in an emergency situation.)
Objective 3	
Goal 2	
Objective 1	
Objective 2	
Objective 3	

Goal 3	
Objective 1	
Objective 2	
Objective 3	

Response

Goal 1	**Improve evacuation procedures.**
Objective 1	Work with Emergency Service Personnel to update flood evacuation plan.
Objective 2	Note: Be sure to include Keats and rural areas within the evacuation plan and address challenges specific to the rural areas within the evacuation plan.
Objective 3	
Goal 2	**Incorporate usage of temporary flood barriers into flood response options.**
Objective 1	Research community- and individual-level temporary flood barriers. Consider purchasing temporary flood control barriers for problematic neighborhoods. Create resource outlining temporary flood control products for individuals, including cost, how to order, under what situations they are effective, etc.
Objective 2	

Objective 3	
Goal 3	**Broaden understanding of response needs and impacts for business owners and landowners (particularly for agricultural use).**
Objective 1	Improve understanding and document infrastructure, business, and agricultural losses/potential losses due to flooding. Examples: loss of data, loss of business location & equipment, loss of productivity, private road damage, private water and septic damage, debris on property, how to "restart" wells and septic system after a flood and make sure they are safe to use after a flood, etc.
Objective 2	Explore ways to help business and landowners become more resilient to flooding.
Objective 3	

Rebounding Forward

Goal 1	**Restore natural environments capacity to deal with flooding.**
Objective 1	Increase bank stabilization with natural elements like trees, plants, and stones to slow erosion.
Objective 2	
Objective 3	
Goal 2	**Improve data collection and monitoring.**
Objective 1	Analyze past trends related to groundwater levels, gauge depth, rate of rise, impact of rainfall, etc. Identify factors most impactful on flooding (e.g., groundwater, rainfall, rate of rainfall, etc.) Develop models to predict where and how fast water will rise. Does Keats always lead Manhattan in terms of flooding levels? What is the lead time for flooding between points?

Objective 2	Install gauge on Wildcat creek further upstream from Keats to (1) give Keats residents more warning time on flooding and (2) collect additional data to improve predictability of flooding events in Keats and Manhattan and to better understand the watershed area and how upstream activity impacts/leads downstream flooding.
Objective 3	
Goal 3	
Objective 1	
Objective 2	
Objective 3	

Mitigation

Goal 1: Ensure new developments won't increase floods

Objectives:
- Enforce existing floodplain regulations
- Avoid/heavily scrutinize development in floodplains/far or
- Look into greener/less impervious surfaces in new developments

Goal 2: Push for funding for large-scale dams
- Mobilize legislators at all levels
- Hope and pray

Goal 3: Push for smaller scale detention throughout watershed

Preparation

Goal: Inform tenants/residents of flood risks

Objectives:
- Pass ordinance requiring rental property owners/managers include a floodplain/flood risk notice in leases & explain it in the rental process
- Install signage in frequently flooded neighborhoods
- Include info about flood risks at new student orientation at PSU

Prep Cont.

Goal = Create Watershed awareness
  Objectives: - form intergovt agreements to inform residents ofe
  all affected communities of risks, tendencies, & impacts
  of watershed/floodplain on their community
      - Collaboration b/w Admins, govts, = P Riley Gully,
      Manhattan, Keats, Fort Riley, etc. to avoid
      further impact on watershed & businesses
      - Public outreach Programs.

Response:

Goal: Ensure people are informed of impending/ongoing risks/
  dangers as soon as possible
  objective. Through increased awareness, put out alert notifications
  to everyone via call, text,
    · Maybe localized severe weather alarms being installed by landlords
    in units

Mitigation

Goal 1   **Address future land uses that are impacted by flood.**

Objective 1 Review floodplain development regulations.

Objective 2 Enact City Ordinance to Prevent new building in projected or future conditions hydrology as predicted by the City Flood Model.

Objective 3 Ensure enforcement of regulation that prevents building to include mitigation efforts in current and future conditions area of flood maps.

Goal 2

Objective 1

Objective 2

Objective 3

Goal 3

Objective 1

Objective 2

Objective 3

Rebounding Forward

Goal 1   **Restore natural environments capacity to deal with flooding.**

Objective 1 Increase bank stabilization with natural elements like trees, plants, and stones to slow erosion.

Objective 2

Objective 3

Goal 2   Establish ordinance to eliminate mitigation efforts or rebuilding of property in the flood plain or future flood plain.

Objective 1 Do not allow any new structures in the flood plain or future flood plain.

Objective 2 Do not allow rebuild of any ground floor residential flooded property for existing buildings. For example ground floor of Garden Way Apartments must be converted to storage or garages, no ground floor apartments or residential occupancy in the flood plain. .

Objective 3

Goal 3   Use flood model to evaluate CIP projects to prevent future flooding

Objective 1 Improve water flow at selected bridges – Scenic Drive and Fort Riley Boulevard Highway and Rail Bridge

Objective 2 Establish containment ponds in the County and on Fort Riley

Objective 3

Preparation

Goal 1   **Increase understanding of flood risks for residents; especially those in vulnerable areas.**

    Objective 1   Place historical markers in all flood areas. Markers to include dates, water level and pictures.

    Objective 2   Amend City Ordinance to require notification of buyers and renters of property that is in the flood plain or future flood plain.

    Objective 3   up the notifwant ⟶ Electronic Notification means

Goal 2   Update early Warning Devices upstream

    Objective 1   Add additional high-water notification sensors upstream   3

    Objective 2   Update collective devices to ensure measurement of extreme rain events – plus 12 inches.

    Objective 3

Goal 3

    Objective 1

    Objective 2

    Objective 3

Response

Goal 1   **Improve evacuation procedures.**

Objective 1   Work with Emergency Service Personnel to update flood evacuation plan.

Objective 2   Install Emergency sirens with voice activation in flood plain.

Objective 3

Goal 2

Objective 1

Objective 2

Objective 3

Goal 3

Objective 1

Objective 2

Objective 3