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## 4 MITIGATION STRATEGY

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This chapter focuses on the state's hazard mitigation strategy. It is divided into five parts:

- Hazard Mitigation Goals
- State Capability Assessment
- Local Capability Assessment
- Mitigation Actions
- Funding Sources

## 4.1 Mitigation Goals

**Requirement 201.4(c)(3)(i): [The mitigation strategy shall include] a description of State goals to guide the selection of activities to mitigate and reduce potential losses.**

**Update 201.4(d): [The] plan must be reviewed and revised to reflect changes in development, progress in statewide mitigation efforts and changes in priorities**

This section describes the mission, and goals of the Kansas Hazard Mitigation Plan and the process used to update the goals in 2018. The State has updated the framework of its mitigation strategy to improve its ability to track progress in meeting plan goals and to improve alignment with local mitigation strategies (goals, objectives, and actions). The framework of the State's mitigation strategy has three parts: mission, goals, and actions, which are defined as follows:

- The **mission** is a philosophical or value statement that has the purpose and primary function of the strategy.
- The **goals** describe the overall direction that the State will take to reach their mission.
- The **actions** describe the activities or projects used to support the accomplishment of the goals and mission.

### 4.1.1. 2018 Updated Goals

During the 2018 update process, the Kansas Hazard Mitigation Team (KHMT) reviewed the mission statement and goals to guide the development and implementation of the hazard mitigation plan. They felt the strategy and goals in the last plan update remained consistent and should be kept intact for the 2018 update. Objectives were taken out of the 2018 plan update and will be revisited in the 2023 update. The mission and goals follow:

**Mission:** To create a disaster-resilient Kansas through the implementation of a statewide comprehensive mitigation strategy.

**Goal 1: Minimize the vulnerability of the people, property, environment, and economy of Kansas and its communities to the impacts of natural and manmade hazards**

**Goal 2: Build the mitigation capabilities of local governments throughout Kansas in establishing and implementing effective mitigation plans, policies, and programs**

**Goal 3: Promote a state policy framework for effective hazard mitigation programming in the state**

**Goal 4: Improve education and training in hazard mitigation and related programs for government officials, businesses, and the public.**

#### **4.1.2. Process for Updating Goals**

The planning team for the 2002 Kansas Mitigation Strategy established goals and objectives for the strategy in a workshop-type discussion. These goals and objectives were reviewed and modified slightly from the previous Kansas Hazard Mitigation Plans. During the 2013 plan update, the KHMT reviewed the existing goals and objectives at the February 13, 2013 State Hazard Mitigation Team meeting and determined them to be applicable for the long term and for providing the ability for growth. The KHMT made only minor revisions to the wording to allow for local/regional plans. During the 2018 plan update, the KHMT elected to use the existing goals and not the objectives as identified in the 2013 plan update. It was determined that objectives would be revisited at a later date.

The intention of the KHMT was to establish mitigation goals that had applicability over the long term. These goals would continue to provide direction to state and local/regional mitigation efforts for many years through future updates and revisions. The team believed that this approach was more feasible with capability-based goals, rather than hazard-specific goals. It would ensure the statewide applicability of each goal, rather than focus on a specific hazard type that may not be applicable in all regions or communities.

As part of the 2018 plan update, the goals from the previous plan were assessed to determine if they still addressed current and anticipated future conditions. The assessment was based on the following:

- The updated statewide risk assessment, which includes changes in growth and development, recent disasters, and enhanced vulnerability assessments;
- Assessment of changes and challenges in state and local capabilities since the previous plan;
- Mitigation tasks from the preceding plan;
- Analysis of the similarities and differences of the state mitigation plan goals with local mitigation plan goals; and
- Analysis of mitigation actions completed since 2013 that were not specifically aligned with the goals of the 2013 plan.

Based on this assessment, a mission statement and updated goals were drafted and presented to the KHMT for review and then revised to reflect their input.

The key issues identified in the statewide risk assessment can be found in *Identifying New Mitigation Actions* on page 4.76. Information on the changes in state and local mitigation

capabilities is summarized in Section 4.2 State Capability Assessment and Section 4.3 Local Capability Assessment. Section 4.4 Mitigation Actions includes detailed and updated mitigation actions designed to meet the designated goals and objectives. The following section describes how local mitigation plan goals were reviewed and considered during the 2018 update.

### 4.1.3. Review of Local Goals

The KHMT analyzed the goals of 12 Regional FEMA-approved hazard mitigation plans covering 104 counties to assess their consistency with state goals. (Greenwood County elected not to participate in the regional planning initiative, and their local plan expired in October 2016). The analysis involved counting the regional plans that addressed the goal type and how it relates to the state goal. The results of the analysis are presented in **Table 4.1**.

**Table 4.1. Local Plans with Goals Similar to State Plan Goals**

Local Goal Type	Number of Regional Plans	Percent of Total	Corresponding State Goal
Critical Facility Protection	12	100%	Goal #1 Minimize Vulnerability
Risk Reduction	12	100%	Goal #1 Minimize Vulnerability
Vulnerable Populations	12	100%	Goal #1 Minimize Vulnerability
Capabilities Development	12	100%	Goal #2 Capability Building
Policy Development	12	100%	Goal #2 Capability Building
Communications	12	100%	Goal #3 State Policy
Public Education	12	100%	Goal #4 Education /Training
<b>Total</b>	<b>12</b>		

In order to ensure the regional plans reflect the state plan and vice versa, the emphasis in the regional plans was highlighting and building on the goals in the state plan at a more simplified level. While the percent of total reflects 100% for all the regional plans, that is not indicative of 100% of all jurisdictions. Smaller jurisdictions often do not have the money or capabilities to enact big projects and tend to focus on education to prevent worse case scenarios. Also, they tend to know more of their community members and the vulnerable populations are well known to responders and more readily taken care of. The most common goals that occur in regional plans are related to minimizing vulnerability and the protection of critical facilities. Projects related to the public education usually are minimal cost to the community with the access to print, radio and internet media. Projects that protect critical facilities can be funded through Federal Emergency Management Agency (FEMA) mitigation grant programs if funds are available and meets all the eligibility criteria including benefit cost analysis. However FEMA funding is not a requirement to include a mitigation action item in a local plan.

## 4.2 State Capability Assessment

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**REQUIREMENT 201.4(c)(3)(ii): [The State mitigation strategy shall include] a discussion of the State's pre- and post-disaster hazard management policies, programs, and capabilities to mitigate the hazards in the area, including: - an evaluation of State laws, regulations, policies, and programs related to hazard mitigation as well as to development in hazard-prone areas: [and] - a discussion of State funding capabilities for hazard mitigation projects.**

The state capability assessment evaluates existing capabilities of state agencies, federal agencies and organizations for implementing mitigation-related programs. This assessment allows for improving mitigation capabilities at the state and local levels. The state capability assessment is meant to do the following:

- Identify agencies or statewide organizations that have applicable mitigation capabilities or programs that should be direct participants in the statewide mitigation planning process;
- Incorporate all suitable state agency programs and capabilities into the state's hazard mitigation planning and programming to identify programs with complementary purposes or funding sources to permit their coordinated use to resolve specific mitigation-related problems;
- Identify state statutes, agency regulations, and agency policies that are related to hazard mitigation and development in hazard-prone areas;
- Assess state funding capabilities for hazard mitigation projects; and
- Assess strengths and opportunities in the state's mitigation capabilities and identify weaknesses and obstacles to improve state capabilities and define possible corrective actions.

As part of the update process, this section will also highlight the changes in state mitigation capabilities since the development of the previous plan update.

### 4.2.1. State Agencies and Mitigation-Related Programs

Many Kansas state agencies have programs that are directly or indirectly related to hazard mitigation. A goal of the State's mitigation strategy is to continue to improve the integration and use of these programs to enhance statewide mitigation capabilities. This section highlights agencies involved in mitigation and summarizes their mitigation-related programs. The majority of these programs can be considered pre-disaster as many of the mitigation programs listed here are implemented as part of the day-to-day functions of state agencies. Many of these programs also support mitigation opportunities that arise in the post-disaster environment.

**Table 4.2** and **Table 4.3** at the end of this section summarize the technical, program implementation, and local support capabilities of these state agencies.

### *Adjutant General's Department*

The Adjutant General's Department consists of the Division of Emergency Management (see below), the Kansas Air National Guard, and the Kansas Army National Guard.

## **Mitigation-Related Programs and Planning**

**Geospatial Technologies / Mapping (GIS)** - There are two distinct Geospatial Technology Sections split under the Adjutant General's Department. One section operates under the Kansas Division of Emergency Management (below under KDEM) and the other under the Directorate of Public Works. The DPW/GIS section maintains the Army National Guard standardized geodatabase called Common Installation Picture (CIP). The CIP is a minimum data requirement set by the Army National Guard (ARNG) extracted from the Spatial Data Standard for Facilities, Infrastructure, and Environment (SDSFIE). By utilizing the framework of CIP and other customized local data, DWP/GIS section provides services to support various ARNG functions to include Plans and Programming, Real Property, Construction Project Management, Facilities Management, Utilities Management, Environmental, Military Recruiting, Military Range Control, and Military Training.

### ***Adjutant General's Department—Kansas Division of Emergency Management***

The Kansas Division of Emergency Management (KDEM) is designated to provide staff support to the Kansas KHMT and is responsible for maintenance of this mitigation plan. The mission of the division is to provide a 24-hour operation to reduce loss of life and property and to protect Kansas from all hazards. This support is provided by coordinating resources, expertise, leadership, and advocacy through a comprehensive, risk-based emergency management program of mitigation, preparedness, response, and recovery. The division provides mitigation advocacy, planning requirements and guidance, response coordination, and administration of recovery programs for the state. These services are provided regardless of the type of hazard. KDEM has five sections: Administration, Fiscal, Planning and Mitigation, Response and Recovery, and Preparedness.

## **Mitigation-Related Programs and Planning**

**Geospatial Technologies/Mapping (GIS)** - The Geospatial Technology group coordinates and manages the geographic information system (GIS) for KDEM. The group is responsible for data creation, requests, and distribution to and from other state agencies, federal entities, and local governments. The GIS group operates and maintains the Public Information/Geographic Information (PIGI) response vehicle. In the State Emergency Operations Center the unit provides situational awareness and mapping support to SEOC staff. The group provides easy to use Internet maps and desktop applications to non-GIS users across the department.

**Comprehensive Emergency Planning Support for Local Government** - Kansas statutes require all 105 counties to have emergency management offices with designated points of contact for county emergency management coordinators and local emergency planning committees. KDEM provides guidance to local governments on regulations regarding the contents and format of county emergency management plans and reviews and approves these plans. The regulations contain provisions for mitigation elements within the emergency operations plans.

**Disaster Response and Recovery Operations** - KDEM coordinates state resources and services for local governments and the public impacted by disasters. Upon receipt of a presidential major disaster declaration, the division also coordinates provisions of federal disaster relief.

**Emergency Water Supply** - KDEM coordinates obtaining water or water supply equipment when a local water system is inoperative or in the event of a drought, if requested.

**Mitigation Planning Support for Local Governments** - KDEM provides guidance and limited support for local hazard mitigation plan development and maintenance. Since the regional mitigation plan initiative, if counties elect to participate, KDEM provides guidance, support, plan development, maintenance and funding.

**Kansas Planning Standards** – The Kansas Planning Standards is intended to be an all-encompassing guide used to develop and review County Emergency Operations Plans (CEOPs). It includes the planning considerations from the National Response Frameworks, the Nuclear Regulatory Commission (NUREG 0654), the National Incident Management System (NIMS), Sara Title III, and guidance from the United States Department of Homeland Security (DHS).

The KPS is intended to provide local emergency managers and local planning teams with information on the State of Kansas' concept on developing CEOPs. This standard clarifies the prevention, preparedness, response and recovery planning elements that warrant inclusion in CEOPs.

The KPS encourage Local Emergency Planning Committees (LEPCs) to address all hazardous materials issues that threaten their jurisdiction in a single CEOP instead of relying on separate plans. The coordination of all local planning efforts is key in eliminating duplication and conflict between plans. This alliance contributes to the creation of a strong local planning structure, inclusive of all governmental agencies with response and recovery functions, volunteers, and the private sector.

**Kansas Response Plan** - The Kansas Response Plan is designed to address natural and manmade hazards that could adversely affect the State of Kansas. The plan applies to all state government departments and agencies that are tasked to provide assistance in a disaster or emergency situation. It describes the fundamental policies, strategies, and general concept of operations to be used to manage an emergency, through all phases of emergency management.

Incident-specific annexes are plans that address the full spectrum of activities related to specific incident types, which include prevention, preparedness, response, and recovery actions. The coordinating agency is responsible for developing and exercising these plans. KDEM is charged with approving the plans and adding them as annexes to the Kansas Response Plan.

**The Hazard Mitigation Grant Program (HGMP)** – The Hazard Mitigation Grant Program is authorized by Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance

Act, as amended (the Stafford Act), Title 42, United States Code (U.S.C.) 5170c. The key purpose of HMGP is to ensure that the opportunity to take critical mitigation measures to reduce the risk of loss of life and property from future disasters is not lost during the reconstruction process following a disaster. HMGP is available, when authorized under the Presidential Major Disaster Declaration, in the areas of the state requested by the governor. The amount of HMGP funding available to the applicant is based upon the total federal assistance provided by FEMA for disaster recovery under the major disaster declaration.

**The Pre-Disaster Mitigation (PDM) Program** - The Pre-Disaster Mitigation program is authorized by Section 203 of the Stafford Act, 42 U.S.C. 5133. The PDM program is designed to assist states, territories, Indian tribal governments, and local communities to implement a sustained pre-disaster natural hazard mitigation program to reduce overall risk to the population and structures from future hazard events, while also reducing reliance on federal funding from future major disaster declarations.

**Flood Mitigation Assistance** - The Act (called the Biggert-Waters Flood Insurance Reform Act of 2012, found in H.R. 4348) consolidates three of the NFIP funded mitigation programs described below into a single program. Under Hazard Mitigation Assistance the National Flood Mitigation Fund is referred to as Flood Mitigation Assistance. Under the FY17 FMA application period there will be \$160M available, of which 70M is for community flood mitigation projects. The grant is competitive and goes into more detail in the funding portion of this plan update under section 4.5.1.

**Fire Management Assistance Grant Program – HMGP Post Fire Grant** -This program, which provides a 75 percent federal share/25 percent state share, is available to states, as well as local and tribal governments. It provides for the mitigation, management, and control of fires on publicly or privately owned forests or grasslands, which threaten such destruction as would constitute a major disaster. The process is initiated when the state requests federal assistance for an event where the threat of major disaster exists for either single fires or numerous small fires.

**Continuity of Operations (COOP) and Continuity of Government (COG) Initiatives** - COOP planning is an effort to assure that the capability exists to continue essential agency functions across a wide range of potential emergencies. The objectives of a COOP plan include:

- Ensuring the continuous performance of an agency's essential functions/operations during an emergency,
- Protecting essential facilities, equipment, records, and other assets,
- Reducing or mitigating disruptions to operations,
- Reducing loss of life, minimizing damage and losses, and
- Achieving a timely and orderly recovery from an emergency and resumption of full service to customers.



COG planning is essentially an integration of all agencies capabilities within the COOP to assure the best possible surviving governmental structure should a major disaster event have the potential to disrupt normal operations.

### ***Kansas Board of Regents***

At the direction of the nine-member Kansas Board of Regents, it is the governing board for the State's 32 public higher education institutions that includes seven public universities, 19 community colleges, and six technical colleges.

### **Mitigation-Related Programs and Planning**

Many higher education institutions in Kansas have public safety offices with priorities to protection the lives, assets, valuable research, property and the environment. This includes having Emergency Management Plans and participating in local multi-jurisdictional hazard mitigation plans with identified mitigation actions. Mitigation actions may include construction of tornado safe rooms at their campus; education on hazards and provision of specific shelter location details.

### ***Kansas Corporation Commission***

The Kansas Corporation Commission's mission is to protect the public interest by regulating electric, gas, and telecommunications services and ensuring the availability and safety of these utilities. The Commission is critical to the development and implementation of this plan, because of the Commission's roles in ensuring the adequacy of energy and telecommunication services and managing the risk of damage to underground utilities.

### ***Kansas Data Access and Support Center***

The Kansas GIS Policy Board (board) was established by the governor in 1989 to develop GIS technology management policies and direct the Kansas GIS Initiative. The board consists of directors of the major state, federal, and local agencies that are using GIS technology. The board realized that a centralized delivery and distribution center for GIS databases was essential to the development and implementation of GIS technology across state government. The board created the Data Access & Support Center (DASC) in 1991. Originally established as a center for the archival and distribution of geospatial data, DASC has expanded its service portfolio over the years. While data archival and distribution are at the core of DASC's mission, DASC also provides a variety of geospatial services including web-based application development and hosting, database development and integration, state and local coordination, technical support, and local GIS data backup. These services support the Kansas GIS Initiative and complement state and local GIS activities. Physically located at the Kansas Geological Survey, DASC serves at the pleasure of the Kansas GIS Policy Board and under the direction of the Kansas Geographic Information Officer.

## ***Kansas Department of Administration—Office of Facilities and Property Management***

The Office of Facilities and Property Management provide services in building maintenance, design and construction, parking, and leasing and space management at the capitol complex. Mitigation-related responsibilities include infrastructure construction and maintenance, property acquisition, and property repair and rehabilitation for buildings at the Capitol Complex and the Governor's residence.

## ***Kansas Department of Agriculture***

The Kansas Department of Agriculture is charged by law to ensure a safe food supply, responsible and judicious use of pesticides and nutrients, the protection of natural and cultivated plants, integrity of weighing and measuring devices in commerce and beneficial use of the State's waters. The Department is made up of a variety of divisions and programs. Mitigation-related responsibilities include environmental protection, natural resource development and use, public health and safety services, community and economic development and local government grants and loans.

### **Mitigation-Related Programs and Planning**

**Agricultural Commodities Assurance Program-** This program regulates the quality of feed, pet food and seed.

**Pesticide and Fertilizer Program -** This program conducts inspection, registration, and sampling of pesticide and fertilizer products sold, offered, or exposed for sale or distributed in Kansas. It also monitors safe handling and storage of bulk fertilizers, approves containment facility design and inspects facilities for compliance.

## ***Kansas Department of Agriculture—Division of Animal Health***

The Division joined Kansas Department of Agriculture in 2011 and is divided into three programs: disease control, animal facilities inspection, and brands. One of the agency's goals is to eradicate infectious and contagious livestock diseases throughout the State. The responsibilities of the division are related to the identified hazards of agri-terrorism and agricultural infestation. The Division of Animal Health proactively serves Kansas farmers and ranchers by assisting with the development of premises specific biosecurity plans, conducting training and outreach programs and conducting a full-scale multi-day animal disease exercise on an annual basis. Kansas has subscribed to the Secure Milk and Secure Beef plans which have been developed to mitigate the effects of an outbreak of Foot and Mouth disease on business that need to move milk and livestock during an outbreak in North America. County emergency managers and other first responders are also invited to attend the various outreach activities and KDA actively promotes the engagement of the Agriculture community with their local emergency personnel.

### **Mitigation-Related Programs and Planning**

**Food and Agriculture Incident Annex** - This annex is part of the Kansas Response Plan and is routinely updated through cooperative emergency planning with Kansas counties as well as other Kansas agencies and private entities that would be involved in the response. KDA also maintains a variety of Standard Operating Procedures detailing how the agency and stakeholders would respond to a food, plant, or agriculture emergency.

**Kansas Volunteer Veterinary Response Corps** - Members attend training and exercises for animal disease emergency issues, conduct ongoing disease surveillance, and identify pre-approved burial sites for disease-affected livestock.

**Kansas Agriculture Emergency Response Corps** – this all hazards corps of volunteers is comprised of Kansans with a variety of skill sets. Veterinarians used to be the primary profession targeted by the precursor to this group, but experience and exercises demonstrated the need for a cadre of volunteers with agriculture knowledge. Member attend training and exercises for animal disease emergency issues, the incident command system and all hazards events.

### ***Kansas Department of Agriculture—Division of Conservation***

The Kansas Department of Agriculture, Division of Conservation (KDA-DOC) works with the 105 local conservation districts, the 88 organized watershed/drainage districts, and state and federal agencies to administer programs that improve water quality, reduce soil erosion, conserve water and reduce flood potential. Mitigation-related responsibilities include: local government grants and loans, community and economic development, infrastructure construction/maintenance, property acquisition, environmental protection and natural resource development and use. The U.S. Department of Agriculture Natural Resources Conservation Service provides the majority of the technical assistance. Local government administration is provided by the conservation districts. The KDA-DOC's programs for financial assistance in water resources protection are an important implementation component of the Kansas Hazard Mitigation Plan.

### **Mitigation-Related Programs and Planning**

**Multipurpose Small Lakes Program** - This program provides state cost-share assistance to a government entity for the construction or renovation of a dam for flood control and water supply and/or recreational purposes. It requires a general plan of works and a local nonpoint source pollution control plan.

**Nonpoint Source Pollution Control** - KDA-DOC distributes funding for implementation of local nonpoint source pollution management plans and supports the installation of best management practices involving sediment control, abandoned water well plugging, nutrient and pesticide management, household waste disposal, livestock waste systems, onsite waste systems, dump site reclamation and chemical containment. The agency provides cost shares to local landowners for practice implementation, supports local technical assistance and provides funding for local no till information and education programs.

**Riparian and Wetland Protection Program** - This program is meant to financially assist and address the conservation and management of riparian areas and wetlands. Financial assistance is provided to implement practices such as tree planting, riparian fencing, wetland enhancement and other innovative bioengineering practices.

**State Assistance to Watershed Dam Construction** - The State provides cost-share assistance to organized watershed districts and other special purpose districts for the implementation of structural and nonstructural practices that reduce flood damage. Structural practices must be approved by the chief engineer of the Division of Water Resources.

**Water Quality Buffer Initiative** - This program provides additional incentive for participation in the Continuous Sign-Up provision of the U.S. Department of Agriculture Conservation Reserve Program. The program supplements the federal rental payments for the Conservation Reserve Program by 30 percent for grass filter strips or 50 percent for riparian forest buffers.

**Water Resources Cost Share Program** - This program provides state cost-share assistance to landowners for the establishment of enduring water conservation practices to protect and improve the quality and quantity of Kansas water resources. This includes targeting water quality funds to address total maximum daily load and other issues in priority areas, continuing base level funding to address water resource problems, technical assistance funding to landowners to implement best practices and maintaining the irrigation efficiency focus in western Kansas.

**Water Conservation Program** - This program provides financial incentives for voluntary retirements of private water rights in high priority areas. The Water Transition Assistance Program (WTAP) and the Conservation Reserve Enhancement Program (CREP) are two projects currently operating in approved target areas. Only those water rights, which can result in significant water conservation benefits to the State's rivers, streams and aquifers are selected for these grants.

**Watershed Planning Assistance Program** - The program provides financial assistance for engineering and environmental services, general plan development, and other flood control and rehabilitation projects in watershed districts.

**Water Supply Restoration Program** - This program provides financial assistance to renovate and protect lakes, which are used directly as a source of water for public water supply systems, where appropriate, and where watershed restoration and protection practices are planned or in place. Eligible sponsors include any entity with taxing authority and the right of eminent domain, rural water districts and public wholesale water supply districts.

### ***Kansas Department of Agriculture—Division of Water Resources***

The Kansas Department of Agriculture, Division of Water Resources (KDA-DWR) has three programs: Water Structures, Water Management Services, and Water Appropriation. These programs have authorities and responsibilities important to the mitigation of three Kansas hazards: flood, dam and levee failure and drought. Mitigation-related responsibilities include: infrastructure construction and maintenance, community and economic development,

environmental protection, public health and safety services, regulation and control of land development, local government grants and loans and natural resource development and its use.

The Water Structures program regulates manmade activities affecting the flow and overflow of any stream. The program enforces limits imposed by laws and courts that such activities are properly planned, constructed, operated, and maintained for their authorized purpose without adversely affecting the environment, public health and welfare or public and private property. The Water Structures program is responsible for permitting dams that have a height of 25 feet or more, or have a height of six feet or greater, and have the capacity to impound 50 or more acre feet of water at the auxiliary spillway.

Kansas ranks high in the nation for its number of dams with 6,403 dams in the National Inventory of Dams. There are 4,498 state-regulated jurisdictional dams as of February 2017. Of these, 232 were designated as high hazard dams because of the level of development in the downstream inundation areas, and 166 are designated as significant hazard dams. High and significant hazard dams are required to have plans prepared and maintained for emergency response to protect public safety in the event of a dam break. At this time, 209 high hazard dams and 96 significant hazard dams have plans on file with the KDA-DWR.

The Water Structures program provides permit approval for levee and floodplain issues. The Levee Law of 1929 makes it unlawful to construct fills and levees without prior approval of the chief engineer. Currently, the flood control capabilities of some levees are being reassessed to ensure that they continue to offer adequate protection. It is possible that some levees will be found not to be high enough to protect to the base flood elevation. Areas behind some of these levees could be reclassified as vulnerable to flooding. Many of these areas have experienced substantial development since the levees were constructed.

The Water Structures program also serves as the State's manager for implementation of the National Flood Insurance Program (NFIP), and the associated Community Rating System (CRS). In this capacity, the division provides training for local floodplain managers and actively supports the Kansas Association for Floodplain Management. This group trains participating and nonparticipating community officials and other interest groups to help them achieve a better understanding of flood hazards and techniques for safer development within floodplains. The KDA-DWR publishes quarterly, a free statewide newsletter to promote the objectives and benefits of floodplain management.

The Water Appropriation program exercises state authority to permit the use of both surface water and groundwater, document the annual use of water, enforce water-related statutes and work toward management of water as a sustainable resource. Allocations for the largest use of water (irrigation) are based on crop needs for 80% chance net irrigation (NIR). There is an 80% chance of NIR 20% of the time or two out of ten years. In cases when water use demand exceeds supply, the chief engineer can restrict use of water. In case of severe water shortages, procedures have been established to develop and implement water management strategies.

The KDA-DWR programs have authority to conduct inspections of construction and to enforce statutes related to the individual programs.

## **Mitigation-Related Programs and Planning**

**Community Assistance Program** - KDA-DWR participates in FEMA's Community Assistance Program, which enhances the State's capability to provide floodplain management information and technical assistance to help local officials in NFIP and CRS participating communities. It also encourages nonparticipating communities to join the NFIP and CRS.

**Floodplain Management Program** - KDA-DWR coordinates and provides technical assistance for local, state and federal floodplain management, including managing the NFIP and floodplain ordinances and regulations adopted by city and county governments.

**Interstate Water Matters** - The division is responsible for state participation in four interstate compacts pertaining to the apportionment of waters in rivers that flow through Kansas and two or more states and for participation in the Missouri River Basin Association.

**Levees and Drainage District Program** - This program regulates the construction of levees and dikes and the formation of drainage districts to address local issues regarding drainage problems and their amelioration.

**Water Management Services Program** - This program provides administrative and technical support to the chief engineer of the KDA-DWR. The program addresses interstate compact administration, GIS, intensive groundwater use control areas, flow meter specifications and water assurance districts.

**Special Management Programs** - KDA-DWR is responsible for management of water resource-related issues, such as the Groundwater Management District Act and the Intensive Groundwater Use Control Area. It also monitors the observation well network, has designated responsibilities under the Water Assurance District Act, and reviews and approves of water conservation plans.

**Stream Obstructions Program** - This program regulates and monitors the changes in the course, current, or cross section of a stream; processes applications; reviews and approves plans; inspects ongoing projects before, during, and after construction; and performs ongoing safety inspections.

**Sub Basin Program** – KDA-DWR is responsible for the development and implementation of proactive sub basin specific, long-term water resource management and the development of programs under the current water rights administrative system. With input from the regulated community and the general public, the Ogallala component of the program helps to define hydrologic subunits.

**Water Appropriation Program** - This program administers the division's responsibilities regarding the management of water resources. These responsibilities include processing of applications for the appropriation of waters of the state, processing applications for changes to water rights, creation of a water transfer panel, facilitation of the hearing and decision review regarding the appropriate transfer of water, issuing certificates of appropriation, inventory, monitoring of water use reports, and administration and enforcement of water rights.

**Water Structures Program** - This program inspects and regulates dams that could endanger lives and property if they failed. It monitors activities that affect the flow of rivers and streams to ensure these activities are properly planned, constructed, operated, and maintained.

**Water Use Report Program** - Data collection, review, analysis, and reports for water use information are conducted under this program, a continuation of a cooperative agreement with the U.S. Geological Survey.

**Watershed District Program and Multipurpose Small Lakes Program** - These programs support the division's responsibilities to perform regulatory and supervisory tasks during the formation of a watershed district and for projects to be built under the Small Lakes Program (see Kansas Department of Agriculture, Division of Conservation).

For the Cooperating Technical Partner (CTP) narrative see FEMA below on page 4.28.

### ***Kansas Department of Commerce***

The Kansas Department of Commerce has responsibility for several key federal and state programs related to hazard mitigation. The department has responsibility for state administration of the U.S. Department of Housing and Urban Development's Community Development Block Grant (CDBG) program. The mitigation-related responsibilities of this department include property repair and rehabilitation, environmental protection, local grants and loans, community economic development and property acquisition.

HUD grants are one way the department is able to support mitigation programming for designated repetitive flood loss properties. These properties are structures insured under the NFIP that have experienced two flood loss claims in the last 10 years. This makes them a high priority for flood mitigation. Much of the unmet needs funding from HUD has been used by the department to fund removal of vulnerable properties from the floodplain.

### **Mitigation-Related Programs and Planning**

**Community Service Tax Credit** - This incentive program offers Kansas tax credits for contributions to approved projects. Tax credits for nonprofit organizations allow them to improve their ability to undertake major capital fundraising drives. Projects eligible for tax credit awards include community service, crime prevention and health care.

**Small Cities Community Development Block Grant Program** - The department administers the CDBG program, awarding grants in four categories: community improvement, urgent need, Kansas Small Towns Environment Program and economic development. The CDBG program is a competitive grant process through which about half of the funding goes to support the development of community facilities and water and sewer projects.

## ***Kansas Department of Corrections—Capital Improvements and Facilities Maintenance***

Mitigation-related responsibilities of the Kansas Department of Corrections include public health and safety services, property repair and rehabilitation and property acquisition.

## ***Kansas Department of Education***

The Department oversees the education of students in Kansas in grades K-12.

### **Mitigation-Related Programs and Planning**

Unified School Districts in Kansas are encouraged to participate in local multi-jurisdictional hazard mitigation plans and identify mitigation actions. Many mitigation actions include construction of tornado safe rooms in their buildings; education on hazards and ongoing required drills to protected lives during fires, tornadoes, and intruders.

## ***Kansas Department of Health and Environment—Bureau of Environmental Remediation***

The Kansas Department of Health and Environment protects the health of Kansans through efficient and effective public health programs and services, and through preservation, protection, and remediation. The department has three divisions: Laboratories, Environment, and Health. The mission of the Bureau of Environmental Remediation is to respond to environmental emergencies and to manage environmental contamination through pollution source control, containment, or remedial action. The Bureau's responsibilities include the investigation of pollution occurrences and sources from spills, illegal dumping, abandoned facilities, and landfills; storage tank regulation; surface mining site regulation; and designing and overseeing remedial activities at contaminated sites.

### **Mitigation-Related Programs and Planning**

**Abandoned Mine Land Program** - The Surface Mining Section is responsible for the reclamation of abandoned coalmines in Kansas and administers federal funds from the Office of Surface Mining Reclamation and Enforcement to address past mining problems that are hazardous to the health, safety, and general welfare of the public. Reclamation includes land clearing, backfilling and grading, erosion and site drainage control, guardrail and fence installation, demolition and disposal, and revegetation. The Abandoned Land Mine Emergency Program provides for the remediation of sites that are an immediate threat to the health and safety of the general public. These problems require prompt action and therefore cannot be reclaimed through ordinary program procedures. Kansas currently has over 350 abandoned coal mine sites identified with health and safety problems. Typical abatement activities include backfilling mine subsidence holes in residential areas and near roads and filling subsurface voids beneath structures and roads with cement grout.

**Kansas Brownfields Program** - Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous



substance, pollutant, or contaminant. Often the potential liability associated with contamination complicates business development, property transactions, or expansion on these properties.

Cleaning up and redeveloping brownfields properties is necessary to preserve neighborhoods, reduce urban sprawl, and stop the continued development of new industrial and commercial facilities on farmland. By investigating and cleaning up a brownfields property and taking care of the site's potential health or environmental risks, communities can use local land again - producing jobs, increasing the tax base, or adding other benefits such as creating a park or residential area.

Almost every city and county, in both rural and urban areas, has brownfields properties. KDHE currently has programs to assist communities with the redevelopment of brownfields properties.

**State Water Plan Contamination Remediation Program** - Funding from the State Water Plan Fund is provided for the evaluation, monitoring, and remediation of contaminated groundwater or surface water sites, as well as contamination source areas in Kansas where the responsible party is not known or is unable or unwilling to undertake the necessary action. The program also provides funding to supply alternate water sources as an emergency response action to residences with contaminated drinking water sources.

### ***Kansas Department of Health and Environment—Preparedness Program***

The Bureau of Community Health Systems' Preparedness Program provides leadership to protect the health of Kansans through efforts to mitigate, prepare for, respond to and recover from disasters, infectious disease, terrorism and mass casualty emergencies. The program evolved from the Bioterrorism Program, which was a part of the Bureau of Epidemiology and Disease Prevention from 2002-2005 and the Hospital Bioterrorism Program, formerly part of the Office of Local and Rural Health. The program works with local, regional and state level health and medical sector agencies and associations to promote the preparedness of all sector partners for all-hazards emergencies using the Public Health and Healthcare Preparedness Capabilities. The Preparedness Program administers funds from the CDC and HHS related to public health and healthcare preparedness cooperative agreements. A portion of these funds is made available to local health and medical sector agencies to fund preparedness activities including mitigation measures. The program also focuses on biological incident preparedness and response activities including bioterrorism incidents.

### ***Kansas Department of Insurance***

The Department's major functions are to regulate and review companies for financial solvency and regulatory compliance, educate consumers, assist consumers and license agency selling insurance products in the State.

### **Mitigation-Related Programs and Planning**

The Department provides estimates of storm losses in Kansas since 2002 as a public service <http://www.ksinsurance.org/storms/index.php> . The data consists of windstorm, tornado and hail

damage or other weather-related claim losses for insured real and personal property. It is reported for each calendar year and monthly during the calendar year. The Department also promotes flood and earthquake insurance as a pre-mitigation measure.

### ***Kansas Department of Labor***

The Kansas Department of Labor administers programs in industrial safety and health, and accident prevention. Within these programs, the agency's staff inspects facilities, investigates workplace accidents, and provides training and information to facility owners regarding occupational safety and health. Mitigation-related responsibilities may include providing occupational safety and health services to businesses, industry, public sector employees and the general public in an affected community.

The Kansas Department of Labor also administers the Disaster Unemployment Assistance (DUA) program. The DUA program provides monetary assistance to individuals unemployed as a direct result of a major disaster and who are not eligible for regular Unemployment Compensation benefits. DUA is funded through the Federal Emergency Management Agency (FEMA).

### ***Kansas Department of Transportation***

The Kansas Department of Transportation (KDOT) is responsible for providing a statewide transportation system, including the Kansas State Highway System. The State Highway Program has four principal areas of activity: maintaining roadways (Substantial Maintenance Program), service and safety improvements (Major Modification Projects), replacing or rehabilitating bridges (Priority Bridge Program), and highway system expansions or enhancements (System Enhancement).

KDOT also implements a Local Transportation Program that provides state and federal funding to local governments for roadway development, maintenance, and improvement. Additionally, KDOT is responsible for the Kansas Aviation, Rail and Freight Transportation, Public Transit for the general public, elderly and persons with disabilities and Bicycle and Pedestrian Transportation.

There are many aspects of KDOT's program activities that are relevant to hazard mitigation programming and the implementation of this plan. As the principal agency responsible for the transportation infrastructure in the State, KDOT's efforts to make the highway network less vulnerable to the impacts of disasters are critical to maintaining the vitality of regional and local economies and to assuring continued transportation capability during and after disasters. Substantial amounts of public funds have been invested in this network and these programs because the mitigation of disaster-caused damage can result in significant savings in the future. In addition, KDOT's safety improvement programs are designed to prevent or reduce human injury and property loss.

### **Mitigation-Related Programs and Planning**

**Corridor Management Program** - The purpose of this program is to balance traffic and access management with land use management to protect public safety, public investment in the highway system, and private investment in property development on adjacent lands. The goal of corridor management is to create and preserve safe, efficient, and economically viable transportation corridors.

**Transportation Enhancement Program** - This is an annual competitive Federal Transportation Enhancement funded program that can be used for transportation enhancement activities that include environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity.

### ***Kansas Forest Service***

The primary mission of the Kansas Forest Service related to the Kansas Hazard Mitigation Plan is its role in wildfire management and its programs in public education and rural fire prevention. Timber is an important contributor to the state's economy, and the agency provides services to ensure the vitality of this economic sector. The Kansas Forest Service maintains a list of timber buyers and sawmills for use when needed, including after a disaster when there is a need to quickly find markets for damaged timber. The agency, upon request, can help prepare management plans for landowners and prepare harvest and planting plans; however, the small size of its staff limits this activity.

The Fire Management Program of the Kansas Forest Service provides vehicles and equipment to fire departments, trains rural volunteer fire department personnel in fire behavior and proper firefighting techniques and safety. The program assists in long-range planning for rural fire departments, including recommendations to improve fire prevention and suppression capabilities and to lower fire insurance premiums for commercial and residential property. The program also promotes fire prevention, suppression and controlled burning through educational materials to fire departments and schools.

The Kansas Forest Service encourages local communities to develop Community Wildfire Protection Plans to identify specific areas at risk to wildfires and to develop actions that can be taken to reduce to risk to people, animals and property. This is described in the State Vulnerability Analysis Section 3.3.20 Wildfire.

### **Mitigation-Related Programs and Planning**

**Community Forestry Program** - This program provides assistance, education, and support to communities and municipalities in organizing urban and community forestry programs, identifying resource needs, setting priorities of work, and training city employees.

**Rural Forestry Program** - Professional foresters provide "on-site" forest management and agro forestry analysis and recommendations through inventory of forests, woodlands and windbreaks.

**Conservation Tree Planting Program** - The tree-planting program provides tree and shrub seedlings for conservation plantings to establish forests, woodlands and shelterbelts ant to mitigate loss of forestland.

**Environmental Education and Financial Assistance** - The Kansas Forest Service provides a variety of publications, field days and workshops all available on the Web at [www.kansasforests.org](http://www.kansasforests.org). The Kansas Forest Service administers the Volunteer Fire Assistance cost-share grant program that provides financial assistance to fire departments. Such programs as the USDA conservation programs provide for incentives to protect and implement forestry practices through the Environmental Quality Incentives Program (EQIP), the Cooperative Conservation Partnership Initiative, the Continuous Conservation Reserve Program and other programs are available to landowners.

**Firewise Program** - The Kansas Firewise program offers prevention materials for homeowners to reduce the threat of wildland fire in rural and high-risk areas. There is currently only one Firewise community in Kansas.

**Forest Health Program** - This program monitors the impacts of insects, diseases, drought, flooding and other health issues in forests, woodlands, windbreaks and conservation tree plantings by providing diagnosis and control recommendations and mitigation and planning for Emerald Ash Borer, Asian Bush Honeysuckles and other invasive species.

**Forest Stewardship** - Develops long-term comprehensive management plans and specific project plans for tree planting, forest stand improvement, timber harvest and windbreak establishment and renovation. The program maximizes and mitigates the forest and agro forestry benefits of water quality, clean air, aesthetics, wildlife, soil conservation, recreation, and timber products.

**Streamside Forestry Program** – Assesses protects and establishes trees adjacent to streams and rivers with the primary objective of improving water quality by stabilizing stream banks and providing vegetative filters between crop fields and waterways.

**Kansas Wildland Fire Interagency Agreement** - This document forms an agreement and commitment to fire management assistance and cooperation among the State of Kansas, Kansas State University on behalf of the Kansas Forest Service, the Kansas Department of Wildlife, Parks and Tourism, the Kansas Division of Emergency Management, and the U.S. Department of Agriculture Forest Service and other federal agencies.

**Landowner Education** - The agency provides information and education to farmers regarding the benefits of good forest management. This includes information about federal cost share practices including the Environmental Quality Incentives Program, Conservation Reserve Program, and the Riparian and Wetland Protection Program.

**Rural Fire Protection** - The agency provides fire support services to rural fire departments, including wildfire training, Smokey Bear fire prevention materials, and the acquisition and distribution of excess military vehicles for conversion to firefighting units.

### ***Kansas Geological Survey***

The Kansas Geological Survey is housed in the University of Kansas and has sections for geohydrology (groundwater, aquifers); geology (mapping, resources, and hazard studies); energy (oil and gas data); and geophysics (subsurface exploration). The geological survey has produced reports on earthquakes, land subsidence, landslides, and other hazard-related topics. One of its principal responsibilities for the KHMT is to make technical data and analyses available to other state agencies. The agency was involved in a landslide-mapping project of rapidly developing areas around Kansas City.

#### **Mitigation-Related Programs and Planning**

**High Plains Aquifer Information Network (HIPLAIN)** - This joint effort between the Kansas Geological Survey and Kansas State University is dedicated to providing information, data, and resources related to the High Plains aquifer.

**Information Collection and Dissemination** - The Kansas Geological Survey develops and hosts web-based information retrieval systems to allow access to water-related data accumulated since 1975.

**Ogallala Aquifer Study** - The Kansas Geological Survey conducts research on the extent and characteristics of the groundwater resources to better plan to meet future water needs.

**Surface Water Groundwater Interactions** - This program develops integrated computer models for surface water and groundwater hydrology, develops hydraulic characterizations of the stream-aquifer interface, and studies the physical and chemical processes of stream-aquifer interactions in the middle Arkansas River sub basin and the Walnut River basin.

**Water Resource Sustainability and Aquifer Recharge** - This program develops documents and informational resources addressing the issue of the sustainability of water resources, the safe yield of aquifers, and the rate of aquifer recharge.

### ***Kansas Highway Patrol***

The Kansas Highway Patrol (KHP) has an Emergency Operations Section that is responsible for the emergency preparedness functions assigned to the agency. Under the Kansas Response Plan, the KHP is the lead agency for Emergency Support Function (ESF) #13 Public Safety and Security and provides support to other ESF functions. The KHP has been working with the

Kansas Department of Health and Environment to provide security for the Strategic National Stockpile. Also, the KHP has been working with the Kansas Division of Animal Health to create a plan to stop the movement of livestock and agricultural products across state lines during a foreign animal disease outbreak. The KHP is also closely involved with the radiological emergency preparedness planning activities for the Wolf Creek Nuclear Power Plant.

The Kansas Highway Patrol monitors hazardous materials transportation on highways, operates a vehicle safety inspection program for hazardous materials transporters, and maintains a database with the derived information. The KHP has been tasked by the Governor to be the lead administrative agency for the State's activities under the U.S. Department of Homeland Security Grant Program.

### **Mitigation-Related Programs and Planning**

**Federal Preparedness Grant Program** - Through this program, the Department of Homeland Security/FEMA provides funding to states to prevent, respond to, and recover from acts of terrorism by enhancing and sustaining capabilities. This program has been ongoing since federal fiscal year 1999 and the funding level varies each year.

### ***Kansas State Fire Marshal's Office***

The Kansas State Fire Marshal's Office works to protect the citizens of Kansas by reducing deaths, injuries, and property losses from fire, explosion, and hazardous materials through inspection, enforcement, regulation, investigation, hazardous materials incident mitigation, data collection, and public education. Key programs of this agency related to hazard mitigation are those in fire prevention and hazardous materials risk management and incident mitigation.

### **Mitigation-Related Programs and Planning**

**Fire Prevention Program** - This program focuses on structural inspection to ensure compliance with the Kansas Fire Prevention Code. The Kansas State Fire Marshal's Office works with local jurisdictional authorities. In addition, the Fire Prevention Division regulates the storage of highly flammable materials; oversees businesses involved in selling fire extinguishers, alarms, and sprinkler systems; and regulates fireworks manufacturers and displays. The division also tracks annual school fire and tornado drills.

**Hazardous Materials Program** - The Hazardous Materials Division is charged with developing, training, equipping, and supporting 12 regional hazardous materials/weapons of mass destruction (WMD) response teams across the State. These teams support local first responders in hazardous materials incidents, accidents, and acts of terrorism. They provide training, planning, and analysis related to hazardous materials accidents/incidents and WMD events to help local facilities and local, state, and federal agencies before an event occur. These teams are trained in the Incident Command System, facility pre-planning (which includes performing vulnerability analyses), and coordination among local, state, and federal agencies. Many of these trained personnel serve on local emergency planning committees, providing expertise and assistance to numerous communities. The division coordinates with other state agencies for training and actual hazardous materials/terrorism response.

## ***Kansas State Historical Society***

The Kansas Historical Society is the state agency charged with actively safeguarding and sharing the state's history to facilitate government accountability, economic development, and the education of Kansans. This is accomplished by collecting, preserving, and interpreting materials and information pertaining to state government and Kansas history. The programs and services of the agency are carried out by four divisions: Administration (fiscal, human resources, marketing), Cultural Resources (Historic Preservation Office, archeology, historic sites), Museum of History, and State Archives.

The agency takes an active interest in the preservation and protection of the tangible historical and cultural heritage resources statewide, which includes helping cultural heritage entities create disaster plans and with mitigation/recovery from disaster situations. The three divisions of Cultural Resources, Museum and Archives participate in mitigation programs and consults on projects that preserve the cultural heritage of the state and its people.

The Cultural Resources Division, with a State Historic Preservation Office (SHPO) and Archeology Department, oversees the 1438 properties listed on the National Register of Historic Places and 173 properties listed in the Register of Historic Kansas Places. Of the 1438 sites listed in the National Register of Historic Places, 26 have the highest designation in the country as National Historic Landmarks. Historic properties are vulnerable to disasters and several have been damaged in past events. The SHPO consults on projects that effect cultural resources in accordance with state and federal preservation laws (Section 106). In the event of a disaster that affects historic buildings (those 50 years or older), the SHPO expedites reviews before any clean-up or demolition. The SHPO also administers two grant programs. The Heritage Trust Fund is a grant program for the rehabilitation of historic buildings on the state or national register. Currently, nearly \$1 million is expended annually with a required 20 percent local match. Exterior repairs are commonly funded projects because it is the intent of the program to retain a sound envelope for historic structures. These grant funds are often combined with other funding sources, such as state and federal rehabilitation tax credits. The Historic Preservation Fund grant is for planning activities and can be used for preservation planning and education. Disaster planning related to cultural resources qualifies for this grant funding.

KHS Archives and Museums divisions, which has established designated disaster assistance staff for helping entities after disasters, works closely with volunteers from the Kansas Museums Association to help small museums mitigate damage to collections following disasters.

In cooperation with the KSHS Archeology Department, the Kansas Data Access and Support Center (DASC) maintains a GIS coverage and associated database of over 14,000 recorded archeological sites and all National Register and state register listings in Kansas, including the built environment. In 2008, the SHPO launched the Kansas Historic Resources Inventory

(KHRI) online database, which contains almost 60,000 buildings, structures and sites. In addition, KHRI also has GIS capabilities.

The Museum of History and the State Archives both participate as members of KCHERN (see programs and planning,) to help cultural heritage entities in the state with planning, mitigation and recovery methods relating to disasters.

### **Mitigation-related programs and planning:**

KCHERN, the Kansas Cultural Heritage Emergency Resources Network is a conglomerate of libraries, museums, historical societies and other cultural heritage institutions interested in preparing for disasters. This statewide resource and planning network is a replacement for KDRAN (Kansas Disaster Recovery Network, 1993-2009) in providing valuable resources for planning for and mitigating potential disasters. The leadership of the network is positioned in the Kansas Historical Society Museum and Archives.

### ***Kansas State University Research and Extension***

The Kansas State University Agricultural Experiment Station and Cooperative Extension Service have personnel in 105 county offices, nine experimental fields, five area offices, three research centers, and three research extension centers. These services deliver educational programs and technical information to enhance the economic viability and quality of life in Kansas communities. Mitigation-related responsibilities include research and education, community and economic development, and environmental protection. The educational and technical skills that the organization can deliver throughout Kansas at the community level are very important to the implementation of the Kansas Hazard Mitigation Plan.

### **Mitigation-Related Programs and Planning**

**Natural Resources and Environmental Management Program** - The research and extension service works to protect the environment and conserve natural resources, particularly soil and water, by providing information about conservation techniques. The main emphases of the program are to ensure quality and quantity of surface water and groundwater, promote rangeland and forestry management, air quality, environmental issues and bio-energy production.

### ***Kansas Water Office***

The Kansas Water Office develops and maintains the Kansas Water Plan, coordinates water planning among agencies, develops drought triggers and monitors drought conditions, chairs the Governor's Drought Response Team, sells water from state-owned storage in federal reservoirs to municipal and industrial water users and coordinates with the Corps of Engineers on releases from reservoirs to meet downstream and instream needs. Water releases from storage operated by the Kansas Water Office also helps members of three water assurance districts and a special access district in meeting their water supply needs during periods of low flow.



The Kansas Water Authority is part of the Kansas Water Office and is responsible for advising the Governor, the legislature, and the director of the Kansas Water Office on water policy issues; for approving the Kansas Water Plan and revisions thereto; and for approving water storage sales, federal contracts, administrative regulations, and legislation proposed by the Kansas Water Office.

### **Mitigation-Related Programs and Planning**

**Assessment and Evaluation** - The Kansas Water Office assesses water resource conditions and assists in identification of priority areas to target state financial and technical assistance and to provide a baseline, against which progress in meeting objectives can be measured.

**Drought Monitoring** - The Kansas Water Office, with the approval of the Kansas Water Authority, develops guidelines which indicate when drought conditions exist in the state. Conditions are routinely monitored and when drought conditions exist, the Kansas Water Office informs the Governor and recommends assembly of the Governor's Drought Response Team. A periodic Kansas Drought Report is prepared and posted on the website of the Kansas Water Office.

**Governor's Drought Response Team** - This team, chaired by the Kansas Water Office, is responsible for implementing an interagency state response to drought that is properly coordinated with local and federal response activities at all drought stages. The team is consulted on drought status declarations and responses.

**Drought Operations Plan** - An operations plan spelling out team membership, leadership, and procedures was updated and approved by the Governor in June 2012. It identifies individual agency responsibilities at three drought stages. This operations plan outlines a phased approach to drought response keyed to three county drought stages declared by the Governor: watch, warning and emergency. Specific agency actions to be taken at each stage are identified. The Kansas Water Office developed the operations plan with input from state and federal agency members of the response team.

**Kansas State Water Plan** - The Kansas Water Office develops and maintains a comprehensive state water plan, which is approved by the Kansas Water Authority. The Kansas Water Plan addresses the management, conservation, and development of the water resources of the state. It involves all water-related agencies and is organized into policy and basin sections. Fourteen planning region advisory committees provide advice to the director and the Kansas Water Authority in this regard. The State Water Plan Fund is dedicated to implementing recommendations made in the Kansas Water Plan.

**50-Year Vision for the Future of Water in Kansas** – The call to action was initiated in 2013 to develop a Vision for meeting Kansas water needs into the future. The vision provides the framework, policy and tools, developed in concert with stakeholders, to manage, secure, and protect a reliable, long term statewide water supply while balancing conservation with economic growth. The action items developed in the Vision will be incorporated into the State Water Plan.

Actions are associated with four major areas; water conservation, water management, technology and crops, and additional sources of supply.

**Public Information and Education** - This public education program provides information on water resource issues to the general public through publication of articles, pamphlets, reports, news releases and social media. It includes field days, demonstrations, participation in water festivals and other events for environmental education.

**Stream Gauging Program** - State financial assistance is provided for the operation of selected gauging stations operated by the U.S. Geological Survey. These gages provide real-time stream flow data to facilitate decision making regarding water rights, minimum desirable stream flows, flood monitoring, reservoir management, and water quality monitoring and analysis.

**Technical Assistance to Water Users** - This program provides technical assistance to public water suppliers, irrigators, and other groups to assist in the reduction of water use and improve water use efficiency. Development of water conservation plans is an important component which includes contingencies for drought.

**Water Conservation Program** - The Kansas Water Office develops guidelines for irrigation and municipal water conservation plans and practices. Municipal guidelines, revised in 2007, address drought response in addition to long-term water conservation.

**Reservoir Operations** – Federal reservoirs provide roughly two-thirds of Kansas citizens with water the State of Kansas owns and/or manages conservation storage in 15 of these federal reservoirs operated by the Corps of Engineers. Operation of the reservoirs and releases are managed to meet downstream needs through the Water Assurance, Water Marketing, and Water Access programs along with specific target flows and water quality needs. Management attempts to keep water in storage for future needs such as drought while balancing flood control needs.

**Water Assurance Program** - This program augments stream flow during periods of low flow through releases from water supply storage in federal reservoirs to satisfy downstream municipal and industrial water rights during drought conditions. The authorizing legislation allows municipal and industrial water right holders to form assurance districts and contract with the state for storage space in the federal reservoirs. Three water assurance districts have been formed by water users on the Kansas River, Marais des Cygnes River, and the Neosho-Cottonwood Rivers.

**Water Marketing Program** - Through this program, the state sells water to municipal and industrial water users from state-owned water storage facilities in 13 federal reservoirs. Revenues repay the costs of the water supply storage space, operations, and maintenance to the federal government. The Kansas Water Office contracts with municipal and industrial water users wishing to obtain water from this storage. Contracts are approved by the Kansas Water Authority. Some users have more than one contract and some sell treated water at wholesale prices to other water systems. Surplus water contracts are available on an annual basis, when there is water available.

**Water Access Program** – In response to low levels of water supply related to drought in 2006, policy development and subsequent legislation provided opportunity for water users below Kannapolis Reservoir to acquire storage in the Reservoir. The Lower Smoky Access District now has water stored for use when flows are insufficient to meet the needs of the downstream members.

**Water Supply and Demand Estimates** - These estimates provide a consistent set of long-range population and water demand projections for planning purposes. Since 2006, supply and demand projections have been made for all basins that have access to federal storage. Projections by county and public water supplier were made in 1998 by decade out to 2040; these are being updated on an as needed basis for specific projects.

Modeling is also used to estimate the impacts of drought conditions on water supply for both streams and groundwater systems.

**Weather Modification** - The Kansas Water Office regulates weather modification activities in Kansas through licensing of weather modification operators and permitting specific weather modification projects. There are currently no permitted activities.

## ***Kansas Wildlife, Parks and Tourism***

### **Mitigation-Related Programs and Planning**

**State Wildlife Grants Private Lands Program** - This program provides cost-share to private landowners for the construction, establishment, and enhancement of grasslands, wetlands and riparian habitat. Request for proposals are announced annually and funds are awarded based on ecological priorities.

**Project Review Program** - This program provides technical assistance to project sponsors to mitigate impacts to grassland, wetland, and stream habitat as a result of development projects. Staff works with development sponsors to avoid and minimize impacts through native habitat restoration measures and natural stream design techniques.

**Stream Survey and Assessment Program** - The purpose of this program is to document the current range and distribution of aquatic species, including aquatic nuisance species. Other objectives include establishing baseline data and monitoring fish kill and other natural resource damage assessments.

## ***Office of the Governor—Kansas Information Technology Office***

The Kansas Information Technology Office supports the statutory responsibilities of the executive, judicial, and legislative branch chief information technology officers and the chief information technology architect. The office also supports the Kansas GIS Policy Board. Several components of the Kansas Hazard Mitigation Plan rely on interagency cooperation in gathering, processing, and sharing data and information, in GIS and other formats. The mitigation-related responsibilities of the office include information gathering and management and database

development and management, including cyber-security and impacts to communications.

## **Federal Agency Mitigation-Related Programs and Planning**

### ***Environmental Protection Agency (EPA)***

In April 2010, the EPA announced a formal plan to spend \$3.5 million to buyout approximately 100 residents in the contaminated City of Treece, Cherokee County, KS. The Kansas Department of Health & Environment provided matching funds for the buyout. The community was part of the Tar Creek mining area. The area was a heavy supplier of lead, zinc, and iron ore. The buyout was completed and the area is now contaminated and dotted with sinkholes and cave-ins filled with polluted water.

### ***FEMA Risk Mapping, Assessment, and Planning (Risk MAP)***

In fiscal year 2009, FEMA began transitioning from Flood Map Modernization to Risk MAP. The Risk MAP strategy leverages community floodplain management to advance strategic hazard mitigation by using tools such as Digital Flood Insurance Rate Maps, and risk assessment products. These deliver quality data that increases public awareness and motivates actions to protect life and property. Key components of the RiskMAP strategy include watershed-based study approaches, elevation data acquisition, engineering and mapping, risk assessment, mitigation planning, and risk communication.

The RiskMAP program works toward a goal of identifying assessing, communicating, and mitigation risk by providing holistic and comprehensive risk information, building partnerships, and supporting long-term planning. It works to address data gaps by delivering more precise digital products such as Water Surface Elevation Grids, Depth Grids, and BLE (Base Level Engineering) advisory products. Many BLE products provide an important foundation for projects that ultimately become effective regulatory maps. They often help stakeholders review draft data and provide feedback well in advance of regulatory phases, increasing accuracy and reducing the cost of map changes.

A key element of the RiskMAP program are Flood Risk Products that work with regulatory products to provide more contextualized information that bolsters overall floodplain management and hazard mitigation initiatives. For instance, Water Surface Elevation Grids (which display water surface elevations during a 1% annual chance flood as a series of easy-to-interpret pixels) began as an approximate tool developed during the early phases of projects. However, these grids proved to be so effective for risk communication that they are now being developed to regulatory product standards in accordance with update FEMA guidance. The success of these grids is an example of how RiskMAP evolves to better meet community needs.

The Kansas Department of Agriculture-Division of Water Resources (KDA-DWR) serves as the Cooperating Technical Partner (CTP) in running this program for the State. The CTP will continue to enhance the communities' understanding of the data displayed in RiskMAP, and educate them on specifics of what the RiskMAP products can provide in the endeavor to make better land use decisions. CTPs help FEMA extend limited financial resources and increase local involvement from sophisticated partners. The CTP provides technical assistance to

Kansas communities on a wide array of floodplain management topics. The CTP also participates in the mitigation plan process in order to engage with local stakeholders and foster community utilization of RiskMAP products. Ultimately, RiskMAP combines advanced engineering data with local leadership to assess potential actions, address vulnerabilities, and reduce risk to the public.

### ***National Oceanic and Atmospheric Administration StormReady Program***

Storm Ready is a voluntary program that was developed by the National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) to help communities better prepare for and mitigate effects of all types of severe weather—from tornadoes to flooding. The program encourages communities to take a new, proactive approach to improving local hazardous weather operations by providing emergency managers with clear-cut guidelines on how to improve their hazardous weather operations. Storm Ready is designed to help community leaders and emergency managers strengthen local safety programs. To be officially Storm Ready, a community must:

- Establish a 24-hour warning point and emergency operations center,
- Have more than one way to receive severe weather warnings and forecasts and to alert the public,
- Create a system that monitors weather conditions locally,
- Promote the importance of public readiness through community seminars, and
- Develop a formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises.

In Kansas, there are 27 counties, nine communities, two military sites, two universities and one commercial site that are recognized as Storm Ready (see **Figure 4.4**).

### ***U.S. Army Corps of Engineers***

U.S. Army Corps of Engineers (USACE) has relevant Civil Works programs that are flood or drought mitigation related in Kansas and overlap with the Kansas Hazard Mitigation Team. Those programs include: Flood Plain Management Services (FPMS, Section 206), Planning Assistance to the States (PAS, Section 22), Continuing Authority Program (CAP) (Section 14, Section 205, Section 208; or known as Emergency Streambank Protection projects, Small Flood Control Projects, Snagging and Clearing for Flood Control Projects, respectively), General Investigations (planning studies), construction flood projects, inspection of completed works, and rehabilitation and inspection program.

**Silver Jackets Program** - This is the USACE Civil Works program enabling participation in the KHMT. Some of the states use the name Silver Jackets, however, many of the teams have existed longer than the inception of Silver Jackets around 2009. The Lead Silver Jackets Coordinator for Kansas directly participates on the KHMT, representing all the USACE districts within the State at the team's regular meetings. The Lead Silver Jackets Coordinator provides regular status updates, available on request. The status updates provide detail information on

active USACE projects and programs, including specific project information that is useful during the FEMA Risk MAP Discovery Phases. The Silver Jackets Coordinators may also participate in the FEMA Risk MAP Resiliency Meeting to enhance hazard mitigation efforts.

**Federal Partners Interagency Mitigation and Resilience Workgroup** - This is a workgroup of federal partnering agencies for Region VII in the four state region of Kansas, Iowa, Missouri, and Nebraska. The team is regarded as a subcommittee to the FEMA Regional Interagency Steering Committee. The KHMT co-leads, as well as the other states and meets annually with the federal partners to enhance strategic hazard mitigation.

**Levee Safety Program** - The KHMT gets periodic updates on this USACE Civil Works program. Note the USACE is not responsible for all levees in the Nation, and the Kansas Department of Agriculture, Division of Water Resources already has an active levee program. The USACE Levee Safety Program activities have complemented KHMT work and have included establishing a National Levee Database (NLD), inspecting levees, communicating risks, taking steps to reduce risks, and establishing a levee safety portfolio internally at USACE for prioritizing levee work. Levee sponsors are required to communicate risk per the Water Resources Development Act of 2007, as amended by the Water Reform and Resources Development Act of 2014. The Lead Silver Jackets Coordinator and the USACE districts' Levee Safety Project Manager will look to the KHMT to look for efficiencies in joint flood risk communication efforts. A standard means of communicating for each levee is to use Levee System Summaries that will be part of the revised NLD. Those communities with levee in the USACE program will get a Levee Safety Action Classification (LSAC), similar to the one used with the USACE Dam Safety Program, where LSAC 1 (or LSAC I) is high risk and an LSAC 5 (or LSAC V) is low, however, the emphasis will be on mitigation actions needed in each case. The USACE Civil Works programs, especially Silver Jackets and the USACE National Nonstructural Committee, can help the state in assisting levee sponsors with the full menu of flood risk management measures that should be used in tandem with levees.

**Dam Safety Program** - This USACE program complements the Kansas Department of Agriculture, Division of Water Resources work with state dams. The USACE Dam Safety Program focuses on the large reservoirs, many of which are multipurpose. Reservoirs act together with levees and other infrastructure to reduce impacts of floods, and the reservoirs may also maintain flows for navigation downstream. The program is a little older than the program on levee safety and also has a risk portfolio for prioritizing dam work. The USACE districts provide emergency preparedness reports with dam break inundation maps directly to the state hazard mitigation officer on approximately an annual basis, as funding allows.

**Emergency Management** - This USACE Civil Works program addresses flood fighting and the rehabilitation of damaged infrastructure, such as levees or dams. In addition, major disasters and emergencies are also coordinated through this program.

**Water Management** - The control of flow releases from the many USACE lake projects is done by the district and divisions responsible for the various river basins.

The flows of the Missouri River are managed by the USACE Northwestern Division. Eight authorized purposes must be addressed, including flood risk management. Flows on the Missouri River are managed by two districts. The Kansas City District Water Management handles reservoirs in Kansas and Missouri that drain to the Missouri River. The Omaha District handles major dams upstream of Rulo, Nebraska. In southern Kansas, reservoirs in the Arkansas Basin are managed by the Tulsa District, which is part of the USACE Southwestern Division.

## **Organization Mitigation-Related Programs and Planning**

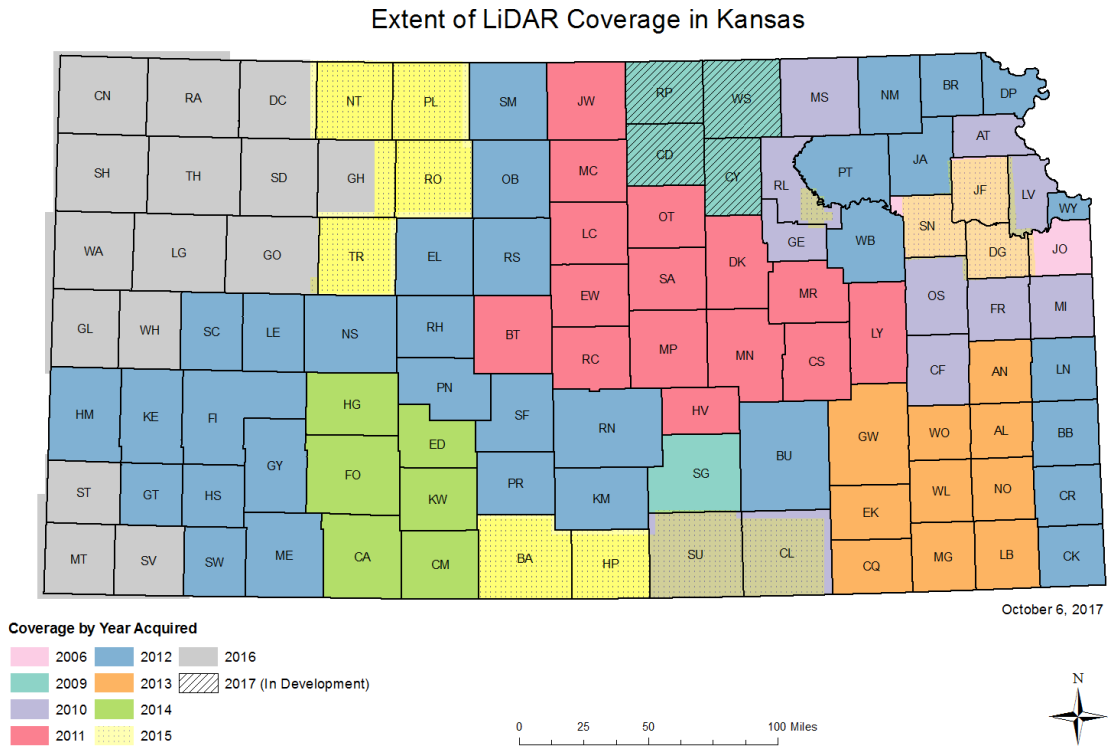
### ***Commission on Emergency Planning and Response (CEPR)***

The Commission on Emergency Planning and Response is established KSA 65-57, Emergency Planning and Community Right to Know Act in Kansas. The Commission serves as the technical advisor and information clearinghouse for state and federal hazardous materials programs. The primary focus of the commission is to enhance state and local emergency response and preparedness capabilities through improved coordination and planning. The Commission is comprised of representatives from various state and local government organizations and industry as appointed by the governor. Membership was expanded and now includes agency heads from the Adjutant General's Department, Kansas State Fire Marshal's Office, Kansas Department of Transportation, Kansas Department of Health and Environment, Kansas Highway Patrol, Kansas Department of Commerce, Kansas Bureau of Investigation, Kansas Department of Agriculture, the Kansas Division of Animal Health, and 18 members from various state and local agencies.

### ***GIS Policy Board***

The GIS Policy Board adopted a business plan in 2008 for Improved Elevation Data for Statewide Applications and it identified high-resolution digital elevation data as a priority. The Business Plan documents the LiDAR progress while incorporating lessons learned after data collection contracts and eventually leading to implementing LiDAR statewide. Each contract for additional LiDAR areas uses multiple partners (local, state, and federal sources) for cost share and collaboration. The LiDAR data is shared through the Data Access and Support Center in Kansas. Figure 4.1 shows the extent of LiDAR coverage in Kansas.

**Figure 4.1. Extent of LiDAR Coverage in Kansas**



Note: Kansas LiDAR status as of October 6, 2017

### ***Kansas Water, Wastewater, Gas and Electric Utility Mutual Aid Program (KSMAP)***

KSMAP has been developed to serve as the mutual aid program for Kansas utilities. The project is a joint effort of Kansas Municipal Utilities, Kansas Rural Water Association, the Kansas Section – American Water Works Association, the Kansas Water Environment Association, Kansas Corporation Commission, Kansas Department of Health & Environment and the Kansas Division of Emergency Management. The organizations participating in KSMAP stand ready to help with inter-utility assistance of equipment, materials and personnel to assist in the restoration and continuation of utility service for those utilities needing assistance (source: <http://ksmap.org/general/KSMAPProgram.pdf>).

### ***Watershed Restoration and Protection Strategy***

The Kansas Watershed Restoration and Protection Strategy (WRAPS), <http://www.kswraps.org/> offers a framework that engages citizens and other stakeholders in a teamwork environment aimed at protecting and restoring Kansas watersheds. The WRAPS framework consists of identifying watershed restoration and protection needs, establishing watershed goals, creating cost-effective action plans to achieve established goals, and implementing the action plans. Each watershed served by a WRAPS team completing the program framework is eligible for



WRAPS grant funding. The WRAPS funds are administered an interagency Work Group, which consists of representatives from a number of state and federal agencies.

**Table 4.2. 2018 Technical Capabilities of State Agencies**

	Agriculture Data Gathering/ Analysis	Demographic Data Gathering/ Analysis	Economic Analyses	Energy Resource Regulation	Environmental Data Gathering/ Analysis	GIS Data Management	Historical/ Cultural Resource Analyses	Natural Resource Management/ Planning	Risk Analysis and Management	State Property Information and Management
Adjutant General's Department		✓	✓		✓	✓			✓	
Kansas Division of Emergency Management		✓	✓		✓	✓			✓	
Kansas Board of Regents		✓								✓
Kansas Corporation Commission			✓	✓	✓	✓			✓	
Kansas Data Access and Support Center		✓				✓				
KDoA, Office of Facilities & Property Management			✓							✓
Kansas Department of Agriculture	✓	✓	✓		✓	✓		✓	✓	
KDA, Division of Animal Health	✓		✓							
KDA, Division of Conservation								✓		
KDA, Division of Water Resources					✓	✓		✓	✓	

	Agriculture Data Gathering/ Analysis	Demographic Data Gathering/ Analysis	Economic Analyses	Energy Resource Regulation	Environmental Data Gathering/ Analysis	GIS Data Management	Historical/ Cultural Resource Analyses	Natural Resource Management/ Planning	Risk Analysis and Management	State Property Information and Management
Kansas Department of Commerce		✓	✓		✓					
Kansas Department of Corrections – Capital Improvements & Facilities Management		✓								✓
Kansas Department of Education		✓								
KDHE, Bureau of Environmental Remediation					✓	✓		✓	✓	
KDHE, Bureau of Preparedness Program						✓				
Kansas Department of Insurance		✓								
Kansas Department of Labor			✓						✓	
Kansas Department of Transportation		✓			✓	✓			✓	
Kansas Forest Service					✓	✓		✓	✓	
Kansas Geological Survey					✓	✓			✓	

	Agriculture Data Gathering/ Analysis	Demographic Data Gathering/ Analysis	Economic Analyses	Energy Resource Regulation	Environmental Data Gathering/ Analysis	GIS Data Management	Historical/ Cultural Resource Analyses	Natural Resource Management/ Planning	Risk Analysis and Management	State Property Information and Management
Kansas Highway Patrol									✓	✓
Kansas State Fire Marshal's Office					✓				✓	
Kansas State Historical Society						✓	✓		✓	
Kansas State University Extension Service		✓	✓		✓	✓		✓	✓	
Kansas Water Office		✓			✓	✓		✓	✓	
Kansas Wildlife, Parks and Tourism					✓	✓		✓		✓
Office of the Governor –KS Information Technology Office		✓	✓		✓	✓				

**Table 4.3. 2018 Implementation Capabilities and Local Mitigation Support Capabilities of State Agencies**

	Implementation Capabilities							Local Mitigation Support Capabilities				
	Audits/ Code Enforce- ment	Information Management	Inspection	Project Engineering/ Design	Project Funding	Project Operations/ Maintenance	Project Permitting/ Licensing	State Water Planning	Grants and Loans	Regulatory Guidance/ Control	Technical Support	Training and Education
Adjutant General's Department		✓	✓		✓				✓		✓	✓
Kansas Division of Emergency Management			✓		✓				✓		✓	✓
Kansas Board of Regents										✓		
Kansas Corporation Commission	✓		✓	✓			✓			✓		✓
Kansas Data Access and Support Center		✓									✓	✓
KDoA, Office of Facilities & Property Management			✓	✓	✓	✓	✓					
Kansas Department of Agriculture	✓	✓	✓						✓	✓	✓	✓
KDA, Division of Animal Health	✓	✓	✓							✓	✓	✓
KDA, Division of Conservation	✓	✓			✓					✓	✓	✓

	Implementation Capabilities							Local Mitigation Support Capabilities				
	Audits/ Code Enforce- ment	Information Management	Inspection	Project Engineering/ Design	Project Funding	Project Operations/ Maintenance	Project Permitting/ Licensing	State Water Planning	Grants and Loans	Regulatory Guidance/ Control	Technical Support	Training and Education
KDA, Division of Water Resources	✓		✓	✓			✓			✓	✓	✓
Department of Commerce					✓				✓	✓	✓	✓
Kansas Department of Corrections – Capital Improvements & Facilities Management	✓											
Kansas Department of Education											✓	
KDHE, Bureau of Environmental Remediation	✓	✓	✓							✓	✓	
KDHE, Bureau Preparedness Program		✓			✓				✓		✓	✓
Kansas Department of Insurance		✓									✓	
Kansas Department of Labor			✓								✓	
Department of Transportation			✓	✓	✓	✓	✓		✓		✓	✓
Kansas Forest Service			✓						✓		✓	✓

	Implementation Capabilities						Local Mitigation Support Capabilities					
	Audits/ Code Enforce- ment	Information Management	Inspection	Project Engineering/ Design	Project Funding	Project Operations/ Maintenance	Project Permitting/ Licensing	State Water Planning	Grants and Loans	Regulatory Guidance/ Control	Technical Support	Training and Education
Kansas Geological Survey									✓		✓	✓
Kansas Highway Patrol	✓		✓		✓				✓	✓	✓	✓
Kansas State Fire Marshal's Office	✓		✓		✓				✓		✓	✓
Kansas State Historical Society									✓		✓	✓
Kansas State University Extension Service							✓				✓	✓
Kansas Water Office					✓		✓	✓			✓	✓
Kansas Wildlife, Parks and Tourism					✓	✓	✓		✓			✓
Office of the Governor –KS Information Technology Office		✓									✓	

## 4.2.2. State Policies and Regulations

This section provides an update to the identification of state statutes that are applicable to the mitigation program. **Table 4.4** shows the state statutes that address hazard mitigation programs in the State most directly. The mitigation plan is intended to be consistent with and supportive of these policies.

**Table 4.4. Kansas Statutes Applicable to the State Mitigation Program**

Statute	Hazards Addressed	Purpose
Establishing and Insurance Proceeds Fund (2016) K.S.A. 40-3901	Wildfire Tornado Flood	Allows for communities to set up an ordinance and file it with the insurance Commissioner's office. The Insurance proceeds ordinance awards a community 15% of any insurance claim as a sort of temporary lien. The community then holds that money until the property is brought into compliance.
Small Dam Safety and Rehabilitation Policy (K.S.A. 82a-301et seq.) (Revised July 1, 2013)	Dam Failure	On July 1, 2013 the Obstructions in Streams Act was revised. The jurisdictional storage volume minimum of 50 acre-feet was measured at the top of the dam elevation, and is now measured at the auxiliary spillway. Additionally, permit exemptions were added for Class A, low hazard dams. In January 2005, the Kansas Water Authority approved a Kansas Water Plan policy section titled Small Dam Safety and Rehabilitation. It made 21 recommendations addressing the issues of establishing a cost share program, catastrophic repair eligible, and inundation map preparation eligible, but does not include routine operation and maintenance or limit dam owner liability.
Dam Identification Regulations (K.S.A. 2007 Supp. 82a-303a)	Dam Failure	The State enacted new regulations for dams in May 2007. The regulations now require class B (significant) hazard dams to prepare emergency response plans on a form prescribed by the chief engineer of the Division of Water Resources. This plan should include a map or written description of the area that could be inundated by a breach (as described in the regulation). As of 2013 they are still trying to complete all the plans for the significant hazard dams. The requirements for high hazard dams did not change. Additionally, the definitions of the hazard classes for class A, B, and C dams were changed (see Section 3.3.2 Dam and Levee Failure).
Conservation Districts Chapter 2, Article 19	Soil Erosion, Drought	Establishes the Division of Conservation and the authority to establish 105 County Conservation Districts; each district with a board of five supervisors responsible for overseeing conservation activities, evaluating local practices, suggesting and overseeing the implementation of mitigation measures deemed necessary, offering financial and other assistance, and taking appropriate actions that would be needed to enforce any laws relating to conservation.
Soil erosion caused by wind Chapter 2, Article 20	Soil Erosion	Charges individual landowners with practicing appropriate erosion preventive measures; makes it the duty of the Secretary of Agriculture to collect data, offer solutions to erosion causing conditions, and report conclusions to local and state government officials and the general public; and requires County Commissions to enforce erosion



Statute	Hazards Addressed	Purpose
		prevention practices as well as to take proper action to correct or mitigate potential erosion causing conditions.
Planning and Zoning Chapter 12, Article 7	Multi-Hazard	Allows local governments to establish planning commissions and to adopt zoning regulations and comprehensive development plans.
Planning and Zoning Chapter 12, Article 7	Multi-Hazard	Prevents governing bodies from enacting zoning laws that exclude manufactured housing.
Planning and Zoning Chapter 12, Article 7	Flood	Allows cities and municipalities to designate floods zones and restrict the use of land within these zones, require that any local ordinances relating to flood zones be approved by the chief engineer of the Division of Water Resources of the State Board of Agriculture before adopting such ordinances, and require compliance with the Flood Insurance Act of 1968.
Flood Control Chapter 19, Article 33	Flood	Allows cities and counties to develop stormwater management and flood control projects and programs, provide local funding, and enter into agreements with other agencies to develop and use flood control works.
Flood Control Chapter 19, Article 33	Flood	Allows for a county sales tax to provide funding for stormwater and flood control improvement, and county and city governments to enter into agreements for development of flood control projects.
Watershed Districts Chapter 24, Article 12	Soil Erosion, Flood	Establishes watershed districts and outlines how they will be established and operate.
Drainage Districts within Counties and Cities Chapter 24, Article 4	Flood	Allows the development of drainage districts of 160 acres or more involving several landowners for, in part, taking actions to protect property from floods, including raising funds and constructing flood control works such as levees or retention dams. Also allows districts to develop an emergency fund to respond to imminent danger, such as from a threatening flood.
Public Improvements Chapter 13, Article 10	Flood	Allows first class cities to construct stormwater projects to prevent localized flooding.
Chapter 19, Article 26	Multi-Hazard	Allows local governments to trim trees that may be a hazard away from local power lines.

<b>Statute</b>	<b>Hazards Addressed</b>	<b>Purpose</b>
Fire Safety and Prevention  Chapter 31, Article 1	Wildfire, Tornado	Establishes the Office of the State Fire Marshal and outline its duties as well as the role the state will play in fire safety and prevention.
Fire Insurance Companies and Mutual Fire and Tornado Companies Chapter 40, 901(a)	Winter Storm, Tornado	To make insurance upon property or any valuable interest thereon against loss or damage caused by fire, lightning, or other electrical disturbances, earthquake, windstorm, cyclone, tornado, tempest, hail, frost, snow, ice, sleet, weather or climatic condition, including excess or deficiency of moisture, flood, rain, or drought, a rising of the waters of the ocean or its tributaries, bombardment, invasion, insurrection, riot, civil war or commotion, military or usurped power, explosion, other than the explosion of steam boilers, or the breaking of flywheels, against loss or damage from any cause to trees, crops and farm products.
Protection of Domestic Animals  Chapter 47, Article 6	Agricultural Infestation	Provides the Livestock Commissioner authorities to develop regulations for control of disease spread among animals and to impose quarantines and other control measures.
Kansas Emergency Management Act  Chapter 48, Article 9	Multi-Hazard	Creates the Division of Emergency Management under the direction of the Adjutant General and outlines the emergency management responsibilities and capabilities of the Adjutant General. Appoints the governor as the Commander-in-Chief of the organized and unorganized militia and all other forces available for emergency duty as well as giving the governor the power to declare a state of disaster emergency and direct emergency operations. Directs the Division of Emergency Management to formulate a statewide emergency plan and outlines the duties of the division. Requires counties to establish and maintain a disaster agency responsible for emergency management, prepare a county emergency response plan, and coordinate efforts with the division. Establishes the Kansas Nuclear Safety Emergency Management Act.
Emergency Planning and Community Right-to Know Act  Chapter 65, Article 57	Hazardous Materials	Establishes the state emergency response commission and its duties for the purpose of providing assistance in the coordination of state agency activities relating to: chemical emergency training, preparedness, and response; and chemical release reporting and prevention, transportation, manufacture, storage, handling, and use.
Kansas Underground Utility Damage Prevention Act  Chapter 66, Article 18	Multi-Hazard	Promulgates regulations for utility damage prevention.
Roads and Bridges	Flood	Controls the damming of water courses.

Statute	Hazards Addressed	Purpose
Chapter 68, Articles 9 and 15		
Kansas Water Office and Kansas Water Authority  Chapter 74, Article 26	Drought	Requires that the Kansas Water Office with Kansas Water Authority approval shall establish guidelines for monitoring drought conditions. When drought conditions exist within the state, the governor is to be notified, and assembly of the Governor’s Drought Response Team recommended.
Architectural Services Chapter 75, Article 12	Tornado	Requires mobile homes to have appropriate foundations, “tie downs,” and roofs as well as to comply with national standards for manufacture.
Department of Health and Environment  Chapter 75, Article 56	Multi-Hazard	Provides for the development of local environmental protection plans to support implementation of the environmental protection strategy of the state water plan. Also, provides for local environmental planning grants.
Navigable Waters, Obstructions in Streams, and Collection, Storage, and Impounding of Waters  Chapter 82a, Articles 2,3, and 4	Flood, Drought, Dam Failure	Governs the regulations and supervision of dams and other water obstructions and ensures public safety from dam failure.
Water Districts  Chapter 82a, Article 6	Drought	Allows the establishment of water supply districts.
State Water Resources Planning  Chapter 82a, Article 9	Flood, Drought	Establishes long-range goals and objectives for the management, conservation, and development of the waters of the state and policies deemed desirable for their achievement. Stipulates considerations to be used in formulating the State Water Plan and establishes the State Water Plan Fund.
Groundwater Management Districts  Chapter 82a, Article 10	Drought	Establishes special districts for the proper management and conservation of the groundwater resources of the state.
Groundwater Exploration and Protection Act  Chapter 82a, Article 12	Drought	Provides for the exploration and protection of groundwater through the licensing and regulation of water well contractors in Kansas to protect the health and general welfare of the citizens of this state, to protect groundwater resources from waste and potential pollution, and to provide data on potential water supplies that will permit the economic

Statute	Hazards Addressed	Purpose
		and efficient utilization and management of the water resources of the state.
Weather Modification Act Chapter 82a, Article 14	Hailstorm, Drought	At the direction of the Kansas Water Authority, the director may issue licenses to weather modification operators and permits for weather modification activities, as provided for in this act.

The assessment of state policies and regulations is done to evaluate the strength of the State policy framework in light of the hazards that threaten the State, to identify conflicts or inconsistencies in policies that may erode their effectiveness, to evaluate the capabilities of state policies to encourage and improve hazard mitigation capabilities at the local level, and to identify mitigation-related policies that could be used in a more coordinated manner to more effectively achieve the mitigation goals and objectives of the State.

### 4.2.3. State Funding Capabilities

The ability to fund mitigation-related efforts is a key component of the mitigation capabilities of the State. The primary source of mitigation funding is through the State’s administration of FEMA’s Hazard Mitigation Grant Program (HMGP) (see Section 4.5 Funding Sources for more information about this and other FEMA grant programs). Currently most of the HMGP funds from past disasters have been allocated to communities for mitigation projects. KDEM continues to utilize the PDM and FMA programs. In addition, the Post HMGP Fire Grant has been funded and Kansas is a recipient of these funds in 2018. The State also has a variety of nonfederal funding and incentive programs to support mitigation in Kansas. One way the State funds mitigation is through the program budgets for mitigation-related state agency programs. During the initial Regional Mitigation Plan Initiative that began in 2012, the State Legislature appropriated funding for the projects life cycle to ensure that every county in Kansas had a mitigation plan. In addition, the HMGP Post Fire has been appropriated and Kansas will be a recipient of these funds in 2018.

In addition, the State Water Plan Fund, a statutory fund (KSA 82a-951) is entirely nonfederal and is supported from water protection fees, fees imposed on fertilizer and pesticides, Sand Royalty Receipts, Pollution Fines, Clean Water Drinking Fees, State General Fund Transfer, and Economic Development Initiative Fund Transfer. It is used to implement recommendations in the Kansas Water Plan. Specific projects vary year by year. Budgets direct funds to various state agencies for program activities and specific projects, often to be completed through contracts with local, state, or federal agencies or to complete needed data collection, studies, or construction by subcontractors. Annual allocations are a result of Kansas Water Authority recommendations, the governor’s budget recommendations, and the legislative budget process. State agency mitigation-related efforts concerning water availability and management of flood hazards are included.

The following other state financial assistance or incentive programs were described in Section 4.2.1 State Agencies and Mitigation-Related Programs; most are focused on flood and drought hazards:

- Kansas Partnership Fund (Kansas Department of Commerce)
- Water Quality Buffer Initiative (Kansas Department of Agriculture, Division of Conservation)
- Water Resources Cost Share Program (Kansas Department of Agriculture, Division of Conservation)
- Water Rights Purchase Program (Kansas Department of Agriculture, Division of Conservation)
- Water Supply Restoration Program (Kansas Department of Agriculture, Division of Conservation)
- Watershed Dam Construction Assistance (Kansas Department of Agriculture, Division of Conservation)
- Watershed Planning Assistance Program (Kansas Department of Agriculture, Division of Conservation)
- Multipurpose Small Lakes Program (Kansas Department of Agriculture, Division of Conservation)

#### **4.2.4. Changes in Capabilities since 2013**

This section highlights key changes in the capabilities of the State since approval of the previous plan.

##### Legislation and Policies

The Kansas Water Vision was completed in 2015. The Kansas Water Office, the Kansas Department of Agriculture and other agencies are working to implement the many actions including rule and regulation changes and development water right conservation tools such as water conservation areas (WCAs).

- The Kansas Water Authority and Kansas Water Office initiated a strategic planning effort aimed at facilitating a more proactive approach to emerging long-range issues. Initial emphasis is being placed on sediment and surface water management. A key component is assessing future demand for water from state-owned water supply storage in federal reservoirs and the impact that sediment deposition will have on water availability. This is being done within the context of a 2% (50-year) drought, such as was experienced during the 1950s. Future statutory changes or changes to reservoir operations policy are possible outcomes of this effort. KWO is using the OASIS model to simulate a 2% drought to quantify demand and water availability. The input to the model is complete and is updated periodically. This is included in the work for the Reservoir Sustainability Initiative. This initiative looks at the effects of sediment on the water supply reservoirs statewide, and then basin by basin. The first drought simulation has been conducted using the OASIS model to provide information for planning and mitigation of drought in December 2016. Additional development and workshops have occurred focused on the Neosho, Verdigris, and Maris de Cygnes basins.

## ***Agency Roles and Responsibilities***

- KDEM continues to manage the FEMA mitigation grant programs for HMGP, PDM, and FMA. KDEM is still using HMGP monies to pursue mitigation of repetitive and severe repetitive flood loss properties. KDEM has used FMA funds. In conjunction with the state National Flood Insurance Program (NFIP) coordinator, KDEM will continue to inform and educate jurisdictions about the NFIP and mitigation efforts to reduce property impacts within flood hazard areas. Additionally, as the new requirements for local multi-hazard mitigation plans are mandated to include FMA criteria, the state may pursue FMA grants for interested communities as part of their flood mitigation strategy.
- The Kansas Department of Conservation has been realigned under Kansas Department of Agriculture, Division of Conservation (KDA-DOC). Their mission remains the same.
- The Kansas Corporation Commission is working with Kansas Municipal Utilities to develop mutual assistance agreements. In addition, the commission assisted the municipal utilities in getting grant money to develop a Municipal Mutual Assistance Plan in Kansas.

## ***Funding Sources***

- The KHMT indicated that some grants formerly available through the U.S. Department of Homeland Security designed to improve capabilities in planning, equipment, training, and exercises, had significantly decreased from recent disasters throughout the United States and abroad.
- Because of disaster declarations between 2013 and 2017, the State of Kansas received \$12,100,293 in Hazard Mitigation Grant Program funding for mitigation planning and projects (see Section 4.5.5 Funding for Mitigation Actions 2004 to December 2017).
- The Bipartisan Budget Act of 2018 contains a provision that authorizes FEMA to provide HMGT assistance as a result of a Fire Management Assistance declaration for events from October 1, 2016, through September 30, 2018. The state of Kansas received \$3,120,536.23 in the ceiling amount and management cost for FM-5170 – FM5176.

### **4.2.5. Assessment of Opportunities for Improvement**

This section highlights policies and programs that have been effective in achieving mitigation actions in Kansas and discusses opportunities for improving state mitigation capabilities. The KHMT discussed the State's mitigation capabilities, and the opportunities and obstacles to improving mitigation capabilities. Several themes emerged from this process and are summarized below. Ranking of mitigation actions was also included in the meetings.

## ***Interagency Coordination***

The KHMT identified interagency coordination as improving, but continues to be an obstacle to improving state capabilities, specifically related to planning efforts and sharing information and technical data. The long-term effectiveness of the state's mitigation program is contingent on using existing mitigation-related programs in as coordinated and integrated manner as possible to achieve the maximum benefits to statewide capabilities. As part of the 2018 planning

process, the KHMT agreed to continue to have quarterly meetings to continue facilitating interagency coordination.

Sharing agreements continued to be in place by state agencies. The State capability assessment identified the following opportunities for coordinating the implementation of different programs to enhance local mitigation capabilities:

- The programs of the Kansas Department of Commerce offer opportunities for incorporating mitigation into state-sponsored and funded efforts for community and economic development.
- The Water Quality Buffer Initiative of the Kansas Department of Agriculture, Division of Conservation could be used to expand the state's capabilities for land and property acquisition in the floodplain under the Hazard Mitigation Grant Program and the Flood Mitigation Assistance Program.
- The Community Forestry Program of the Kansas Forest Service and its local training programs offer opportunities to provide information in local land use controls for minimizing wildfire vulnerability in the wildland-urban interface.

### ***Financial and Technical Assistance to Local Governments***

**Table 4.3** indicates that many agencies provide support to local governments through training and education, grants and loans, and technical support:

- KDEM provides financial and technical assistance to counties for the development of local mitigation plans and for funding mitigation projects. KDEM also coordinates programs for local comprehensive emergency management planning and local mitigation planning to ensure that planning efforts are consistent and mutually supportive.
- The Kansas Department of Commerce administers community development programs, such as the Community Capacity Building Program and Kansas Partnership Fund, which can provide state assistance to local governments in a coordinated manner to ensure that mitigation considerations are incorporated into community development programs.
- The Kansas Department of Agriculture has several programs that are supportive of local government efforts, particularly in flood control and water availability. This includes the Division of Water Resources provision of technical assistance to communities with adopting, updating, and enforcing floodplain management regulations.
- The Kansas Water Office helps coordinate several programs supporting local flood control and drought mitigation actions through the Kansas Water Plan.
- The Kansas Department of Health and Environment has programs supporting local government efforts to respond to human disease outbreaks injury and illness reduction and all-hazards preparedness.
- The Kansas Department of Agriculture, Division of Conservation is responsible for programs focused on watershed development and protection.

Opportunities exist for building state and local mitigation capabilities by expanding the State's capabilities for helping local governments meet nonfederal matching costs for mitigation-related projects and by improving the coordination and integration of state training programs for local

officials with more emphasis on hazard mitigation. The greatest opportunities for improvement in hazard mitigation in Kansas exist at the local level. Therefore, helping all communities develop and adopt local hazard mitigation plans is one of the state's top priorities.

### ***Statewide Regulation and Enforcement***

One important aspect of the State's mitigation policy framework is the requirement or encouragement of general actions by local governments to reduce vulnerability to disasters. Two such general actions are adoption and enforcement of building codes and comprehensive land use planning to manage growth in known hazard areas.

The Kansas State Legislature has not implemented a statewide building code nor does it require comprehensive planning by local governments. The State does not have a land use plan or specific plans for critical areas or those of special concern. The KHMT identified the lack of requirements in these areas as a weakness in the State's mitigation capabilities and found that additional statewide guidance and requirements in these areas offer opportunities to enhance mitigation capabilities at the local level. In addition, inadequate enforcement of existing regulations by the State was found to be an obstacle.

New regulations are not popular in Kansas, which is a home rule state. Home rule is the granting of powers from the central government of a state to governments at regional or local levels. The KHMT identified that distrust of state and federal government is common among residents. The KHMT did not believe that Kansas legislation in these areas will change in the near future but did identify opportunities to encourage local adoption of building codes and land use plans through promoting model codes and ordinances and providing guidance on integrating land use and mitigation.

### ***Statewide Policy Framework for Floods***

The Kansas Statutes Annotated address flooding at both the State and local level. The State statutes empower local governments to restrict development and redevelopment in the floodplain, to build and operate stormwater and flood control projects, to form watershed and drainage districts for better coordination of flood projects and operations, and to raise funds locally to accomplish these purposes. If local governments use the authorities granted to them by state statutes and policies, there is a strong policy framework for flood hazard mitigation in Kansas.

Kansas statutes passed in 1970 gave cities and counties zoning authority to help reduce floodplain problems. Those statutes were significantly revised in 1991. The Division of Water Resources reviews and approves floodplain-zoning ordinances prior to their adoption by local governing bodies and provides technical assistance to communities to help them develop proper floodplain-related ordinances. For floodplain management, incorporated cities and unincorporated areas of counties are separate entities that must separately enact and enforce floodplain management regulations.

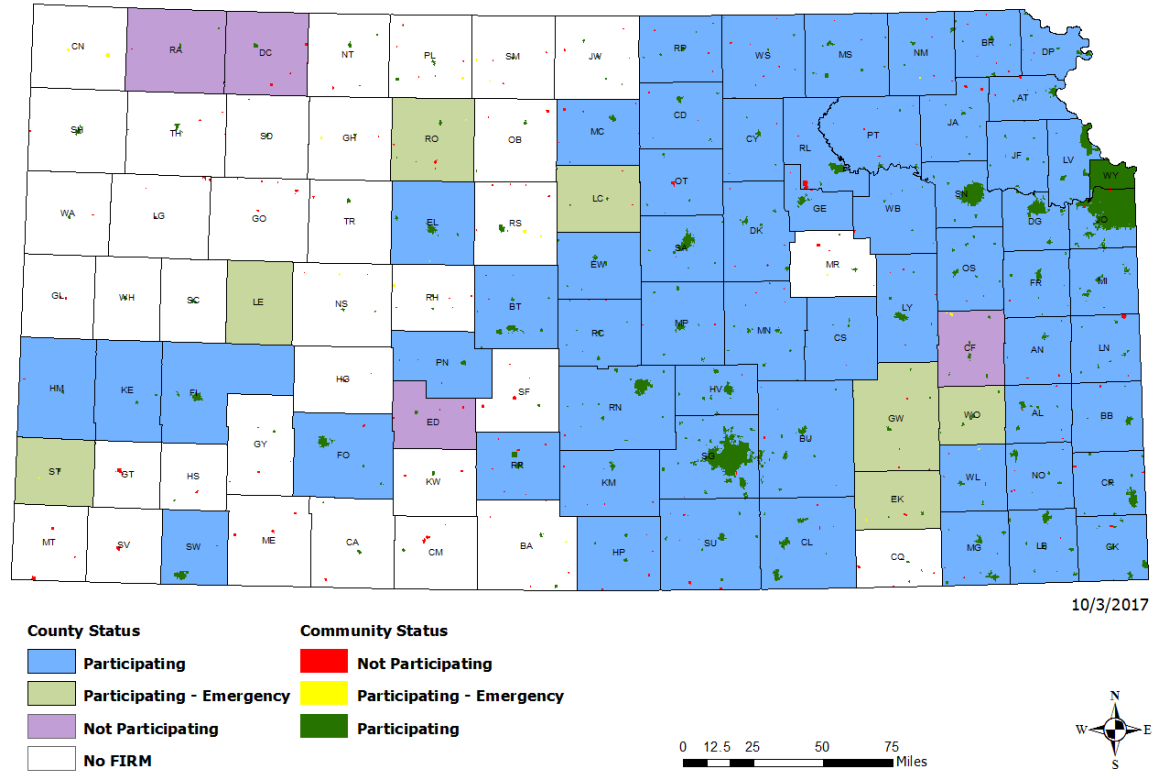
Floodplain mapping is essential to administering local floodplain management programs. A total of 56 Kansas counties have been or are being modernized to the Digital FIRM format for flood



hazards as of October 2017. New or updated maps are still needed in many areas of Kansas. The Division of Water Resources coordinates with FEMA on floodplain mapping priorities and provides limited state mapping assistance to local communities. **Figure 4.2** shows the National Flood Insurance Program Participation and **Figure 4.2a** shows the Kansas Floodplain by Watershed Mapping Projects.

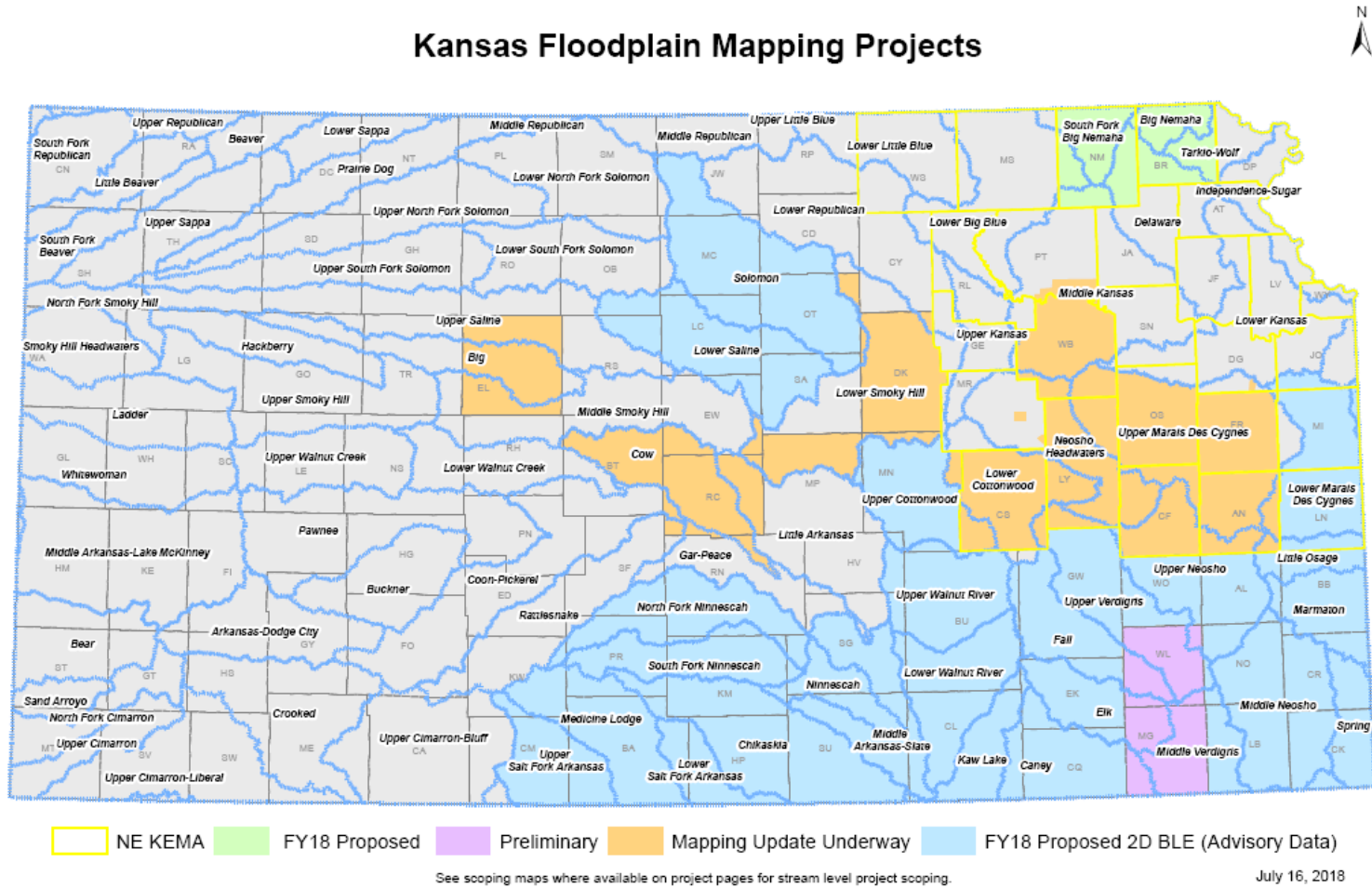
Figure 4.2. Kansas National Flood Insurance Program Participation

### Kansas National Flood Insurance Program Participation



Source: Kansas Division of Water Resources

Figure 4.2a. Kansas Floodplain Mapping Projects by Watershed (Most current available)



Source: Kansas Department of Agriculture, Division of Water Resources

The State Water Resources Planning Act establishes a long-range goal to reduce damaging floods and losses resulting from floods and identifies policies for achieving this goal. The act also mandates the formulation of a state water plan and establishes the State Water Plan Fund. Significant funding from the State Water Plan Fund has been directed toward reducing flood vulnerability in priority watersheds in Kansas.

The KHMT identified that better communication and coordination between the water and emergency management communities is still needed. The Kansas Hazard Mitigation Plan and the Kansas Water Plan should also be more complementary. The Kansas Water Plan is an appropriate place to address needed changes in state policy related to flooding. In addition to the basin plans, the Kansas Water Plan contains policy sections that make recommendations regarding the need for new or amendatory legislation, planning and coordination, and funding. The State Water Plan Fund supports implementation of recommendations made in the Kansas Water Plan. Additional funds are often sought through grants and loans to accomplish identified actions or studies that contribute to planning, water management and expanding water supplies.

The State has made the mitigation of repetitive flood loss and severe repetitive loss properties a priority, which is a national priority as well. KDEM has an on-going mitigation action in this plan to mitigation repetitive flood loss and severe repetitive loss properties. The availability of the consolidated National Flood Mitigation Funds for repetitive loss mitigation provides opportunities for the State to address these issues (see Section 4.5.1 Federal Funding Sources for more detail).

Through Kansas Legislature appropriated funds remaining, the state was able to pay for the Regional Mitigation Plan Initiative. The State will require that regional, and local, plan include information in their plans concerning NFIP participation as well as their repetitive and severe repetitive loss properties and how they intend to address them. As of 2017, all counties participated in appropriating funds to compete a regional hazard mitigation plan, with the exception of Greenwood County.

### ***Data Needs and Capabilities***

When assessing the state's technical capabilities, the KHMT identified problems with data consistency, quality, and accessibility. Conflicts are also created around the issue of which data is too sensitive to make public. Some progress is being made on this issue. The Geospatial Technology Section of the Adjutant General's Department has released a Kansas Geospatial Data Security Policy to help determine if a data layer or attribute data within the layer needs to be restricted. Information sharing and coordination among agencies is also a weakness.

The state has strong GIS capabilities, largely because of the efforts of the Kansas GIS Policy Board and DASC. The GIS Policy Board helps to develop standards, strategies, and policies that emphasize cooperation and coordination among agencies in GIS. DASC has begun a new program that allows local governments to back up GIS data at DASC for free. The collaborative effort between the GIS Policy Board and DASC—the Kansas Geospatial Community Commons allows state and local governments to share information and promote services and products.

The GIS Breakthrough Team formed through the Kansas Collaborative has completed a Guidebook for County GIS Implementation, which is available for downloading. In partnership with members of the state's GIS Policy Board, efforts are underway to create a statewide inventory of critical data layers at the local level. Pilot efforts are also underway in partnership with DASC to build a process for local verification and updates of statewide data layers.

Opportunities for improvement in data are in critical facilities, critical infrastructure, and state-owned and operated facilities. Information exists in different agencies and has not been compiled into one location. Some data is out-of-date, information on local facilities is difficult to collect, and some information is not geospatially enabled. The KHMT also identified the need for state agencies to have a consistent and coordinated approach to collecting and archiving data after emergency events. This was still an issue with the 2018 plan update.

### ***State Staff Resources***

KDEM has staffed its department and is currently up to adequate personnel. New staff members are trained on state and federal mitigation programs and procedures to adequately support the department on the "day to day" functions.

### ***State-Approved Watershed General Plans***

In 2018, there were 88 organized watershed districts in Kansas that covered 22 percent of the state's land area. About 60 percent of districts have an active general plan according to the Kansas Water Plan. The Kansas Watershed District Act (KSA 24-1201 et seq.) was enacted in 1953 to provide a subdivision of state government with adequate powers to sponsor watershed projects developed with federal assistance. The act requires that a general plan identifying planned works of improvement eligible for state cost share, such as dams, be prepared and identify associated costs and benefits documented. The general plan is reviewed and approved by the chief engineer of the Division of Water Resources. These plans have traditionally focused on structural flood control measures; however, incorporating nonstructural measures into watershed plans, such as those being developed as part of the Watershed Restoration and Protection Strategy, could further enhance the reduction of damage from floods while also providing other benefits.

### ***Tornado Safe Room Policies***

One weakness of the state mitigation program may be that programs and funding are heavily centered on flood hazards. Currently, there are no policies, requirements, financial incentives, or other provisions to have tornado safe rooms instituted in public and private buildings. Only one identified state regulation, KSA Chapter 75, Article 12, requiring certain architectural standards for mobile homes, addresses tornado or high wind hazards.

### ***Public Education Programs***

Enhancing the scope and coverage of public education programs conducted by state agencies is an opportunity for improving state mitigation capabilities. In their evaluation, the KHMT

discussed the lack of public awareness and understanding of hazards and vulnerabilities and a common attitude of apathy, such as “it won’t happen to me.”

Many agencies have the capability to provide public education and information programs. KDEM and local emergency management agency’s participate annually in the National Weather Service’s Severe Weather Awareness Week in March. Area residents, businesses, schools, and emergency management agencies are encouraged to use Severe Weather Awareness Week as a springboard to preparing for the severe weather season. Enhancing participation in this and other seasonal awareness campaigns could also improve state mitigation capabilities. The State has been very active with continuing public education for severe weather working with the National Weather Service. When funding and manpower are available, the State intends to improve public education efforts of extreme temperatures, hazardous materials, wildfire, and outreach to special needs populations and communities in rural areas. Different state associations and community centers have been identified as potential partners in public awareness efforts; however, the economy has been a deterrent statewide.

### ***Recent Disasters***

Kansas has experienced six presidential disaster declarations since 2013. Declarations included severe storms, tornadoes and flooding, and winter storms. 2016 and 2017 saw an uptick in wildfires resulting in 9 FMAGs. These disasters have increased the hazard awareness of the public, state agencies, and elected officials. State agencies worked together during recent disasters. In addition, available funding offers opportunities to implement planning and projects.

## **4.3 Local Capability Assessment**

<b>REQUIREMENT 201.4(c)(3)(ii): [The State mitigation strategy shall include]: a general description and analysis of the effectiveness of local mitigation policies, programs and capabilities.</b>
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Local capabilities are the existing programs and policies through which local governments implement mitigation actions to reduce potential disaster losses. The local capability assessment provides a general description of local mitigation capabilities in Kansas and their effectiveness for mitigation.

### **4.3.1. Local Policies, Programs, and Capabilities**

There are a wide range of policies that can serve as a foundation for implementing local mitigation plans, including building codes, floodplain ordinances, zoning codes, and comprehensive land use plans. The State continues to encourage and authorize through state statute local adoption of these types of capabilities, but they are not required. Other types of capabilities that may be used to implement local mitigation actions include economic development plans, capital improvement plans, stormwater management plans, erosion management plans, environmental regulations, growth management plans, and hazard specific ordinances.

An analysis of the effectiveness of the most common local mitigation policies and programs was conducted during the September 2017 Kansas Emergency Management Association Annual Meeting. The local emergency management community was asked to rank local communities' mitigation programs and activities as Effective, Marginally Effective, or Not Effective, with results remarkably similar to 2013. Emergency Managers were instructed to use their expertise and general working knowledge of local policies and programs to make their decision regarding effectiveness. A large percentage of the local emergency managers attend the meeting and participated in the rating process. **Table 4.5** displays the results of how the local emergency management community ranked the effectiveness of local communities' mitigation policies and programs. This ranking table will be updated during the 2023 plan update to reflect the current pulse of the mitigation realm, and to ensure mitigation measures are purely mitigation and not preparedness.

Local emergency managers found planning to be the most effective mitigation measure. This is attributed largely to the recent multiple planning efforts undertaken by the Kansas Division of Emergency Management such as mitigation plan development, emergency operations plan updates, and other efforts. The benefit of the plan is often the planning itself, and these plan updates are a good chance for local communities to get together and discuss the hazards affecting their community and their capabilities to respond to events. Exercises and drills were also ranked as effective by more than three-quarters of emergency managers. However, only rarely do local mitigation plans contain actions related to exercises and training. The exception to the local plans is school tornado and emergency drills. Of all the types of measures rated, public information received the lowest number of votes as effective.

**Table 4.5. Effectiveness of Local Programs and Activities as Ranked by Local Emergency Management**

Mitigation Measure	Effective	Marginally Effective	Not Effective
Planning	80%	17%	3%
Exercises /Drills	76%	17%	7%
Warning Sirens / Generators	66%	27%	7%
Floodplain / Storm Water Mgmt	45%	45%	10%
Public Information	33%	58%	9%

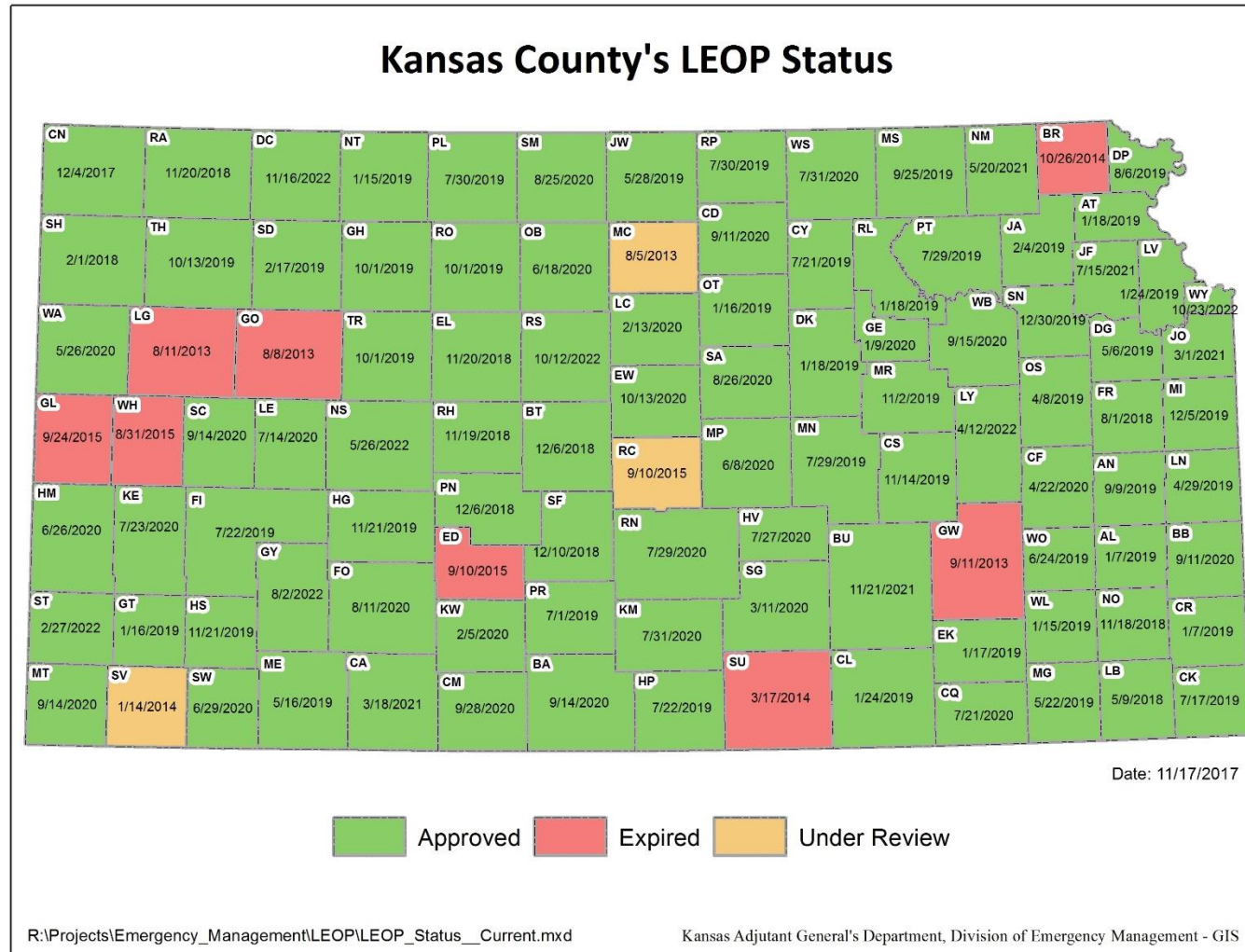
### ***County Emergency Operations Plans***

The Kansas Emergency Management Act requires that each county maintain a disaster agency responsible for emergency preparedness and coordination of response to disasters. The statute also requires each county to maintain an emergency operations plan that has been approved by KDEM (see **Figure 4.3** below). The act is the basis for the state/local emergency management relationship, which is solidified by continued contacts and mutual assistance with day-to-day

operations and during disaster response. The Kansas Planning Standards provide guidance to local governments in developing emergency operations plans.



Figure 4.3. County Emergency Operations Plan Status



## ***Local Hazard Mitigation Plans***

Federal regulations require local jurisdictions to prepare and adopt a local hazard mitigation plan approved by FEMA to be eligible for FEMA's Hazard Mitigation Grant Program and Pre-Disaster Mitigation program. The mitigation section of KDEM supports local hazard mitigation planning, administers funding programs, and reviews plans before submission to FEMA.

KDEM is committed to updating and maintaining local hazard mitigation plans and has undertaken a new initiative to assure that the plans are updated within the timeframes. This initiative supports regional planning throughout the State and it is described in more detail in chapter 5 – Coordination of Local Mitigation Plans. Generally following Homeland Security Regional boundaries, the State has been divided into 12 regions. KDEM hired a contractor to assist KDEM mitigation planning staff with preparation of the regional plans. At the time of this 2018 update, KDEM has finalized all 12 regional plans and they been approved through FEMA. The plans were updated at no cost to the counties. KDEM is currently holding regional mitigation reviews every quarter.

## ***Building, Fire, and Life Safety Codes***

The State has adopted the 2006 International Building Code for all state-owned facilities.

The State of Kansas does not have a statewide building code. State statutes do assign the Fire Marshal the responsibility of establishing reasonable and uniform regulations to ensure a minimum level of life safety. To meet the intent of the Kansas Fire Prevention Code and other statutory requirements, new construction and changes in building use are required to be under the direct supervision of a licensed design professional. It is also required to be designed and constructed to a criteria established by one of the three model building codes adopted by Kansas regulations, and either have plans reviewed for compliance to code intent or receive a building permit from a local building official with fire authority with building inspections during construction as well as receive a certificate of occupancy prior to formal use. Although no statewide regulations exist, guidance from the State, such as codes and ordinances, offers an opportunity to promote these tools.

## ***Land Use and Comprehensive Plans***

Cities and counties in Kansas are authorized by state statute KSA Chapter 12, Article 7, to establish planning commissions and to prepare and adopt comprehensive development plans but are not required to do so. These plans could be used to implement growth management in known hazard areas. Some communities have used this authorization to adopt comprehensive plans, but, without state requirements, many are out of date.

Currently, the State is able to track what comprehensive plans the counties and municipalities have through the COOP database. The county COOP plans are ongoing and will continue to be updated as new data is available for each community. It is intended that COOP plans and local/regional hazard mitigation plans will eventually be connected to one another for ease in data collection and dissemination in the State of Kansas Planning System.

## ***Floodplain Management***

The potential for future flood damage may be reduced significantly by preventing inappropriate development from occurring in flood-prone areas. Local governments may accomplish floodplain management through their land use planning and zoning authority to protect the public health, safety, and welfare. Multi-objective management of flood-prone areas can provide significant benefits for recreation, water quality, and wildlife habitat while reducing the risk of future flood damage.

State statute allows cities and municipalities to designate flood zones and restrict the use of land within these zones. It requires that any local ordinances relating to flood zones be approved by the Chief Engineer of the Division of Water Resources before adoption and requires compliance with the Flood Insurance Act of 1968. As of September 2017, 459 communities participate in the National Flood Insurance Program (NFIP), 38 communities are a part of the NFIP Community Rating System (CRS).

There are 82 local jurisdictions that are known to be vulnerable to flood hazards that are not yet participants in the NFIP. **Table 4.6** illustrates how the participation of Kansas communities in the NFIP changed between the 2013 and 2018 plan update.

**Table 4.6. Changes in National Flood Insurance Program Participation 2010–2012**

<b>Capability</b>	<b>2013</b>	<b>2017</b>
NFIP Participation Total	446 communities	459 communities
NFIP Participation Suspended	6 communities	6 communities
Not in NFIP, Hazard Area Identified	79 communities	82 communities
CRS Participation	13 communities *	38 communities
Repetitive Loss Properties	451 properties	509 properties

Sources: Kansas Division of Emergency Management, Federal Emergency Management Agency

\*Four communities have since been rescinded.

One concern of the state mitigation program is repetitive loss properties. As noted in Chapter 3, Table 3.74, there are 509 identified repetitive loss properties in Kansas. Flood losses to these properties have resulted in total payments of over \$41 million over the last 34 years (1978-2017). The State of Kansas has made mitigation of repetitive loss properties a priority use of mitigation funds. Of the 509 properties that meet the definition of repetitive loss, 132 have been mitigated, leaving 377 unmitigated repetitive loss properties.

## ***Regional and Local Water Resource Management Organizations***

Local governments are also authorized to develop storm water management and flood control projects and programs, provide local funding, and enter into agreements with other agencies to develop and use flood control works. State statutes also provide for the establishment of local drainage districts, water supply districts, and groundwater conservation districts.

Kansas state agencies are assisted in their efforts to effectively control water resources through regional and local water resource management organizations. From the state level, the Kansas

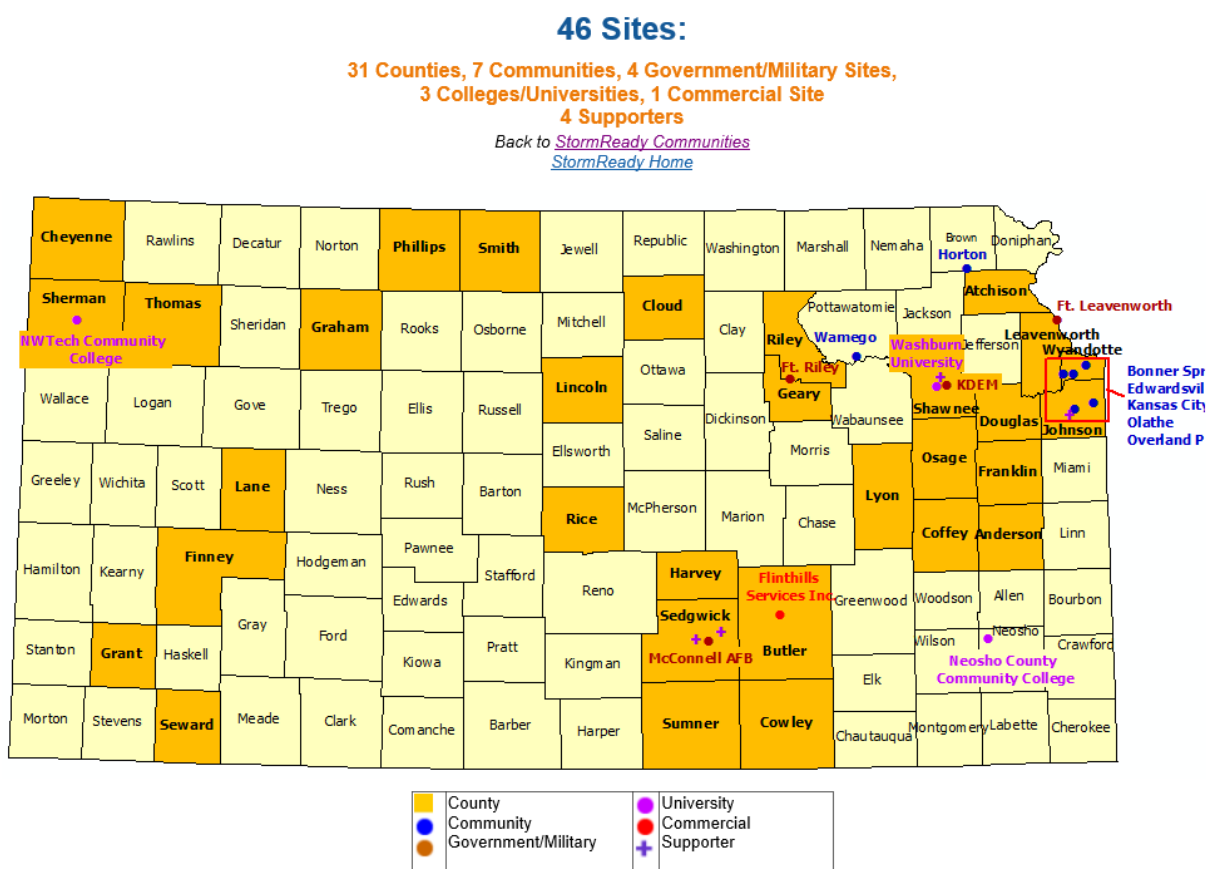
Department of Agriculture, Kansas Department of Health and Environment, and the Kansas Water Office, work with these regional and local organizations on a regular basis. About 22 percent of the State is encompassed by 88 organized watershed districts, which are formed primarily to cooperate on flood control efforts within a watershed. Watershed districts have taxing powers to support program implementation and cooperate on efforts to control erosion, sediment, and water supply within the watershed.

There are also conservation districts, rural water districts, public wholesale water supply districts, and drainage districts. The drainage districts are the former levee authorities who have a taxing authority. All of these local and regional water management organizations have a potential role in the future expansion and implementation of the Kansas Hazard Mitigation Plan.

### **National Oceanic and Atmospheric Administration StormReady Program**

StormReady is a voluntary program that was developed by the National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) to help communities better prepare for and mitigate effects of all types of severe weather—from tornadoes to flooding. In Kansas, there are 41 StormReady Designated Sites as seen in **Figure 4.5**.

**Figure 4.4. 46 Kansas StormReady Designated Sites**



Counties	Communities	Government/Military Sites
<ul style="list-style-type: none"> <li>▪ Anderson</li> <li>▪ Atchison</li> <li>▪ Butler</li> <li>▪ Cheyenne</li> <li>▪ Cloud</li> <li>▪ Coffey</li> <li>▪ Cowley</li> <li>▪ Douglas</li> <li>▪ Finney</li> <li>▪ Franklin</li> <li>▪ Geary</li> <li>▪ Graham</li> <li>▪ Grant</li> <li>▪ Harvey</li> <li>▪ Johnson</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lane</li> <li>▪ Leavenworth</li> <li>▪ Lincoln</li> <li>▪ Lyon</li> <li>▪ Osage</li> <li>▪ Phillips</li> <li>▪ Rice</li> <li>▪ Riley</li> <li>▪ Sedgwick</li> <li>▪ Seward</li> <li>▪ Shawnee</li> <li>▪ Sherman</li> <li>▪ Smith</li> <li>▪ Sumner</li> <li>▪ Thomas</li> <li>▪ Wyandotte</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bonner Springs</li> <li>▪ Edwardsville</li> <li>▪ Horton</li> <li>▪ Kansas City</li> <li>▪ Olathe</li> <li>▪ Overland Park</li> <li>▪ Wamego</li> </ul>
		<ul style="list-style-type: none"> <li>▪ Ft. Leavenworth</li> <li>▪ Ft. Riley</li> <li>▪ Kansas Department of Emergency Management (KDEM)</li> <li>▪ McConnell AFB</li> </ul>
		Colleges/Universities
		<ul style="list-style-type: none"> <li>▪ Neosho County Community College</li> <li>▪ NWTech Community College</li> <li>▪ Washburn University</li> </ul>
	Commercial Sites	Supporters
	<ul style="list-style-type: none"> <li>▪ Flinthearts Services Inc.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Intrust Bank Arena</li> <li>▪ Kansas City Air Route Traffic Control Center</li> <li>▪ Towne East Square</li> <li>▪ West Ridge Plaza</li> </ul>

Source: National Weather Service StormReady Program, <https://www.weather.gov/stormready/ks-s> , dated 1/18/2018

## Geographic Information Systems

Technical capabilities, including GIS, vary greatly among Kansas counties. Capabilities in rural areas are very limited. GIS products and spatial analysis effectively allow communities to map where hazards exist and to combine areas of high risk with areas where many high value assets or vulnerable populations are found. The community can then visualize this information and target areas where mitigation activities would be beneficial.

The KHMT identified the problem of the lack of coordination between local GIS and emergency management staff along with the lack of data sharing and off site backup. As discussed in the state capability assessment, the Data Access and Support Center (DASC) developed a program that allows local governments to back up GIS data at no cost. A collaborative web-based effort between the GIS Policy Board and DASC, The Kansas Geospatial Community Commons allows state and local governments to share information and promote services and products.

The Regional Homeland Security Councils, with the aid of various state agencies and The Kansas Collaborative, have established a GIS Leadership Team, which has partnered with DASC and the GIS Policy Board, to develop a statewide inventory of critical data layers at the local level. As a result, efforts are also underway to build a process for local verification and updates of statewide data layers. A Guidebook for County GIS Implementation has been completed and is available for downloading.

Limited mitigation capabilities in rural parts of the state, characterized by declining populations and high percentages of elderly and low-income residents, present challenges in improving local mitigation capabilities in Kansas. Regional planning and response and mutual aid agreements offer opportunities to combine resources and improve working relationships among counties and cities. Outreach and partnerships with local economic development entities, special districts, utilities, environmental organizations, the agricultural community, and schools offer opportunities

to leverage different funding sources and meet multiple community objectives. Improved education and outreach at the local level can lead to greater household preparedness, public participation in, and support for mitigation policies and programs, as well as political support to address and fund mitigation needs.

## 4.4 Mitigation Actions

**REQUIREMENT 201.4(c)(3)(iii): [The State plans shall include an] identification, evaluation, and prioritization of cost-effective, environmentally sound, and technically feasible mitigation actions and activities the State is considering and an explanation of how each activity contributes to the overall mitigation strategy. This section should be linked to local plans, where specific local actions and projects are identified.**

**Update 201.4(d): [The] plan must be reviewed and revised to reflect changes in development, progress in statewide mitigation efforts and changes in priorities.**

This section describes the intentions of the KHMT to address state and local vulnerabilities identified in the risk and capability assessments through specific mitigation actions that contribute to an overall mitigation strategy. Mitigation actions are specific activities that provide the detail on how the state will accomplish identified objectives, and ultimately meet the mission and goals outlined in this plan. This section also reports on the status of previously identified mitigation actions as a measure of the progress that Kansas is making toward its mitigation goals.

### 4.4.1. Identifying, Evaluating, and Prioritizing Mitigation Actions

The KHMT focused on identifying, evaluating, and prioritizing mitigation actions at their third and fourth plan update meetings in 2018. The process for updating actions is described below.

#### ***2013 Actions—On-going, Completed, Deferred, and Deleted***

At the KHMT meeting on December 13, 2017, the team was given a handout of the 27 mitigation actions from the 2013 plan. Each team member reviewed the mitigation actions that it was lead agency for in the previous plan. They were instructed to provide a detailed status report of the actions and the 2018 Status as a measurement, complete, or deleted. Another column was added asking the lead agency to identify how this action reduced or eliminated the risk. **Table 4.10** on page 4.69 shows the status of mitigation actions from the 2013 plan and also shows the new actions for the 2018 update.

Two actions from the 2013 plan will be deleted in the 2018 plan, number 14 and 27, having to do with regional mitigation plans database, and utilization of Crisis City for mitigation activities. Two actions from 2013 (21 & 22 in the 2013 update) were combined into number 21 in the 2018 update. The remainder of the action items have seen quite a bit of activity, however, by nature of their subject, the maintenance, reviews, and expansion of affected scope of work puts these actions in a continuously on-going status. The status has been updated to reflect the degree to which these actions have seen activity. This demonstrates that the State is making progress toward meeting the goals of this plan.

Twenty-four mitigation actions are on-going and demonstrate that they are effective in reducing future losses. This demonstrates the State's priorities and strategies are staying the same and these actions are valid and effective in Kansas.````````````````````

**Table 4.7. This space is reserved.**

### ***Review and Integration with Local Actions***

A roll-up and analysis of the mitigation actions contained in the regional hazard mitigation plans was conducted to summarize the types of mitigation actions most commonly implemented, or desired to be implemented. This analysis included a summary of actions and the associated hazards, which give an indication of the priority hazards to be mitigated at the local level.

#### Methodology

The roll-up was conducted by reviewing and capturing key elements of the mitigation sections of each regional plan. Most plans provided a summary table of their mitigation actions, which included a variety of information, such as action description, category of mitigation action, priority, responsible agency, potential funding sources, hazard addressed, and the action’s relationship to the local plan’s goals and objectives. The roll-up of the regional mitigation actions focused on evaluating the types of local mitigation actions by determining the following:

- The total number of mitigation actions in each region, and
- The number of actions for each mitigation category (i.e., prevention, emergency services, property protection, natural resource protection, structural protection, and public information).

Tracking the number of actions in each local plan presented some challenges during the regional mitigation plan initiative. A large number of local plans included actions that were described as “multi-jurisdictional” without specifying which jurisdictions were participating in the action. In some instances a single coordinating jurisdiction, usually the emergency management agency, was listed for multi-jurisdictional actions, but it was not obvious which other agencies would be participating. To alleviate multi- jurisdictional actions all jurisdictions within that county were assigned the action. It was then up to the jurisdiction to determine whether it applied to them or not during the review process. Ultimately this did increase the number of actions overall by 1,480. This will be the number one priority during the regional plan updates – reducing the total number of actions. **Table 4.8** has the number of actions in local plans by Mitigation Planning Regions.

**Table 4.8. Number of Actions in Local Plans by Mitigation Planning Regions**

<b>Region</b>	<b>Number of Actions</b>	<b>Range of Number of Actions per County</b>
A	448	34 - 100
B	876	28 - 370
C	316	19 - 54
D	620	41 – 125
E	1451	33 – 812



Region	Number of Actions	Range of Number of Actions per County
F	1867	70 – 517
G	305	30-149
H	668	21 – 110
I	592	66 – 107
J	846	75 – 170
K	1187	20 – 162
L	366	101 – 133
<b>TOTAL</b>	<b>9,542</b>	

Most of the information needed to sort actions into categories reviewing the actions by county. Additional information was obtained, where necessary, in the regional plans’ text. In some instances, where the mitigation categories as defined by the plan did not meet the four FEMA-established mitigation categories included in FEMA state and local guidance, the actions were assigned to the most suitable FEMA category. This analysis assumes that the local actions were accurately placed in the FEMA mitigation categories, to the extent possible. There were instances where the action was either not in the appropriate category, or was not assigned a category, but no effort was made to try to reinterpret the information in the local plans. Some actions that are oriented to life safety, such as tornado safe rooms, do not easily fit into any of the four categories. Most assigned this action to structural projects or emergency services.

**Table 4.9** summarizes the results of the roll-up of regional mitigation actions using FEMA’s mitigation categories. Because there were very few additional action items added to the regional plan initiative, the table was determined to be accurate for this update. FEMA’s publication Developing the Mitigation Plan emphasizes four categories of mitigation activities categories as described in **Figure 4.5a** below:

**Figure 4.5a Types of Mitigation Actions**

Mitigation Type	Description	Examples
Local Plans and Regulations	<p>These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.</p>	<ul style="list-style-type: none"> <li>• Comprehensive plans</li> <li>• Land use ordinances</li> <li>• Subdivision regulations</li> <li>• Development review</li> <li>• Building codes and enforcement</li> <li>• NFIP Community Rating System</li> <li>• Capital improvement programs</li> <li>• Open space preservation</li> <li>• Stormwater management regulations and master plans</li> </ul>
Structure and Infrastructure Projects	<p>These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure.</p> <p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p> <p>Many of these types of actions are projects eligible for funding through the FEMA Hazard Mitigation Assistance program. <i>Task 9 - Create a Safe and Resilient Community</i> provides more information on these programs.</p>	<ul style="list-style-type: none"> <li>• Acquisitions and elevations of structures in flood prone areas</li> <li>• Utility undergrounding</li> <li>• Structural retrofits.</li> <li>• Floodwalls and retaining walls</li> <li>• Detention and retention structures</li> <li>• Culverts</li> <li>• Safe rooms</li> </ul>
Natural Systems Protection	<p>These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.</p>	<ul style="list-style-type: none"> <li>• Sediment and erosion control</li> <li>• Stream corridor restoration</li> <li>• Forest management</li> <li>• Conservation easements</li> <li>• Wetland restoration and preservation</li> </ul>
Education and Awareness Programs	<p>These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as <a href="#">StormReady<sup>1</sup></a> or <a href="#">Firewise<sup>2</sup></a> Communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to lead to direct actions.</p>	<ul style="list-style-type: none"> <li>• Radio or television spots</li> <li>• Websites with maps and information</li> <li>• Real estate disclosure</li> <li>• Presentations to school groups or neighborhood organizations</li> <li>• Mailings to residents in hazard-prone areas.</li> <li>• StormReady</li> <li>• Firewise Communities</li> </ul>

Source: FEMA Local Mitigation Planning Handbook (March 2013). [https://www.fema.gov/media-library-data/20130726-1910-25045-9160/fema\\_local\\_mitigation\\_handbook.pdf](https://www.fema.gov/media-library-data/20130726-1910-25045-9160/fema_local_mitigation_handbook.pdf)

**Table 4.9. Breakdown of Local Actions by Mitigation Categories**

Action Type	Percent of Actions described in Plans
Structure and Infrastructure Projects	56%
Natural Resources	4%
Local Plans and Regulations	29%
Education and Awareness Programs	10%
Other	1%
Specific Actions	Number of Actions
Wildfire Actions	1907
Safe Rooms	531
Repetitive Flood Loss	58
NFIP	551

Based on this summary, a large portion of the actions seemed to be Structure and Infrastructure Projects followed by Local Plans and Regulations.

#### Challenges in Implementation

In general, Kansas has been very successful in implementing mitigation projects. Funding, or lack thereof, has been a major challenge in implementing mitigation projects in Kansas. In recent years, Kansas has taken advantage of competitive grant programs, such as the Pre-Disaster Mitigation program, which provides annual allocations to fund both plans and projects. Kansas experiences Presidential Disasters regularly and as a result obtains significant Hazard Mitigation Grant Program funds. The fact that Kansas regularly experiences disasters presents its own special challenge, as KDEM mitigation staff are often involved in response and recovery operations in addition to mitigation program administration. A new process for receipt of applications for hazard mitigation funding has been utilized since the last update of this plan. The “Notice of Intent” process is working well and helps to focus the applications from local entities.

#### ***Identifying New Mitigation Actions***

The KHMT was presented with the key issues from the Risk Assessment and ideas for new mitigation actions during the March 2018 meeting for the 2018 plan update. The key issues and ideas for new mitigation actions are:

- Consideration has been given to develop a statewide flood inundation map layer for more accurate vulnerability.
- National Levee Database was integrated with FEMA’s levee inventory to create a more comprehensive inventory of levees. However, in 2018 the databases continue to not match

on number of levees. Consider a comprehensive levee review to get an accurate count, and consider a statewide layer for more accurate vulnerability analysis;

- Unregulated levees exist that are not captured in the USACE Levee Safety Program or FEMA Accreditation Process;
- There are 376 Un-mitigated Repetitive Loss Properties in Kansas—significant progress has occurred (133 mitigated properties); between 2013- 2017, seven (7) properties were removed from the RL list using HMGP funds. However, due to flood events and additional 49 properties were added to the list. There are now 376 properties on the Repetitive Loss List.
- 40 Un-mitigated Severe Repetitive Loss Residential Properties;
- Flood Insurance Coverage is less than estimated losses in most cases;
- Western and many east-central counties with increased wildfire risk do not have Community Wildfire Protection Plans;
- Capture Risk Map Resiliency Mitigation Strategy Actions in local/regional hazard mitigation plans;
- Regional plans. Suggest guiding local emergency managers on updating their mitigation actions, to include decreasing the number of overall actions.
- Explore more funding options for mitigation activities

The KHMT was given time to review these key issues and work on their agency’s new mitigation actions. Not all of these key issues and new mitigation action ideas are feasible or priorities in Kansas, but these broad ideas were presented and allowed the KHMT ideas for future priorities as capabilities and funding sources are available.

### ***Evaluating and Prioritizing Mitigation Actions***

As a result of the activities discussed above, the KHMT identified a number of new or revised actions that needed to be evaluated and prioritized. The team followed the FEMA-recommended approach of examining available alternatives and then applying criteria to those alternatives to determine their priority.

To create mitigation actions, the KHMT reviewed the mitigation action categories as:

Local plans and regulations

Structure and infrastructure projects

Natural systems protection

Education and awareness programs

The KHMT is using the low, medium, and high priority method for each action. It was talked through with each organization giving weight to their actions and its level of priority as High, Medium, or Low. The priority levels are provided for each on-going and new mitigation action in **Table 4.10**. Once the organization submitted new actions for review, the KHMT, taking into account feasibility, political will, legal, social, technical, and financial criteria then as a whole decided on the low, medium, or high priority. The Kansas Hazard Mitigation Teams priorities of

flood mitigation and tornado safe rooms were also taken into account. The KHMT reviewed existing capabilities for reducing long-term vulnerability to hazards and reducing the risk to future development. In addition, the team considered the benefits that would result from a mitigation action versus the cost of the action. While the KHMT has previously used the STAPLEE, it was decided that it is not representative of Kansas and how Kansans determine priorities. When money is available for use on projects it is not the STAPLEE score that determines the project – it is the Kansas priorities, available matching funds, and the pulse of the people. Low category overall has a limited reduction on the risk to people and property, the Medium category has more of an impact on people and property but not to the extent that it causes undue hardship. A category of High was assigned to those actions that showed a clear benefit versus cost of an action, while taking into account the state priorities. In all cases, funding and the pulse of the people were taken into account. It is also noteworthy that many of the actions, whether low, medium, or high, can be implemented out of order – depending on fund availability.

#### **4.4.2. 2018 Mitigation Actions**

The 2018 Mitigation Actions are summarized in **Table 4.10** and are the result of the process to identify, evaluate, and prioritize on-going and new mitigation actions. Each includes an Action Title, lead agency, support agencies, priority, status, and goal. The Goal column ties the actions to the strategy by noting the primary corresponding goal. Where actions meet multiple goals these are indicated. Mitigation action implementation worksheets were completed for each action by the responsible agencies. These worksheets include information on the background of each action, responsible agency, supporting agencies, priority, benefits, cost estimate, potential funding source, and timeline.

**Table 4.10. Kansas 2018 Mitigation Actions**

ID	Action	Intent	Status	Responsible Agencies	Rankings & Associations
1	Promote tornado safe rooms in public facilities	To protect the public from the effects of natural hazards, including Tornadoes and High Winds.	On-Going Nineteen (146) Safe Rooms have been constructed over the last 10 year.	<b>Lead:</b> KDEM <b>Support:</b> KDOC, local emergency managers	<b>Priority:</b> High  <b>Goal:</b> 1
2	Mitigate repetitive flood loss and severe repetitive flood loss structures	To remove properties from the RL list means that these properties were mitigated through buy-outs, elevations, etc., in order to help the individuals sustain no losses due to flooding. In turn is enables the NFIP to save on costs which helps the taxpayers.	On-Going Since 2008, Seven (7) RL properties have been removed thru HMGP.	<b>Lead:</b> KDEM <b>Support:</b> KDA	<b>Priority:</b> High  <b>Goal:</b> 1
3	Provide automatic weather stations	To provide real time alerts to NWS office of high wind events; and expand local data collection for wind speed, temperature and precipitation.	In the last 10 years the number of automated stations has increased from 30 to 61. New stations include enhancements such as soil moisture monitoring and 10 meter wind and temperature data. Previously established stations are being upgraded with similar sensors at the rate of approximately 3 per year.	<b>Lead:</b> KSU (KS Mesonet) <b>Support:</b> KWO, NWS, KDOT, USGS	<b>Priority:</b> High  <b>Goal:</b> 1
4	Develop inundation maps for high hazard dams	Inundation maps help dam owners and emergency management authorities identify critical infrastructure and population-at-risk sites that may require protective measures, warnings, and evacuation planning.	On-Going Dam safety officials continue to work with owners to develop maps for their dams. 73 inundation maps were created in 2016 and 2017 as part of contracts from 2015 and 2016.	<b>Lead:</b> KDA <b>Support:</b> KDEM, KWO, dam owners	<b>Priority:</b> High  <b>Goal:</b> 1
5	Continue assisting with development of emergency action plans (EAPs) for high and significant hazard dams	Identifies potential emergency conditions at a dam and specifies action to be followed to minimize loss of life and property damage.	On-Going, dam safety officials work with owners to develop EAPs for their dams. 31 emergency action plans were created in 2016 and 2017 as part of contracts from 2015 and 2016.	<b>Lead:</b> KDA <b>Support:</b> KDEM, KWO, dam owners	<b>Priority:</b> High  <b>Goal:</b> 1

ID	Action	Intent	Status	Responsible Agencies	Rankings & Associations
6	Participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)	To reduce flood risk through better management of floodplains and access to flood insurance.	On-Going, (To date there are 461 participating NFIP communities and 39 CRS participating communities).	<b>Lead:</b> KDA <b>Support:</b> KWO, KDEM	<b>Priority:</b> High  <b>Goal:</b> ,2,1
7	Prioritize and develop floodplain mapping studies	To provide more accurate risk information to facilitate community-based mitigation and strengthen resiliency.	On-Going The mapping studies are done by watershed under RiskMAP, however During the last 5 years, 14 county DFIRM projects have become effective. There are 8 counties with a DFIRM under development and there are 7 counties with effective DFIRM with redevelopment. Approximately 25% of the FIRMS in Kansas have been updated in the past 5 years.	<b>Lead:</b> KDA <b>Support:</b> KWO	<b>Priority:</b> High  <b>Goal:</b> 1
8	Promote hazard mitigation and emergency management training for special needs populations	To reduce risk to life and health by mitigating social vulnerability and improving communication with first responders and vice versus.	On-Going. In 2016-2017 a letter of support to the Child Care Aware of Kansas reinforcing efforts to provide preparedness and recovery to KS Children and families in collaboration with the community-based program. KDHE Preparedness has aligned activities with the EMS-C 5-year strategic plan including increasing community pediatric planning. A targeted assessment of vulnerable populations was completed and published in the 2017 Kansas Response Plan related to certain health and medical vulnerabilities under ESF 8.	<b>Lead:</b> KDHE <b>Support:</b> SRS, KDEM, Governor's Office, TAG, KDA, KDOE	<b>Priority:</b> High  <b>Goal:</b> 4
9	Rehabilitate and repair identified dam deficiencies	Without proper maintenance, repairs, and rehabilitation, a dam may become unable to serve its intended purpose and could	On-going, dam safety officials evaluate dams and identify deficiencies through inspection.	<b>Lead:</b> KDA <b>Support:</b>	<b>Priority:</b> High  <b>Goal:</b> 1

ID	Action	Intent	Status	Responsible Agencies	Rankings & Associations
		become a risk for failure. This poses a threat to public safety.	Since January 1, 2013, the Dam Safety Team has evaluated 288 dams.	KDEM, KWO, dam owners	
10	Improve coordination between the Kansas Water Plan and the Kansas Hazard Mitigation Plan	To provide current and pertinent information in support of mitigation planning and operations.	KWO continues to hold various training and workshops in the areas of drought and earthquakes. Within the past two years, the Governor's conference on Water and the drought workshop in Wichita provided much needed visibility to these hazards. These will continue in the foreseeable future.	<b>Lead:</b> KWO <b>Support:</b> KDHE, KSU, KDEM	<b>Priority:</b> Medium  <b>Goal:</b> 3
11	Identify priority flood issues in river basin sections of revised Kansas Water Plan	Provides recognition of issues so that they can be addressed when resources allow.	Included in Water Plan, updated as needed	<b>Lead:</b> KWO <b>Support:</b> KDEM	<b>Priority:</b> High  <b>Goal:</b> 3
12	Complete Regional Hazard Mitigation Plans	The Regional Mitigation Plans provide continuity across the state and enables the communities, jurisdictions, and counties to work as a group in order to mitigate for hazards to reduce the risk to people and property.	100% writing of the plans is complete. Annual reviews are on-going and in 2019 the regional plan updates will begin.	<b>Lead:</b> KDEM <b>Support:</b> KDA, local jurisdictions	<b>Priority:</b> High  <b>Goal:</b> 2
13	Update and implement the HMGP administrative plan following each federally declared disaster.	To give clear direction on the priorities for the State and an accountability for the program.	Plan was updated & implemented for 8 disaster declarations. 100% complete until next disaster.	<b>Lead:</b> KDEM <b>Support:</b> FEMA	<b>Priority:</b> Medium  <b>Goal:</b> 2
14	<del>Develop local mitigation actions database based on local plans to easily identify and track potential projects</del>	<del>This line item will be deleted in the next plan update. A process is set up for grant applications, and it is a local or jurisdictional call on what projects they wish to complete within the guidelines of the KHMT.</del>	Delete	<b>Lead:</b> KDEM <b>Support:</b> KITO	<b>Priority:</b> Medium  <b>Goal:</b> 3
15	Maintain the system for emergency event and disaster loss tracking	This exists and is a response tool/action, all this has to be accomplished each time we submit for a federally declared disaster in some capacity	100% Complete and is in a maintenance status as disasters are declared.	<b>Lead:</b> KDEM <b>Support:</b> KDHE	<b>Priority:</b> Medium  <b>Goal:</b> 3



ID	Action	Intent	Status	Responsible Agencies	Rankings & Associations
16	Promote the Firewise/Community Wildfire Protection Plan (CWPP)/Fire Master Plan program	To help communities clarify priorities for protection of life and property through collaboration, fuel reduction, and structure ignitability mitigation.	On-Going. The Kansas Forest Service initiates the FireWise conversation when it has training and meetings with local governments, fire departments and with the public.	<b>Lead:</b> KFS <b>Support:</b> KSFMO	<b>Priority:</b> Medium  <b>Goal:</b> 1
17	Conduct mitigation outreach activities to all government agencies and public and private organizations within the State	Outreach is a way to educate all entities on mitigation, and promote mitigation activities and priorities. The - mapping tool allows geographic visualization of activities in the state.	On-Going, KDEM GIS has developed a map for all past/current projects. These products are made available to 100% of the customer base when requested. As future projects are completed they will be added to the map.	<b>Lead:</b> KDEM <b>Support:</b> TAG	<b>Priority:</b> Medium  <b>Goal:</b> 4
18	Continue coordination among state level post-disaster mitigation and recovery efforts	KDEM reaches out during and after each federally declared disaster to assist in current needs and potential projects the affected community would like to apply for	This is done on a continuous basis after each federally declared disaster. It remains on the action list as an on-going endeavor and will continue to be as disasters are declared.	<b>Lead:</b> KDEM <b>Support:</b> KDHE, KDA, rural electric cooperatives, local jurisdictions	<b>Priority:</b> Medium  <b>Goal:</b> 3
19	Coordinate GIS capability improvements for emergency management with the Kansas Statewide GIS Strategic Plan	Coordination with other agencies enables GIS to improve products which help their customer to advocate, initiate, and educate various Kansas jurisdictions, agencies, etc., on projects, results, and actions needed to reduce risks to people and property.	This action is implemented by the GIS staff who are members of the GIS Policy Board, KS Assc of Mappers, KAM Education Committee and on the NG911 GIS Committee. As needs arise, and new products are available, GIS seeks out training opportunities through workshops, one-on-one, and webinars to promote and educate on products. 50% of the annual recurring activities are complete for this year and are on track to finish for the year.	<b>Lead:</b> KDEM <b>Support:</b> All State agencies with GIS Capability	<b>Priority:</b> Medium  <b>Goal:</b> 3

ID	Action	Intent	Status	Responsible Agencies	Rankings & Associations
20	Acquire new state-wide elevation data (two-foot contours)	Supports the development of more accurate flood risk maps to improve development resiliency and facilitate community-based mitigation.	On-Going – From 2013 – 2016 QL3 LiDAR data has been acquired in 16 counties, and QL2 LiDAR data in 23 counties which created a LiDAR-based topographic data set for 100% of the counties in the state of Kansas. In 2017 – 2018, 90 counties upgraded QL2 LiDAR data are in development. 84 of the 2018 counties will have QL2 data (2 <sup>nd</sup> highest quality level possible), and 2 of the 2018 counties (Gray and Ford) will have QL1 data, the highest quality level possible.	<b>Lead:</b> KDA <b>Support:</b> KDEM	<b>Priority:</b> Medium  <b>Goal:</b> 3
21	Provide annual training to support the identification and development of stronger mitigation actions	Supports the development of realistic and specific actions in the mitigation plans that supports the SMART principles.	-Mitigation Actions are a part of the agenda at all 12 regional yearly reviews and during the 5 year cycle updates.	<b>Lead:</b> KDEM <b>Support:</b> KHS	<b>Priority:</b> Medium  <b>Goal:</b> 4
22	Conduct continuity of operations (COOP) planning throughout all interested agencies in state government.	Ensuring state agencies are able to deliver essential functions to mitigate the impact to citizens. Provides stability when facility locations have changed or telework directive has been initiated.	On-Going, The COOP planning committee has 100% participation. While not a mitigation activity, it does mitigate impacts to the citizens in the event of a disaster.	<b>Lead:</b> KDEM <b>Support:</b> TAG	<b>Priority:</b> Medium  <b>Goal:</b> 3
23	Conduct all hazards workshops and exercises that incorporate capabilities.	While mitigation is hard to exercise, the capabilities that are needed to look forward for mitigation are essential for community resilience, etc. This could be done in a workshop setting.	-In 2017 The KHMT/Silver Jackets started funding and assisting in levee overtopping exercises. This is expected to continue in the future. During 2018 the Silver Jackets hosted 2 exercises.	<b>Lead:</b> KDEM <b>Support:</b> All State Agencies	<b>Priority:</b> Medium  <b>Goal:</b> 4
24	Improve KDEM's website with respect to mitigation To include mitigation success story tracking	Enables the public and private communities to address mitigation by seeing actions that can be taken, or have been taken to reduce the risk. Also lets the stakeholders know of	While mitigation is addressed on the website, it is not to the level needed. This action continues to	<b>Lead:</b> KDEM <b>Support:</b> DISC, KITO, KDOC	<b>Priority:</b> Low  <b>Goal:</b> 2, 3

ID	Action	Intent	Status	Responsible Agencies	Rankings & Associations
	and documentation, current information, and links to funding project information.	any funding opportunities available via grants.	need additional work and is about 10% complete.		
25	Maintain the Governor's Drought Response Team and the Governor's Drought Resource Website	Timely information available for planning use of water resources, enacting drought stage water conservation/restrictions, declaring burn bans and other activities to mitigate drought impacts	Team assembled as needed, recommendations to governor throughout drought as defined in Kansas Drought Operations Plan. Website maintained by KSO, updated at least monthly	<b>Lead:</b> KWO <b>Support:</b> KDEM, KDA, KDHE, KSU, KFMO, KFS	<b>Priority: Low</b>  <b>Goal: 3</b>
26	<del>Utilization of Crisis City for mitigation activities</del>	<del>This action is to be removed during the 2018 plan update.</del>	Delete	<b>Lead:</b> KDEM <b>Support:</b> All state agencies, local emergency managers	<b>Priority: Low</b>  <b>Goal: 4</b>
27	Decrease number of overall actions in the Regional Mitigation Plans	Will promote quality over quantity and bring mitigation strategies to more manageable levels and aid in strategic implementation of a more refined strategy in local plans.	New	<b>Lead:</b> KDEM <b>Support:</b> All Local Emergency Managers	<b>Priority: Low</b> <b>Goal: 2</b>
28	Support the Installation, Improvement, and protection of drainage pumps in levee-protected areas.	Drainage pumps help protect people and property by removing floodwater from an area.	New	<b>Lead:</b> KDA <b>Public Works Department</b>	<b>Priority: High</b> <b>Goal: 1</b>
29	Support the improvement and accreditation of community flood control levees.	Levees help protect people and property by preventing floodwater from entering an area.	New	<b>Lead:</b> KDA USACE <b>Public Works Dept.s</b>	<b>Priority: High</b> <b>Goal: 1</b>
30	Support the construction of stormwater detention, retention, and conveyance infrastructure	Flood storage reduces the frequency and severity of inundation. Improved roadway drainage will help prevent the severely dangerous situation of vehicles entering high water.	New	<b>Lead:</b> KDA <b>Public Works Departments</b>	<b>Priority: High</b> <b>Goal: 1</b>
31	Support the calibration of hydrologic and hydraulic modeling to correspond with observed flood events.	Calibration of modeling provides more accurate flood hazard data to communities.	New	<b>Lead:</b> KDA USACE	<b>Priority: High</b> <b>Goal: 3</b>

<b>ID</b>	<b>Action</b>	<b>Intent</b>	<b>Status</b>	<b>Responsible Agencies</b>	<b>Rankings &amp; Associations</b>
32	Increase support for and implementation of higher floodplain management standards beyond the minimum required by the NFIP.	Higher regulatory standards will reduce flood damage and improve flood readiness.	New	Lead: KDA Planning and Zoning Departments	Priority: High Goal: 1, 2
33	Assess benefits from the restoration of flow, habitat, and flood storage in urban waterways.	Flood storage reduces the frequency and severity of inundation.	New	Lead: KDA KDHE City Commissions	Priority: Medium Goal: 1
34	Support the relocation of flood proofing of public works/maintenance facilities.	Relocating the public works maintenance structure would facilitate continuity of operations and improve flood fight resource availability.	New	Lead: KDA Public Works Departments	Priority: Medium Goal: 1
35	Support the development of comprehensive community land use and development plans	Land use and development plans help preserve natural floodplain functions and guide development away from hazardous areas.	New	Lead: KDA Planning and Zoning Departments	Priority: Low Goal: 2

DISC—Division of Information Systems and Communications

KDA—Kansas Department of Agriculture

KDEM—Kansas Division of Emergency Management

KDHE—Kansas Department of Health and Environment

KDOA—Kansas Department of Administration

KDOAg—Kansas Department of Aging

KDOC—Kansas Department of Commerce

KDOE—Kansas State Department of Education

KDOL—Kansas Department of Labor

KDOT—Kansas Department of Transportation

## 4.5 Funding Sources

**Requirement 201.4(3)(iv): [The State mitigation strategy shall include an] identification of current and potential sources of Federal, State, local, or private funding to implement mitigation activities.**

There are a wide variety of mitigation funding opportunities. Currently, the majority of the funding used by Kansas for mitigation activities comes from the federal government. This section discusses the primary sources for mitigation funding, both current and potential.

### 4.5.1. Federal Funding Sources

Since the last update of the Kansas Hazard Mitigation Plan, the State's primary federal source of hazard mitigation funding has been FEMA's Hazard Mitigation Grant Program. Another FEMA Hazard Mitigation Assistance program, which the State has begun pursuing includes the Pre-Disaster Mitigation Program.

In 2012, the Flood Mitigation Assistance Program, Repetitive Flood Claims Program, and Severe Repetitive Loss Program are now consolidated into the **National Flood Mitigation Fund**. These FEMA programs are discussed further in this section.

**More Information:** <http://www.fema.gov/hazard-mitigation-assistance>

#### ***Hazard Mitigation Grant Program***

The Hazard Mitigation Grant Program (HMGP) is a FEMA program. Its purpose is to provide funds to states, territories, Indian tribal governments, and communities to significantly reduce or permanently eliminate future risk to lives and property from natural hazards. HMGP funds projects in accordance with priorities identified in state, tribal, or local hazard mitigation plans, and enables mitigation measures to be implemented during the recovery from a disaster.

HMGP funds can be used for projects to protect either public or private property, as long as the project fits within state and local government mitigation strategies to address areas of risk and complies with program guidelines. Examples of projects include acquiring and relocating structures from hazard-prone areas; retrofitting structures to protect them from floods, high winds, earthquakes, or other natural hazards; constructing certain types of minor and localized flood control projects; and constructing safe rooms inside schools or other buildings in tornado-prone areas.

The State may set aside up to seven percent of the HMGP funds received following a presidential disaster declaration to develop FEMA-approved mitigation plans. The State may also set aside up to five percent of the HMGP funds to be used to fund 5% Initiative Projects.

**Amount:** Federal funding under the HMGP is available following a major disaster declaration if requested by the governor. The amount of an HMGP grant will depend on the costs associated with each individual disaster. Since the Kansas Hazard Mitigation Plan is a standard hazard mitigation plan, Kansas is eligible for 15 percent for amounts not more than \$2 billion, 10 percent for amounts of more than \$2 billion and not more than \$10 billion, and 7.5 percent on amounts more than \$10 billion and not more than \$35.3 billion.

**Eligibility:** HMGP funds are administered by KDEM. Local governments, certain private nonprofit organizations or institutions, and Indian tribes or authorized tribal organizations are eligible to apply to KDEM for assistance as sub-applicants. Individuals and businesses are not eligible to apply to the State, but eligible local governments or private nonprofit organizations may apply on their behalf. KDEM reviews and prioritizes sub-applications and submits the grant application with sub-applications to FEMA for review and approval.

For project grants, sub-applicants must have a FEMA-approved local mitigation plan. All activities submitted for consideration must be consistent with the local mitigation plan as well as the Kansas Hazard Mitigation Plan.

**Cost-Share Requirements:** HMGP funds are provided on a 75 percent federal to 25 percent nonfederal cost share basis. The nonfederal match does not need to be cash; in-kind services and/or materials may be used.

### ***Pre-Disaster Mitigation Program***

The Pre-Disaster Mitigation (PDM) program is a FEMA grant program. Its purpose is to provide funds to states, territories, Indian tribal governments, communities, and universities for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event. Funding these plans and projects reduces overall risks to the population and structures, while also reducing reliance on funding from actual disaster declarations. PDM grants are to be awarded on a competitive national basis.

Project grants are available for voluntary acquisition of real property (i.e., structures and land, where necessary) for open space conversion; relocation of public or private structures; elevation of existing public or private structures to avoid flooding; structural and nonstructural retrofitting of existing public or private structures to meet/exceed applicable building codes; construction of safe rooms for public and private structures; vegetation management (e.g., for wildfire); protective measures for utilities, water and sanitary sewer systems, and infrastructure; storm water management projects; and localized flood control projects, which are designed specifically to protect critical facilities and that do not constitute a section of a larger flood control system.

Planning grants are available for new plan development, plan upgrades, and comprehensive plan reviews and updates.

**Amount:** PDM grants are to be awarded on a competitive basis and without reference to state allocations, quotas, or other formula-based allocation of funds.

**Eligibility:** In Kansas, KDEM serves as the applicant for all PDM grants. State-level agencies, including state institutions (e.g., state hospital or university); federally recognized Indian tribal governments; local governments (including state recognized Indian tribes and authorized Indian tribal organizations); public colleges and universities; and Indian Tribal colleges and universities are eligible to apply to KDEM for assistance as sub-applicants. Private nonprofit organizations and private colleges and universities are not eligible to apply to the state, but an eligible, relevant state agency or local government may apply on their behalf. KDEM reviews and

prioritizes sub-applications and submits the grant application with sub-applications to FEMA for review and approval.

All sub applicants that have been identified through the NFIP as having a Special Flood Hazard Area and that have a Flood Hazard Boundary Map or a Flood Insurance Rate Map must be participating and in good standing in the NFIP.

For project grants, sub-applicants must have a FEMA-approved local mitigation plan. All activities submitted for consideration must be consistent with the local mitigation plan as well as the Kansas Hazard Mitigation Plan.

**Cost-Share Requirements:** PDM grants are provided on a 75 percent federal/25 percent nonfederal cost share basis. Small and impoverished communities may be eligible for up to a 90 percent federal cost-share.

**Requirements:** Recipients of PDM planning grants must produce FEMA-approved hazard mitigation plans.

## **Flood Mitigation Assistance**

The Act (called the Biggert-Waters Flood Insurance Reform Act of 2012, found in H.R. 4348) consolidates the three NFIP funded mitigation programs. Under Hazard Mitigation Assistance the National Flood Mitigation Fund is referred to as Flood Mitigation Assistance. Under the FY18 FMA application period there will be \$160M available, of which 70M is for community flood mitigation projects and advance assistance. The grant is competitive and is for the following priorities:

### 1. Community Advance Assistance and Flood Mitigation Projects – up to \$70,000,000 available

- Advance Assistance – Applicants are eligible to receive up to \$100,000 federal share to develop mitigation strategies and obtain data to prioritize, select, and develop viable community flood mitigation projects.
- b. Community Flood Mitigation Projects – FEMA will select the highest ranked eligible community flood mitigation sub-application from each Applicant up to \$10,000,000 federal share based on final priority scoring criteria (see table below) and that benefit communities with high participation and favorable standing in the NFIP.
  - Eligible project activities include:
    - Infrastructure protective measures
    - Floodwater storage and diversion
    - Utility protective measures
    - Storm-water management
    - Wetland restoration/creation
    - Aquifer storage and recovery
    - Localized flood control to protect critical facility
    - Floodplain and stream restoration
    - Water and sanitary sewer system protective measures

**More Information:**

[http://uscode.house.gov/view.xhtml?req=\(title:42%20section:4104d%20edition:prelim\)](http://uscode.house.gov/view.xhtml?req=(title:42%20section:4104d%20edition:prelim))

**HMGP Post Fire**

What started as a pilot program in 2015 was again funded by the Bipartisan Budget Act (BBA) of 2018 that contains a provision that authorizes FEMA to provide HMGP assistance as a result of a Fire Management Assistance declaration for events from October 1, 2016, through September 30, 2018. The funding amount set aside by the BBA of 2018 is \$425,000 per FMAG disaster declaration. FEMA encourages the mitigation of wildfire and related hazards such as flood or erosion. However, HMGP is available for the risk reduction of any hazard. Funding will be made available to the declared county or counties. The project may be outside of this area as long as the risk reduction benefits the declared county or counties. If funding cannot be used in these areas, then it may be made available statewide. The application period is 6 months from the day of notification.

**More Information:**

<https://www.fema.gov/hazard-mitigation-grant-program-post-fire>

***Hazard Mitigation Funding Under Section 406 (Stafford Act)***

The Robert T. Stafford Disaster Relief and Emergency Assistance Act provide FEMA the authority to fund the restoration of eligible facilities that have sustained damage because of a presidentially declared disaster. Title 44 CFR 206.226 Restoration of Damaged Facilities contains a provision for the consideration of funding additional measures that will enhance a facility's ability to resist similar damage in future events.

In providing discretionary authority for the addition of hazard mitigation measures to permanent work restoration, Congress recognized that during the repair of damaged components of facilities there would be a unique opportunity to prevent recurrence of similar damage from future, similar disaster events. Such measures are in addition to any measures undertaken to comply with applicable codes and standards, although such compliance, itself, could be considered a form of mitigation.

Section 406 hazard mitigation funding and Section 404 hazard mitigation funding are distinct. Section 406 is applied on the parts of the facility that were actually damaged by the disaster and the mitigation measure provides protection from subsequent events. The mitigation work must be cost effective and be reasonably performed as part of the work or measure that will reduce the potential for damage to a facility from a disaster event. Sometimes, a combination of Section 406 and 404 funding may be appropriate, where Section 406 hazard mitigation funding is used to provide protection to the parts of the facility that were damaged and Section 404 hazard mitigation funding is used to provide protection to the undamaged parts of the facility. In these instances, the application for Section 404 hazard mitigation funding must be submitted in a timely manner, consistent with state and local hazard mitigation plans, and approved by the State Hazard Mitigation Officer.



- FEMA may provide discretionary hazard mitigation funding under Section 406 of the Stafford Act. FEMA, grantee and sub grantee's interests in disaster resistance must be balanced with the supplemental nature of disaster assistance and FEMA's obligation for the prudent stewardship of federal disaster funds.
- Only FEMA is authorized to interpret and implement the Stafford Act and regulations issued pursuant to the Stafford Act. Accordingly, only FEMA has the authority to determine which hazard mitigation measures it will fund. The Stafford Act and applicable regulations do not authorize state or local building officials or agencies to determine the amount of hazard mitigation funding FEMA will contribute to a project

**Amount:** Contact the Disaster Assistance Directorate (Public Assistance Division for current Section 406 Funding availability).

**Eligibility:** Section 406 provides discretionary authority to fund mitigation measures in conjunction with the repair of the disaster-damaged facilities. These opportunities usually present themselves during the repair efforts. The mitigation measures must be related to eligible disaster-related damages and must directly reduce the potential of future, similar disaster damages to the eligible facility. Normally, this work is performed on the parts of the facility that were actually damaged by the disaster. In some instances, an eligible mitigation measure may not be an integral part of the damaged facility. FEMA will consider these exceptions on a case-by-case basis.

**Cost-Share Requirements:** Contact the Disaster Assistance Directorate (Public Assistance Division for current cost share requirements).

**Requirements:**

Mitigation measures must be determined to be cost effective. Any one of the following means may be used to determine cost-effectiveness:

Mitigation measures may amount to up to 15 percent of the total eligible cost of the eligible repair work on a particular project.

Certain mitigation measures may be determined cost effective, as long as the mitigation measure does not exceed 100 percent of the eligible cost of the eligible repair work on the project.

For measures that exceed the above costs, the grantee or sub grantee must demonstrate through an acceptable benefit/cost analysis methodology that the measure is cost effective.

If a facility has Section 406 hazard mitigation funding included in the approved scope of work (SOW) and the sub-grantee wishes to restore the facility to its pre-disaster condition and function without the Section 406 hazard mitigation SOW, then the sub-grantee must request a change of SOW prior to completion of the project. Section 406 hazard mitigation funds must be de-obligated when the sub-grantee does not use the funds as approved in the SOW.

FEMA must approve proposed hazard mitigation projects prior to funding. FEMA will evaluate the proposed hazard mitigation projects for cost effectiveness, technical feasibility, and compliance with statutory, and regulatory and executive order requirements. In addition, FEMA will ensure that the proposed hazard mitigation projects do not cause a negative impact to the facility's operation, surrounding areas, or susceptibility to damage from another hazard.

The cost of meeting applicable codes/standards in accordance with 44 CFR 206.226(d) Restoration of damaged facilities, Standards and minimum National Flood Insurance Program requirements are regulatory requirements that are distinct from hazard mitigation. Funding for these costs is considered separately.

When the cost of proposed replacement material for a damaged component is more than the original material, the proposed material must be shown to be cost effective.

There may be no duplication in hazard mitigation funding between Sections 404 and 406. Therefore, the grantee and sub grantee must be able to identify specific hazard mitigation work that will be accomplished with funding through Section 406. Section 404 funding may not duplicate that work, although Section 404 may be added and accomplished on Section 406 facilities. The appropriate split on a project between funds under Sections 404 and 406 is a FEMA decision. Sections 404 and 406 funding cannot be used to meet the non-federal cost share of the other grant.

Funds recommended for mitigation measures may be approved for an improved project if the original facility and its function will be restored and the mitigation work is still needed, is technically feasible, and will be performed as part of the overall project. Facilities eligible for replacement under 44 CFR 206.226(f) Restoration of damaged facilities. Repair vs. replacement are not eligible for mitigation measures.

If mitigation measures are approved for the repair of a disaster-damaged facility and the sub-grantee requests an improved project, which will instead involve the replacement of the facility, on the same site or an alternate site, the cost of the mitigation measures is not eligible.

The cost of mitigation measures approved under Section 406 for the repair of a facility may not be applied toward an Alternate Project

### ***U.S. Army Corps of Engineers***

The U.S. Army Corps of Engineers Silver Jackets Program has provided planning funds for hazard mitigation efforts. Kansas has received 16 Silver Jackets projects. Current projects, totaling over \$300,000, are summarized in the table below (current as of 12/6/2017).

<b>Project</b>	<b>Budget</b>
Repetitive Loss Update	\$75,000
Recurring Flood Area ID and Outreach	\$80,000

High Water Mark Signs	\$60,000
Manhattan Levee Safety	\$41,739
Salina Levee Safety	\$50,000
Florence	\$90,000

A summary of all past projects is below:

1. Wildcat Creek-flood forecast inundation maps, three new gages, a warning light for Scenic Drive, and floodplain management plan having a watershed perspective
2. Emergency Action Plans (EAP) for Watershed Districts-20 EAPs for locations
3. Cross Creek-flood forecast inundation maps
4. Big Blue and Kansas Rivers' Confluence-flood forecast inundation maps and floodplain management plan, including integration of the Manhattan Levee and Tuttle Creek Reservoir
5. Nonstructural Measures for Kansas' Little Apple-nonstructural assessment of buyouts, relocations, home elevations, detailed assistance with public involvement, and general feasibility evaluation of other flood-proofing
6. Missouri River Flood Event Mapping-enhanced unsteady modeling for use collaboratively with NOAA NWS and to improve on efficiency of almost real time mapping (8-hour turn around) for use during future flood events between Rulo, NE and St. Louis on the river
7. Floodplain Leadership Course-a draft curriculum of flood risk management intended for use at the government training institutes managed at councils of government and regional planning councils to help train current and the next generation of flood risk managers in communities
8. Osawatomie Levee Safety Interagency Project table top exercise and risk assessment possibly leading to an EAP
9. Pottawatomie County-floodplain management plan and flood forecast inundation map

Projects currently on-going during the 2018 plan update are as follows:

1. Florence-nonstructural assessment
2. Repetitive Loss Update-quality review of the database of properties at risk of flooding and plan formulation of mitigation measures
3. Recurring Flood Area ID And Outreach-a collaborative effort KHMT co-leads with NOAA NWS to review recent flood events and enhance forecasting abilities to help mitigate those location using a comprehensive and shared database
4. High Water Mark Signs-provides an opportunity for communities to get a sign that KDWR and USACE partner with the Kansas Historical Society, NOAA NWS, and USGS in developing a story that enhances risk communication and directly addresses cognitive bias and public understanding of the risks, using historic photos and high water marks

5. Manhattan Levee Safety-a table top exercise combined with risk communication and enhancing the mitigation measures for the current floodplain management plan and EAP
6. Salina Levee Safety- a table top exercise combined with risk communication and enhancing the mitigation measures for a possible floodplain management plan and EAP

### ***Other Potential Sources of Federal Funding and Technical Assistance***

Additional sources of federal funding and technical assistance, including programs of other federal agencies, such as the U.S. Department of Agriculture, U.S. Department of Housing and Urban Development, U.S. Department of the Interior, U.S. Department of Health and Human Services, U.S. Environmental Protection Agency, and others.

For information about state funding sources, see Section 4.2.3 State Funding Capabilities and Section 4.5.3 Local Funding Sources below.

#### **4.5.2. Local Funding Sources**

Most local governments in Kansas do not have a dedicated funding source for mitigation activities and rely on grant programs to implement actions and projects. Some communities are able to implement mitigation-related projects through their public works and capital improvements budgets. Local match requirements for mitigation planning and project grants are most often met through “soft” match, or in-kind services.

#### **4.5.3. Private Funding Sources**

The State of Kansas does not typically use private funding sources to implement mitigation actions. Public-private partnerships are encouraged at the local level as a method of leveraging funding for local mitigation projects. In the past, some donations have been used for storm shelters and weather transmitters; however there have been no major donors for this program.

#### **4.5.4. FEMA Funding for Mitigation Actions 2004 to 2018**

Kansas received 27 presidential major disaster declarations between 2004 and December 2017. HMGP funding received as a result of these declarations is detailed by disaster declaration with the obligated federal funds and the types of mitigation projects approved by FEMA. In addition, the state received a ceiling amount of \$2,975,056 and management costs of \$145,480.23 for the Fire Declarations FM5170 – FM5176 through the HMGP Post Fire in 2018.

#### **DR-1535 Severe Storms, Flooding, and Tornadoes (June 2004) Obligated Federal Funds \$768,016**

Tornado Safe Rooms at the Holy Cross School in Hutchinson - Approved

Acquisition/Demolition - Five repetitive flood loss properties were removed from the floodplain in Kansas City - Approved

Bridge Protection over the Neosho River – Approved

**DR-1562 Severe Storms, Flooding, and Tornadoes (August 2004) Obligated Federal Funds \$101,250.**

Tornado Safe Rooms in Wichita Elem School - Approved

**DR-1579 Severe Winter Storm, Heavy Rains, and Flooding (January 2005) Obligated Federal Funds \$2,180,964.**

Tornado Safe Rooms—Haysville (five schools), Andover (four schools and one library), Maize (one school), and Wichita (one school) - Approved

**DR-1600 Severe Storms and Flooding (August 2005) Obligated Federal Funds \$178,200.**

USD 259 Tornado Safe Room in School - Approved

**DR-1626 Severe Winter Storm (January 2006) Obligated Federal Funds \$568,616**

1 acquisition/demolition project in Bonner Springs- Approved

1 tornado shelter in Bonner Springs Library - Approved.

**DR-1638 Severe Storms, Tornadoes, and Straight-Line Winds (April 2006). Obligated Federal Funds \$236,876**

1 shelter in school - Approved.

**DR-1675 Ice Storm, December 2006. Obligated Federal Funds – \$33,964,511**

- Mitigation Plan funding for all counties that applied in the state.
- Purchase and Demolition of 11 Properties in Allen County.
- Storm Shelter in Bonner Springs Fire Department.
- Power Line Retro-fitting projects for Flinthills REC, Heartland REC, & Twin Valley REC.
- Purchase and Demolition of 21 properties in Cherokee County.
- Acquisition and Demolition of 6 properties in Coffeyville, KS.
- Dam Breach Inundation Map Study for the Dept. of Agriculture.
- Purchase and Demolition of 11 properties in Erie, KS.
- Tornado Safe Rooms – Erie USD 101, Family Life Center in Riverton, KS, Galesburg USD 101, Maize USD 266, Rainbow United, Inc in Wichita, KS, St Mary's / Derby Schools, USD 505 St. Paul HS, USD 259 Wichita, USD 262 Valley Center.
- Purchase and Demolition of 91 structures in Independence, KS.
- Purchase and Demolition of 116 structures in Iola, KS.
- Purchase and Demolition of 28 residential structures in Montgomery County.
- Management Grant to hire to 2 additional state active duty employees.
- Purchase and Demolition of 28 structures in Neodesha, KS.
- Funds to help with the renewal / update of the State Hazard Mitigation Plan.
- Acquisition and Demolition of 18 properties in Wilson County.

**DR-1699 Greensburg Tornado, May 2007, Obligated Federal Funds \$13,101,869**

- Residential Safe Room program for substantially damaged homes that were in the flood plain in Chapman, KS - Approved
- Coffeyville Medical Center Safe Room - Approval
- Tornado Safe Rooms for Colwich / St Marks USD 267 - Approved
- Tornado Safe Room for Eudora Elementary - Approved
- Tornado Safe Room for Kiowa Hospital - Approved
- Funding for Osborne, Republic, and Woodson Counties Hazard Mitigation Plan - Approved
- Tornado Safe Room application for 16 schools in Wichita, KS - Approved

**DR-1711 Flooding, June 2007. Obligated Federal Funds \$1,037,969**

- Tornado Safe Room for Roseland – Approved
- Tornado Safe Room for Resurrection Catholic School - Approved
- McPherson, Clark, Grant, Morris, and Rooks County Mitigation Plans - All Approved
- Resurrection Catholic School Safe Room, Wichita - Approved
- Wabaunsee, Butler and Finney County Mitigation Plans - Approved
- Tornado Shelters for CPRF at Timbers Apartment Complex, Wichita - Approved

**DR-1741 Severe Winter Storms, December 2007. Obligated Federal Funds \$23,763,376**

- Chapman Middle School Safe Room - Approved
- Chapman High School Safe Room – Approved
- State Mitigation Plan Update – Approved
- David Brewer Elem. Safe Room – Approved
- Anthony Elem. School Safe Room –Approved
- Southwest Elem. Safe Room – Approved
- Leavenworth High Safe Room – Approved
- Basehor-Linwood High Safe Room – Approved
- Camp Alexander of Emporia Safe Room– Approved
- Johnson County Corrections Safe Room– Approved
- Drywood Township Comm. Safe Room – Approved
- Independence USD 446 two Safe Rooms in schools – Approved
- City of Burden, Community Safe Room – Approved
- USD 259, 9 Tornado Safe Rooms in several schools – Approved
- Dry Creek Overflow Detention Facility, Wichita - Denied
- 5% Warning Siren Program – 1.9 Million Fed Share

**DR-1776 Severe Storms and Tornadoes, June 2008. Obligated Federal Funds \$6,161,210**

- USD 225 Fowler Dome Safe Room - Approved
- City of Clearwater Community Safe Room – Approved

- USD 237 Auburn Washburn High School Safe Room, Topeka – Approved
- St Mary Catholic Church Safe Room, Derby – Approved
- Camp Naish Boy Scout Tornado Safe Room, Bonner Springs – Approved
- USD 402 Augusta safe rooms in schools – Approved
- Kearny & Chautauqua County Hazard Mitigation Plans - Approved
- Andover City Hall Safe Room – Approved
- USD 210 Hugoton Safe Room in school – Approved
- USD 361 Anthony & Harper Elem Safe Rooms - Approved
- Weather Radio Rebate Program - Approved

**DR-1808 Flooding, September 2008. Obligated Federal Funds \$442,177**

- USD 437 Auburn Washburn Elem. Safe Room – Approved
- USD 437 Auburn Washburn Wannamaker Safe Room – Denied

**DR-1848 Severe Winter Storms and Record and Near Record Snow (June 24, 2009 and March 26-29, 2009). Obligated Federal Funds \$2,157,698**

- Community Safe Room Herrington – Approved
- USD 320 Central Elem Safe Room – Approved
- Local Hazard Mitigation Plan – Approved
- Dept of Ag, Stafford Safe Room – Approved
- GIS mapping Program – Approved

**DR-1849 Severe Storms, Flooding, Straight-line Winds, and Tornadoes (June 25, 2009). Obligated Federal Funds \$1,600,685**

- USD 402 Robinson Elem Safe Room – Approved
- USD 473 Enterprise & Blue Ridge Elem Safe Rooms – Approved
- USD 259 Pleasant Valley Elem Safe Room – Approved
- SE Education Service Center Safe Room – Approved

**DR-1860 Severe Storms and Flooding (September 30, 2009) Obligated Federal Funds \$479,121**

- USD 376 Sterling High School Safe Room - Approved
- Johnson County Public Works Fleet Building Safe Room – Approved
- Marion County Hazard Mitigation Plan – Approved

**DR-1868 Severe Winter Storm (December 23, 2009) Obligated Federal Funds \$3,606,438**

- USD 259 Elem & Middle School Safe Rooms – Approved
- USD 402 Elem & Middle School Safe Rooms – Approved
- Johnson County Public Works Admin Building Safe Room – Approved

- GIS Mapping Program Electrical Grid for 10 Cities – Approved
- Safe Room Fire Science Training Facility – Approved
- State Hazard Mitigation Plan Update 2013 – Approved
- USD 489 Felten Middle School Safe Room – Approved
- North Central KS Technical College Heavy Equipment Safe Room – Approved

**DR-1885 Severe Winter Storms and Snowstorm (March 9, 2010) Obligated Federal Funds \$1,393,874**

- USD 473 Rural Center Elem School Safe Room – Approved
- DeSoto High School Safe Room – Approved
- Local Hazard Mitigation Plan – Approved
- USD 207 MacArthur Elem Safe Room – Approved
- Cherokee Community Tornado Shelter – Approved
- USD 259 Multiple Elem Safe Rooms –Withdrawn
- GIS Mapping Program – Approved
- Seward County Tornado Siren for City of Liberal – Approved

**DR-1932 Severe Storms, Flooding and Tornadoes (August 10, 2010). Obligated Federal Funds \$518,979**

- Leavenworth Flood Protection Wall – Approved
- Cherokee County Acquisition & Demolition of Private Property – Approved
- USD 259 Chisolm Trail Safe Room – Approved
- KMEA GIS Mapping – Approved
- City of Pittsburg safe room – Approved

**DR-4010 Severe Storms, Straight-line Winds, Tornadoes and Flooding (July 29, 2011). Obligated Federal Funds \$309,535**

- Pratt Community College Outdoor Mass Notification System – Approved
- City of Formoso Tornado Siren – Approved
- Stafford Schools Safe Room – Approved
- Reading Community Safe Room – Approved
- Bishop Seabury Safe Room – Approved

**DR-4035 Flooding (September 23, 2011). Obligated Federal Funds \$514,893**

- Dodge City Community College Safe Room – Approved

**DR-4063 Severe Storms, Tornadoes, Straight-line Winds and Flooding (May 24, 2012). \$726,400**

- USD 260 Derby Safe Room - Approved



**DR-4112 Snowstorm (April 26, 2013). \$140,000**

- City of Moundridge Safe Room.- Approved

**DR-4150 Severe Storms, Tornadoes, Straight-line Winds and Flooding (Oct 22, 2103). \$1,517,800**

- Arma Siren - Approved
- Bronson Siren - Approved
- Columbus Siren - Approved
- Community Health Center SEK – Safe Room - Approved
- Ellsworth Housing – Safe Room - Approved
- USD 247 Weir – Safe Room - Approved
- USD305 Salina – Safe Room - Approved
- USD 379 – Safe Room - Approved
- USD 401 Chase Raymond – Safe Room - Approved

**DR-4230 Severe Storms, Tornadoes, Straight-line Winds and Flooding (Jul 20, 2015). \$1,572,800**

- Bird City – Safe Room - Approved
- Cherokee Co. – Acquisition/demolition - Approved
- Cerebral Palsy Foundation – Safe Room - Approved
- Jefferson Co. – Generator - Approved
- Manhattan – Acquisition/Demolition - Approved
- St. Francis – Safe Room - Approved
- Welda – Safe Room - Approved

**DR-4287 Severe Storms and Flooding (Oct 20, 2016) \$960,588.**

- Clay Center – Safe Room - Approved
- Fowler – Generator, Warning Siren - Approved
- Greeley – Safe Room - Approved
- Kanorado – Safe Room - Approved
- KDWP&T – Warning Siren - Approved
- Meade Co. – Safe Room - Approved

**DR-4304 Sever Winter Storm (February 24, 2017) \$1,270,887.**

- Clay Center – Safe Room - Approved
- Fowler – Generator, Water Supply - Approved
- USD258 Humboldt – Safe Room - Approved
- USD 298 Lincoln – Safe Room - Approved

**DR-4319 Severe Storms, Tornadoes, Straight-line Winds, Flooding (Jun 19, 2017)  
\$5,013,225.**

- Cherokee Co. – Warning Sirens (2 ea) - Pending
- Columbus – Warning Sirens (3 ea) - Pending
- Douglas Co. – Generator - Approved
- Kismet – Safe Room - Approved
- Manhattan – Acquisition/Demolition - Withdrawn
- Mulvane – Drainage Improvement - Pending
- Regional Mitigation Plan Updates – 12 Regions - Approved
- USD249 Frontenac – Safe Room -Pending
- USD 506 Labette Co. – Safe Rooms (6 ea) - Approved
- Veritas School – Safe Room - Pending

**DR-4347 Severe Storms, Straight-line Winds, and Flooding (November 7, 2017)  
\$1,459,920 est.**

- TBD

HMGP money has been available to the State, but not at the levels as in prior years, therefore, Kansas has pursued funding from other FEMA grant programs, such as PDM. PDM funding has been successfully applied for mainly safe rooms for various jurisdictions. The State will continue to monitor the requirements and allocations for these programs, as well as the FMA program, and submit applications as deemed appropriate by the KHMT.

Under FMAG 5170 the state received a ceiling amount of \$2,975,056 and management costs of \$145,480.23 for the Fire Declarations FM5170 – FM5176. All HMGP funds for all federally declared Fire Management Assistance Declarations from FY2017-18 will be combined under FM-5170.