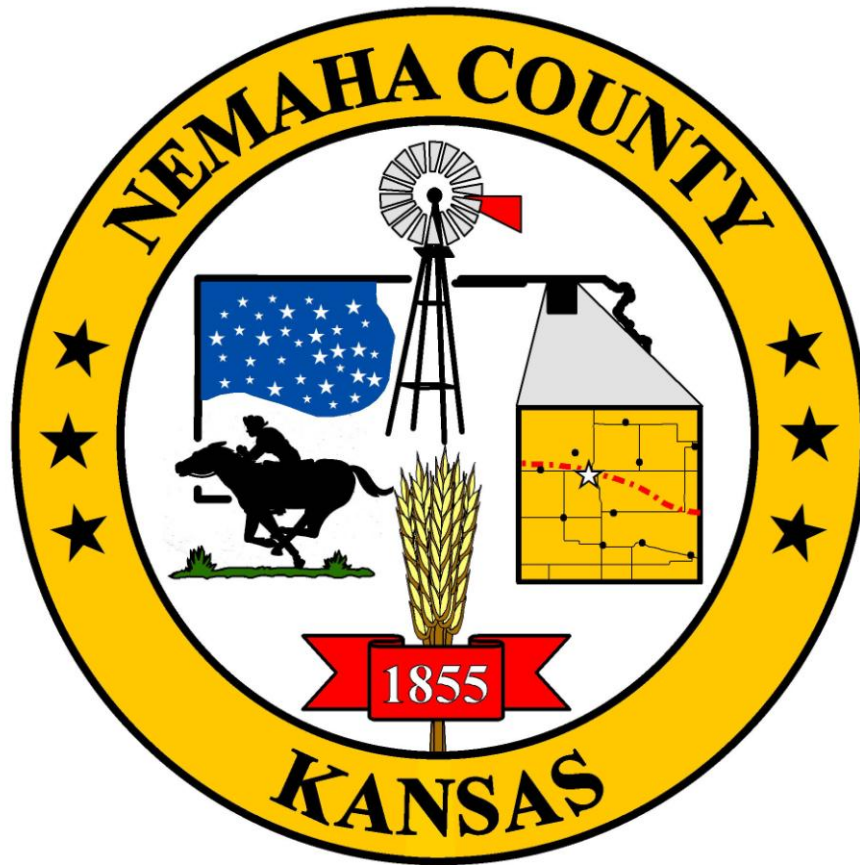


**NEMAHA COUNTY
HAZARD MITIGATION PLAN**



SEPTEMBER 2011

created in cooperation by the

Nemaha County Hazard Mitigation Team

Duryea Consulting

Nemaha County Emergency Management

through the

Hazard Mitigation Grant Program

Project No.: 0029 Nemaha County

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Agricultural Infestation	Hailstorm	Terrorism and Civil Disorder
Dam Failure	Hazardous Materials	Tornado
Drought	Land Subsidence	Utility/Infrastructure Failure
Earthquake	Landslide	Wildfires
Expansive Soils	Lightning	Windstorm
Extreme Temperatures	Major Disease Outbreak	Winter Storm (Snow, Ice, Sleet)
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EXECUTIVE SUMMARY

The Nemaha County Hazard Mitigation Plan is a multi-jurisdictional hazard mitigation plan that addresses hazards to Nemaha County and its jurisdictions and how to limit (mitigate) vulnerability to those hazards. The plan has been a cooperative effort between the Nemaha County Hazard Mitigation Team (NCHMT), Duryea Consulting, and Nemaha County Emergency Management Agency (FEMA) Region 7 and the Kansas Department of Emergency Management (KDEM). The plan has been written in accordance with the Disaster Mitigation Act of 2000 using FEMA's "Local Multi-Hazard Mitigation Planning Guidance" drafted July 1, 2008.

The Nemaha County Hazard Mitigation Plan is designed as a resource for county residents, organizations, agencies, and others interested in learning about the hazards affecting Nemaha County and the plan for mitigating the effects of these hazards through the promotion of awareness, health and safety, continuity of operations, funding of initiatives, and flood prevention. This plan was written based on information provided by knowledgeable county officials, data from the National Climatic Data Center, the State of Kansas, and branches of the Federal Government such as the Federal Emergency Management Agency and the Department of Agriculture.

The Kansas Hazard Mitigation Plan 2007 addresses 22 hazards that affect Kansas. Nemaha County is vulnerable to those same hazards, but in varying degrees. The hazards addressed by this plan include:

Agricultural Infestation	Landslide
Dam Failure	Lightning
Drought	Major Disease Outbreak
Earthquake	Radiological
Expansive Soils	Terrorism and Civil Disorder
Extreme Temperatures	Soil Erosion and Dust
Flooding	Tornado
Fog	Utility/Infrastructure Failure
Hailstorm	Wildfires
Hazardous Materials	Windstorm
Land Subsidence	Winter Storm (Snow, Ice, Sleet)

In writing the Nemaha County Hazard Mitigation Plan some hazard events recognized by the state plan have been renamed for clarity. The category Dam and Levee Failure has been renamed to Dam Failure, Flooding/Flash Flooding has been renamed to Flooding, Terrorism/Agri-terrorism/Civil Disorder has been renamed to Terrorism/Civil Disorder, and Wildfires/Urban has been renamed to Wildfires.

The Nemaha County Hazard Mitigation Plan includes a Risk Assessment that addresses the vulnerability of Nemaha County and its jurisdictions to each of the previously indicated hazards. Each hazard is addressed in the terms of what is vulnerable, jurisdictional variations in vulnerability, identifying which structures/assets are vulnerable, estimating potential losses with an occurrence of the hazard, and what considerations each hazard may have on future development.

The Nemaha County Hazard Mitigation Plan includes mitigation goals, objectives, and actions designed to mitigate (lessen) the vulnerability to the hazards. Goals are general guidelines that explain what is to be achieved. Objectives define implementation steps to attain identified goals. Objectives are specific, measurable, and may have a defined completion date. Actions are even more specific than objectives and further define the steps to attain identified goals.

The Nemaha County Hazard Mitigation Plan includes a plan maintenance process that highlights evaluating the plan, updating the plan, and incorporating the plan into existing documents.

The Nemaha County Hazard Mitigation Plan will be officially adopted by the Nemaha County Commissioners as well as adopted by the mayors and city councils of the cities of Bern, Centralia, Corning, Goff, Oneida, Sabetha, Seneca, Wetmore, and Nemaha County schools as soon as it is approved by the Kansas Division of Emergency Management and the Federal Emergency Management Agency.

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1 INTRODUCTION

The Nemaha County Hazard Mitigation Plan is a multi-jurisdictional local mitigation plan that addresses natural hazards. The plan has been a cooperative effort between the Nemaha County Hazard Mitigation Team (NCHMT), Duryea Consulting, and Nemaha County Emergency Management funded through the Hazard Mitigation Grant Program sponsored by the Federal Emergency Management Agency (FEMA) Region 7 and the Kansas Department of Emergency Management (KDEM). The plan has been written in accordance with FEMA's "Local Multi-Hazard Mitigation Planning Guidance" drafted July 1, 2008.

This chapter introduces the Nemaha County Hazard Mitigation Plan, its purpose, organization, and provides evidence of plan adoption by the county and participating jurisdictions. See "Appendix A: Nemaha County and Participating Jurisdictions" for a map of Nemaha County and the participating jurisdictions within the county.

1.1 Purpose

The purpose of the Nemaha County Hazard Mitigation Plan is to guide hazard mitigation to better protect the people and property of Nemaha County. It demonstrates the county's commitment to reducing risks from natural hazards and serves as a tool to help decision makers direct mitigation activities and resources. The planning process is continual. The NCHMT reviews the plan annually and updates it every five years and as needed based on changes in priorities, disaster events, and funding availability. The next update of the plan is scheduled to begin in January 2014.

The Nemaha County Hazard Mitigation Plan details the natural hazards to which Nemaha County is most vulnerable and the county's commitment to mitigating them. It was developed by the NCHMT pursuant to the requirements of the Disaster Mitigation Act of 2000 (P.L. 106-390) and the implementing regulations set forth by the Interim Final Rule published in the *Federal Register* on February 26, 2002 (44 CFR §201.4). While the act emphasized the need for mitigation plans and more coordinated mitigation planning and implementation efforts, the regulations established the requirements that local hazard mitigation plans must meet in order for a county to be eligible for certain federal disaster assistance and hazard mitigation funding under the Robert T. Stafford Disaster Relief and Emergency Act (P.L. 93-288).

Specifically, the purpose of the Nemaha County Hazard Mitigation Plan and the associated planning process is to:

- Create a countywide vision for a disaster resilient future and define the county's goals for hazard mitigation programming;
- Ensure that all the natural hazards threatening Nemaha County are identified, evaluated, and addressed with a priority reflecting the risk they pose to the county;
- Comply with federal and state requirements as they pertain to mitigation in a coordinated and integrated manner;
- Provide an effective mechanism to plan, budget, monitor, and evaluate mitigation efforts;
- Educate county and local officials, as well as the public, regarding the natural hazards threatening Nemaha County and methods to mitigate them; and
- Establish and define policies to improve mitigation planning and programming at the local level.

1.2 Organization

This plan is organized around FEMA's mitigation planning process and is divided into six chapters with supporting appendices:

Chapter 1 Introduction includes the county's adoption of the plan and assurances that the county will comply with all applicable federal and state statutes and regulations.

Chapter 2 Planning Process explains the planning process, including how the plan was prepared, who was involved, and how it was integrated with other related planning efforts.

Chapter 3 Jurisdictional Profiles contains a summary of community related information for Nemaha County and each participating jurisdiction. Each profile includes jurisdictional information highlighting: community identification, community topography, community demographics, community economics, community industry, community land uses and development trends, community rivers and watersheds, community technical and fiscal resources, and existing community plans and documents.

Chapter 4 Risk Assessment features the risk assessment, which identifies the type and location of hazards that can affect Nemaha County, analyzes the county’s vulnerability to the hazards identified, and serves as the factual basis for the mitigation strategy.

Chapter 5 Mitigation Strategy provides the county’s mitigation blueprint. Specifically, it includes goals and objectives, county and local capabilities, mitigation activities, and funding sources.

Chapter 6 Plan Maintenance Process presents the method the NCHMT uses to monitor, evaluate, and update the plan. It also outlines how the county reviews progress on achieving the goals of the mitigation strategy.

1.3 Adoption by the County

Requirement §201.6(c)(5): [The local hazard mitigation plan shall include] documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).

The Nemaha County Commissioners have adopted the Nemaha County Hazard Mitigation Plan for implementation on September 12, 2011. Adoption by Nemaha County demonstrates the county’s commitment to fulfilling the mitigation goals and objectives outlined in this plan. Adoption also legitimizes this plan and authorizes responsible agencies to execute their responsibilities. A copy of the plan adoption resolution is available in “Appendix B: Nemaha County Plan Adoption”.

1.4 Adoption by Participating Jurisdictions

Requirement §201.6(c)(5): For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.

The following jurisdictions and special districts that meet the FEMA definition of “local government “ participated in the development of this plan and have adopted the Nemaha County Hazard Mitigation Plan for implementation. See “Appendix C: Adoption by Participating Jurisdictions” for copies of Resolution of Adoption.

Table 1.1 Adoption by Participating Jurisdictions

Participants	Date of Adoption	Participants	Date of Adoption
Jurisdictions		Nemaha County Schools	
City of Bern	01/XX/2011	USD 113 – Prairie Hills	01/XX/2011
City of Centralia		USD 115 – Nemaha Central	
City of Corning		USD 380 – Centralia/Frankfort	
City of Goff			
City of Oneida			
City of Sabetha			
City of Seneca			
City of Wetmore			

The plan will be adopted and formal resolutions included for each participating jurisdiction after preliminary approval from the Kansas Department of Emergency Management and the Federal Emergency Management Agency. If the local jurisdiction has not passed a formal resolution, or used some other documentation of adoption, the clerk or city attorney will provide written confirmation that the action meets their community’s legal requirements for official adoption and/or the highest elected official or their designee must submit written proof of the adoption. The signature of one of these officials is required with the explanation or other proof of adoption. Minutes of a council or other meeting during which the plan is adopted may be sufficient if local law allows meeting records to be submitted as documentation of adoption. The clerk of the governing body, or city attorney, **must** provide a copy of the law and a brief, written explanation such as, “in accordance with section ___ of the city code/ordinance, this constitutes formal adoption of the measure,” with an official signature.



2 PLANNING PROCESS

The planning process is as important as the plan itself. Hence, the mitigation planning regulation at 44 CFR Part 201 requires a narrative description of the process used to develop the mitigation plan—a systematic account about how the mitigation plan evolved from the moment the planning team was created and the public participated, to how each section of the plan was developed, to what plans or studies were incorporated into the plan, to how it will be implemented.

This chapter documents the process used to develop this plan (how the plan was prepared) and who was involved in the process (participating jurisdictions and the public). The chapter is divided into three parts:

- Planning Process Guidance
- Documentation of the Planning Process
- Participation among Jurisdictions
- Participation by the Public

2.1 Planning Process Guidance

Requirements §201.6(b) and §201.6(c)(1): An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:

- (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
- (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
- (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

[The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

It was determined from the beginning that this would be a multi-jurisdictional plan with Nemaha County serving as the lead entity. Various local, state, and federal agencies were invited to participate on the NCHMT and assist with the creation of the Nemaha County Hazard Mitigation Plan.

The process established for this planning effort is based on the Disaster Mitigation Act of 2000 planning and update requirements and the Federal Emergency Management Agency's (FEMA) associated guidance for local hazard mitigation plans. The Nemaha County Hazard Mitigation Team followed FEMA's recommended four-step mitigation planning process:

- identify and organize available resources,
- identify hazards and assess risk,
- develop a mitigation strategy and mitigation plan, and
- implement the plan and monitor progress.

Nemaha County's mitigation planning program is designed to coordinate the efforts of the county departments, county organizations, and jurisdictions in mitigation planning and programming on an ongoing basis. Specifically, mitigation planning in Nemaha County is designed to:

- Encourage and facilitate a multi-organizational, multi-jurisdictional approach to mitigation planning, striving to develop interrelated and coordinated plans and programs at both the county and local levels;

- Use a consistent and valid, but practical, technical approach to mitigation plan development to allow countywide comparability of information, regardless of the jurisdiction or level of government;
- Promote a mitigation planning process that prioritizes available time and resources to address the highest risk hazards confronting the communities of Nemaha County and the mitigation goals that have been established at the county and local levels; and
- Recognize that mitigation planning and programming must be an ongoing process that can never be fully completed due to continuous changes in the communities of Nemaha County, in the hazards they confront, as well as the resources and capabilities available to mitigate vulnerabilities to those hazards.

2.2 Documentation of the Planning Process

In October 2007, the Nemaha County Department of Emergency Management initiated the process of creating the Nemaha County Hazard Mitigation Plan. The process began with an application to the Kansas Division of Emergency Management (KDEM) for Hazard Grant Mitigation Funds in contracting a consultant to assist with the development of a local Hazard Mitigation Plan.

In December 2007, the project was awarded and a contractor selected. The contractor was to perform the more labor-intensive tasks, such as updating and improving the risk assessment, facilitating meetings, creating the draft, and keeping the process on track.

In May 2008, letters inviting participation were mailed to the targeted agencies. These letters were addressed to the head of each agency and signed by the county commissioner. The letters requested that a representative from the respective agency attend and participate in the meetings of the NCHMT. Copies of these letters are on file at the courthouse. Representatives designated by agencies were added to a master participants list and informed of meetings and announcements through subsequent emails.

On May 30, 2008, the initial meeting of the Nemaha County Hazard Mitigation Team was held. Agenda items were included:

- role of the NCHMT,
- review of the planning requirements,
- review and comment on risk assessments, and
- review and comment on mitigation capabilities.

The attendees discussed the role of NCHMT and what needs would be required from participants. The participants would gladly help, but their time is limited as most also have other obligations. It was agreed that Duryea Consulting would perform the research, conduct the Hazard Analysis, the jurisdictional assessments, the Vulnerability Assessment, and create a draft multi-jurisdictional mitigation plan to be submitted. Participants would communicate through email or phone and attend bi-annual meetings to review progress and provide direction.

On October 24, 2008 the second meeting of the Nemaha County Hazard Mitigation Team was held. Agenda items included:

- review and comment on goals and objectives,
- review and comment on mitigation actions, and
- review and comment on prioritization of mitigation actions.

The attendees reviewed the Hazard Analysis, the jurisdictional assessments, and the Vulnerability Assessment. Comments and ideas were incorporated into the plans as appropriate. The attendees also developed the mitigation goals, objectives, and actions.

On March 12, 2009 the third meeting of the Nemaha County Hazard Mitigation Team was held. Agenda items included:

- review and comment on mitigation actions,
- review and comment on prioritization of mitigation actions, and
- review and comment on the plan maintenance strategy.

The attendees reviewed the mitigation goals, objectives, and actions. A method for prioritizing the mitigation actions was developed and the strategy for plan maintenance was reviewed with no comments.

On February 1, 2010, the initial draft was completed and submitted to Nemaha County and approved by the Board of Commissioners for review. The plan was submitted for review by the public, neighboring communities, agencies (the Kansas Department of Emergency Management began an informal review), businesses, and other interested parties. The notice for review was published in the Courier Tribune under the County Commission Meeting Minutes with

availability to the plan through a posting on county website and printed copies made available at the county clerk's office. No comments were generated through the review over the 90-day period.

On February 10, 2010 Brad Moeller, Mitigation Planner, presented the results of the informal KDEM review. He had completed a "Local Mitigation Plan Review Crosswalk" and had several suggestions for improvement prior to official submission. The suggestions have been incorporated

On May 28, 2010 the plan was submitted for the formal KDEM review followed by the FEMA review.

On October 20, 2010, the plan was returned by KDEM following completion of the initial FEMA review. The plan was marked "Not Approved" and details of the review were indicated in the "Hazard Mitigation Plan Review Crosswalk – Nemaha County, Kansas". Suggestions were given for areas not meeting FEMA approval.

On July 10, 2011 the suggestions were incorporated and the corrected draft was submitted to KDEM for FEMA review.

On August 26, 2011, the plan was returned by KDEM following completion of the FEMA review. The plan was marked "Approved Pending Adoption" and details of the review were indicated in the "Hazard Mitigation Plan Review Crosswalk – 2nd Review – Nemaha County, Kansas".

On September 12, 2011, the "Nemaha County Hazard Mitigation Plan" was approved and adopted by the Board of County Commissioners of Nemaha County, Kansas through Nemaha County Resolution 2011-8.

On September 13, 2011, the plan was upgraded to "Approved" by FEMA. The approval is for five years and the plan was given an expiration date of September 13, 2016. Prior to the expiration of the plan, Nemaha County is required to review and revise their plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit it for approval in order to continue to be eligible for mitigation project grant funding.

2.3 Participation among Jurisdictions

NCHMT members were asked to:

- attend meetings,
- provide requested data,
- participate in planning team development of new projects and initiatives,
- report status of mitigation projects that their agency was responsible for, and
- review their agencies responsibilities and make changes as necessary.

Table 2.1 "Participation of Agencies in NCHMT Meetings" documents the representation of agencies at each of the three NCHMT public meetings.

Table 2.1 Participation of Agencies in NCHMT Public Meetings

	Solicited	Meeting 1	Meeting 2	Meeting 3
EMERGENCY MANAGEMENT				
NM Co Emergency Manager	X	X	X	X
Nm Co Asst Emergency Manager	X	X	X	X
Public Information Officer		X	X	
COMMUNICATIONS/MEDIA				
NM Co Sheriff's Office – Dispatch	X	X	X	X
Haug Communications	X	X	X	
KMZA Radio	X			
LAW ENFORCEMENT				
NM Co Sheriff's Office – Sheriff	X	X	X	X
City of Seneca - Police	X	X	X	
City of Sabetha - Police	X	X		
EMERGENCY MEDICAL SERVICES				
Seneca EMS	X	X	X	X
Sabetha EMS	X	X		
City of Centralia	X			

	Solicited	Meeting 1	Meeting 2	Meeting 3
HEALTH/MEDICAL				
NM Co Community Health Services	X	X	X	X
Nemaha Valley Community Hospital	X	X	X	X
Sabetha Community Hospital	X	X	X	
FIRE DEPARTMENT				
City of Seneca	X			
City of Goff – RFD 1	X			
City of Corning – RFD2	X			
City of Wetmore – RFD 3	X	X	X	X
City of Bern – RFD 4	X			
City of Sabetha – RFD 5	X			
City of Centralia – RFD 6	X			
PUBLIC UTILITIES				
Nemaha-Marshall Electric COOP	X	X		
Nemaha RWD 3	X	X	X	
TRANSPORTATION				
Bennett Trucking	X			
NM Co Transit	X	X		
INDUSTRY				
SKF Industries	X			
NM Co COOP	X	X	X	
Koch and Company	X			
COUNTY ADMINISTRATION/OFFICES				
NM Co Commissioner	X	X		
NM Co Clerk	X			
NM Co Treasurer	X			
NM Co Appraiser	X			
NM Co Road and Bridge	X			
NM Co Transfer Station	X			
NM Co Extension Service	X	X		
CITY ADMINISTRATION/OFFICES				
City of Seneca	X	X		
City of Sabetha	X	X		
City of Bern	X			
City of Centralia	X			
City of Corning	X			
City of Goff	X			
City of Oneida	X			
City of Wetmore	X	X	X	X
EDUCATION				
USD 113 – Prairie Hills	X	X		
USD 115 – Nemaha Central	X	X	X	X
USD 380 – Centralia/Frankfort	X		X	
Sts Peter & Paul				
NEK-CAP Head Start				
VETERINARIAN				
Seneca Veterinarian Clinic	X			

While not every agency was represented at the planning meetings, many were able to remain involved by individually reviewing and commenting on the draft plan. Credit for plan participation was given to jurisdictions that physically, either through public meetings, individual meetings, email, or phone conversation:

- reviewed and approved information provided for their jurisdictional profile (risk assessment),
- reviewed and approved information provided for their mitigation strategies, and
- reviewed and approved information provided for their plan maintenance strategies.

Nemaha County Jurisdictions

City of Bern – Invited the jurisdiction to attend/participate in the NCHMT Meetings through a mailed letter signed by a county commissioner. No representative present at Meeting 1, Meeting 2, or Meeting 3. Phoned the City Clerk and discussed information for the jurisdictional profile, mitigation strategies, and plan maintenance strategies. No existing

plans were provided for incorporation. The jurisdiction approved the provided information and was granted credit for plan participation.

City of Centralia – Invited the jurisdiction to attend/participate in the NCHMT Meetings through a mailed letter signed by a county commissioner. No representative present at Meeting 1, Meeting 2, or Meeting 3. Phoned the City Clerk and discussed information for the jurisdictional profile, mitigation strategies, and plan maintenance strategies. No existing plans were provided for incorporation. The jurisdiction approved the provided information and was granted credit for plan participation.

City of Corning – Invited the jurisdiction to attend/participate in the NCHMT Meetings through a mailed letter signed by a county commissioner. No representative present at Meeting 1, Meeting 2, or Meeting 3. Phoned the City Clerk and discussed information for the jurisdictional profile, mitigation strategies, and plan maintenance strategies. No existing plans were provided for incorporation. The jurisdiction approved the provided information and was granted credit for plan participation.

City of Goff – Invited the jurisdiction to attend/participate in the NCHMT Meetings through a mailed letter signed by a county commissioner. No representative present at Meeting 1, Meeting 2, or Meeting 3. Phoned the City Clerk and discussed information for the jurisdictional profile, mitigation strategies, and plan maintenance strategies. No existing plans were provided for incorporation. The jurisdiction approved the provided information and was granted credit for plan participation.

City of Oneida – Invited the jurisdiction to attend/participate in the NCHMT Meetings through a mailed letter signed by a county commissioner. No representative present at Meeting 1, Meeting 2, or Meeting 3. Phoned the City Clerk and discussed information for the jurisdictional profile, mitigation strategies, and plan maintenance strategies. No existing plans were provided for incorporation. The jurisdiction approved the provided information and was granted credit for plan participation.

City of Sabetha – Invited the jurisdiction to attend/participate in the NCHMT Meetings through a mailed letter signed by a county commissioner. A representative was present at Meeting 1, but no representative was present at Meeting 2 or Meeting 3. Phoned the City Planning Officer and discussed information for the jurisdictional profile, mitigation strategies, and plan maintenance strategies. The city Zoning Plan was submitted for incorporation. The jurisdiction approved the provided information and was granted credit for plan participation.

City of Seneca – Invited the jurisdiction to attend/participate in the NCHMT Meetings through a mailed letter signed by a county commissioner. A representative was present at Meeting 1, but no representative was present at Meeting 2 or Meeting 3. Phoned the City Administrator and discussed information for the jurisdictional profile, mitigation strategies, and plan maintenance strategies. The city Zoning Plan was submitted for incorporation. The jurisdiction approved the provided information and was granted credit for plan participation.

City of Wetmore – Invited the jurisdiction to attend/participate in the NCHMT Meetings through a mailed letter signed by a county commissioner. A representative was present at Meeting 1, Meeting 2, and Meeting 3. Phoned the City Clerk and discussed information for the jurisdictional profile, mitigation strategies, and plan maintenance strategies. No existing plans were provided for incorporation. The jurisdiction approved the provided information and was granted credit for plan participation.

Nemaha County Schools

USD 113 Prairie Hills - Invited the jurisdiction to attend/participate in the NCHMT Meetings through a mailed letter signed by a county commissioner. A representative was present at Meeting 1, but no representative was present at Meeting 2 or Meeting 3. Phoned the District Superintendent and discussed information for the jurisdictional profile, mitigation strategies, and plan maintenance strategies. No existing plans were provided for incorporation. The jurisdiction approved the provided information and was granted credit for plan participation.

USD 115 Nemaha Central - Invited the jurisdiction to attend/participate in the NCHMT Meetings through a mailed letter signed by a county commissioner. A representative was present at Meeting 1, Meeting 2, and Meeting 3. Phoned the District Superintendent and discussed information for the jurisdictional profile, mitigation strategies, and plan maintenance strategies. No existing plans were provided for incorporation. The jurisdiction approved the provided information and was granted credit for plan participation.

USD 380 Centralia/Frankfort - Invited the jurisdiction to attend/participate in the NCHMT Meetings through a mailed letter signed by a county commissioner. A representative was present at Meeting 2, but no representative was present at Meeting 1 or Meeting 3. Phoned the District Superintendent and discussed information for the jurisdictional profile, mitigation strategies, and plan maintenance strategies. No existing plans were provided for incorporation. The jurisdiction approved the provided information and was granted credit for plan participation.

Sts Peter & Paul – The jurisdiction had not been invited to attend/participate in the NCHMT Meetings. No existing plans were provided for incorporation. The jurisdiction will be included in the next draft of the Plan.

NEK CAP-Head Start - The jurisdiction had not been invited to attend/participate in the NCHMT Meetings. No existing plans were provided for incorporation. The jurisdiction will be included in the next draft of the Plan.

USD 322 Onaga, USD 335 Jackson Heights, and USD 415 Hiawatha have portions of their district within Nemaha County, but have no facilities or infrastructure within Nemaha County, thus they have not been included in the development of the Nemaha County Hazard Mitigation Plan.

Nemaha County Electrical Utilities

Nemaha/Marshal Electric COOP - Invited the jurisdiction to attend/participate in the NCHMT Meetings through a mailed letter signed by a county commissioner. A representative was present at Meeting 1, but no representative was present at Meeting 2 or Meeting 3. Neither the Brown/Atchison Electric COOP nor the Westar Energy Corporation was invited to participate in the NCHMT Meetings. They are considered stakeholders and must apply for individual mitigation activities through Nemaha County. The city electrical departments fall under their individual city jurisdictions and were not invited to participate in the NCHMT Meetings nor included in the development of the Nemaha County Hazard Mitigation Plan.

Nemaha County Water/Wastewater Utilities

Nemaha RWD 3 - Invited the jurisdiction to attend/participate in the NCHMT Meetings through a mailed letter signed by a county commissioner. A representative was present at Meeting 1 and Meeting 2, but no representative was present at Meeting 3. Neither Nemaha RWD 1, Nemaha RWD 2, nor Nemaha RWD 4 were invited to participate in the NCHMT Meetings. They are considered stakeholders and must apply for individual mitigation activities through Nemaha County. The city water and wastewater departments fall under their individual city jurisdictions and were not invited to participate in the NCHMT Meetings nor included in the development of the Nemaha County Hazard Mitigation Plan.

Nemaha County Watershed Districts

The Nemaha County watershed districts are considered participating stakeholders, not jurisdictions, and were not invited to participate in the NCHMT Meetings nor included in the development of the Nemaha County Hazard Mitigation Plan. They are considered stakeholders and must apply for individual mitigation activities through Nemaha County.

Nemaha County Emergency Services

Nemaha County emergency services, EMS and fire departments, are considered participating stakeholders, not jurisdictions, and were not invited to participate in the NCHMT Meetings nor included in the development of the Nemaha County Hazard Mitigation Plan. They are considered stakeholders and must apply for individual mitigation activities through their jurisdictional agencies i.e. city or county.

2.4 Participation by the Public

The public, neighboring communities, agencies, businesses, and other interested parties were given an opportunity to participate during plan development and will be given another opportunity prior to plan adoption.

On February 1, 2010, the initial draft was completed and submitted to Nemaha County and approved by the Board of Commissioners for review. The plan was submitted for review by the public, neighboring communities, agencies (the Kansas Department of Emergency Management began an informal review), businesses, and other interested parties. The notice for review was published in the Courier Tribune under the County Commission Meeting Minutes with availability to the plan through a posting on county website and printed copies made available at the county clerk's office. No comments were generated through the review over the 90-day period.

Another opportunity to participate will be given prior to plan adoption.



3 JURISDICTIONAL PROFILE

3.1 Community Information

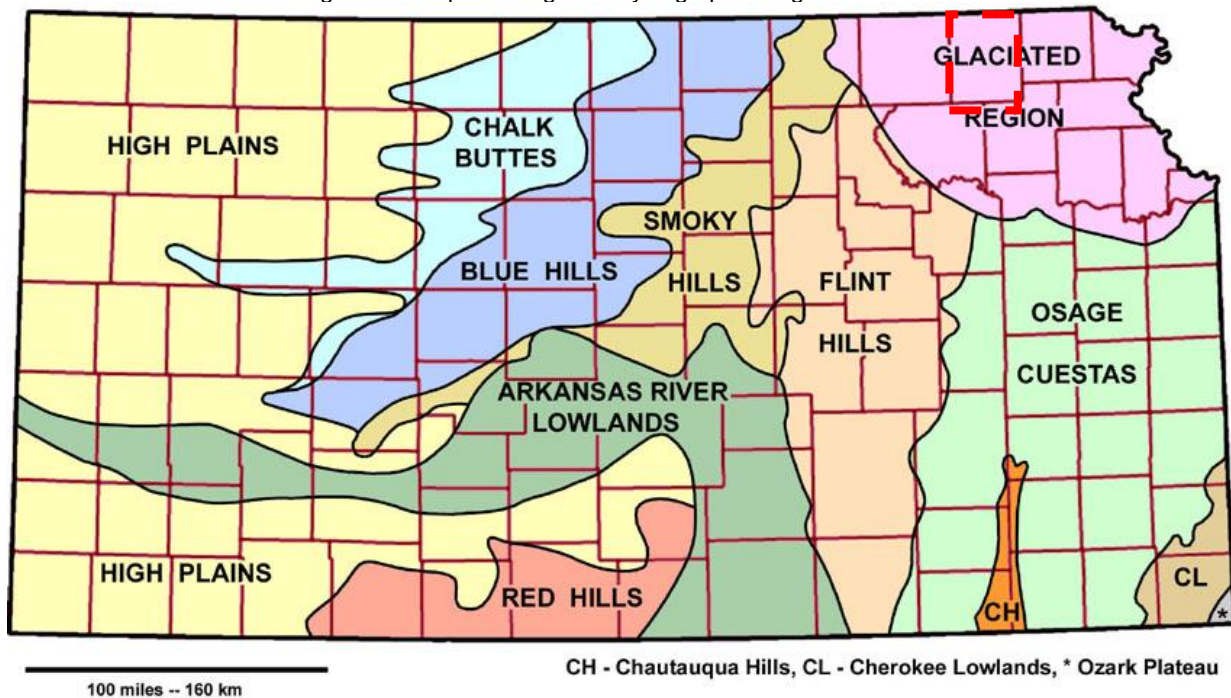
Nemaha County is located in the northeastern part of the State of Kansas, and is bounded on the east by Brown County, on the west by Marshall County, on the south by Pottawatomie and Jackson Counties, and on the north by Richardson and Pawnee Counties in Nebraska. Its boundaries are latitude 40.0000° N to the North, latitude 39.5657° N to the South, longitude 95.7881° W to the East, and longitude 96.2398° W to the West. The FIPS Code for Nemaha County is 20-131.

Nemaha County was founded in 1855 and is named for a river in Nebraska, the Nemaha, whose branches drain the northern half of the county. At 719 square miles total area, approximately 14.9 people per square mile, and a 2000 population of approximately 10,717, Nemaha County is the 41st most populated county in the State of Kansas. Seneca is the county seat, and the largest city is Sabetha. Other cities in Nemaha County are Bern, Centralia, Corning, Goff, Oneida, and Wetmore. See "Appendix A: Nemaha County and Participating Jurisdictions".

3.2 Topography and Soils

Kansas is divided into 13 distinct geographic regions. Each of these regions shows distinct landforms and topography. Each of these regions is also a direct reflection on the underlying geology. The rocks that make up these regions are oldest and lowest in elevation to the southeast, growing progressively higher and younger to the west.

Figure 3.1 Map showing the Physiographic Regions of Kansas



Source: Image by J.S. Aber, <http://archaicgeo.angelfire.com>

Nemaha County is located entirely in the Glaciated Region. Several glaciers, which are huge masses of ice, covered much of the northern United States hundreds of thousands of years ago. The glaciers grew and melted as the climate changed. Most of the glaciers did not reach Kansas, but at least two dipped down into the northeast corner. When the glaciers retreated, rocks and soil that had been carried into the area from the north were left behind. The force of the moving ice was so strong, it broke large quartzite boulders off outcrops in South Dakota, Iowa, and Minnesota and carried them over 200 miles into Kansas. The boulders can still be seen scattered throughout the area today.

The glaciers also left behind a layer of sediment. Finely ground silt, called loess, was sorted and carried by the wind. Thick layers of loess were deposited throughout the area and these were good for farming because they are fertile and contain few rocks. Nemaha County is in the Nebraska and Kansas Loess-Drift Hills major land resource area. The soils generally are deep and gently sloping to moderately steep and have a clayey or loamy subsoil. Source: <http://www.kgs.ku.edu/Physio/physio.html>

3.3 Climate

Average temperatures for January are a high of 36.6F and a low of 15.9F and average temperatures for July are a high of 89.6F and a low of 66.5F. Average annual precipitation is 34.63 inches with an average annual snowfall 28.3 inches. Prevailing winds are generally from the south during the warm months (late spring thru summer) and the north during the cold months (late autumn thru winter).

Elevation ranges from 1,023 to 1,420 feet above sea level, with the highest elevations near the center of the county. Average elevations per city are: Bern at 1,281 ft, Centralia at 1,300 ft, Corning at 1,350 ft, Goff at 1,250 ft, Oneida at 1,213 ft, Sabetha at 1,318 ft, Seneca at 1,131 ft, and Wetmore at 1,150 ft.

3.4 Rivers and Watersheds

The Nemaha River, Black Vermillion River, and the Delaware River, all three of which are permanently flowing streams, and their tributaries drain the majority of Nemaha County. The Nemaha River flows north from Corning through Seneca, the Black Vermillion River west through Centralia, and the Delaware River rises west of Sabetha traversing east out of the county.

In addition to the above-mentioned rivers, there are 26 named-creeks/streams in Nemaha County; Barnes Creek, Burger Creek, Cedar Creek, Craig Creek, Deer Creek, Easley Creek, Fisher Creek, Fourmile Creek, Gibson Creek, Harris Creek, Honey creek, Illinois Creek, Manley Creek, Mulberry Creek, Negro Creek, North Fork Wildcat Creek, Pole Creek, Rattlesnake Creek, Rock Creek, South Fork Nemaha Creek, South Fork Wildcat Creek, Tennessee Creek, Turkey Creek, Webster Creek, Wildcat Creek at Pawnee City, and Wildcat Creek at St. Benedict.

The U.S. EPA has identified five watersheds located within Nemaha County: the Lower Big Blue; the Big Nemaha; the South Fork Big Nemaha; the Middle Kansas; the Delaware. As of 2003, Nemaha County has been identified by the Kansas Department of Agriculture -Division of Water Resources as a priority community for future floodplain mapping. See "Appendix D – Nemaha County Maps" for county river locations and watershed boundaries.

There are three large public lakes located within Nemaha County: the Centralia City Lake, the Sabetha City Lake, and the Nemaha State Fishing Lake and Wildlife Area.

Of the city lakes, the Centralia City Lake is a 400-acre lake two miles south and one mile west of Centralia. The lake facilities include multiple ramps, picnic tables, plenty of camping pads and many sites with electricity. It is listed as a community lake utilized for recreational use including fishing, boating, and camping. The Sabetha City Lake is a 100-acre community lake about five miles west of Sabetha. The lake is utilized for recreational activities including fishing, and hunting is not allowed.

The Nemaha State Fishing Lake and Wildlife Area (formerly the Nemaha State Fishing Lake) was built in 1933, with the Civilian Conservation Corps (C.C.C.) being the primary labor force. The lake property was then donated to the Kansas Forestry, Fish and Game Commission. The lake existed until 1986 when the spillway washed out. The current 705 acres of property contains approximately 60 acres upland grassland, 350 acres of oak/hardwood timber and the balance being riparian/bottomland. In 2002, a 149-acre marsh was completed in the old lakebed by building a 6100 ft. berm adjacent to the Nemaha River. Next to the marsh a 20-acre borrow area, created by the construction of the wetland, provides fishing opportunities for anglers.

3.5 Population and Demographics

According to the US Census, the population of Nemaha County has been in steady decline since 1930. Nemaha County has experienced an estimated average loss in population of 7.9% every decade from a population of 18,342 in 1930 to an estimated population of 10,112 in 2008. In contrast the State of Kansas has experienced steady growth. The state has experienced an average growth in population of approximately 4.8% every decade from a population of 1,880,999 in 1930 to an estimated population of 2,802,134 in 2008. Table 3.1 illustrates the population growth of Nemaha County in relation to the State of Kansas.

Table 3.1 Nemaha County Population Growth

	Nemaha County		Kansas	
	Population	% growth	Population	% growth
Population 2008 est.	10,112	- 6.0	2,802,134	+ 4.1
Population 2000	10,717	+ 2.5	2,688,418	+ 7.8
Population 1990	10,446	- 7.3	2,477,574	+ 4.6
Population 1980	11,211	- 5.5	2,363,679	+ 5.0
Population 1970	11,825	- 9.1	2,246,578	+ 3.0
Population 1960	12,897	-11.2	2,178,611	+12.5
Population 1950	14,341	-16.9	1,905,299	+ 5.5
Population 1940	16,761	- 9.4	1,801,028	- 4.4
Population 1930	18,342	---	1,880,999	---

Source: US Census Bureau

The decline in the population of Nemaha County is also reflected in the decline in the population of its communities. The average decline in population across the county's eight communities from a population in 2000 to an estimated population in 2008 is approximately 6.7%, a slightly faster rate than Nemaha County. The communities of Sabetha, Oneida, and Seneca experienced a slower rate of loss than the county, with Wetmore, Bern, and Corning experiencing a slightly faster rate of loss than the county. The communities of Centralia and Goff experienced losses in population at significant rates of 9.9% and 10.4% respectively. Table 3.2 illustrates the changes in population and number of housing units among the communities in comparison to Nemaha County.

Table 3.2 Nemaha County Community Population Growth and Residential Structures

	Population 1990	Population 2000	Population 2008 est.	% growth	Housing 1990	Housing 2000	% growth
Nemaha County	10,446	10,717	10,112	- 6.0	4,319	4,340	+ 0.5
City of Bern	190	204	192	- 6.3	101	102	+ 1.0
City of Centralia	452	534	486	- 9.9	216	235	+ 8.1
City of Corning	142	170	160	- 6.3	70	70	+ 0.0
City of Goff	156	181	164	-10.4	78	72	- 8.3
City of Oneida	79	70	67	- 4.5	34	36	+ 5.6
City of Sabetha	2,341	2,589	2,482	- 4.3	1,041	1,049	+ 0.8
City of Seneca	2,027	2,122	2,013	- 5.4	944	978	+ 3.5
City of Wetmore	284	362	341	- 6.2	157	156	- 0.6

Source: US Census Bureau

Demographics of the declining populations can be identified through the US Census Bureau. According to 2008 population estimates, the population of Nemaha County is estimated at 10,112 with a population density of 14.1 persons per square mile. The racial composition of the county is 97.8% White, 1.4% Hispanic, 0.7% Black or African American, 0.5% American Indian and Alaska Native, 0.1% Asian, 0.1% Native Hawaiian and Other Pacific Islander, and two or more races 0.8%. The county is 49.9% male and 50.1% female. The median age is 39.1 years with 20.6% of the total population 65 years old or older. In 2008, 9.3% of county residents had income below the poverty level in comparison to 11.3% statewide and 12.4% nationwide.

3.6 Economy and Industry

The total labor force in 2006 for Nemaha County consisted of 4,645 with an average wage of \$25,498 and an unemployment rate of 2.9% in 2006 and 3.7% in 2009. The U.S. Census Bureau identified the employment industries in 2000 as educational, health and social services (23.0%); manufacturing (16.6%); retail trade (10.8%); construction (5.4%); transportation and warehousing, and utilities (7.2%); arts, entertainment, recreation, accommodation and food services (6.2%); professional, scientific, management, administrative, and waste management services (3.5%); other services except public administration (5.1%); finance, insurance, real estate, and rental and leasing (3.4%); agriculture, forestry, fishing and hunting, and mining (11.6%); public administration (3.1%); wholesale trade (2.4%); and information (1.7%).

Nemaha County property was valued at \$78,532,803 in 2006. 37.9% of the total property valuation was classified as residential property, with agricultural land accounting for 25.87% of the total property valuation. Public utilities accounted for 10.37% of the total property valuation, and commercial real estate accounted for 10.23% of the total property valuation.

According to the U.S. Census Bureau, the following valuations and characteristics of residential properties were determined. Table 3.3 highlights the valuation of residential structures in Nemaha County.

Table 3.3 Nemaha County Valuation of Residential Structures 2000

	Housing Units	Median Value	Total Value	Occupied	Vacant	Structure Type
Nemaha County	4,340	\$ 58,200	\$252.6 M	3,959	381	mixed type
City of Bern	102	\$ 34,300	\$ 3.5 M	86	16	mixed type
City of Centralia	235	\$ 44,400	\$ 10.4 M	216	19	mixed type
City of Corning	70	\$ 19,200	\$ 1.3 M	64	6	wood frame
City of Goff	72	\$ 22,900	\$ 1.6 M	60	12	wood frame
City of Oneida	36	\$ 23,800	\$ 0.9M	25	11	wood frame
City of Sabetha	1,049	\$ 55,300	\$ 58.0 M	958	91	mixed type
City of Seneca	978	\$ 71,900	\$ 70.3 M	897	81	mixed type
City of Wetmore	156	\$ 37,500	\$ 5.9 M	139	17	mixed type

Source: US Census Bureau

3.7 Land Uses and Development Trends

The bulk of the land cover in Nemaha County (~94%) is comprised of cropland and grassland. Woodlands cover roughly 5.6% of the county, and they are typically clustered along the many streams and creeks that traverse the county. (The native timber is hickory, oak, hackberry, elm, walnut, cottonwood, locust, sycamore and ash.) The primary water bodies include Sabetha City Lake, Centralia Lake, the South Fork Big Nemaha River, the North Fork Black Vermillion River, and the Delaware River. Residential and commercial/industrial development comprises roughly 0.43% of the land cover, primarily in and around the cities of Seneca and Sabetha.

Table 3.4 Nemaha County Land Use

Land Cover	% Area
Cropland	62.76
Grassland	30.85
Woodland	5.56
Water	0.34
Residential	0.32
Commercial/Industrial	0.11
Urban - Grassland	0.04
Urban - Woodland	0.00
Urban - Water	0.00
Other	0.02

Source: US Applied Remote Sensing Program: LANDSAT Data Interpretation

Most of the communities within Nemaha County are small and without large industrial areas or employers. A majority of the residents are engaged in agriculture or employed in one of the larger cities of Sabetha and Seneca.

3.8 Technical and Fiscal Resources

Nemaha County has a three-member elected commission that is primarily for operations of the county government. The following departments whose management is either elected or appointed assist the county commissioners.

Table 3.5 Nemaha County Administration

	Position
County Commissioners	elected
County Clerk	elected
County Sheriff	elected
County Treasurer	elected
County Attorney	elected
County Register of Deeds	elected
County Appraiser	appointed
County Emergency Manager	appointed
County Extension Agent	appointed
County Health Coordinator	appointed
County Senior Services Director	appointed
County Solid Waste Coordinator	appointed
County Recycling Director	appointed
County Noxious Weed Director	appointed
County Road Foreman	appointed

See “Appendix D – Nemaha County Maps” for the boundaries of the three commissioner districts.

3.9 Existing Plans and Documents

Nemaha County is not zoned. It has no zoning, subdivision, erosion, or stream management ordinances in place. The county does have a floodplain management program in effect. The floodplain management plan was published on January 7, 2008 and the county has adopted floodplain management ordinances and maintains its own elevation certificates. The last delineation date was December 28, 2007. They have been incorporated into the plan. The county is also a member of the Nation Flood Insurance Program, community number 200237. The county joined the program on August 19, 1985 and its current effective map date is August 19, 1985. No jurisdictions within Nemaha County, including Nemaha County, participate in the NFIP Community Rating System Program.

See “Appendix E – Nemaha County Jurisdictional Profiles” for profiles of participating jurisdictions.

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4 RISK ASSESSMENT

Section 201.6(c)(2) of the mitigation planning regulation requires local jurisdictions to provide sufficient hazard and risk information from which to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards. This includes detailed descriptions of all the hazards that could affect the jurisdiction along with an analysis of the jurisdiction's vulnerability to those hazards.

This section includes the following eight (8) subsections as follows:

- Identifying Hazards
- Profiling Hazards
- Assessing Vulnerability: Overview
- Assessing Vulnerability: Identifying Structures
- Assessing Vulnerability: Addressing Repetitive Loss Properties
- Assessing Vulnerability: Estimating Potential Losses
- Assessing Vulnerability: Analyzing Development Trends
- Multi-jurisdictional Risk Assessment

4.1 Identifying Hazards

Requirement §201.6(c)(2)(i): [The risk assessment shall include a] description of the type ... of all natural hazards that can affect the jurisdiction ...

According to FEMA, the definition of a hazard is an act or phenomenon that has the potential to produce harm or other undesirable consequences to a person or thing. The risk assessment identifies and describes the hazards likely to affect Nemaha County. The following hazards have been selected from the "Kansas Hazard Mitigation Plan 2007" and are as follows:

- Agricultural Infestation
- Dam Failure
- Drought
- Earthquake
- Expansive Soils
- Extreme Temperatures
- Flooding
- Fog
- Hailstorm
- Hazardous Materials
- Land Subsidence
- Landslide
- Lightning
- Major Disease Outbreak
- Radiological
- Terrorism and Civil Disorder
- Soil Erosion and Dust
- Tornado
- Utility/Infrastructure Failure
- Wildfires
- Windstorm
- Winter Storm (Snow, Ice, Sleet)

4.2 Profiling Hazards

Requirement §201.6(c)(2)(i): [The risk assessment shall include a] description of the ... location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

The profile of each hazard includes an in-depth description of the hazard as it affects Nemaha County and its jurisdictions. The hazards are profiled under twelve categories:

- Definition
- Probability
- Previous Occurrences
- Geographic Location
- Extent
- Warning Time and Duration
- Calculated Priority Risk Index
- Hazard Summary
- Vulnerability Overview
- Identifying Structures
- Estimating Potential Losses
- Future Development

See "Appendix F – Nemaha County Hazard Profiles" for details.

Hazard Summary

In compliance with the requirement by the Kansas Division of Emergency Management the NCHMT used the methodology from the MitigationPlan.com planning tool to prioritize the hazards. This prioritization was based on a Calculated Priority Risk Index (CPRI) that considers four elements of risk: Probability, Extent (Magnitude/Severity), Warning Time, and Duration. Table 4.1 defines the CPRI and the rankings for each element of risk.

Table 4.1 The CPRI and Element Rankings

Probability	Extent	Warning Time	Duration	CPRI
3 x .45	+ 3 x .30	+ 0 x .15	+ 4 x .10	= 2.65
4 - Highly Likely	4 - Catastrophic	4 - Less Than 6 Hours	4 - More Than 1 Week	Max of 4.00 and a Min of 1.00
3 - Likely	3 - Critical	3 - 6-12 Hours	3 - Less Than 1 Week	
2 - Possible	2 - Limited	2 - 12-24 Hours	2 - Less Than 1 Day	
1 - Unlikely	1 - Negligible	1 - 24+ Hours	1 - Less Than 6 Hours	

Each hazard is assigned Probability, Extent, Warning Time, and Duration ratings based on the criteria detailed in "Appendix L – Nemaha County Hazard Profiles". The CPRI factors these elements of risk into an index, which allows for the prioritization of mitigation activities based on the level of risk.

Based on their CPRI, the hazards are further separated into three categories of planning significance; High (2.30-3.00), Moderate (1.60-2.25), and Low (1.00-1.55). These terms relate to the level of planning significance/analysis for each hazard considered in the risk assessment process. Table 4.2 includes the Risk Ratings, the CPRI, and the Planning Significance for each hazard facing Nemaha County.

Table 4.2 Hazard Profile CPRI Summary with Planning Significance

Hazard	Probability	Extent (Magnitude /Severity)	Warning Time	Duration	Calculated Priority Risk Index	Planning Significance
Tornado	3	3	4	1	2.95	High
Winter Storm (Snow, Ice, Sleet)	4	2	1	3	2.85	High
Windstorm	4	2	2	1	2.80	High
Flooding	4	1	2	3	2.70	High
Hailstorm	4	1	3	1	2.65	High
Extreme Temperatures	3	2	1	3	2.40	High
Lightning	4	1	1	1	2.35	High
Utility/Infrastructure Failure	4	1	1	1	2.35	High
Agricultural Infestation	2	2	1	4	2.05	Moderate
Hazardous Materials	2	2	3	1	2.05	Moderate
Terrorism and Civil Disorder	1	3	2	3	1.95	Moderate
Radiological	1	3	1	4	1.90	Moderate
Drought	2	1	1	4	1.75	Moderate
Major Disease Outbreak	1	2	1	4	1.60	Moderate
Wildfires	1	1	4	1	1.45	Low
Earthquake	1	1	4	1	1.45	Low
Fog	2	1	1	1	1.45	Low
Expansive Soils	1	1	1	4	1.30	Low
Land Subsidence	1	1	1	4	1.30	Low
Dam Failure	1	2	1	1	1.30	Low
Landslide	1	1	1	2	1.10	Low
Soil Erosion and Dust	1	1	1	2	1.10	Low

The Probability, Magnitude, Warning Time, and Duration levels were determined by the NCHMT.

The following Table 4.3 is a summary of the Calculated Priority Risk Index for each hazard facing Nemaha County as well as the related indexes from the Kansas Hazard Mitigation Plan 2007 and the Hazard Analysis conducted by E-Fm in 2006 for comparison.

Table 4.3 Related Risk Indexes

Hazard	E-Fm Consulting 2006**	Kansas Plan 2007*	Nemaha County 2010
Tornado	2.41	3.40	2.95
Winter Storm (Snow, Ice, Sleet)	3.24	3.30	2.85
Windstorm	0.90	3.20	2.80
Flooding	1.00	3.30	2.70
Hailstorm	12.28	2.80	2.65
Extreme Temperatures	Not Specified	2.40	2.40
Lightning	0.23	2.50	2.35
Utility/Infrastructure Failure	Not Specified	2.85	2.35
Agricultural Infestation	Not Specified	2.50	2.05
Hazardous Materials	Not Specified	2.90	2.05
Terrorism and Civil Disorder	Not Specified	2.65	1.95
Radiological	Not Specified	1.95	1.90
Drought	0.46	2.80	1.75
Major Disease Outbreak	Not Specified	2.65	1.60
Wildfires	10.71	3.20	1.45
Earthquake	0.68	1.75	1.45
Fog	0.10	1.60	1.45
Expansive Soils	Not Specified	2.20	1.30
Land Subsidence	Not Specified	2.65	1.30
Dam Failure	Not Specified	2.35	1.30
Landslide	Not Specified	2.20	1.10
Soil Erosion and Dust	Not Specified	2.20	1.10

*The Kansas Hazard Mitigation Plan Rating is the Calculated Priority Risk Index created by the combined sum of the weighted rankings for Probability, Magnitude/Severity, Warning Time, and Duration.

**The E-Fm Rating is the Risk Rating created by the combined sum of the Magnitude Severity Rating, the Death Severity Rating, the Injury Severity Rating, the Property Damage Severity Rating, and the Crop Damage Severity Rating multiplied by the Likelihood of Occurrence.

The top five hazards ranked by the CPRI are Tornado (2.95), Winter Storm (2.85), Windstorm (2.80), Flooding (2.70), and Hailstorm (2.65). The ranking is similar to that of the Kansas Hazard Mitigation Plan 2007.

The following Table 4.4 is a summary of the Kansas Presidential Disaster Declarations since May 1955. Of the ten declarations, flooding was included in eight declarations, severe storms was included in seven declarations, tornados was included in four declarations, and severe winter storms were the 2 most recent declarations. Notice that the top four hazards ranked by the county are tornado, flooding, winter storm, and windstorm.

Table 4.4 Presidential Declarations including Nemaha County

Declaration Date	Declaration Number	Description	Counties	Constant 2006 \$'s
11/06/1958	88	Flooding	3	\$ 830,839
07/18/1967	229	Flooding, Severe Storms, Tornados	27	\$ 5,031,351
05/02/1973	378	Flooding, Severe Storms	64	\$ 8,829,200
09/28/1973	403	Flooding, Severe Storms, Tornados	64	\$ 18,851,282
09/20/1977	539	Flooding, Severe Storms	10	\$ 13,052,810
06/22/1984	714	Flooding, Severe Storms, Tornados	6	\$ 9,565,631
07/22/1993	1000	Flooding, Severe Storms	57	\$ 137,038,990
05/06/2007	1699	Flooding, Severe Storms, Tornados	42	\$ 65,979,498
12/12/2007	3282	Severe Winter Storms	105	
02/01/2008	1741	Severe Winter Storms	65	

Kansas Presidential Declarations May 1955 –December 2009 including Nemaha County

In order to focus on the most critical hazards, those assigned a level of high or moderate significance were given more attention in the remainder of this analysis (e.g., quantitative analysis or loss estimation), while those with a low planning significance were addressed in a general manner.

4.3 Assessing Vulnerability: Overview

Requirement §201.6(c)(2)(ii): [The risk assessment shall include a] description of the jurisdiction’s vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.

The vulnerability assessment further defines populations, buildings, critical facilities, and other community assets at risk. The vulnerability assessment followed the methodology described in the FEMA publication “Understanding Your Risks – Identifying Hazards and Estimating Losses”.

The vulnerability assessment was conducted based on the best available data and the significance of the hazard. Data to support the vulnerability assessment was collected from various sources such as:

- Nemaha County GIS data (hazards, base layers, and assessor’s data)
- Kansas GIS datasets created by state and federal agencies
- Existing plans and reports
- The Kansas Hazard Mitigation Plan 2007
- Interviews with NCHMT members and other stakeholders

The vulnerability assessment describes the assets at risk in Nemaha County, including the exposure of critical facilities and infrastructure, potential dollar losses to those structures, the impact of development trends, identification of repetitive loss properties, and a statement on the multi-jurisdictional nature of the vulnerability assessment. See “Appendix F – Nemaha County Hazard Profiles” for details on vulnerability by specific hazard.

4.4 Assessing Vulnerability: Identifying Structures

Requirement §201.6(c)(2)(ii)(A): The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas

An essential component of the Nemaha County Hazard Mitigation Plan is the identification of Nemaha County’s critical facilities. The objective of the critical facilities inventory is to maintain information on buildings and support infrastructure that are vital to the response and recovery of a community from a disaster. While it is important to reduce or eliminate risks to various sites throughout Nemaha County, there are several types of structures that are more important to protect because damage to these critical facilities can impact the delivery of vital services, can cause greater damages to other sectors of the county, or can put special populations at risk.

According to FEMA’s HAZUS-MH loss estimation software, critical facilities/assets can be divided into three categories. Essential facilities are those that if damaged would have devastating impacts on disaster response and recovery. High potential loss facilities are those that would have a high loss or impact on the community. Transportation and lifeline facilities are the third category of critical assets. Table 4.5 highlights the types of facilities/asset found in each category.

Table 4.5 Categories of Critical Structures Assets

Essential Facilities	High Potential Loss Facilities	Transportation and Lifelines
Hospitals	Power plants	Highways and bridges
Other medical facilities	Dams and levees	Railroads and facilities
Police stations	Military installations	Airports
Fire stations	Hazardous materials sites	Water treatment facilities
Emergency ops centers	Schools	Natural gas facilities
	Shelters	Oil pipelines
	Day care centers	Communications facilities
	Nursing homes	

For mitigation planning purposes, the critical facilities will be further classified according to the following categories and numbered priority scale:

LEVEL 1 Facilities must not lose operational capability, such as County Emergency Operations Center (EOC), and Communications (i.e., electrical transformers, telephone-switching stations).

LEVEL 2 Facilities must be operational within 24 hours following event, such as Hospitals, Fire stations, Police station, Major roads and bridges, Major government buildings, Emergency shelters, and Response staging areas.

LEVEL 3 Facilities must be operational within 72 hours following event, such as Electrical utilities, Sewage treatment plants, Water treatment plants and pumping stations, Schools, Day care centers, Senior care facilities, Hazardous material storage areas, Disaster Field Office I Disaster Recovery Center, and Transportation systems (i.e. fuel supply, airport, ferry terminal).

Table 4.6 highlights the primary critical facilities/assets located within Nemaha County. Each description includes: the facility name, the type of facility, location of the facility, the facility's jurisdiction, the facility priority level, and the facility replacement cost.

Table 4.6 Nemaha County Critical Facilities

	Facility Name	Facility Type	Location	Jurisdiction	Priority	Replacement Cost
1	NM Co Sheriff's Office	County EOC, Communications LE Center	Seneca, KS	Nemaha Co	Level 1	\$ 846,110
2	NV Community Hospital	Hospital	Seneca, KS	Nemaha Co	Level 2	\$ 4,115,010
3	Sabetha Commtly Hospital	Hospital	Sabetha, KS	Nemaha Co	Level 2	\$ 13,858,750
4	Seneca EMS	EMS Station	Seneca, KS	Nemaha Co	Level 2	\$ 693,600
5	Sabetha EMS	EMS Station	Sabetha, KS	Nemaha Co	Level 2	part of 11
6	Centralia EMS	EMS Station	Centralia, KS	Centralia	Level 2	\$ 60,210
7	Bern RFD 4	Fire Station	Bern, KS	Nemaha Co	Level 2	\$ 50,690
8	Centralia RFD 6	Fire Station	Centralia, KS	Nemaha Co	Level 2	\$ 222,890
9	Corning RFD 2	Fire Station	Corning, KS	Nemaha Co	Level 2	\$ 161,650
10	Goff RFD 1	Fire Station	Goff, KS	Nemaha Co	Level 2	\$ 30,470
11	Sabetha RFD 5	Fire Station	Sabetha, KS	Nemaha Co	Level 2	\$ 1,699,500
12	Seneca Fire Dept	Fire Station	Seneca, KS	Nemaha Co	Level 2	part of 23
13	Wetmore RFD 3	Fire Station	Wetmore, KS	Nemaha Co	Level 2	\$ 35,940
14	Sabetha Police	LE Center	Sabetha, KS	Sabetha	Level 2	part of 22
15	Seneca Police	LE Center	Seneca, KS	Seneca	Level 2	part of 1
16	NM Co Courthouse	Govt Center	Seneca, KS	Nemaha Co	Level 2	\$ 1,490,040
17	Bern City Hall	City Hall	Bern, KS	Bern	Level 2	\$ 124,000
18	Centralia City Hall	City Hall	Centralia, KS	Centralia	Level 2	\$ 460,940
19	Corning City Hall	City Hall	Corning, KS	Corning	Level 2	\$ 745,480
20	Goff City Hall	City Hall	Goff, KS	Goff	Level 2	\$ 367,730
21	Oneida City Hall	City Hall	Oneida, KS	Oneida	Level 2	\$ 247,730
22	Sabetha City Hall	City Hall	Sabetha, KS	Sabetha	Level 2	\$ 1,046,590
23	Seneca City Hall	City Hall	Seneca, KS	Seneca	Level 2	\$ 1,409,940
24	Wetmore City Hall	City Hall	Wetmore, KS	Wetmore	Level 2	---
25	NM Co Shop	Road & Bridge Staging Area	Seneca, KS	Nemaha Co	Level 2	\$ 345,350
26	Sabetha City Shop	Road & Bridge	Sabetha, KS	Sabetha	Level 2	part of 3
27	Seneca City Shop	Road & Bridge	Seneca, KS	Seneca	Level 2	\$ 247,870
28	Nemaha Marshal Electric	Elect Distribution	Axtell, KS	Nemaha Co	Level 3	
29	Brown-Atchison Electric	Elect Distribution	Hiawatha, KS	Nemaha Co	Level 3	
30	Westar Energy	Elect Distribution	Topeka, KS	Nemaha Co	Level 3	
31	Sabetha Electric	Elect Distribution	Sabetha, KS	Sabetha	Level 3	
32	Seneca Electric	Elect Distribution	Seneca, KS	Seneca	Level 3	
33	Nemaha RWD 1	Water Distribution	Bern, KS	Nemaha Co	Level 3	
34	Nemaha RWD 2	Water Distribution	Baileyville, KS	Nemaha Co	Level 3	
35	Nemaha RWD 3	Water Distribution	Seneca, KS	Nemaha Co	Level 3	
36	Nemaha RWD 4	Water Distribution	Wetmore, KS	Nemaha Co	Level 3	
37	Brown RWD 2	Water Distribution	Hiawatha, KS	Nemaha Co	Level 3	
38	Pottawatomie RWD 3	Water Distribution	Onaga, KS	Nemaha Co	Level 3	

According to the U.S. Census Bureau, the following valuations and characteristics of residential properties were determined. Table 4.7 highlights the valuation of residential structures in Nemaha County.

Table 4.7 Nemaha County Valuation of Residential Structures 2000

	Housing Units	Median Value	Total Value	Occupied	Vacant	Structure Type
Nemaha County	4,340	\$ 58,200	\$252.6 M	3,959	381	mixed type
City of Bern	102	\$ 34,300	\$ 3.5 M	86	16	mixed type
City of Centralia	235	\$ 44,400	\$ 10.4 M	216	19	mixed type
City of Corning	70	\$ 19,200	\$ 1.3 M	64	6	wood frame
City of Goff	72	\$ 22,900	\$ 1.6 M	60	12	wood frame
City of Oneida	36	\$ 23,800	\$ 0.9M	25	11	wood frame
City of Sabetha	1,049	\$ 55,300	\$ 58.0 M	958	91	mixed type
City of Seneca	978	\$ 71,900	\$ 70.3 M	897	81	mixed type
City of Wetmore	156	\$ 37,500	\$ 5.9 M	139	17	mixed type

Source: US Census Bureau

4.6 Assessing Vulnerability: Analyzing Development Trends

Requirement §201.6(c)(2)(ii)(C): [The plan should describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

A general overview of land uses and types of development occurring within Nemaha County and each jurisdiction is included in the Plan. This overview includes existing land uses and any anticipated future/proposed land uses, including anticipated new development.

The bulk of the land cover in the county, approximately 94%, is comprised of cropland and grassland. Woodlands typically clustered along the many streams and creeks that traverse the county, cover roughly 5.6% of the county. Residential and commercial/industrial development, primarily in and around the cities of Seneca and Sabetha, comprises roughly 0.43% of land cover.

Table 4.8 Nemaha County Land Use

Land Cover	% Area
Cropland	62.76
Grassland	30.85
Woodland	5.56
Water	0.34
Residential	0.32
Commercial/Industrial	0.11
Urban - Grassland	0.04
Urban – Woodland	0.00
Urban – Water	0.00
Other	0.02

Source: US Applied Remote Sensing Program: LANDSAT Data Interpretation

The decline in the population of Nemaha County is reflected in the decline in the population of its communities. The average decline in population across the county's eight communities from a population in 2000 to an estimated population in 2008 is approximately 6.7%, a slightly faster rate than Nemaha County. The communities of Sabetha, Oneida, and Seneca experienced an slower rate of loss than the county, with Wetmore, Bern, and Corning experiencing a slightly faster rate of loss than the county. The communities of Centralia and Goff experienced losses in population at significant rates of 9.9% and 10.4% respectively. Table 4.9 illustrates the changes in population and number of housing units among the communities in comparison to Nemaha County.

Table 4.9 Nemaha County Community Population Growth and Residential Structures

	Population 1990	Population 2000	Population 2008 est.	% growth	Housing 1990	Housing 2000	% growth
Nemaha County	10,446	10,717	10,112	- 6.0	4,319	4,340	+ 0.5
City of Bern	190	204	192	- 6.3	101	102	+ 1.0
City of Centralia	452	534	486	- 9.9	216	235	+ 8.1
City of Corning	142	170	160	- 6.3	70	70	+ 0.0
City of Goff	156	181	164	-10.4	78	72	- 8.3
City of Oneida	79	70	67	- 4.5	34	36	+ 5.6
City of Sabetha	2,341	2,589	2,482	- 4.3	1,041	1,049	+ 0.8
City of Seneca	2,027	2,122	2,013	- 5.4	944	978	+ 3.5
City of Wetmore	284	362	341	- 6.2	157	156	- 0.6

Source: US Census Bureau

See “Appendix E – Nemaha County Jurisdictional Profiles” for more on development trends.

4.7 Assessing Vulnerability: Addressing Repetitive Loss Properties

Requirement §201.6(c)(2)(ii): [The risk assessment in all] plans approved after October 1, 2008 must also address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged by floods.

Repetitive loss properties are those for which two or more losses of at least \$1,000 each have been paid under the National Flood Insurance Program (NFIP) within any 10-year period since 1978. Local governments may obtain information on repetitive loss properties within their jurisdiction by contacting their State NFIP Coordinator. Use of flood insurance claim and disaster assistance information is subject to The Privacy Act of 1974, as amended, which prohibits public release of the names of policy holders or recipients of financial assistance and the amount of the claim payment or assistance. However, maps showing *areas* where claims have been paid can be made public. The data *should* be used for planning purposes and can be very helpful in identifying problem areas that may not be apparent on a floodplain or drainage map.

Nemaha County has no residential, commercial or industrial repetitive loss properties located in identified flood hazard areas.

4.8 Multi-jurisdictional Risk Assessment

Requirement §201.6(c)(2)(iii): For multi-jurisdictional plans, the risk assessment must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.

This plan presents information for Nemaha County as a whole, but where hazards and associated losses occur in only part of the County, this information is attributed to the particular jurisdiction in which they occur.

See “Appendix F – Nemaha County Hazard Profiles” for details.



5 MITIGATION STRATEGY

Section 201.6(c)(3) of the mitigation planning regulation requires jurisdictions to develop a mitigation strategy. The mitigation strategy serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy includes the development of goals, objectives, and prioritized mitigation actions.

Goals are general guidelines that explain what is to be achieved. They are broad policy statements and are usually long-term and represent global visions. **Objectives** define implementation steps to attain identified goals. Unlike goals, objectives are specific, measurable, and may have a defined completion date. **Actions** are even more specific than objectives and further define the steps to attain identified goals.

This section includes the following five (5) subsections:

- Hazard Mitigation Goals, Objectives, and Actions
- Analysis of Hazard Mitigation Actions
- Prioritization and Implementation of Hazard Mitigation Actions
- Identification of Multi-jurisdictional Hazard Mitigation Actions
- Implementation of the National Flood Insurance Program (NFIP)

5.1 Hazard Mitigation Goals, Objectives, and Actions

Requirement §201.6(c)(3)(i): [The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

The county's hazard reduction goals, as described in the plan, along with the corresponding objectives, guide the development and implementation of mitigation actions. This section lists the goals, objectives, and corresponding actions intended to reduce or avoid the effects of the profiled hazards addressed in the risk assessment. Each goal, objective, and action was presented, discussed, and a general consensus reached among the NCHMT members.

Table 5.1 Hazard Mitigation Goals, Objectives, and Actions

Goal	Objective	Action
1 Awareness		
Assure that the residents of Nemaha County understand the hazards threatening their respective jurisdictions and the techniques they can use to minimize vulnerability to those hazards.	1 To provide education programs for the citizens of Nemaha County regarding threats faced from natural hazards and the ways and means to mitigate them.	1 Establish an annual Spring Severe Weather Week.
		2 Conduct training and public outreach to Nemaha county citizens, businesses and local government regarding ways to protect against and mitigate hazards.
		3 Allow the public to examine the Nemaha County Hazard Mitigation Plan and give written comment on concerns, changes or suggestions.
2 Health and Safety		
The health, safety and welfare of the county's residents and visitors will not be threatened by disasters.	1 To ensure adequate systems for notifying the public at risk and providing emergency instruction during a disaster are available in all identified hazard areas.	1 Assure that all citizens are equipped with NOAA Weather Radios
		2 Install outdoor emergency warning systems that allow for voice communications

3 Continuity of Operations		
Nemaha County will have the capability to initiate and sustain emergency response and continuity of local government operations in the county and its local jurisdictions during and after a disaster.	1: To have all buildings and facilities used for the operation of government and emergency services retrofitted or relocated from hazard areas in order to withstand the impacts of disasters.	1 A study will be conducted to ascertain the vulnerability to hazards affecting government and emergency services structures and facilities, and how these can be mitigated.
4 Funding of Initiatives		
Nemaha County will promote and pursue funding for initiatives to protect citizens and structures.	1 To promote the construction of Storm Safe Rooms in Nemaha County schools.	1 Act as a sub-grantee for the Hazard Mitigation Grant Program to assist in constructing Storm Safe Rooms in Nemaha County schools.
	2 To identify structures and facilities located within the 100-year floodplain, in order to mitigate the effects of flooding.	1 Utilize the Hazard Mitigation Grant Program and other funding means, Nemaha County and its local jurisdictions will implement a buy-out program to demolish or remove structures from hazardous areas.
5 Flood Prevention		
Flooding will not affect the citizens of Nemaha County.	1 To prevent and protect against the effects of flooding upon all citizens of Nemaha County.	1 Review or develop and promote plans and ordinances for restrictions to construction in flood hazard areas.
		2 Continue participation for communities already in National Flood Insurance Program. Promote participation for communities not in the program.

The Nemaha County Hazard Mitigation Team believes that the preceding goals and objectives are achievable for all jurisdictions as indicated. The team also believes that future goals can then be built on the foundation of these, once they have been attained. The citizens of Nemaha County and its jurisdiction are ready and willing to join together to make this work in an effort to create a virtually hazard resistant and sustainable community.

5.2 Analysis of Hazard Mitigation Actions

Requirement §201.6(c)(3)(ii): [The mitigation strategy shall include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

Mitigation actions form the fundamental mechanism for the implementation of the mitigation plan. Actions are developed by sponsoring organizations and evaluated by the NCHMT. Under the evaluation process, each proposed mitigation action is reviewed by the NCHMT. The purpose of this review is to ensure that the proposed action:

- is consistent with the goals and objectives of the plan,
- addresses identified vulnerabilities of the community
- does not conflict with other proposed actions,
- does not cause adverse affects in another jurisdiction,
- is based on an adequate level of technical analysis,
- includes only assumptions that are reasonable and logical,
- and is evaluated using FEMA’s STAPLEE method (see “Appendix G: Evaluation Guidelines”).

If necessary, the proposed action is returned to the sponsoring organization for revision. Adoption into the Plan does not necessitate implementation. When resources and the opportunity to implement mitigation actions become available, the sponsoring organization begins the necessary steps towards implementation.

See “Appendix H – Analysis of Hazard Mitigation Actions” for details.

5.3 Prioritization and Implementation of Hazard Mitigation Actions

Requirement §201.6(c)(3)(iii): [The mitigation strategy shall include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

As part of the analysis, hazard mitigation actions shall be prioritized. The STAPLEE method will be used to prioritize those that the jurisdiction selects as its mitigation actions. Jurisdictions will also consider the benefits that will result from the mitigation actions versus the cost of those actions. A cost estimate or budget for each action shall be included, when available. If cost estimates are not available, jurisdictions may provide comparative costs (such as high, medium, or low) with defined scales among actions.

Actions are prioritized by a “Modified Score”. The “Modified Score” is determined by dividing the “STAPLEE Score” by the “Cost per Person”; which is the “Cost” of implementation divided by the “Population Affected”.

Table 5.2 Prioritization of Mitigation Actions

Mitigation Action	Cost	STAPLEE Score	Population Affected	Cost per Person	Hazards Affected	Jurisdictions Affected	Modified Score
1.1.1 Weather Week	\$ 6,000	35	10,112	\$ 0.59	22	9	59
1.1.2 Local Outreach	\$ 6,000	35	10,112	\$ 0.59	22	9	59
1.1.3 HMP Review	\$ 6,000	35	10,112	\$ 0.59	22	9	59
5.1.1 Const Ordinances	\$ 12,000	35	10,112	\$ 1.19	1	9	30
5.1.2 NFIP Involvement	\$ 12,000	35	10,112	\$ 1.19	1	9	30
3.1.1 COOP Study	\$ 36,000	35	10,112	\$ 3.56	22	9	10
2.1.1 NOAA Radios	\$ 130,000	31	10,112	\$ 12.86	22	9	2
4.1.1 Storm Rooms	\$ 500,000	32	10,112	\$ 49.45	8	3	1
4.2.1 Structure Buy-outs	\$ 291,000	27	4,207	\$ 69.17	1	1	1
2.1.2 Weather Sirens	\$ 700,000	33	5,905	\$ 118.54	22	9	1

As another part of the analysis of hazard mitigation actions, it shall be determined how each action will be implemented and administered, including the department or agency responsible for carrying out the actions, the potential funding sources, and the implementation timeline. See “Appendix H – Analysis of Hazard Mitigation Actions” details on prioritization and implementation.

5.4 Identification of Multi-jurisdictional Hazard Mitigation Actions

Requirement §201.6(c)(3)(iv): For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

The Plan links the proposed mitigation actions to the applicable jurisdictions. The actions may be part of a countywide mitigation action or entirely within a jurisdiction. The actions will be implemented by the jurisdiction and administered by the Lead Agency as technical and funding restraints allow.

See “Appendix H – Analysis of Hazard Mitigation Actions” for details.

5.5 Implementation of the National Flood Insurance Program (NFIP)

Requirement §201.6(c)(3)(ii): [The mitigation strategy] must also address the jurisdiction’s participation in the NFIP, and continued compliance with NFIP requirements, as appropriate.

Participation in the NFIP is based on an agreement between communities and FEMA. The NFIP has three basic aspects: floodplain identification and mapping; floodplain management; and flood insurance.

First, NFIP participation requires community adoption of flood maps. Mapping flood hazards creates broad-based awareness of the flood hazards and provides the data needed to administer floodplain management programs and to actuarially rate new construction for flood insurance.

Second, to be a participant, the NFIP requires communities to adopt and enforce minimum floodplain management regulations that help mitigate the effects of flooding on new and improved structures.

Third, community participation in the NFIP enables property owners to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages.

All plans approved by FEMA after October 1, 2008 **must** describe each jurisdiction's participation in the NFIP and **must** identify, analyze and prioritize actions related to continued compliance with the NFIP.

Basic compliance NFIP actions could include, but are not limited to:

- Adoption and enforcement of floodplain management requirements, including regulating all and substantially improved construction in Special Flood Hazard Areas (SFHAs);
- Floodplain identification and mapping, including any local requests for map updates, if needed; or,
- Description of community assistance and monitoring activities.

Not all jurisdictions participate in the NFIP either because the community has not been identified with Special Flood Hazard Area (SFHA), has not been issued a Flood Hazard Boundary Map (FHBM) or a Flood Insurance Rate Map (FIRM), or because the community has not adopted the FEMA issued flood maps. NFIP participation is voluntary for communities. Jurisdictions that are currently not participating in the NFIP may meet this requirement by describing the reasons why the community does not participate, particularly where a FHBM or FIRM has been issued.



6 PLAN MAINTENANCE PROCESS

Section 201.6(c)(4) of 44 CFR requires a formal plan maintenance process to ensure that the mitigation plan remains an active and relevant document. The plan maintenance process includes a method and schedule for monitoring, evaluating, and updating the plan at least every five (5) years. This also includes an explanation of how local governments intend to incorporate their mitigation strategies into existing planning mechanisms, such as comprehensive or capital improvement plans, or zoning and building codes. Lastly, this section requires that there be continued public participation throughout the plan maintenance process.

This section includes the following three subsections:

- Monitoring, Evaluating, and Updating the Plan
- Incorporation into Existing Planning Mechanisms
- Continued Public Involvement

6.1 Monitoring, Evaluating, and Updating the Plan

Requirement §201.6(c)(4)(i): [The plan maintenance process shall include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

Periodic monitoring and reporting on the progress of the plan is required to evaluate the goals and objectives for Nemaha County. The Nemaha County Hazard Mitigation Plan will remain available at the Nemaha County Emergency Management Office and on the County website for review and comment.

Public comments shall be addressed at the next meeting of the Nemaha County LEPC, if necessary. The Plan can also be discussed at any meeting the group feels it is appropriate.

The Plan should be reviewed following a disaster declaration to possibly incorporate lessons learned and to address specific circumstances arising out of the disaster.

The Nemaha County Emergency Manager, or an individual assigned by him, shall also evaluate the Plan annually. The annual evaluation shall be presented the Board of County Commissioners and made available to the public at the Nemaha County Emergency Management Office and on the County website for review and comment. The annual evaluation shall assess at a minimum whether:

- The goals and objectives address current and expected conditions.
- The nature, magnitude, and/or type of risks have changed.
- The current resources are appropriate for implementing the plan.
- There are implementation problems, such as technical, political, legal, or coordination issues.
- The outcomes have occurred as expected (a demonstration of progress).
- The agencies and other partners participated as originally proposed.
- The public comments received have been addressed appropriately.

The evaluation will recommend, as appropriate, any required changes or amendments to the Plan.

The background studies supporting the Plan shall be reviewed every five years to determine if there have been any significant changes in Nemaha County that should be assessed and considered in the Plan. Increased development, increased exposure to certain hazards, development of new mitigation techniques, and changes to federal or state legislation are examples of changes that may affect the condition of the Plan.

If the Board of County Commissioners determines that the recommendations warrant modification to the Plan, the Board may request the Nemaha County Emergency Manager amend the Plan or request the Emergency Manager undertake a complete update of the Plan.

6.2 Incorporation into Existing Planning Mechanisms

Requirement §201.6(c)(4)(ii): [The plan shall include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.

Where possible, Nemaha County Emergency Management, with assistance from the Nemaha County Hazard Mitigation Team (NCHMT), will use existing plans or programs to implement hazard mitigation actions. Communities in Nemaha County will continue to plan and implement programs to reduce the loss of life and property from hazards. This plan builds upon the momentum developed through previous planning efforts and recommends implementing actions, where possible, through the following means:

- General or Master Plans of participating jurisdictions
- Resolutions of Nemaha County
- Ordinances of participating jurisdictions
- Nemaha County Emergency Operations Plan
- Capital Improvement Plans
- Mutual Aid Agreements
- Hazard Mitigation Grant Program (HMGP) projects
- Actions funded by the Pre Disaster Mitigation Program
- Other community plans within Nemaha County

NCHMT members involved in updating these existing planning mechanisms will be responsible for integrating the findings and actions of the Plan as appropriate. The NCHMT is also responsible for monitoring this integration and incorporating the appropriate information into the five-year update of the Plan.

6.3 Continued Public Involvement

Requirement §201.6(c)(4)(iii): [The plan maintenance process shall include a] discussion on how the community will continue public participation in the plan maintenance process.

The update process provides an opportunity to publicize success stories from the Plan's implementation and seek additional public comment. Information will be posted in the Courier Tribune newspaper and on the County website following the annual review of the mitigation plan. A public hearing(s) to receive public comment on plan maintenance and updating will be held during the update period. When the NCHMT reconvenes for the update, it will coordinate with all stakeholders participating in the planning process, including those who joined the NCHMT after the initial effort, to update and revise the plan. Public notice will be posted and public participation will be invited, at a minimum, through available website postings and press releases to local media outlets, primarily the newspapers and the local radio station.