

Section 4: Mitigation Strategy

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.*

4.1 Mitigation Goals and Actions

This section of the plan focuses on the mitigation strategies developed by each jurisdiction to reduce or avoid long-term vulnerabilities to the 12 identified hazards. In accordance with 44 CFR Part 201, each of the mitigation goals and actions identified in the 2004 plan were reviewed for relevance and updated with current status. The 2004 mitigation goals and actions were developed through research, data collection and stakeholder participation in the planning process. These mitigation actions were activities that stakeholders in the hazard mitigation process, especially local governments, could implement over a five-year period. Many of the actions were intended to be implemented in a relatively short period of time, generally less than two years, using existing organizations and resources in each county or across the region. Other actions required a longer implementation timeframe, perhaps two to five years or longer, as well as additional resources, particularly funding.

For the 2004 plan, jurisdictions were not required to link directly to specific mitigation goals and actions. As such, the goals and actions developed in 2004 were on a broad, regional scale. Additionally, these goals and actions only addressed the first eight natural hazards identified in this plan. The aim was to provide local governments with many options for reducing their risks to hazards. However, specifics for each jurisdiction were not included. This update attempts to correct that deficiency. MARC staff created a Web site database that listed the goals and actions from the 2004 Plan—46 goals and 153 actions across the eight hazards. Jurisdictions who had previously adopted the plan were provided login access to the Web site and asked to update each mitigation goal and action with a current status. As part of the update process, jurisdictions were asked to re-evaluate hazards for their community. Jurisdictions needed only to complete information on goals and actions for hazards that were identified to continue to pose a threat. For each mitigation action, jurisdictions were asked to designate a project's status as completed, deleted, deferred or ongoing. If the action was completed, jurisdictions were asked to provide a date of completion. For those deleted or deferred, jurisdictions were asked to provide a narrative explanation. If a project was marked as ongoing, further information was requested including:

- 1) Priority
- 2) If the action applies to new or existing community assets
- 3) Existing local planning mechanism through which the action was/will be implemented
- 4) Primary agency responsible for implementation/administration
- 5) Date for completion
- 6) Estimated cost
- 7) Funding source

In the 2004 plan, a preliminary evaluation of all the proposed mitigation actions was conducted using the "STAPLEE" concept. With STAPLEE, the feasibility of mitigation actions was considered in light of the social, technical, administrative, political, legal, economic and environmental characteristics, capabilities and issues in a community. The STAPLEE evaluation did not apply priority or weight to a proposed mitigation action and was only assessed at the county level. To comply with changes in regulatory requirements since 2004, the planning team determined that "priority" should be ranked on a qualitative scale of high, medium and low. Jurisdictions were instructed to consider a generic cost/benefit analysis

when ranking mitigation actions. FEMA, in its *Local Multi-Hazard Mitigation Planning Guidance*, offers the following as ways to appraise a generic cost/benefit analysis:

- Assessing the economic impact of one action compared to another
- Showing how one type of action costs more than another to achieve the same benefit
- Showing that funding is available for one type of action but not another
- Demonstrating how the economic goals of the community are better served by one action compared to another

High-priority actions are those for which resources, manpower, political capital, etc., are readily available to accomplish the actions. High-priority actions should generally be accomplished within two years. Medium-priority actions are those that are desirable, but due to various planning limitations, aren't expected to be implemented for two to five years. Low-priority actions are those that aren't scheduled to be implemented in the near future (greater than five years). Actions deleted or deferred were either no longer applicable or regarded as "failing" the cost/benefit analysis. Each is accompanied with an explanation.

Below is a screenshot from the mitigation action Web site:



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Hazard - Drought

Question 1 of 13

Jump to Hazard

Mitigation Goal:

1. Assess the vulnerability of water systems.

Mitigation Action:

- a. Conduct an assessment of the vulnerability and water use demand of local water systems by utilizing the procedures in the Missouri Drought Plan.

Project status:

- Complete
- Ongoing
- Deleted
- Deferred

Section 4.1.1 Mitigation Goals and Actions, 2004 Hazard Mitigation Plan

The next several pages list the hazard mitigation goals and actions developed for the 2004 Plan, divided by hazard. Mitigation goals for the hazard are underlined and numbered (1, 2, 3, etc.) Mitigation actions are lettered (a, b, c, etc.).

Tornadoes (mitigation goals #1'd, mitigation actions lettered)

1. Increase public awareness and understanding of the benefits of "safe rooms."
 - a.) Develop and distribute informational materials on safe rooms.
 - b.) Partner w/ trade organizations to conduct safe room workshops.
2. Ensure public facilities have shelters to accommodate staff and visitors during tornadoes/ natural hazards.
 - a.) Assess existing facilities for shelter suitability. Mark clearly and inform visitors/employees of locations.
 - b.) Retrofit or add shelters to existing public facilities with inadequate protection from tornadoes and high wind.
 - c.) Consider adopting policies requiring incorporation of safe rooms/shelters in new public facility construction.
3. Encourage construction of community tornado shelters in office complexes, factories, apartment complexes, schools mobile home parks, stadiums, and other large population congregation centers.
 - a.) Offer residential/ commercial builders/developers tax incentives to construct safe rooms/community shelters in new public facilities.
 - b.) Work with chambers of commerce, school districts, corporations, etc. to promote benefits of safe rooms.
 - c.) Consider adopting ordinances or regulations requiring the construction of tornado shelters in new buildings where people live, work or congregate.
4. Encourage building practices and the use of materials that reduce the damaging effects of tornadoes.
 - a.) Work w/ trade orgs to inform builders/ developers of construction techniques and materials that may minimize tornado/ high wind damage to residential/ commercial structures.
 - b.) Adopt current edition of a model building code to address structural and architectural issues related to tornadoes and high wind events.
 - c.) Review and enhance (if necessary) regulations related to design and installation of architectural features on buildings to minimize the creation of windborne debris.
 - d.) Require the use of tempered or shatter-resistant glass in the windows of new public/private facilities where large numbers of people may congregate. Retrofit existing facilities.

5. Encourage electric and telecommunications utilities to protect their existing infrastructure from the effects of tornadoes and high winds.
 - a.) Anchor or strengthen above-ground transmission lines, poles and similar structures.
 - b.) Adopt ordinances or regulations requiring the underground placement of new electric and telecommunications transmission lines.
 - c.) Offer financial or other incentives to utility providers to replace existing above-ground utility lines with underground utility lines.

Flooding (mitigation goals #d, mitigation actions lettered)

1. Examine repetitive flood loss properties in each county and determine feasible and practical mitigation options.
 - a.) Work with owners of repetitive flood loss properties to identify feasible mitigation strategies and potential opportunities; determine property owners' interest in specific mitigation options.
 - b.) Identify potential funding opportunities to implement mitigation options for repetitive flood loss properties.
 - c.) As funding allows, repetitive flood loss properties and structures will be targeted for buyout.
 - d.) With stakeholders, explore incentive options to encourage property owners to take action to prevent or reduce future flood losses
2. Integrate flood mitigation strategies with projects and activities designed to (1) protect, restore or enhance ecosystems and the environment and/or (2) create recreational opportunities for the community.
 - a.) Consider the construction of detention basins, small lakes and greenways or riparian corridors in areas of new development to channel and catch storm water, thereby reducing the likelihood of flooding.
 - b.) In concert with existing comprehensive and land use plans, develop a strategy for acquiring flood-prone property for use as open space or park land.
 - c.) Identify funding sources for the acquisition of flood-prone land for environmental, recreational and flood mitigation uses.
 - d.) Consider alternative uses for floodplains and flood-prone areas, such as sports fields, parks, wildlife habitats, etc.
 - e.) Work with area environmental groups, property owners and other stakeholders to develop and implement flood mitigation strategies that also promote the restoration and/or sustainability of fish and wildlife habitats
 - f.) Develop partnerships between regional emergency management, floodplain management and environmental groups to educate one another and the public of the benefits of collaboration and identify specific programs and activities that can be developed and implemented jointly.

3. Reduce flood-related damage to public, residential and commercial property in flood-prone areas through structural and nonstructural retrofits or removal of property.
 - a.) Encourage homeowners and businesses in flood-prone areas to elevate mechanical systems (i.e., furnaces, hot water heaters, electrical panels, etc.).
 - b.) Encourage water and wastewater districts to elevate vulnerable equipment, electrical controls and other equipment at wastewater treatment plants, potable water treatment plants and pumping stations.
 - c.) Encourage utility providers to assess their facilities, distribution systems, etc. for vulnerability to flooding and, if necessary, retrofit or modify them to decrease vulnerability.
 - d.) As funding allows, repetitive flood loss properties and structures will be targeted for buyout.
 - e.) Elevate public facilities in flood-prone areas. Encourage home owners and businesses to elevate their structures.
 - f.) Identify incentives to offer home owners and businesses to remove or retrofit their structures in flood-prone areas.
4. Discourage new development in floodplains and flood-prone areas.
 - a.) Adopt ordinances prohibiting residential and commercial development in flood plains or flood-prone areas.
 - b.) Develop or amend comprehensive and/or land use plans to specifically address development in flood-prone areas and recommend strategies for decreasing the jurisdiction's vulnerability to flooding.
 - c.) Levy fees on new residential, commercial and infrastructure development in floodplains or flood-prone areas to finance flood mitigation, preparedness, response and recovery actions.
5. Improve flood hazard assessments and flood mapping.
 - a.) Obtain parcel data (assessed valuation and other information) for flood boundary areas and enhance vulnerability assessments for these areas.
 - b.) Partner with FEMA in the Cooperating Technical Partners (CTP) Program to increase local involvement in, and ownership of, the flood mapping process.
 - c.) Purchase HAZUS-Flood software from FEMA, possibly in conjunction with other local or regional stakeholders.
 - d.) Coordinate the collection of demographic, economic, watershed, land use and other data required by the HAZUS-Flood software program and/or GIS systems.
 - e.) Conduct an in-depth flood risk analysis utilizing HAZUS data and create detailed maps based on GIS technology to identify areas at risk from flooding.
6. Enhance public awareness and education efforts related to flooding.

- a.) Encourage home owners and businesses to purchase flood insurance.
 - b.) Obtain brochures and related publications on flood mitigation, preparedness, response and recovery from FEMA, SEMA, the American Red Cross and other organizations and provide them to home owners and businesses in flood-prone areas.
 - c.) Partner with emergency services, public health, human services organizations, appropriate state and federal agencies and the business community to conduct special public education events, such as a Flood Mitigation and Preparedness Workshop.
7. Participate in, and ensure compliance with, flood mitigation and floodplain management programs.
- a.) Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS).
 - b.) Obtain the latest copies of flood insurance rate maps (FIRMs), floodplain maps and similar documents.
8. Implement or improve flood warning systems.
- a.) Determine the need for stream gauges in waterways without flood warning systems or additional stream gauges in waterways with flood warning systems already in-place.
 - b.) Work with local governments and other stakeholders to share data from flood warning systems in multiple jurisdictions.
 - c.) Develop and implement procedures to quickly analyze and disseminate information from flood warning systems to the public.

Severe Winter Weather (mitigation goals #d, mitigation actions lettered)

1. Encourage electric and telecommunications utilities to protect their existing infrastructure from the effects of severe winter weather.
 - a.) Adopt ordinances or regulations requiring the underground placement of new electric and telecommunications transmission lines.
 - b.) Offer incentives to utility providers to replace existing above-ground utility lines with underground utility lines.
 - c.) Budget for the incremental replacement of existing above-ground utility lines with underground utility lines.
2. Ensure local governments and human services agencies are aware of facilities across the Kansas City area with generators or emergency power that can be used as shelters in the event of severe winter weather.
 - a.) Partner with MARC, the American Red Cross, Salvation Army and other stakeholders to inventory public, private and non-profit facilities that have generators or emergency power and can be used as shelters in the event of severe winter weather.

- b.) Retrofit otherwise suitable existing facilities with generators for emergency power.
 - c.) Consider the adoption of policies requiring generators or other emergency power systems in the construction of new public facilities.
3. Ensure at-risk, low income and elderly residents have adequate heat in their homes.
- a.) Partner with community service organizations to provide materials and volunteer labor to assist at-risk groups, low income residents and the elderly with winterizing their homes.
 - b.) Work with utility providers to develop and implement programs to reduce, eliminate or defer home heating costs for elderly, low income and at-risk people in the community.
4. Since traffic accidents account for 70 percent of injuries related to ice and snow, develop and implement programs to improve road conditions and protect motorists during severe winter weather.
- a.) Budget for the stockpiling of sand, salt and other materials necessary to reduce or eliminate ice on roadways and improve road conditions.
 - b.) Work with area local governments and MARC to develop a regional “pool” of sand, salt and other materials necessary to reduce or eliminate ice on roadways.
 - c.) Partner with area local governments to establish a mutual aid system for sand, salt and other materials and their delivery resources (i.e., trucks, crews, etc.).
 - d.) In an effort to reduce the number of people on the roadways during periods of severe winter weather, develop and implement “snow day” plans and policies for non-essential personnel and encourage private sector and non-profit employers in the community to do the same.
5. Enhance public awareness of severe winter weather mitigation and preparedness activities.
- a.) Develop and conduct a public education and awareness campaign on properly winterizing homes.
 - b.) Collect and disseminate public education materials that address winter weather safety, preparedness and mitigation activities.
 - c.) Provide vulnerable populations with winter weather safety, preparedness and mitigation information.
 - d.) Partner with emergency services, public health and community groups to conduct special public education events, such as a Severe Winter Weather Awareness Day.

Drought (mitigation goals #d, mitigation actions lettered)

1. Assess the vulnerability of water systems.
- a.) Conduct an assessment of the vulnerability and water use demand of local water systems by utilizing the procedures in the Missouri Drought Plan.

- b.) Partner with MDNR (Public Drinking Water and Water Resources Programs) and USDA to use USDA's Reservoir Operation Study (RESOP) computer program to determine the performance capacity of local reservoirs.
2. Ensure plans and procedures addressing local drought response, drought mitigation and long-term water planning are developed.
- a.) Review the Missouri Drought Plan, as well as local drought plans available from MDNR, and develop a local drought plan.
- b.) Develop local procedures implementing the provisions of the Missouri Drought Plan.
- c.) Working with MARC, develop drought plans and water conservation programs.
3. Enhance public awareness of drought, drought mitigation, state and local drought response actions and water conservation measures.
- a.) Develop and conduct public education and awareness programs on drought mitigation, drought response and water conservation.
- b.) Collect and disseminate public education materials that address water conservation techniques and strategies, particularly those addressing agricultural drought mitigation and management.
4. Encourage water conservation efforts by commercial, industrial and private water users.
- a.) Develop and implement a program to encourage voluntary water conservation.
- b.) Offer economic incentives to encourage water conservation, e.g., through modification of water rate structures.
- c.) Develop and implement water conservation ordinances.
5. Encourage improvements to water system infrastructures to reduce vulnerability to drought and meet water use demands.
- a.) Budget for infrastructure improvements to municipal water systems.
- b.) Develop and approve bond measures to fund improvements to municipal and/or water district water treatment plants, transmission systems, water mains and related infrastructure.
- c.) Identify and apply for state and federal grants to improve water treatment plants, transmission systems, water mains and related infrastructure.

Heat Wave (mitigation goals #d, mitigation actions lettered)

1. Ensure local governments and human services agencies are aware of air conditioned facilities across the Kansas City metropolitan area that can be used as shelters in the event of a heat wave.
- a.) Partner with MARC, local public health agencies, emergency management agencies, the American Red Cross, Salvation Army and other stakeholders to inventory public, private and non-profit facilities that are air conditioned and can be used as "heat emergency shelters" in the event of a heat wave.

- b.) Retrofit otherwise suitable existing facilities with air conditioning systems and designate them as shelters for use during heat waves.
2. Ensure at-risk, low income and elderly residents have adequate air conditioning (or fans) and ventilation in their homes.
- a.) Identify at-risk, low income and elderly residents and develop a database and map (or GIS layers) of their places of residence.
- b.) Partner with community service organizations and area businesses to provide air conditioners and/or fans to at-risk groups, low income residents and the elderly.
- c.) Work with utility providers to develop and implement programs to reduce, eliminate or defer air conditioning costs for elderly, low income and at-risk people in the community.
3. Ensure programs and procedures to mitigate, prepare for and respond to heat waves are developed and implemented.
- a.) Develop local heat emergency plans or heat wave annexes to local emergency operations plans.
- b.) Consider developing a regional heat emergency plan for the greater Kansas City metropolitan area.
- c.) Partner with public safety agencies, local public health agencies and community groups to develop a program to regularly check on elderly, low income and at-risk people in the community during heat waves.
- d.) Work with community groups to sponsor a program to encourage people to think of those who require special assistance (this effort can be incorporated into Neighborhood Watch, CERT or similar programs).
- e.) Temporarily reduce or eliminate fees for public swimming pools during extended periods of extreme heat and humidity.
4. Enhance public awareness of the hazards associated with heat waves, precautionary measures and area heat wave mitigation and preparedness activities.
- a.) Collect and disseminate public education materials that address heat wave safety, preparedness and mitigation activities.
- b.) Provide vulnerable populations with public education materials that address heat wave safety, preparedness and mitigation activities.
- c.) Work with the media to publish special newspaper sections or conduct periodic broadcasts with emergency information on extreme heat.
- d.) Develop and conduct a public education and awareness campaign on properly weather stripping homes.

Earthquake (mitigation goals #d, mitigation actions lettered)

1. Improve technical analysis of earthquake hazards and enhance earthquake vulnerability and risk assessment for the Kansas City metropolitan area.
 - a.) Purchase HAZUS software from FEMA, possibly in conjunction with other local or regional stakeholders.
 - b.) Coordinate the collection of demographic, economic, geologic and other data required by the HAZUS software program.
 - c.) Conduct an in-depth earthquake risk analysis utilizing HAZUS data and create detailed maps based on GIS technology to identify areas at risk from seismic activity and further assist in prioritizing mitigation activities and assessing the adequacy of current land use policies, building codes and other measures related to earthquake mitigation.
2. Review and update building codes to improve seismic safety standards for new or renovated buildings, especially critical facilities.
 - a.) Determine the levels of seismic forces that structures must be designed to withstand.
 - b.) Require the use of tempered or shatter-resistant glass in the windows of new public facilities and private facilities where large numbers of people may congregate (i.e., day care centers). Retrofit existing facilities with similar materials.
 - c.) Adopt the most current edition of a model building code to address structural and architectural issues related to seismic events.
 - d.) Work with trade organizations to inform builders and developers of construction techniques and materials that may minimize earthquake damage to residential and commercial structures.
3. Identify funding sources for structural and nonstructural retrofitting of structures that are identified as seismically vulnerable.
 - a.) Explore options for including seismic retrofitting in existing programs, such as low-income housing, insurance reimbursements and pre- and post-disaster repairs.
 - b.) Provide information to property owners, small businesses and community organizations on sources of funds (low interest loans, grants, etc.) that may be used for seismic retrofit projects.
4. Encourage the purchase of earthquake hazard insurance.
 - a.) Provide earthquake insurance information to Kansas City metropolitan area residents.
 - b.) Work with insurance companies and organizations, such as the Missouri Insurance Coalition and Missouri Insurance Information Service, to produce and distribute earthquake insurance information.
5. Encourage seismic strength evaluations of critical facilities and potentially at-risk structures in the Kansas City metropolitan area to identify vulnerabilities and bring these structures up to current seismic standards.
 - a.) Develop an inventory of critical facilities, schools, universities and other public facilities that do not meet current seismic standards.

- b.) Encourage water providers to replace old cast iron pipes with more ductile iron, and identify partnership opportunities with other agencies for pipe replacement.
 - c.) Encourage owners of significant and high hazard dams to ensure these structures meet current seismic standards.
6. Encourage reduction of nonstructural and structural earthquake hazards in homes, schools, businesses and public facilities.
- a.) Provide information to government and school facility managers and teachers on securing bookcases, filing cabinets, light fixtures, heavy furniture and other objects that can cause injuries and/or block exits if they topple due to seismic activity.
 - b.) Encourage facility managers, business owners and teachers to review FEMA's earthquake mitigation guidebook entitled, "Reducing the Risks of Nonstructural Earthquake Damage".
 - c.) Encourage homeowners and renters to use the IBHS publications, "Is Your Home Protected from Earthquake Disaster? A Homeowner's Guide to Earthquake Retrofit" and "Protect Your Home Against Earthquake Damage," for practical and economic earthquake protection measures.
 - d.) Partner with other stakeholders to provide earthquake retrofitting classes for homeowners, renters, building professionals and contractors.
 - e.) Target development located in potentially unstable soils or sloping terrain for education and retrofitting resources.
7. Ensure local governments and human services agencies are aware of facilities across the Kansas City metropolitan area with generators or emergency power that can be used as shelters in the event of an earthquake.
- a.) Partner with MARC, the American Red Cross, Salvation Army and other stakeholders to inventory structurally sound (and meeting current seismic standards, if possible) public, private and non-profit facilities that have generators or emergency power and can be used as shelters in the event of a damaging earthquake.
 - b.) Retrofit otherwise suitable existing facilities with generators for emergency power.
 - c.) Consider the adoption of policies requiring generators or other emergency power systems in the construction of new public facilities.

Dam Failures (mitigation goals #d, mitigation actions lettered)

1. Improve hazard assessment information for dams across the Kansas City metropolitan area.
- a.) Work with MDNR's Water Resources Program and USACE to determine which dams in Cass, Clay, Jackson, Platte and Ray counties have had inundation studies, inundation pathway maps and emergency action plans developed.
 - b.) Using the latest information from the NID, MDNR's inventory of dams and other sources, develop GIS layers and maps indicating the locations, inundation pathways and hazard potential of known dams within the Kansas City metropolitan area.

- c.) Obtain assessed valuation data and population figures for areas in the vicinity of dam inundation pathways so that enhanced vulnerability assessments may be conducted describing the number of lives and amount of property at risk from dam failure.
 - d.) Include maps and information from inundation studies and dam emergency action plans in local emergency operations and land use plans.
2. Enhance public awareness of the hazards associated with dam failures, as well as mitigation and preparedness activities.
- a.) Work with MDNR and USACE to conduct a public education campaign to inform citizens living near the inundation pathways of dams of the need to be familiar with the emergency action plans for these dams.
 - b.) Collect and disseminate public education materials that address dam safety, preparedness and mitigation activities.
 - c.) Provide property owners in or near the inundation pathways of dams with information on dam safety, preparedness and mitigation activities.
 - d.) Conduct a public education campaign to inform dam owners and citizens living near the inundation pathways of dams about the need to properly maintain and upgrade these structures, particularly those that are more than 50 years old.
3. Reduce the potential for dam failures by enhancing inspection efforts.
- a.) For dams not regulated by the state, encourage dam owners to inspect their dams at least annually and submit the results of these inspections to MDNR.
 - b.) Adopt codes or ordinances requiring permits, engineering studies and safety certifications prior to the construction of new dams.
 - c.) Encourage the state to provide MDNR's Water Resources Program with funding necessary to regularly inspect all significant and high hazard dams in the state.
 - d.) Adopt local ordinances and/or state laws requiring all dam owners to develop emergency action plans for their dams and provide local public safety agencies with copies of these plans.
4. Reduce the potential for dam failures by adding to the number of dams regulated by the state.
- a.) Contact representatives in the state legislature to propose changes in state law lowering the height limit for regulated dams to 25 feet on those holding back 50 acres or more of water.
 - b.) Revise existing dam safety laws and/or regulations to add all high hazard dams to the list of regulated dams, regardless of dam height and reservoir storage capacity, until the hazard potential of these dams can be downgraded.
5. Improve the structural integrity of dams to reduce the threat of dam failures.
- a.) Identify and pursue grants and/or low interest loans to repair or improve dams.

- b.) Encourage dam owners to repair or upgrade their dams, particularly those that are more than 50 years old, by offering them a reduction in property taxes or similar financial incentive.
 - c.) Budget for regular repairs and improvements to dams, particularly those that are publicly owned.
 - d.) Develop and implement codes and ordinances requiring minimum site and construction standards for dams.
6. Improve warning and evacuation systems and procedures in the event of dam failure.
- a.) Where feasible, add outdoor warning sirens to campgrounds and other recreational areas downstream from dams.
 - b.) Work with dam owners, particularly USACE, emergency management and other public safety agencies to develop and conduct emergency response exercises.
 - c.) Adopt policies, codes or ordinances discouraging development in the vicinity of dam inundation zones.

Wildland Fires (mitigation goals #d, mitigation actions lettered)

1. Improve wildland fire hazard assessment information for communities across the Kansas City metropolitan area.
- a.) Use the Firewise risk analysis methodology and hazard ranking criteria from NFPA 1144, Standard for Protection of Life and Property from Wildfire, 2002 Edition, to assess the wildland fire threat for specific communities across the Kansas City metropolitan area and compile the results.
 - b.) Work with local fire departments, state and federal agencies (e.g., Missouri Department of Conservation, Missouri Department of Natural Resources and the Natural Resources Conservation Service) to identify areas in each community subject to wildland fires and depict them on maps or include them on GIS layers.
 - c.) Include maps and information from community-based wildland fire hazard assessments in local emergency operations and land use plans.
2. Enhance public awareness of wildland fire mitigation and preparedness activities.
- a.) Work with fire departments/fire protection districts to conduct a public education campaign to inform citizens across the region, especially those in rural areas, of the benefits of creating a defensible space around their homes and other structures on their property.
 - b.) Collect and disseminate public education materials that address wildland fire safety, preparedness and mitigation activities.
 - c.) Provide homeowners in rural and/or urban-wildland interface areas with information on wildland fire safety, preparedness and mitigation activities.
 - d.) Partner with fire departments/fire protection districts and community groups to conduct special public education events, such as a Fire Safety and Awareness Day.

3. Encourage building practices and the use of materials that reduce the damaging effects of fire.
 - a.) Adopt ordinances or building code modifications prohibiting the use of highly flammable materials, e.g., wood shakes, in the construction of roofs on new homes.
 - b.) Work with homeowners associations to eliminate the requirement for wood shake roofs from subdivision covenants and allow retrofits of roofs made of fire resistant materials.
 - c.) Consider financial incentives, e.g., property tax reductions, etc., to encourage the use of fire resistant materials (tile roofs, etc.) in the construction of homes or commercial structures.
 - d.) Adopt the most current editions of model fire and building codes to address structural and architectural issues related to fire safety and prevention.
 - e.) Review and, if necessary, enhance regulations related to the design and installation of architectural features on structures to minimize their susceptibility to fire (e.g., enclosing soffits, reducing the overhang of bay windows, etc.), especially in rural and/or urban-wildland interface areas.
4. Encourage implementation of wildland fire mitigation practices that also aid in the restoration or enhancement of natural areas and ecosystems.
 - a.) Use thinning and prescribed burning to reduce the build-up of vegetation and organic surface litter and debris in woodlands and other natural areas.
 - b.) To reduce the risk of wildland fires in parks, campgrounds and publicly-owned natural areas, encourage the clearing of brush, debris and other potentially hazardous vegetation (especially dry and dead vegetation) as a part of routine landscaping and grounds maintenance.
 - c.) Provide homeowners with educational materials that address the hazard mitigation and ecological benefits of clearing brush, debris and organic surface litter from their property.
5. Improve the wildland firefighting capabilities of area fire departments and fire protection districts, particularly those in rural areas.
 - a.) Identify funding sources to enhance the operational capabilities and fire prevention programs of fire departments and fire protection districts; assist fire agencies with the development of grant applications.
 - b.) Conduct seminars or workshops to educate fire service personnel about the full range of grants and related financial assistance available from the state and federal governments (e.g., U.S. Fire Administration Assistance to Firefighters Grant Program).
 - c.) Identify training opportunities, and conduct training courses and exercises focusing on wildland firefighting.
 - d.) Identify and inventory alternative water resources for fire departments and fire protection districts, map their locations and determine appropriate methods for accessing these water resources.

6. Reduce the wildland fire threat by regulating outdoor burning.

- a.) Adopt ordinances prohibiting the burning of brush and yard debris without a permit.
- b.) Prohibit burning, use of campfires in parks and similar activities during weather conditions conducive to wildland fires (i.e., extended periods of high heat, high winds and low humidity).
- c.) Adopt ordinances prohibiting or regulating the use of fireworks.

Section 4.1.2 Status of Mitigation Goals and Actions

Attachment 1 to this section lists the status of mitigation goals and actions developed in each community. Each jurisdiction is discussed separately along with applicable hazards. Those jurisdictions that adopted the 2004 plan are denoted by an asterisk*. These jurisdictions were required to discuss the status of mitigation goals and actions from the 2004 plan. The numbers and letters under each hazard correspond to the mitigation goals and actions sequencing outlined in the above Section 4.1.1. Jurisdictions that were new to adopting the plan were not required to address the 2004 goals and actions. However, some chose to adopt a portion of those as their goals and actions for this plan update. Other jurisdictions chose to develop completely new mitigation goals and actions. In these cases, a narrative of the jurisdiction's planning development process is provided below.

Incorporation of new mitigation goals and actions

As discussed further in Section 5.1, this plan shall be reviewed at least annually. During these reviews, mitigation goals and actions will be reevaluated and updated to reflect current status as appropriate. Jurisdictions wishing to add new mitigation goals and actions may choose to do so at this time. Those jurisdictions submitting new goals and actions should develop a planning process narrative in accordance with the requirements for mitigation strategies outlined in this plan. The narrative should be submitted to the jurisdiction's respective Planning Team member for review, who will forward to MARC for formatting and incorporation into this plan.

4.1.2.1 Oak Grove additional completed mitigation actions

Oak Grove and Sni Valley Fire Protection District, in addition to the goals and actions identified in Attachment 1, provided additional information about mitigation actions undertaken since the 2004 plan:

2005

The city of Oak Grove worked with Kansas City Southern Railroad and MODOT to obtain electronic and gated signals at existing railroad crossings.

2006

The city of Oak Grove installed an emergency generator at Oak Grove Civic Center, providing full building load power for the principle site for an emergency congregate shelter.

2006

The city of Oak Grove rehabilitated the storm water outflow from Broadway (F Highway) at 21st Street.

2006

The city of Oak Grove improved the flow through open storm water drainage between 20th Terrace and 21st Street and Broadway and Mitchell Street.

2006

The city of Oak Grove commissioned an engineering study to produce a comprehensive street plan.

2006

Oak Grove/Sni Valley Emergency Management initiated a program to provide NOAA Radios for public buildings and major occupancies.

2007

The city of Oak Grove purchased the convenience store property at 1000 S. Broadway and planned demolition of the structure and removal of underground storage tanks to rehabilitate this property using a Community Development Block Grant

2007

The city of Oak Grove worked with MARCIT (Midwest Public Risk) to develop a comprehensive Employee Safety Training Program.

2007

The city of Oak Grove began a comprehensive program of sanitary sewer infiltration and inflow inspections including purchase of sewer inspection camera vehicle and assignment of two personnel to carry out sewer inspections and cleaning. The program includes personnel training, scheduled camera inspection, smoke testing program, and infiltration and inflow consultation by consulting engineers. This program is intended to reduce potential of sewer backups into residences and businesses and escape of untreated sewerage into the environment.

2007

Oak Grove/Sni Valley Emergency Management assisted in creation of the R-VI School All-Hazard Plan (2007) and carried out a comprehensive pre-incident planning project. (2006)

2007

The city of Oak Grove F Highway and 30th Street Site Distance improvements.

2007

The City of Oak Grove installed heated and ADA accessible sidewalks in downtown area. A cistern under 12th and Broadway intersection found during construction was filled. An underground storage tank near 1205 S. Broadway under the sidewalk was located and filled.

2007

The city of Oak Grove constructed a mechanical sewer treatment plant to replace existing sewerage lagoons at a cost of \$6 million.

The city of Oak Grove constructed south interceptor sewer line, at a cost of \$1 million to improve sewer system capacity in southern half of Oak Grove and help prevent sewer backups into residences and businesses and spills into the environment.

The city of Oak Grove initiated a policy of providing emergency power generators for new sewer stations and plans to retrofit pre-existing stations.

2007

The city of Oak Grove purchased a group of 12 handheld radio transceivers to be used as a radio cache for disaster operations and special events.

2007–2008

The city of Oak Grove began a NIMS/Incident Command System Training with basic NIMS/ICS training for all full-time employees and selected part-time employees.

2008

Oak Grove/Sni Valley Emergency Management began a program which included a full-time Emergency Management Director and comprehensive Planning, Exercise, and, Disaster Response Training Program funded by a FEMA Emergency Management Performance Grant and joint funding by the City of Oak Grove and Sni Valley Fire Protection District.

2008

City of Oak Grove voters authorized a road rehabilitation project in which S.E. 5th Street, S.W. 12th Street will be widened and get curbs and storm water drainage. F Highway (Broadway) will be widened and receive curbs and storm water drainage from 13th Street to the south city limits.

2008–2009

The city of Oak Grove worked with Missouri Department of Transportation to accomplish widening of F Highway (Broadway) from I-70 to 10th Street with installation of curbs and storm water drainage. At this time the water main under F Highway was moved to the easement alongside the roadway, upsized and additional fire hydrants installed from the 200 block to 10th Street.

2009

The city of Oak Grove authorized a program of sanitary sewer inspection and I&I Rehabilitation Work by contractor, during which several manholes and stretches of main were resealed and/or lined. This work is designed to prevent leakage of sewage and infiltration of storm water.

2009

The city of Oak Grove and a private developer funded a new railroad crossing at Robinson Road to improve north-south traffic flow in Oak Grove.

2009

The city of Oak Grove carried out an engineering study to determine specifications for planned purchase of emergency generator for City Hall and mobile generator for remaining sewer lift stations without emergency power.

4.1.2.2 Sni Valley Fire Protection District additional completed mitigation actions**General Actions**

Sni Valley Fire Protection District maintains a program of equipment modernization and replacement to maintain and improve the District's emergency response capability. Fire Act Grants during the last five years have provided new hydraulic rescue tools, a rescue strut system, updated self contained breathing apparatus, breathing air compressor, protective clothing and public education supplies. The SAFER grant program has provided for three additional staff positions and the district funded one additional staff position. Sni Valley Fire Protection District co-sponsored the Tri-District Hazmat Team in cooperation with the Central Jackson County Fire Protection District and Fort Osage Fire Protection District since 1987. The District provides new construction inspections for buildings in the rural portion of the district and consults with the cities within the district on major new construction projects. The district operated

two advanced life support ambulances. Open burning in the district is regulated as an agent of the Missouri Department of Natural Resources. Open burning is only allowed by permit and banned on days when fire weather danger and regional air pollution levels are high.

2006

Oak Grove/Sni Valley Emergency Management initiated a program to provide NOAA Radios for public buildings and major occupancies.

2007

Oak Grove/Sni Valley Emergency Management assisted in creation of the R-VI School All-Hazard Plan (2007) and carried out a comprehensive school pre-incident planning project. (2006)

2007

Sni Valley Fire Protection District installed a emergency power generator at Sni Valley Station 1.

2007

The district began a program of fire prevention education concentrating on the fourth-grade classes of Oak Grove R-VI School District.

2007–2008

The district began a NIMS/Incident Command System Training with basic NIMS/ICS training for all full-time employees and selected part-time employees.

2008

Oak Grove/Sni Valley Emergency Management began a program which included a full-time Emergency Management Director and comprehensive Planning, Exercise and Disaster Response Training Program funded by a FEMA Emergency Management Performance Grant and joint funding by the city of Oak Grove and Sni Valley Fire Protection District.

2008

Voters approved a bond issue for purchase of a new Ladder Truck, construction of a new headquarters fire station and renovation of Sni Valley Station 2.

2009

The district began a program to provide address signs to selected residences in the rural areas of the response area.

**4.1.2.3 Archie R-V School District
Hazard Mitigation Strategy****A. Local Hazard Mitigation Goals**

The Archie R-V School District finds that the most readily apparent hazard to the school district and the community is severe weather. The potential hazard this creates is high to medium, depending solely on the weather. In June 2009, the community of Drexel, Mo., situated 15 miles to the east of Archie was damaged extensively by straight-line winds and possible tornadic activity. Although the school district cannot prevent such weather related incidents from occurring, it can educate the community's patrons and staff regarding severe weather. =

The Archie R-V School District will disseminate information to patrons through electronic newsletters, paper newsletters, fliers and other mailings. In addition, the Archie R-V School District will hold informational meetings from weather experts to assist community members in becoming more aware of preventive measures that may be taken in case of severe weather.

Goal 1. Educate Board of Education, district staff, parents, patrons and students about the necessity of severe weather planning at school and at home.

Goal 2. Disseminate information to Board of Education, district staff, parents, patrons and students regarding the threat of severe weather and preventative measures that can be taken to mitigate the hazards associated with severe weather.

B. Analysis of Mitigation Actions

The Archie R-V School District issued an electronic survey of parents, patrons and staff members who are on the district's electronic newsletter list. The survey asked the following question:

1. In what ways do you receive severe weather information?
 - a. Television
 - b. Radio
 - c. Internet
 - d. Other
2. In case of severe weather, do you have a basement or storm shelter?
 - a. Yes
 - b. No
3. Do your household members know where to go and what to do during the threat of severe weather?
 - a. Yes
 - b. No
4. Does your family have an alternative form of power, i.e., generator, in case utilities are unavailable for hours or days?
 - a. Yes
 - b. No
5. How would you rank the risk of severe weather as a potential risk to the Archie R-V School District and its community?
 - a. High
 - b. Medium
 - c. Low
 - d. No Risk
6. What would you like further information about in regard to severe weather?
 - a. Tornadoes
 - b. Straight Line Winds
 - c. Severe Thunderstorms
 - d. Flooding
 - f. I wouldn't like further information

C. Implementation of Mitigation Actions

Upon completion of the electronic survey, the district will:

Action 1. Educate parents and patrons regarding severe storm safety.

Ideas for implementation:

- Disseminate information to patrons based upon survey information
- Meet with school personnel regarding school district safety and emergency preparedness
- Initiate ongoing information dissemination and awareness for the district's staff, parents and patrons during faculty and staff in-service

In analyzing the costs/benefits of this action, the district determined that a greater number of patrons and staff could be reached using the electronic survey method with little or no cost to the district. Based upon the survey data, the district will be able to provide the necessary information to its staff and patrons to educate them on preventative measures regarding severe weather.

Responsible Agency: Archie R-V School District
Plan Goals Addressed: Increase education of district officials and patrons regarding severe weather
Timeline: Long-term
Funding: District operating funds
Priority: High

4.1.2.4 Fort Osage R-I School District Hazard Mitigation Strategy

A. Local hazard Mitigation Goals

The Fort Osage R1 School District (FOSD) school safety coordinator consulted with the superintendent, building principals, school resource officer (SRO), and other members of the school community in the development of a plan to address identified hazards that are of greatest concern. The district used this analysis to establish the following goal:

- **Goal: The Fort Osage R1 School District will revise, distribute, and implement building safety and emergency plans.**

B. Analysis of Mitigation Actions

The FOSD has actively sought ways to improve hazard mitigation actions. The administration, SRO, and other members of the school community meet frequently to review and revise the existing plan. The mitigation actions outlined in this document align with the FOSD Comprehensive School Improvement Plan approved annually by the Board of Education.

C. Implementation of Mitigation Actions

The Fort Osage R1 School District identified several mitigation actions that we believe will aid in achieving our goal of improved student safety.

Action 1. Train identified staff in the understanding of NIMS

Ideas for Implementation

- Complete online courses in ICS 100 and 700
- Conduct table top activities and drills using the ICS structure as a means of training

Cost/Benefit Analysis:

The online courses are no cost to the district or staff. Each of the courses takes approximately three hours to complete. When the courses are taken as a group it serves as a great professional development opportunity to better understand the conceptual framework around which NIMS is constructed.

Responsible Agency:	Fort Osage R1 School District Safety Coordinator
Timeline:	Long-term – Completed annually by district and building safety teams
Estimated Cost:	N/A
Priority:	High

Action 2. Building Safety First Teams will maintain emergency preparedness plans in ERIP.

Ideas for Implementation

- Building data in ERIP will be reviewed annually by Safety First teams to insure it is accurate.
- Quick Reference Flip-Charts will be revised annually. Quick Reference Flip Charts will be posted in all classrooms.

Cost/Benefit Analysis: The State of Missouri has made ERIP available to all public and private schools to maintain emergency preparedness plans. ERIP is NIMS compliant all hazard software application that enables school personnel to provide first responders access to critical site information, such as floor plans and utility shutoffs is facilitated through ERIP’s Critical Information Portal. School personnel are able to upload facility schematics, photographs and rosters into the portal. Public safety agencies are provided special “read-only” accounts so this critical information is available when it is needed most.

Responsible Agency:	Fort Osage School District Safety Coordinator
Plan Goal Addressed:	The Fort Osage R1 School District will revise, distribute, and implement building safety and emergency plans.
Timeline:	Immediate
Estimated Cost:	No cost
Funding:	State of Missouri
Priority:	High

Action 3. Distribute Go Kits and easily identifiable emergency responder apparel to key district staff responsible for responding to an incident.

Ideas for Implementation

- Go Kit/bucket/backpack for administration – A sample of items to include:
 - Clipboard with lists of:
 - Students
 - Students with special needs and description of needs
 - School personnel
 - ICS Commander checklist
 - Whistle and hat for leadership identification
 - Flashlight (shake model)
 - Utility turnoff procedure
 - Emergency communication device
 - First Aid kit with instructions
- Go Kit/bucket/backpack for classrooms – A sample of items to include:
 - Clipboard with lists of:
 - Classroom students
 - Students with special needs and description of needs
 - School emergency procedures
 - Buddy Teacher
 - Whistle and hat for leadership identification
 - First Aid kit with instructions
 - Student activities

Cost/Benefit Analysis: In the midst of responding to an incident Go Kits/buckets/backpacks helps to insure that critical information is maintained in an easy to access and carry manner for staff.

Responsible Agency:	Fort Osage School District Safety Coordinator
Plan Goal Addressed:	The Fort Osage R1 School District will revise, distribute, and implement building safety and emergency plans.
Timeline:	August of 2010
Estimated Cost:	\$4000
Funding:	Fort Osage R1 School District, Federal funds
Priority:	High

**4.1.2.5 Harrisonville School District
Hazard Mitigation Strategy**

A. Local Hazard Mitigation Goals

The Harrisonville School District recently revised the District Emergency Operation Plan. The yearlong process found the highest risk to the school district and the community based on probability and vulnerability was severe weather. Although severe winter storm, blizzard or ice storms also present

concern, tornadoes rank highest regarding storm-related situations. Although the school district cannot prevent such weather-related incidents from occurring, it can educate students, parents and staff regarding severe weather in addition to planning and practicing safety procedures.

The Harrisonville School District will disseminate emergency preparedness information to parents and patrons electronically and via paper brochures or pamphlets. The information will include school and home planning for severe weather.

Goal 1. Educate district staff, parents and students about the necessity of severe weather planning at school and at home.

Goal 2. Develop plans to address shelter of students and spectators during a severe weather event outside of normal school hours at both inside and outside venues.

B. Analysis of Mitigation Actions

The Harrisonville School District utilized the input provided by the District Safety Committee and local first responders to examine a variety of mitigation actions related to meeting the district goals.

While reviewing existing district emergency procedures, committee members as well as school administrators and school-level emergency teams agreed that though procedures are well-established for how to shelter students and staff in the event of the threat of severe weather, including a tornado during the school day, very little planning had been done on how to provide shelter should similar threats during events occur after school hours or at outside venues.

C. Implementation of Mitigation Actions

- Disseminate emergency preparedness information to parents and patrons through district Web site and emergency preparedness brochures.
- Initiate ongoing awareness and training of district staff and students.
- Initiate systematic practice of severe storm safety procedures.
- Develop emergency procedures for severe storm shelter during non-school hours.

Responsible Agency:	Harrisonville School District
Plan Goals Addressed:	Increase education of district officials, students, and parents regarding severe weather
Timeline:	Short-term, ongoing
Funding:	District operating funds
Priority:	High

4.1.2.6 Lone Jack C-6 School District Hazard Mitigation Strategy

A. Local Hazard Mitigation Goals

The Superintendent of the Lone Jack C-6 school district believes a plan for emergency evacuation of the district is an important safety goal. A plan for district evacuation has been visited many times over the

years but has never been completed. There are many problems with evacuating approximately 600 students and 50 staff members. The Lone Jack District has three buildings: a primary building housing grades K–1, an elementary building housing grades 2–6, and a junior/senior high school building housing grades 7–12. The primary building also houses the pre-Kindergarten and the A.M./P.M. children. The dividing line of Lone Jack is 50 Highway. The elementary and primary buildings are located north of 50 Highway and the high school is south of 50 Highway. All three buildings are in residential areas.

Goal. Our district safety goal is to make sure our students are safe regardless of the impending danger. As we cannot plan for everything possible for an evacuation, we can plan for a district evacuation that will keep our students safe if they are not safe in our buildings.

B. Analysis of Mitigation Actions

The safety committee has met and determined that development of an evacuation plan would meet the goal outlined in this strategy. An emergency evacuation drill of the entire district would be done before the end of the first semester. The safety committee has been putting together a plan for an evacuation with the help of the police and fire chief.

We need to be able to evacuate our kids to a central place far enough way from the area so the proper authorities have the space available to do what they need to do. In placing the students off-campus, we will also have to handle the immediate difficulties an emergency evacuation will provide. For example, notifying parents and handling the media.

The students in each of the three buildings have a safe place to walk; buses will then be able to pick up the primary and elementary kids and take them to the central meeting site. The central meeting site is where the secondary kids will walk, one-third of a mile away.

We have compiled a list of all students and staff complete with parents names and phone numbers. We have put together several scripts for our secretaries who will be on the phones, and also a script for the person that will take the call of an impending threat.

C. Implementation of Mitigation Action

The Lone Jack School District has identified the following mitigation action to help our district in putting our plan into action.

Action 1. Evaluate evacuation plan and revise as necessary.

The safety committee has identified an emergency evacuation route for the students in all three buildings. We have identified building safety coordinators who will be the last people out of the buildings to ensure everyone has left and moved in the right direction. We have given the secretaries in each building their responsibilities, including how to handle the situation if and when a phone call comes for the need for an emergency evacuation. The school board is the governing body that will approve our plan.

Cost/Benefit Analysis

The cost of the evacuation is minimal as we are using current staff to handle the evacuation. The benefit of being able to evacuate our buildings to keep our kids safe is immeasurable. We had a truck carrying fertilizer chemicals overturn recently in our area. This accident could have created a need to evacuate our buildings. As stated, the reasons for an evacuation are numerous, and we want to be ready if the

circumstances arise. The Lone Jack School District believes that this drill can better serve the safety of our children in case of a real emergency. This threat in today's culture is a concern. The problems of evacuating a district of over 650 people can be complicated and dangerous. Parents and family members of students and staff can all appreciate the district's desire to be able to handle such an emergency with great efficiency. This project has been a high priority of our superintendent this year.

Responsible Agency:	Lone Jack School District Safety Committee
Plan Goals Addressed:	Increase student safety
Timeline:	Short-term, ongoing
Funding:	Utilize existing staff, no additional cost
Funding Source:	N/A
Priority:	High

4.1.2.7 Park Hill School District Hazard Mitigation Strategy

A. Local Hazard Mitigation Goals

The Park Hill School District recently installed an internal camera surveillance system for all district school sites. The camera system is monitored by the district camera security team from 6 a.m.–11 p.m. Monday through Friday. Senior leaders met to review the use of cameras in the school setting and identified the need to expand current services due to vandalism and repetitive loss. It was recommended that external surveillance cameras be installed to identify potential threats to the school environment and to mitigate property damage around the school sites.

Senior leaders also reviewed their capability to provide electrical service in case of an emergency. To meet this need, senior leaders have identified the need for a portable three-phase generator that could be used at various sites to provide electrical support in the event of an emergency. Senior leaders reviewed patron survey data that identified student safety as their top priority. With the input from district stakeholders and after a review of current safety/mitigation processes, senior leaders have developed the following goals for hazard mitigation:

Goal 1. Purchase external cameras to reduce property damage and identify potential threats to the school environment.

Goal 2. Purchase a portable, three-phase generator to supply electrical power in case of an emergency.

B. Analysis of Mitigation Actions

Senior leaders utilized the goals of the Comprehensive School Improvement Plan and the district safety plan to examine mitigation actions.

C. Implementation of Mitigation Actions

The Park Hill School District has identified the following mitigation action to assist the district in meeting its goals:

1. Consider including the addition of external cameras as part of the federal stimulus funding.

2. Consider including a portion of the cost for the portable generator into the district budget.

Responsible Agency:

1. The Park Hill Board of Education has the responsibility of approving capital projects.
2. The Park Hill School District will oversee the installment and operation of external cameras and the portable three-phase generator.

Plan Goals Addressed:

Comprehensive School Improvement Plan goal: Ensure a safe, caring environment.

Timeline:

1. Determine purchase and installation cost. **Fall 2009**
 - a. Utilize available expertise from the district's technology and building maintenance directors to apply for FEMA Pre-Disaster Mitigation (PDM) to help reduce cost. **Fall/Winter 2009–2010**
2. Disseminate the above to the public in district publications, media, and the district's Web site. **-Winter 2009–2010 and ongoing**

Funding:

1. Consider including a portion of the purchase of the external camera system and portable generator within the school district budget. District Funding. **(Projected Cost: \$350,000 external cameras, \$40,000 portable generator)**

Utilize available expertise from the district's technology ad building maintenance directors to apply for FEMA Pre-Disaster Mitigation (PDM) to help reduce cost-
Federal or State Grant Dollars

Priority: High

**4.1.2.8 Pleasant Hill R-III School District
Hazard Mitigation Strategy**

A. Local Hazard Mitigation Goals

The Pleasant Hill R-III School District finds that the most readily apparent hazard to the school district and the community is severe weather. The potential hazard this creates is high to medium, depending solely on the weather. The city of Pleasant Hill and buildings in the school district were damaged by a tornado on May 4, 1977. More recently, in June 2009, the community of Drexel, Mo., situated 35 miles southwest of Pleasant Hill, was damaged extensively by straight-line winds and possible tornadic activity. Although the school district cannot prevent such weather-related incidents from occurring, it can educate the community's patrons and staff regarding severe weather.

The Pleasant Hill R-III School District will disseminate information to patrons through paper newsletters, fliers and other mailings. There will be information regarding severe weather placed on the district website. In addition, the Pleasant Hill R-III School District will hold informational meetings from

weather experts to assist community members in becoming more aware of preventive measures that may be taken in case of severe weather.

Goal 1. Educate Board of Education, district staff, parents, patrons and students about the necessity of severe weather planning at school and at home.

Goal 2. Disseminate information to Board of Education, district staff, parents, patrons and students regarding the threat of severe weather and preventative measures that can be taken to mitigate the hazards associated with severe weather.

B. Analysis of Mitigation Actions

The Pleasant Hill R-III School District will annually issue an electronic survey of parents, patrons and staff members who are on the district's electronic newsletter list. The survey will ask the following questions:

1. In what ways do you receive severe weather information?
 - a. Television
 - b. Radio
 - c. Internet
 - d. Other
2. In case of severe weather, do you have a basement or storm shelter?
 - a. Yes
 - b. No
3. Do your household members know where to go and what to do during the threat of severe weather?
 - a. Yes
 - b. No
4. Does your family have an alternative form of power, i.e., generator, in case utilities are unavailable for hours or days?
 - a. Yes
 - b. No
5. How do you rank the risk of severe weather as a potential risk to the Pleasant Hill R-III School District and its community?
 - a. High
 - b. Medium
 - c. Low
 - d. No Risk
6. What would you like further information about in regard to severe weather?
 - a. Tornadoes
 - b. Straight Line Winds
 - c. Severe Thunderstorms
 - d. Flooding
 - f. I wouldn't like further information

C. Implementation of Mitigation Actions

Upon completion of the electronic survey, the district will:

Action 1. Educate parents and patrons regarding severe storm safety.

Ideas for implementation:

- Disseminate information to patrons based upon survey information
- Meet with school personnel regarding school district safety and emergency preparedness
- Initiate ongoing information dissemination and awareness for the district's staff, parents and patrons during faculty and staff in-service

In analyzing the costs/benefits of this action, the district determined that a greater number of patrons and staff could be reached using the electronic survey method with little or no cost to the district. Based upon the survey data, the district will be able to provide the necessary information to its staff and patrons to educate them on preventative measures regarding severe weather.

Responsible Agency:	Pleasant Hill R-III School District
Plan Goals Addressed:	Increase education of district officials and patrons regarding severe weather
Timeline:	Long-term
Funding:	District operating funds
Priority:	High

4.1.2.9 Sherwood Cass R-VIII School District Hazard Mitigation Strategy

A. Local hazard Mitigation Goals

The Sherwood Cass R-8 school safety coordinator consulted with the superintendent, building principals, and school resource officer (SRO) in order to identify hazards that are of greatest concern in our school district. The district used this analysis to establish the following goal:

Goal. Improve student safety from natural and man-made hazards.

B. Analysis of Mitigation Actions

The school district has been actively seeking ways to improve hazard mitigation actions throughout the past three school years. Meetings with the administration and SRO have been conducted frequently to identify weaknesses in our existing plan and to determine a course of action for improvement. The mitigation actions outlined in this document serve as a culmination of these discussions.

C. Implementation of Mitigation Actions

The Sherwood Cass R-8 school district has identified several mitigation actions that we believe will aid in achieving our goal of improved student safety.

Action 1. Improve Tornado Preparedness

Ideas for Implementation

- Construct a storm shelter
- Implement tornado readiness and response procedures in curriculum
- Conduct additional drills (two per year currently)

Cost/Benefit Analysis:

Conducting additional drills would not require additional funding, however we feel that two drills per year is sufficient. Throughout this process, it was discovered that tornado readiness and response procedures are already included in our curriculum at several grade levels and would therefore not be necessary.

Although construction of a storm shelter would require a higher initial cost, the benefits outweigh this cost when increased student and community safety is considered. Additionally, this project would stimulate the local economy by providing construction opportunities and bringing income to local businesses. This was determined to be high priority because of the high likelihood of tornadoes affecting our school and due to the large number of individuals that would be impacted throughout our school and community.

Responsible Agency:	Sherwood Cass R-8 superintendent and Board of Education
Plan Goal Addressed:	Improve student safety from natural and man-made hazards.
Timeline:	Long-term – Within next three years
Target Capacity:	1100
Estimated Cost:	\$1.3 - \$1.5 million
Funding:	School District, Federal Grant
Priority:	High

Action 2. Establish and communicate an effective crisis management plan.**Ideas for implementation**

- Establish a school safety committee consisting of the school safety coordinator, superintendent, SRO, additional administrator and other certified staff members
- Revise the existing crisis management plan to improve ease of use. (Revise quick reference flip chart, create crisis management manual, provide training)
- Hire an independent company to train our staff in the use of a commercial crisis management plan

Cost/Benefit Analysis: Hiring an independent company is often very costly and involves a continuous flow of funds to continue implementation of their program from year to year. This type of approach is can often be difficult to adapt to the specific needs of the district. In contrast, developing a site-based plan will likely result in a program that will adequately serve the needs of our district and will effectively utilize existing resources.

Responsible Agency:	Sherwood Cass R-8 School Safety Coordinator
Plan Goal Addressed:	Improve student safety from natural and man-made hazards.
Timeline:	Short-term – completion goal of August 2010
Estimated Cost:	\$1000
Funding:	Local school district
Priority:	High

Action 3. Minimize the threat of intruders and civil disturbances.

Ideas for implementation

- Install video identification system at two main entrances.
- Provide a security guard at each main entrance.
- Hire a full time school resource officer.

Cost/Benefit Analysis: Our district currently has access to a school resource officer one day per week. It is our desire that our district would eventually have the ability to fund a full-time SRO. However, with the current funding crisis, it would be unlikely that this would be feasible in the near future. Although the threat of intruders and civil disturbances is quite real, this threat is not so severe that security guards would be merited. Installation of a video identification system at the two main entrances would serve the purpose of having security guards or a full-time SRO, but at a much lower overall cost.

Responsible Agency:	Sherwood Cass R-8 Superintendent and School Board
Plan Goal Addressed:	Improve student safety from natural and man-made hazards.
Timeline:	Short term – completion goal December 2010
Estimated Cost:	\$5,800
Funding:	Local School District, Federal Funds
Priority:	High

4.1.2.10 West Platte R-II School District Hazard Mitigation Strategy

A. Local Hazard Mitigation Goals

The West Platte R-II School District periodically updates its Emergency Plan so as to keep it current with best practices. This process has been initiated once again during the spring and fall of 2009. A district team has been created to review and recommend changes to district procedures, a consulting firm has been employed to complete a survey of the district's facilities and make recommendations. In addition, the district team met with representatives of Weston's fire, police and ambulance agencies so we could better coordinate our efforts alongside theirs. With the input from all of the above, as well as that of the Regional Hazard Mitigation Plan, the district has developed and prioritized the following goals for hazard mitigation:

Goal 1. Improved safety for students, staff and community from the hazards of tornadoes and severe thunderstorms.

B. Analysis of Mitigation Actions

The West Platte R-II School District utilized the input provided by the district emergency planning team, school safety consultants and local first responders to examine a variety of mitigation actions related to meeting the district's goals. While reviewing existing district emergency procedures, team members as well as school safety consultants agreed that though procedures are well-established for how to shelter students in the event of the threat of a tornado, very little planning had been done as to how to provide shelter should a similar threat present itself during events such as games, plays or commencement. In addition, during the various stages in which the district's schools were built, none were constructed as a "hardened" and therefore safer facility. As the experience at Enterprise, Ala., High School proved, even with the best sheltering procedures in place, if a building is not sufficiently strengthened, it can result in

fatalities. Although the need exists for a “hardened” shelter for students and school visitors, it also exists for other Weston community members. Just as cost has been an impediment construction of other structures in the community. Like most communities, Weston needs more “safe rooms” available to its citizens.

C. Implementation of Mitigation Actions

The West Platte R-II School District has identified the following mitigation action to assist the district in meeting its goals:

Ideas for Implementation:

1. Consider including the construction of a “hardened” shelter as part of the school district’s upcoming capital improvement project. As part of the planning for the capital improvement project, the district will approach the City of Weston regarding possibility of partnering with them to help defray costs. The district could utilize available expertise from city or from the district’s architect or construction manager to apply for a FEMA Hazard Mitigation Grant.
2. Regardless of whether or not a “hardened” shelter is constructed, develop and post emergency shelter directions in school facilities such as the gyms, cafeterias and stadium. Disseminate the above to the public in district publications, media and the district’s Web site.

Responsible Agency:

Idea 1. The West Platte R-II Board of Education has the responsibility of approving capital projects Board of Education, Superintendent or his designee could discuss a possible partnership with the City. The district’s architectural firm is Hollis and Miller, and their construction management firm is JE Dunn.

Idea 2. The district’s emergency team and administration will be responsible for developing and posting emergency procedures. The district’s administration is responsible for disseminating emergency procedures to the public.

Plan Goals Addressed:

Goal 1. Improved safety for students, staff and community from the hazard of tornadoes and severe thunderstorms

Timeline:

Idea 1. Consider including the construction of a “hardened” shelter as part of the upcoming capital improvement project. **Fall 2009**

Approach City of Weston regarding possibility of partnering with them to help defray cost. **Fall 2009**

Utilize available expertise from city or from the district’s architect or construction manager to apply for FEMA Hazard Mitigation Grant to help reduce cost. **Fall/Winter 2009–2010**

Idea 2. Regardless of whether or not a “hardened” shelter is constructed, develop and post emergency shelter directions in school facilities such as the gyms, cafeterias and stadium. **Fall 2009**

Disseminate the above to the public in district publications, media and the district’s Web site-**Winter 2009–2010 and ongoing**

Funding:

Idea 1. Consider including the construction of a “hardened” shelter as part of the upcoming capital improvement project. **District’s Capital Project Budget**

Approach City of Weston regarding possibility of partnering with them to help defray cost. **City’s Capital Project Budget**

Utilize available expertise from city or from the district’s architect or construction manager to apply for FEMA Hazard Mitigation Grant to help reduce cost. **Federal or State Grant Dollars**

Idea 2. Regardless of whether or not a “hardened” shelter is constructed, develop and post emergency shelter directions in school facilities such as the gyms, cafeterias and stadium. **Existing staff***

Disseminate the above to the public in district publications, media, and the district’s Web site. **Existing staff***

***NOTE: Because existing staff would be used, there would be no extra cost.**

Priority: High. There is no doubt that constructing a “hardened” shelter would cost more than constructing a shelter using normal specifications. However, the benefits of having a safe, secure shelter that is available not only to our students during the school day, but also during the many programs and events throughout the year, is considerable. When you also add the benefit of how it could greatly increase the capacity of the Weston community to offer this level of shelter, as well as the opportunity to stimulate the local economy by providing construction jobs, it was determined that this should be a high-priority project.

4.1.2.11 Metropolitan Community Colleges Hazard Mitigation Strategy

Safety and security of the campus community has been a primary element in the college’s strategic planning over the last decade. It is our duty to protect our constituents and to educate them to manage emergency situations in any setting. Safety and security is not an initiative that we address periodically. It has become an element of our standard operating procedures.

Hazard Mitigation Goals: The MCC Safety Committee, consisting of administrative, faculty, staff and student representatives, developed a hazard identification survey that was sent to all employees and students. Based on the results of that survey, the Committee identified and prioritized hazards that need to be addressed. The overarching goal is:

Goal 1. Protect the health and safety of all students, employees and visitors from natural and manmade hazards.

Analysis of Mitigation Actions: MCC has an ongoing five-year safety and security plan that is reviewed and updated annually. Action plans are budgeted by priority. Actions that cost little or nothing to implement are identified and implemented as soon as possible. The mitigation actions outlined below contain both short-term and long-term actions.

Action 1. Improve education and outreach to MCC stakeholders on the risks and responses associated with natural, health and manmade hazards.

Ideas for Implementation:

- Provide safety forums presented by subject experts such as local emergency service personnel
- Offer safety webinars
- Enhance safety section of website with relevant information such as the “Active Shooter on Campus” video
- Expand text and voicemail systems for communicating with students and employees regarding emergency situations
- Integrate evacuation, seek shelter and lock down drills into each course syllabus that instructors would cover during the first class of each semester

Cost/Benefit Analysis:

Our Public Safety and Information Technology departments and faculty can accomplish these tasks with little additional funding. The cost would involve payment to subject experts and to purchase webinars and videos. We are now implementing a voice over IP system so the enhanced text and voicemail systems cost is negligible. Further, there is no cost to instructor led instruction of the various drills.

Responsible Agency:	Metropolitan Community College
Plan Goal Addressed:	Protect the health and safety of all students, employees and visitors from natural and manmade hazards.
Timeline: Short-term:	Less than one year and ongoing
Target Capacity:	42,000 annually
Estimated Cost:	\$5,000 annually
Funding Source:	MCC
Priority:	High

Action 2. Establish resources to manage and protect the campus community in the event of a disaster event.

Ideas for Implementation:

- Create a college police department to serve as emergency first responders
- Construct a fully operational emergency operations center that could be shared with local municipalities

Cost/Benefit Analysis: Police Department

In 2008, we were a participant on the Governor’s Task Force on Campus Security and concluded that a college police department is necessary to protect our 2,000 employees and the 40,000-plus students we serve annually. In Phase I of our implementation plan, we will hire a chief of police that will establish a POST certified force. We will initially hire 10 officers and offer additional officer positions to current Public Safety staff that can pass POST. Because our salary and benefit package is actually more attractive

than most municipal police departments, we don't anticipate any obstacles in attracting qualified officers. Phase II will increase the total number of officers to 54 within five years.

The cost of POST for internal hires will be negligible because they will be trained through our Police Academy. There will remain a need for some Public Safety personnel so no employees will lose their jobs.

The initial cost will include the salary of the chief and the first 10 officers for approximately \$540,000 plus their uniforms and equipment at approximately \$60,000 in year one. With restructuring and attrition, we will achieve a relative salary balance by the five year mark with continuing education, uniform and equipment costs of approximately \$50,000 annually.

Responsible Agency:	Metropolitan Community College
Plan Goal Addressed:	Protect the health and safety of all students, employees and visitors from natural and manmade hazards.
Timeline: Phase I:	Short-term, one year
Target Capacity:	42,000
Estimated Cost:	\$600,000
Funding Source:	Primarily MCC with small criminal justice grants for equipment
Priority:	High
Timeline: Phase II:	Long-term, five years
Target Capacity:	42,000
Estimated Cost:	\$50,000 annually
Funding Source:	Primarily MCC with small criminal justice grants for equipment
Priority:	High

Cost/Benefit Analysis: Emergency Operations Center

The college has been utilizing conference rooms at each of our campuses as EOCs. This practice is not adequate as none of these facilities are equipped for the intended purpose. However, we do have a central control center where security and fire systems as well as automated logic HVAC systems are monitored 24/7. After consultation with an architect/engineering firm, we find it cost effective to expand the control center into a fully functional EOC that would also serve as our police headquarters. College personnel visited the Kansas City, Mo., EOC on Independence Avenue and the manager has agreed to act as an advisor on this project.

Responsible Agency:	Metropolitan Community College
Plan Goal Addressed:	Protect the health and safety of all students, employees and visitors from natural and manmade hazards
Timeline:	Long-term: Five years
Target Capacity:	42,000
Estimated Cost:	\$1 million
Funding Source:	MCC, federal grants
Priority:	High

Goal 2: Assist school districts and municipalities in acquiring funds to mitigate natural hazards.

Analysis of Mitigation Actions: MCC was successful in obtaining a \$100,000 FEMA natural hazard planning grant and FEMA pre-disaster hazard mitigation grants totaling \$10.8 million for the construction of six safe rooms on our campuses. During this process, several employees gained experience and knowledge on the grant application and management process. MCC believes it is part of our mission to provide grant services to any qualifying municipality in the area. MCC's intent is to provide the service at cost. Recently, we contracted with West Platte R-II School District and provided 200 hours of service, at cost, to coordinate and prepare their application for a safe room. We are receiving inquiries and requests for proposals from various public entities for 2010 FEMA grant applications.

Action. Assist school districts and municipalities in applying for hazard mitigation funds from the Department of Homeland Security's Federal Emergency Management Agency.

Ideas for Implementation:

- Provide sample grant applications and written technical advice to any requesting school district or municipality
- Provide grant application and management services at cost to any requesting school district or municipality

Cost/Benefit Analysis:

MCC has already written the technical piece and would provide it and sample grant applications to any requestor at no cost. There would be no cost to MCC because we would send the information electronically. For any entity contracting for actual grant application and/or management services, the contracting entity would pay MCC only for the cost of the work to include personnel, travel and supply expenses. Based on our past experience, the cost is approximately \$10,000 for a safe room application.

Responsible Agency:	Metropolitan Community College
Plan Goal Addressed:	Assist school districts and municipalities in acquiring funds to mitigate natural hazards
Timeline:	Short- and long-term depending on requests
Target Capacity:	Three entities annually
Estimated Cost:	\$10,000 per project
Funding Source:	Public entity requesting services
Priority:	High

4. 2 Implementation of the National Flood Insurance Program (NFIP)

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

In accordance with regulatory requirements, all hazard mitigation plans must describe each jurisdiction's participation in the NFIP by identifying, analyzing and prioritizing actions related to continued compliance with the NFIP. The three basic components of the NFIP include 1) floodplain identification

and mapping; 2) floodplain management; and 3) flood insurance. Several goals and actions were identified in the 2004 Plan that jurisdictions could adopt in order to meet the deliverables of NFIP compliance and are listed below. These have been grouped below according to NFIP component. See Section 4.1, Attachment 1 for detailed information on how each community is addressing the goals and actions related to NFIP. NFIP goals and actions are noted as double asterisks (**).

Floodplain identification and mapping:**5. Improve flood hazard assessments and flood mapping.**

- a.) Obtain parcel data (assessed valuation and other information) for flood boundary areas and enhance vulnerability assessments for these areas.
- b.) Partner with FEMA in the Cooperating Technical Partners (CTP) Program to increase local involvement in, and ownership of, the flood mapping process.
- c.) Purchase HAZUS-Flood software from FEMA, possibly in conjunction with other local or regional stakeholders.
- d.) Coordinate the collection of demographic, economic, watershed, land use and other data required by the HAZUS-Flood software program and/or GIS systems.
- e.) Conduct an in-depth flood risk analysis utilizing HAZUS data and create detailed maps based on GIS technology to identify areas at risk from flooding.

Floodplain management:**4. Discourage new development in floodplains and flood-prone areas.**

- a.) Adopt ordinances prohibiting residential and commercial development in flood plains or flood-prone areas.
- b.) Develop or amend comprehensive and/or land use plans to specifically address development in flood-prone areas and recommend strategies for decreasing the jurisdiction's vulnerability to flooding.
- c.) Levy fees on new residential, commercial and infrastructure development in floodplains or flood-prone areas to finance flood mitigation, preparedness, response and recovery actions.

7. Participate in, and ensure compliance with, flood mitigation and floodplain management programs.

- a.) Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS).
- b.) Obtain the latest copies of flood insurance rate maps (FIRMs), floodplain maps and similar documents.

Community assistance and insurance:

1. Examine repetitive flood loss properties in each county and determine feasible and practical mitigation options.
 - a.) Work with owners of repetitive flood loss properties to identify feasible mitigation strategies and potential opportunities; determine property owners' interest in specific mitigation options.
 - b.) Identify potential funding opportunities to implement mitigation options for repetitive flood loss properties.
 - c.) As funding allows, repetitive flood loss properties and structures will be targeted for buyout.
 - d.) With stakeholders, explore incentive options to encourage property owners to take action to prevent or reduce future flood losses

3. Reduce flood-related damage to public, residential and commercial property in flood-prone areas through structural and nonstructural retrofits or removal of property.
 - f.) Identify incentives to offer home owners and businesses to remove or retrofit their structures in flood-prone areas.

4.2.1 Communities Participating in NFIP

The following communities participate in the NFIP. Communities participating in the NFIP are identified as such in the flooding hazard section of Attachment 1 to Section 4.1.

TABLE 4.1: COMMUNITIES PARTICIPATING IN THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP)						
CID	Jurisdiction	County	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Reg-Emerg Date
290880#	BALDWIN PARK, VILLAGE OF	CASS COUNTY	04/01/80	08/05/85	03/16/06(M)	08/05/85
290062#	BELTON, CITY OF	CASS COUNTY	05/24/74	09/05/79	03/16/06	09/05/79
290783#	CASS COUNTY *	CASS COUNTY	03/14/78	04/15/82	03/16/06	04/15/82
290063#	CREIGHTON, CITY OF	CASS COUNTY	05/13/77	03/16/06	03/16/06	06/30/80
290065#	EAST LYNNE, CITY OF	CASS COUNTY	11/29/1974	03/25/80	03/16/06(M)	03/25/80
290066#	FREEMAN, CITY OF	CASS COUNTY	11/8/1975	05/01/80	03/16/06	05/01/80
290067#	GARDEN CITY, CITY OF	CASS COUNTY	03/29/74	04/08/77	03/16/06	04/08/77
290068#	HARRISONVILLE, CITY OF	CASS COUNTY	03/15/74	11/1/1979	03/16/06	11/1/1979
290953#	LAKE ANNETTE, CITY OF	CASS COUNTY		03/16/06	03/16/06	06/25/04

TABLE 4.1: COMMUNITIES PARTICIPATING IN THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP)						
CID	Jurisdiction	County	Initial FHB Identified	Initial FIRM Identified	Current Effective Map Date	Reg- Emerg Date
290877#	LAKE WINNEBAGO, CITY OF	CASS COUNTY		09/29/86	03/16/06	09/29/86
290878#	PECULIAR, CITY OF	CASS COUNTY	09/10/84	09/10/84	03/16/06(M)	09/10/84
295269#	PLEASANT HILL, CITY OF	CASS COUNTY	09/15/72	09/15/72	03/16/06	09/15/72
290070#	RAYMORE, CITY OF	CASS COUNTY	12/27/1974	05/15/86	03/16/06(M)	05/15/86
290957#	RIVERVIEW ESTATES, VILLAGE OF	CASS COUNTY		03/16/06	03/16/06	10/22/2008
290071#	STRASBURG, CITY OF	CASS COUNTY	08/16/74	03/18/80	03/16/06(M)	03/18/80
290950#	WEST LINE, VILLAGE OF	CASS COUNTY		03/16/06	03/16/06	03/16/07
290087#	AVONDALE, CITY OF	CLAY COUNTY	01/09/74	10/26/1976	10/26/1976	10/26/1976
295272#	BIRMINGHAM, VILLAGE OF	CLAY COUNTY	04/25/78	03/01/79	(NSFHA)	03/01/79
290086#	CLAY COUNTY *	CLAY COUNTY	09/06/74	03/18/80	04/16/03	03/18/80
290089#	CLAYCOMO, VILLAGE OF	CLAY COUNTY	01/23/74	08/01/77	12/2/1980	08/01/77
290091#	GLADSTONE, CITY OF	CLAY COUNTY	05/17/74	01/05/78	08/05/86	01/05/78
290092#	GLENAIRE, CITY OF	CLAY COUNTY	01/23/76	09/15/77	09/15/77	09/15/77
290095#	KEARNEY, CITY OF	CLAY COUNTY	03/22/74	07/17/78	04/16/03	07/17/78
290705#	LAWSON, CITY OF	CLAY COUNTY	06/04/76	12/5/1996	12/5/1996	12/5/1996
290096#	LIBERTY, CITY OF	CLAY COUNTY	06/14/74	03/15/78	02/01/85	03/15/78
290097#	MISSOURI CITY, CITY OF	CLAY COUNTY	08/16/74	08/15/79	08/15/79	08/15/79
290098#	MOSBY, CITY OF	CLAY COUNTY	10/18/1974	09/01/78	04/16/03	09/01/78
290099#	NORTH KANSAS CITY, CITY OF	CLAY COUNTY	03/15/74	03/05/76	04/30/76	03/05/76
290695#	OAKVIEW, VILLAGE OF	CLAY COUNTY	07/16/76	11/6/1979	11/06/79(M)	11/6/1979
290100#	PLEASANT VALLEY, CITY OF	CLAY COUNTY	03/15/74	07/18/77	07/18/77	07/18/77
290101#	PRATHERSVILLE, VILLAGE OF	CLAY COUNTY	02/18/77	11/15/1978	04/16/03	11/15/1978
290102#	RANDOLPH, VILLAGE OF	CLAY COUNTY		07/18/77	07/18/77	07/18/77
295271#	SMITHVILLE, CITY OF	CLAY COUNTY	06/05/70	05/21/71	04/16/03	05/21/71
290172#	INDEPENDENCE, CITY OF	CLAY/JACKSON	04/12/74	02/01/79	09/29/06	02/01/79

TABLE 4.1: COMMUNITIES PARTICIPATING IN THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP)						
CID	Jurisdiction	County	Initial FHB Identified	Initial FIRM Identified	Current Effective Map Date	Reg- Emerg Date
290169#	BLUE SPRINGS, CITY OF	JACKSON COUNTY	06/28/74	09/15/78	09/29/06	09/15/78
290170#	BUCKNER, CITY OF	JACKSON COUNTY	12/21/1973	09/15/78	09/29/06	09/15/78
290737#	GRAIN VALLEY, CITY OF	JACKSON COUNTY	07/16/76	08/15/79	09/29/06	10/9/1979
290171#	GRANDVIEW, CITY OF	JACKSON COUNTY	07/19/74	06/15/79	09/29/06	06/15/79
290711#	GREENWOOD, CITY OF	JACKSON COUNTY	06/04/76	01/03/79	09/29/06	01/03/79
290492#	JACKSON COUNTY *	JACKSON COUNTY	02/21/75	09/29/78	09/29/06	09/29/78
290697#	LAKE LOTAWANA, CITY OF	JACKSON COUNTY	11/19/1976	11/1/1979	09/29/06	11/1/1979
290174#	LEE'S SUMMIT, CITY OF	JACKSON COUNTY	06/21/74	04/03/78	09/29/06	04/03/78
290175#	LEVASY, CITY OF	JACKSON COUNTY	12/20/1974	09/29/78	09/29/06	09/29/78
290694#	OAK GROVE, CITY OF	JACKSON COUNTY	07/11/75	09/05/79	(NSFHA)	09/05/79
290176#	RAYTOWN, CITY OF	JACKSON COUNTY	12/21/1973	09/15/78	09/29/06	09/15/78
290178#	SUGAR CREEK, CITY OF	JACKSON COUNTY	12/17/1976	01/03/79	(NSFHA)	01/03/79
290173#	KANSAS CITY, CITY OF	JACKSON/PLATTE /CLAY COUNTIES	11/8/1974	09/29/78	09/14/90	09/29/78
290504#	DEARBORN, CITY OF	PLATTE COUNTY	09/19/75	06/15/79	06/15/79	06/15/79
290291#	EDGERTON, CITY OF	PLATTE COUNTY	12/20/1974	06/04/80	06/04/80	06/04/80
290292#	FARLEY, VILLAGE OF	PLATTE COUNTY	01/24/75	12/18/1979	12/18/1979	06/30/97
290895#	FERRELVIEW, VILLAGE OF	PLATTE COUNTY		05/17/89	05/17/89(M)	03/30/09
290700#	LAKE WAUKOMIS, CITY OF	PLATTE COUNTY	09/10/76	04/15/80	04/15/80(M)	04/15/80
290293#	NORTHMOOR, CITY OF	PLATTE COUNTY	07/19/74	05/15/78	01/16/04	05/15/78
290294#	PARKVILLE, CITY OF	PLATTE COUNTY	01/16/74	05/15/78	05/15/78	05/15/78
290295#	PLATTE CITY, CITY OF	PLATTE COUNTY	12/14/1973	05/15/78	05/15/78	05/15/78
290475#	PLATTE COUNTY*	PLATTE COUNTY		12/18/1979	06/04/87	12/18/1979
290536#	PLATTE WOODS, CITY OF	PLATTE COUNTY	11/12/1976		(NSFHA)	01/26/83
290296#	RIVERSIDE, CITY OF	PLATTE COUNTY	11/30/1973	09/30/77	06/04/87	09/30/77
290297#	TRACY, CITY OF	PLATTE COUNTY	11/22/1974	06/15/79	06/15/79	06/15/79

TABLE 4.1: COMMUNITIES PARTICIPATING IN THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP)						
CID	Jurisdiction	County	Initial FHB Identified	Initial FIRM Identified	Current Effective Map Date	Reg- Emerg Date
290298#	WESTON, CITY OF	PLATTE COUNTY	03/22/74	06/15/79	06/15/79	06/15/79
290307#	HARDIN, CITY OF	RAY COUNTY	06/07/74	01/06/83	01/06/83	01/06/83
290308#	HENRIETTA, CITY OF	RAY COUNTY	10/18/1974	08/16/82	08/16/82	08/16/82
290309#	ORRICK, CITY OF	RAY COUNTY	04/05/74	01/19/83	01/19/83	01/19/83
290778#	RAY COUNTY *	RAY COUNTY	05/01/79	01/19/83	01/19/83	01/19/83
290657#	RICHMOND, CITY OF	RAY COUNTY	10/22/1976	05/01/99	05/01/99(L)	05/01/99
290090#	EXCELSIOR SPRINGS, CITY OF	RAY/ CLAY COUNTIES	04/05/74	03/15/77	04/16/03	03/15/77

Source: NFIP Web site

4.2.2 Communities Not Participating in NFIP

Communities electing not to participate in the NFIP are listed below:

Houston Lake: All flood prone areas are designated open spaces.

Loch Lloyd (S)

Weatherby Lake: Not listed in Community Status Board (CSB), no Flood Insurance Study (FIS) has been conducted.