

## Commonwealth of Kentucky Enhanced Hazard Mitigation Plan: 2013 Version

### PLANNING PROCESS

#### PART I:

#### Documentation of the Planning Process

##### **A.** *Providing a Narrative Description of How the 2013 Update of the Commonwealth of Kentucky's Hazard Mitigation Plan Was Prepared*

In discussing the preparation of this 2013 update of the Commonwealth of Kentucky's hazard mitigation plan, two (2) terms that will be used throughout this document must be discussed: *inductive planning* versus *deductive planning*. Ultimately, these two neologisms describe a philosophy of planning that will be implicit throughout this document. However, introducing the terms here does result in narrating how this plan was prepared generally.

##### *Inductive versus Deductive Planning*

The use of the adjectives "inductive" and "deductive" to distinguish between planning processes relies upon a somewhat loose interpretation of those adjectives.

*Induction*, when applied to logic, occurs when specific observations or details result in a general principle. Technically, a necessary part of the definition (because it relates to argument) is that the premises of an inductive argument do not necessarily support the general principle.

*Deduction* occurs when the general principle results in specific observations or details. Technically, because the definition is used in logic and argument, the premises that result from deduction are guaranteed to support the general principle.

For the purposes of the 2013 update of the Commonwealth of Kentucky's hazard mitigation plan it is the process that differentiates *induction* from *deduction* that is relevant: *Inductive* reasoning occurs when specific observations or details are observed and compiled upward in order to conclude something general. Thus, *inductive planning* occurs when the planning initiatives, products, and mechanisms of specific entities are compiled upward into a general plan. Perhaps, *inductive planning* can be seen as the ideal planning process in which the general plan is a culmination of the planning efforts of an assemblage of individuals and individual entities.

#### REQUIREMENT §201.4 (c)(1):

*The Commonwealth of Kentucky must include a description of the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how other agencies participated.*

Similarly, *deductive* reasoning occurs when a general principle is established that yields specific observations or details disaggregated from the general or the whole. Thus, *deductive planning* occurs when a general plan is established that yields planning initiatives, products, and mechanisms that can be disaggregated from it and disseminated to an assemblage of individuals and individual entities.

### The Commonwealth of Kentucky's Hazard Mitigation Plan as Inductive Planning

The purposes of distinguishing between an *inductive* versus *deductive* planning process is to be able to make the claim that the 2013 update of the Commonwealth of Kentucky's hazard mitigation plan is the result of *inductive* planning<sup>1</sup>.

This document was developed "inductively". The individual planning initiatives, products, and mechanisms developed by Kentucky's local jurisdictions were aggregated into this general plan. As a result, the scope of this *statewide* hazard mitigation plan and the subsequent scope of the administration of hazard mitigation do not far exceed the scopes of Kentucky's individual local hazard mitigation plans. The philosophy behind this limited scope will be elaborated upon later in this plan.

For the purposes of describing how this 2013 update of the Commonwealth of Kentucky's hazard mitigation plan was prepared, the specific components that were aggregated and molded into a general statewide plan (thus supplying the *inductive* nature of the planning process) derived from two (2) general sources and processes:

- 1) Thorough review throughout the 2010-2013 planning cycle of all of Kentucky's local hazard mitigation plans
- 2) Outreach to local jurisdictions (i.e. the implementation of the Commonwealth of Kentucky's 2010 update of its hazard mitigation plan)

#### **FOR CONTEXT, TO NOTE:**

Deductive Planning: Occurs when planning primarily is conducted centrally. There may be some input from those to whom the planning is intended; but, a general plan is established first with portions relevant to those for whom the planning is done being disseminated to them. Think deductive reasoning.

Inductive Planning: Occurs when the planning primarily is NOT conducted centrally. The sources of what will establish the general plan primarily is a culmination of the individual planning conducted by those for whom the general plan is intended. Think inductive reasoning.

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<sup>1</sup> The Commonwealth of Kentucky does propose some *deductive* planning processes to be implemented via this hazard mitigation plan. These will be discussed in the *Mitigation Strategy* section of this plan.

### Review of Local Jurisdiction Hazard Mitigation Plans

The process of local mitigation plan review was (and is) an ongoing endeavor.

Of course, the review of many of Kentucky's local jurisdictions' hazard mitigation plans was performed solely as a result ongoing of contractual responsibilities. Throughout the 2010-2013 planning cycle, the majority of Kentucky's local hazard mitigation plans were being updated as their five-year planning cycles were ending and local plans were subsequently expiring.

The University of Kentucky Martin School of Public Policy and Administration's Hazard Mitigation Grants Program (UK-HMGP) was responsible for the review and final submissions to FEMA of all updates to local jurisdictional hazard mitigation plans. A fortunate side-effect of UK-HMGP's (as an administrative arm of Kentucky Emergency Management) monopoly of local plan reviews included specialization. UK-HMGP was able to provide the Commonwealth's planning process with significant local plan expertise and planning context.

Beyond the thorough review of local hazard mitigation plans, due to it being the responsibility of paid staff within KYEM/UK-HMGP, thorough local mitigation plan review was conducted systematically and repeatedly in order to prepare this statewide hazard mitigation planning document.

The systematic review of local mitigation plans further was linked with outreach (discussed below) in a feedback loop. The need and desire on the part of the Commonwealth of Kentucky to increase and improve outreach to its local jurisdictions prompted systematic review of these local jurisdictions' hazard mitigation plans and systematic review of local jurisdictions' hazard mitigation plans catalyzed increasing and improving outreach to local jurisdictions.

### Outreach

Essentially, throughout the 2010-2013 planning cycle five (5) series of outreach initiatives resulted in the philosophy and process underlying this 2013 Update:

- 1) Kentucky Association of Mitigation Managers (KAMM) Conferences
- 2) Kentucky Hazard Mitigation Council (KYMC) Meetings
- 3) Applicant Agent Certifications
- 4) Community Hazard Assessment and Mitigation Planning System (CHAMPS) Trainings
- 5) Stakeholder Meetings Presented at Each of Kentucky's 15 Area Development Districts (ADD) between 2012 and 2013.

Each of the abovementioned initiatives is described in greater detail later in this section. The important point relevant for this discussion concerns the inevitable feedback loop that resulted in the philosophy and planning process apparent in this 2013 update.

The Kentucky Association of Mitigation Managers (KAMM) is an expanding association that currently includes, and is constantly actively recruiting, many local managers that deal with mitigation in any capacity. Each year, KAMM organizes a conference, and, every year, participation and attendance at the conferences increases and, more relevantly, represents a wider array of “mitigation manager.” The representation at these conferences (and at accompanying regularly-scheduled KAMM membership meetings) provides significant input and feedback that inevitably is included in statewide planning. Completing the feedback loop, the KAMM conferences also serve to showcase mitigation planning to the ever-increasing and ever-varied membership into KAMM.

Related, the Kentucky Hazard Mitigation Council (KYMC) is a collection of, essentially, all manner of mitigation stakeholders who meet quarterly to discuss, receive advised about, and offer advice to mitigation activity that is being pursued by Kentucky Emergency Management (KYEM). It is relevant for outreach to note that, technically, there is no limited “membership” per se to the KYMC. Rather, KYMC quarterly meetings are open to any agency and to any mitigation stakeholder that desires to take part. KYMC is inclusive.

The KYEM Applicant Agent Certification is a leading-edge weeklong foundational seminar held quarterly and resulting in an official, state-recognized certificate that attracts a wide variety of participants from all of Kentucky’s local jurisdictions. For the planning process, such participation is ideal. The “applicant agent” is a broad category applied to those persons designated to represent entities participating in various FEMA programs. Hence, training to be certified as one has wide practical appeal to any local official and public service representative that will or may have to deal with hazard mitigation at any point in time in their career or life. Consequently, by holding such widely-appealing certification courses, simultaneously is providing information that aids in local planning and incentivizing increased participation in local planning by those who normally might not consider themselves stakeholders. To complete the feedback loop, KYEM is receiving input and insight relevant for planning from individuals who normally are only tangentially involved in statewide and local planning processes.

While itself a tool of *inductive planning* (that increases the number of specifics to be aggregated into statewide mitigation planning), the training for the Community Hazard Assessment and Mitigation Planning System (CHAMPS) provides a feedback loop similar to that experienced with participants in Applicant Agent Certification training. The main difference between the two (2) aforementioned feedback loops involves the audience. The CHAMPS training primarily includes those individuals most prominently or intimately involved in mitigation activity as CHAMPS represents a new tool that standardizes project management, provides a universal database, and democratizes planning participation across jurisdictions and amongst those most prominently and intimately involved in mitigation. The feedback loop still is obvious. CHAMPS training implies training in mitigation planning from Kentucky (via KYEM) and those participants involved in the training constantly improve CHAMPS and, hence, statewide planning efforts.

Finally, Kentucky Emergency Management (KYEM), along with the University of Kentucky Martin School of Public Policy and Administration's Hazard Mitigation Grants Program (UK-HMGP), hosted Stakeholder Meetings specifically scheduled to elicit feedback from local jurisdictions regarding local and statewide planning. It is these stakeholder meetings, conducted throughout 2012 and the first quarter of 2013, which most influenced the nature and preparation of Kentucky's planning process.

The dramatic influence can be attributed to a subtle planning process change that will become codified into future administration at Kentucky Emergency Management (KYEM). Rather than arrange a series of stakeholder meetings whereby representatives of local jurisdictions were required to travel to the state capital to participate, KYEM (along with UK-HMGP) traveled statewide to the local jurisdictions to conduct multiple stakeholder meetings. Relieving local jurisdictions of the significant burden of travel incentivized increased attendance with a wider array of stakeholders at these locally-scheduled meetings. It also implied that meetings were more focused on the localities represented. A stakeholder meeting was not a meeting that shifted its focus or scope of presentation depending upon who showed up and from where. Now, each stakeholder meeting would be targeted toward one audience at the outset. Previous stakeholder meetings did not contain adequate representation from the farthest regions of the state. However, this approach by KYEM (and UK-HMGP) of conducting stakeholder meetings where it was convenient for the audience ensured vital input from the entire commonwealth.

Further, despite the obvious benefits of agency travel to local jurisdictions, such travel usually is quite cost-prohibitive. Kentucky has alleviated some of this cost-prohibition that ensures better community service and more locally-centered planning through its development of the Area Development Districts (ADDs) and through its contracting with the University of Kentucky Martin School of Public Policy and Administration to establish what, in essence, is a branch office of KYEM called the Hazard Mitigation Grants Program.

Area Development Districts (ADD) are discussed below. For the purposes here, ADDs dramatically decreased the number of locales to which KYEM, wishing to address local jurisdictions and communities, needed to travel. The ADDs, administratively at least, collapsed Kentucky's 120 counties into 15 "regions." KYEM can travel to one ADD region and still command a wider audience that includes multiple counties than would ever be achieved holding presentations from a central location.

The University of Kentucky Martin School of Public Policy and Administration's Hazard Mitigation Grants Program (UK-HMGP) functions mainly as an extension of KYEM. But, because KYEM contracts with the University of Kentucky Martin School of Public Policy and Administration, the budget allotted to UK-HMGP as a simple expenditure from KYEM is no longer subject to KYEM or general executive agency budgeting. KYEM's money operates under the University of Kentucky's budgeting rules. So, if KYEM needs money to travel but is constrained through its own budget availability or rules, it can request travel from UK-HMGP which will be acting on behalf of KYEM.

### Summary of Plan Preparation

Having discussed the aforementioned, the 2013 update of the Commonwealth of Kentucky's hazard mitigation plan was prepared largely through a compilation and generalizing of local planning garnered through systematic local plan reviews and frequent, regular outreach that yielded multiple feedback loops.

Since the completion of the 2010 update of the Commonwealth of Kentucky's hazard mitigation plan, KYEM has experienced significant growth within its Hazard Mitigation staff. This allowed for full-time staff dedicated solely to the planning process and preparation for the 2013 update of Kentucky's mitigation plan. Planning staff created a timeline that would allow for all elements of the plan to be evaluated and revised. Monthly meetings were held to analyze the progress of the revisions and discuss the remaining items that needed to be addressed within the plan.

Such plan preparation and the overall planning process is termed here as *inductive planning*.

## ***B. Indicating Who Was Involved in This Current Planning Process***

The 2013 update of the Commonwealth of Kentucky's hazard mitigation plan and its *inductive planning* process could not have been implemented nor completed without involvement of the following noteworthy partners:

### **Kentucky Emergency Management Hazard Mitigation Program (KYEM)**

The KYEM Mitigation Program staff who were most actively involved in all phases of plan development include: KYEM Director John Heltzel; KYEM Assistant Director Jimmy Richerson; KYEM Assistant Director and Recovery Branch Manager Stephanie Robey; State Hazard Mitigation Officer (SHMO) Leslie R. Kennedy; Intergovernmental Liaison Nancy Price; Systems Integration Manager and Acting SHMO Doug Eades; Planning Specialist and Acting SHMO Geni Jo Brawner and Hazard Mitigation Project/Planning/Grant Managers/Specialists (in alphabetical order), Ann Culbertson, Robert Duff, Ryan Hubbs, Amanda LeMaster, and Todd Neal<sup>2</sup>.

Areas of particular emphasis for KYEM regarding the 2013 Kentucky mitigation plan update were program execution, disaster data analysis, and quality control. KYEM is, of course, the driving force behind the execution of both the planning process and plan document itself.

### **University of Kentucky Martin School of Public Policy and Administration Hazard Mitigation Grants Program (UK-HMGP)**

KYEM contracts with the University of Kentucky Martin School of Public Policy and Administration's Hazard Mitigation Grants Program (UK-HMGP). As will be discussed and alluded to throughout this plan document, the contracting relationship is one of efficiency-enhancement for KYEM: UK-HMGP functions as a de facto branch office of KYEM whose staff perform and supplement KYEM functions by managing mitigation projects, pursuing mitigation funding, serving as a storehouse for project files, and, generally, providing direct customer-service for individuals and local jurisdictions.

Staffing at UK-HMGP includes: Director Brian Gathy, Project Grants Manager Esther White, Planning Grants Manager W. Nick Grinstead, and two (2) graduate students from the Martin School of Public Policy and Administration at the University of Kentucky.

UK-HMGP was responsible for implementing the writing of the 2013 update of Kentucky's hazard mitigation plan. Whereas KYEM devised, scheduled, and implemented the planning process, W. Nick Grinstead acted as the manager and writer this update. Esther White wrote about Project Implementation and provided much of the plan's data and documentation. Brian Gathy supervised, provided support, and implemented measures to ensure timely deliverables. Recovery Branch Manager (now

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<sup>2</sup> At the time of publication of this update, KYEM has experienced some staff turnover and promotion: State Hazard Mitigation Officer Leslie R. Kennedy, KYEM Assistant Director Jimmy Richerson, and Manager/Specialist Robert Duff no longer work with KYEM. KYEM Recovery Branch Manager Stephanie Robey has been promoted to KYEM Assistant Director.

Assistant Director) Stephanie Robey and (former) State Hazard Mitigation Officer Leslie R. Kennedy also supervised, provided support, and ensured deliverables from both UK-HMGP and KYEM.

**University of Louisville Center for Hazards Research and Policy Development (CHR):**

CHR is a Board of Trustees-recognized research unit at the University which was established in 1989. Under the direction of Dr. David Simpson and throughout its history, CHR has performed theoretical research regarding all phases and aspects of disasters, hazards, and general homeland security issues. CHR operates under numerous practitioner-oriented contracts that include work for the National Science Foundation, the United Nations, various state and local governments, and, of course, Kentucky Emergency Management (KYEM).

Regarding the 2013 update of Kentucky's hazard mitigation plan, under a contractual relationship between KYEM and itself, CHR performed extensive research in the area of and ultimately provided and incorporated the risk assessment of this 2013 update of Kentucky's hazard mitigation plan. The risk assessment's development and analysis were co-managed by CHR's Associate Director Josh Human and project managers Ben Anderson and Andrea Pompei Lacy.

**Kentucky Hazard Mitigation Council (KYMC)**

The Kentucky Hazard Mitigation Council (KYMC) was established in 1995 and meets at least quarterly to offer advice to and consult with the KYEM Mitigation Program staff. The KYMC is a vital component in the management and oversight of KYEM Hazard Mitigation Program efforts.

The official purposes of the Kentucky Hazard Mitigation Council are to:

- Identify and evaluate state and local hazards and vulnerabilities;
- Identify hazard mitigation strategies;
- Coordinate hazard mitigation resources;
- Review, rank, and recommend mitigation actions that have applied for funding under the FEMA Hazard Mitigation Grant Program (HMGP);
- Implement hazard mitigation projects and programs;
- Assist the State Hazard Mitigation Office on interim and final project inspections.
- Provide technical assistance to the State Hazard Mitigation Officer and local officials to reduce the hazard vulnerability of people, property, and infrastructure;
- Survey selected damages following a Presidential Disaster Declaration in order to develop (in conjunction with the Federal Hazard Mitigation Council) an Interagency Hazard Mitigation Report;
- Participate in regular and special business meetings;
- Receive and conduct hazard mitigation training;
- Assist Area Development Districts (discussed below) in developing regional (and oft-times multi-jurisdictional) hazard mitigation plans; and
- Plan for and develop the Commonwealth of Kentucky's hazard mitigation plan.

The Kentucky Hazard Mitigation Council membership is limited to 25 voting members, which includes the State Hazard Mitigation Officer who chairs the Council. Any program manager in state, local, or federal government or a private sector mitigation specialist who is responsible for a hazard mitigation program is eligible for membership. A mitigation program manager may request to become a Council member or the State Hazard Mitigation Officer may receive recommendations from sources such as other Council members or the Director. Current membership includes:

- ***Voting Members:***

- Kentucky Emergency Management Director
- Stephanie Robey, Kentucky Emergency Management Assistant Director
- Kentucky Emergency Management Recovery Branch Manager
- State Hazard Mitigation Officer (SHMO)
- Mike Hale, Department for Local Governments
- Jim McKinney, Louisville/Jefferson County Metro Government
- Carey Johnson, Kentucky Division of Water
- Wendell Lawrence, Lincoln Trail Area Development District
- Nancy Price, Kentucky Emergency Management Governmental Liaison
- Jerry Rains, Kentucky Emergency Management Regional Response Manager
- Angela Satterlee, Hopkinsville Community Development Services
- Paul Whitman, Shelby County Emergency Management Director
- Noah Taylor, Kentucky Division of Water
- Josh Human, University of Louisville Center for Hazards Research and Policy Development
- Susan Wilkerson, Kentucky Office of Homeland Security
- Joe Sullivan, National Weather Service
- Stephen Noe, Kentucky Association of Mitigation Managers
- Kentucky Transportation Cabinet Representative

- ***Technical Advisors:***

- Doug Eades, Acting SHMO Kentucky Emergency Management
- Geni Jo Brawner, Acting SHMO Kentucky Emergency Management
- Ann Culbertson, Kentucky Emergency Management
- Ryan Hubbs, Kentucky Emergency Management
- Amanda LeMaster, Kentucky Emergency Management
- Todd Neal, Kentucky Emergency Management
- Brian Gathy, University of Kentucky HMGP
- W. Nick Grinstead, University of Kentucky HMGP
- Esther White, University of Kentucky HMGP

Typically, the KYMC includes voting members representing the Kentucky Division of Water (KDOW), Department of Local Governments (DLG), the Kentucky Office of Homeland Security (KOHS), the Area Development Districts (ADDs), the Kentucky Transportation Cabinet (KYTC), and the National Oceanic and Atmospheric Administration (NOAA).

Non-voting members providing technical assistance include but are not limited to the following: the University of Louisville's Center for Hazards Research and Policy Development (CHR), the University of Kentucky Martin School of Public Policy and Administration's Hazard Mitigation Grants Program (UK-HMGP), the U.S. Army Corps of Engineers (USACE), and the Federal Emergency Management Administration (FEMA).

KYMC plays an integral role in statewide Hazard Mitigation planning efforts. Of the functions listed previously and regarding planning specifically, it is the responsibility of the KYMC to select and prioritize initiative and planning projects that will be submitted to FEMA to request funding. It is the responsibility of the KYMC to ensure that program efforts and funding opportunities are harmonious with the hazard risks and solutions identified in the local and state plans.

Further, the KYMC monitors both the five-year planning cycle and subsequent multi-jurisdictional hazard mitigation plans carried out by each of Kentucky's fifteen (15) Area Development Districts (ADDs) and the three-year planning cycle leading to the update of the Commonwealth of Kentucky's Hazard Mitigation Plan.

The regular KYMC meeting schedule is developed a year in advance. Meetings occur at least quarterly. "Scheduled Meetings" are included in the KYEM Master Calendar. "Called Meetings" are held in accordance with the official by-laws of the KYMC<sup>3</sup>. It is the responsibility of KYEM to notify council members of dates, times, and locations in advance of meetings. Meeting minutes are posted to the official Kentucky Emergency Management website.

### **Statewide Mitigation Stakeholders**

Most importantly, there was invaluable input from mitigation stakeholders throughout the Commonwealth in the development of Kentucky's 2013 State Mitigation Plan. Hundreds of stakeholders representing state and local governments, institutions of higher learning, and private and non-profit entities provided input during 15 Area Development District (ADD) meetings.

### **Area Development Districts (ADDs)**

Kentucky Revised Statute 147A.050 creates and establishes fifteen (15) Area Development Districts (ADDs). The ADDs provide the systematic linkage between the local leadership of a county, the Governor's Office, state and federal agencies, and

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<sup>3</sup> KYMC By-Laws are appended to this plan as *Appendix 2-1*.

private organizations. The ADDs served as host for all of the stakeholder meetings throughout the Commonwealth that were so integral to Kentucky's hazard mitigation planning process.

### **C. *Indicating How Other Agencies Were Involved in the Current Planning Process***

A point consistently to be implied throughout this plan is that Kentucky possesses an administrative advantage in mitigation activity due to its state agency (Kentucky Emergency Management) having such a close relationship with two (2) outside university-sponsored agencies. This relationship extends beyond the sub-contractual: The UK-HMGP is very much in function (if not in form) a branch of Kentucky Emergency Management that is able to offer added efficiency and continuity to the state agency itself. UK-HMGP's scope and goals do not vary from the scope and goals of Kentucky Emergency Management (KYEM) itself. And while the University of Louisville's Center for Hazards Research and Policy Development (CHR) operates as a separate entity with separate goals whose funding is dependent on multiple sources outside of Kentucky Emergency Management, the agency still is intimately and directly involved with many of the mitigation functions and actions performed and/or spearheaded by Kentucky Emergency Management. CHR is especially involved with the more research-oriented and systems improvement actions undertaken by KYEM, such as the CHAMP System (Community Hazard Assessment and Mitigation Planning System).

Further, interagency associations such the Kentucky Association of Mitigation Managers (KAMM) and the Silver Jackets indicate considerable involvement from a wide array of agencies. Particularly, the Silver Jackets (comprised of representatives ranging from Kentucky Emergency Management to FEMA to City of Augusta to the United States Department of Agriculture) was presented drafts and ideas from sections of this 2013 update of Kentucky's hazard mitigation plan for input and advice regularly. To convey the interagency cooperation implied merely in seeking counsel from an association such as the Silver Jackets, a list of organizations accompanied by what percentage representation each organization possesses within the Silver Jackets is appended to this section via **Appendix 2-2**. The many and varied organizations represented within KAMM is provided as **Appendix 2-3**.

Finally, inasmuch as other on-going planning efforts throughout the Commonwealth of Kentucky that take place outside of the walls of Kentucky Emergency Management will need to be implemented by some entity that is most likely an agency, this discussion will be continued when this plan documents the Commonwealth's "program integration" below.

## ***D. Documenting How the Planning Team Reviewed and Analyzed Each Section of This Updated Plan***

This 2013 update of the Commonwealth of Kentucky's hazard mitigation plan represents a full revision of all sections of previous iterations of the plan.

As previously mentioned, the successful implementation of the planning process described in the 2010 update of Kentucky's hazard mitigation plan and the parallel implementation of a few relatively new Kentucky Emergency Management initiatives<sup>4</sup> resulted in a new realization and generalization of Kentucky's mission and philosophy in mitigation planning for the state: Kentucky's planning is the culmination of its localities' planning. *Inductive* processes dictate the mitigation goal and strategy animating state-wide planning. Kentucky facilitates and coordinates the planning activities of its local jurisdictions by limiting its scope to focus on initiatives that will aid mitigation activities state-wide and universally and to focus upon customer service and specialization. These themes will all be elaborated upon throughout this plan.

This is not a new focus for Kentucky and Kentucky Emergency Management. This merely is an articulation of the administrative and planning processes that have been normalized within Kentucky and KYEM throughout multiple of FEMA's planning cycles. It is also a reflection that Kentucky Emergency Management maintained responsibility for its hazard mitigation plan rather than rely on the terms of a contract for its development.

Part of this need to re-articulate Kentucky's role in hazard mitigation and planning for it required substantial review and analysis of each section of Kentucky's 2010 update of its enhanced state hazard mitigation plan.

Reviews and analysis of past sections generally occurred throughout the planning process in one of two mutually exclusive settings: The first setting involved extensive review and analysis in group settings amongst all of the Kentucky Emergency Management (KYEM) and University of Kentucky Martin School of Public Policy and Administration Hazard Mitigation Grants Program (UK-HMGP) planning team during regularly-scheduled monthly planning meetings that were held in Frankfort, Kentucky at KYEM offices. It was during these meetings that stakeholder meetings and other *inductive* planning processes were synthesized with review of what the 2010 Commonwealth of Kentucky Hazard Mitigation Plan had recorded. The point here is that the *inductive* planning process and subsequent regular-yet-piecemeal synthesis with review of the 2010 update of Kentucky's mitigation plan eventually led the planning team to decide on almost an entire rewrite for the 2013 update.

Thus, the second setting began whereby the UK-HMGP was assigned central management and chief writing responsibilities for the 2013 update with scheduled

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<sup>4</sup> E.g. the innovative Applicant Agent Certification seminars and that CHAMPS has progressed beyond skeletal implementation to having developed a finished product in its second and usable version (described below).

deliverables being reviewed, analyzed, and revised by Kentucky Emergency Management staff.

### ***E. Indicating Which Sections within the 2013 Update of the Commonwealth of Kentucky's Hazard Mitigation Plan Were Revised as Part of the Updating Process***

It will be readily apparent throughout this 2013 update of the Commonwealth of Kentucky's hazard mitigation plan that all sections have been thoroughly revised.

The revisions reflect clarity in mission and in implementation regarding *statewide* hazard mitigation: Kentucky's local jurisdictions take prominence in hazard mitigation activities. This is reflected through the abovementioned *inductive planning* process that informs most sections of this plan. That local jurisdictions are prominent is reflected in a limiting of Kentucky's own goals in order to defer to the goals and actions of Kentucky's local jurisdictions. It is further reflected in the actions and initiatives undertaken by Kentucky that are described within this plan and that are intended to be undertaken in the future in order to improve hazard mitigation throughout the state. Kentucky, as its overall mitigation strategy, will focus on the mitigation actions of its local jurisdictions as they are the entities that experience the dramatic and devastating effects of natural hazards.

To enhance a mitigation strategy focused on facilitation and coordination of local jurisdictions' demands, Kentucky as a separate entity plans to focus its mitigation actions on activities that benefit the entire Commonwealth, but would not be pursued by any one local jurisdiction necessarily. Such activities include focusing resources on collecting better and more localized data; improving identification and subsequent risk assessment on those hazard types that define so much of Kentucky but that either occur so frequently that records are scarce (e.g. karst/sinkholes) or whose identification and assessment is so cost-prohibitive (e.g. landslides) as to be avoided in favor of more cost-effective direction of resources; and on increasing outreach even further than will be described in this update.

Consequently, all sections of this 2013 update have fully or nearly-fully rewritten. There is very little that remains from the 2010 update. Such revision will be readily apparent with even a superficial comparison of the 2010 vis-à-vis 2013 updates.

Of particular import, the revisions to the risk assessment section of this plan should briefly be discussed:

While the *Risk Assessment* section of this 2013 update appears similar to the risk assessment conducted for the 2010 update of Kentucky's hazard mitigation plan, it is only similar in *format* and in *fundamental methodology*. The University of Louisville's Center for Hazards Research and Policy Development (CHR) integrated into this update a heavily-revised risk assessment process that better utilized and increased accuracy of

its fundamental “Hazard Vulnerability Score” methodology<sup>5</sup> and mirrors the process by which risk assessment will be performed by users of the Community Hazard Assessment and Mitigation Planning System (CHAMPS). Essentially, the story to be told regarding this revision revolves around CHAMPS: CHAMPS, as a currently fully-implementable software program, allows its users to enter in hazard assessment data by responding to survey-like questions that once completed results in a risk assessment analysis. For accessibility, CHR has included three (3) different models within CHAMPS that yields different analyses depending upon how much information a CHAMPS user is able to provide to the program. If a user possesses only “basic” amounts of data regarding hazard vulnerability within his or her area, CHAMPS offers a risk assessment tool that best utilizes that limited amount of information. Similarly, there is a second “higher- or medium-level” risk assessment model for those users with more detailed information. However, users have significant, very-detailed hazard information for their area, then they can use CHAMPS’ third, highest-level risk assessment model and tool, enter in the data (by answering survey-like questions), and obtain a risk assessment analysis that is highly accurate by virtue of its model accounting for the most explanatory variables.

It is this “highest-level” model that has been incorporated into CHAMPS that CHR has used in order to revise its risk assessment from the 2010 update of Kentucky’s hazard mitigation plan. Consequently, it serves not only as the best-available analysis that Kentucky has to offer at the moment, but also serves as an example of the potential power of Kentucky Emergency Management’s CHAMP System for hazard risk assessment.

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<sup>5</sup> Please see the *Risk Assessment* section of this plan for elaboration.

## Commonwealth of Kentucky Enhanced Hazard Mitigation Plan: 2013 Version

### PLANNING PROCESS

## PART II: Coordination Among Agencies

### **A.** *Describing Federal and State Agency Involvement in the Current Planning Process*

#### **State (Commonwealth) Agency Involvement**

Generally state agency involvement is described later in this plan when addressing “Program Integration.” State agency involvement with the current planning process is linked with “ongoing” Commonwealth-wide planning efforts, i.e. necessarily Kentucky’s agencies administer “ongoing” Commonwealth-wide planning efforts.

Commonwealth Agency Involvement includes (in alphabetical order of abbreviation):

<i>Commonwealth Agency</i>	<i>Abbreviation</i>
Kentucky Department for Local Government	DLG
Kentucky Energy and Environmental Cabinet's Division of Water	KDOW
Kentucky Department of Housing, Building, and Construction's Division of Building Codes Enforcement	K-DBCE
Kentucky Division of Forestry	KDF
Kentucky Department of Insurance	K-DOI
Kentucky Heritage Council	KHC
Kentucky (Division of) Emergency Management	KYEM

Again, Commonwealth agency involvement is linked with Commonwealth-wide planning effort integration. Thus, agency involvement is discussed in the *Program Integration* section below.



Area Development District Stakeholder Meeting - 2012

#### REQUIREMENT §201.4 (B):

*The Commonwealth of Kentucky's mitigation planning process should include coordination with other Commonwealth executive agencies, appropriate Federal agencies, interested groups, et al.*

### **Federal Agency Involvement**

Generally and historically, there has been limited or merely indirect federal agency involvement outside of the involvement of the Federal Emergency Management Agency (FEMA) regarding any of Kentucky's planning processes. This fact remains regarding the current planning process.

Technically, Kentucky Emergency Management (KYEM) (the agency ultimately responsible for this 2013 update of Kentucky's hazard mitigation plan) works with federal agencies when other Kentucky agencies working with KYEM simultaneously work with federal agencies. As previously stated, this is an indirect relationship. Where these relationships occur, they are discussed below regarding "Program Integration" as federal agency involvement, even in an indirect sense, is tied to individual programs that KYEM integrates into its planning process.

## ***B. Describing How Businesses, Non-Profit Organizations, et al. Were Involved in the Planning Process***

Whereas state and federal agency involvement generally is piecemeal and tied to specific programs, the 2013 Update of the Commonwealth of Kentucky's Hazard Mitigation Plan involves significant participation from business, nonprofit organizations, and other interested parties. This has to do with the nature of hazard mitigation and the nature of Kentucky itself: Hazard mitigation is a field that compiles many specializations. It is very difficult and arguably quite flawed to expect a polymath in all areas of hazard and their effects. At best a factotum would result with such expectation; at worst, a dilettante. Further, Kentucky is a highly geographically (and social-economically) factious state with disparate regions. Consequently, Kentucky Emergency Management in providing effective and efficient administration relies upon the specialized expertise of many nonprofit et al. partners.

Discussed here are the following most prominent nonprofit et al. partners:

### **University of Louisville Center for Hazards Research and Policy Development (CHR)**

The University of Louisville, as a nonprofit entity, and its Center for Hazards Research and Policy Development (CHR) plays an integral role in the planning for the mitigation of hazards throughout Kentucky. Mainly, it is able to contract for technical, statistic, and research assistance to Kentucky Emergency Management (KYEM) and to other state and federal entities and agencies involved in hazard mitigation. CHR also provides direct planning process assistance for local jurisdictions and other nonprofit entities (e.g. other universities) interested in being able to systematically plan for the effects of hazards.

Regarding the current planning process, CHR provided the methodology and write-up of the risk assessment portion of this 2013 update of Kentucky's hazard mitigation plan.

### **University of Kentucky Martin School of Public Policy and Administration Hazard Mitigation Grants Program (UK-HMGP)**

The University of Kentucky, as a nonprofit entity, and its Hazard Mitigation Grants Program (UK-HMGP) functions very similarly to a branch office of Kentucky Emergency Management (KYEM). While operating under the University of Kentucky's labor, budgeting, payroll, and travel rules (which differ significantly from the like rules of Kentucky executive-branch agencies), UK-HMGP staff perform most of the same functions of KYEM itself. Thus, by contracting with UK-HMGP, KYEM gains access to a de facto branch agency with professional staff that is able to supplement the quotidian functions of KYEM staff, to manage offloaded projects in order to free up KYEM to pursue improvements in administration and to pursue broader initiatives, to provide institutional knowledge and continuity, to travel at will, to elicit and recruit participation in hazard mitigation grant programs (and mitigation activities more generally), and to provide customer service.

Regarding the current planning process, UK-HMGP, with KYEM oversight, has centrally managed and chiefly written up this 2013 update of Kentucky's hazard mitigation plan that allowed KYEM to focus its energies on innovation in and improvement in the actual planning process.

#### **Private Sector Working Group (PSWG)**

In March 2010, KYEM established Kentucky's Private Sector Working Group (PSWG). The PSWG, administered by KYEM, endeavors to build partnerships within the private sector community to help identify and fill gaps in the resources and supply chain during emergency response and recovery efforts. The PSWG is designed to act as a force multiplier between the private and public sectors in order to mitigate the impact of critical incidents, natural disasters, and crisis response events.

The goal in the creation of the program was to draft a comprehensive disaster mitigation, response, and recovery plan that would build upon the strengths, experience, and expanding capabilities of all partners. The resulting group forms a well-organized collaborative network of Commonwealth corporate, business, and industry entities that work in concert with emergency management tasking to protect and re-establish the necessary community infrastructure required to minimize damages and speed the recovery process.

The PSWG meets on a bi-monthly basis, supplemented with conference calls and KYEM annual workshop educational tracks. Meeting agenda items include updates of KYEM mitigation, response, and recovery efforts, member presentations, technology updates, training initiatives, and sector-based workshop sessions.

The primary objective of the program is to build on the strengths, experience, and expanding capabilities of KYEM's private sector partners. To that end, the PSWG has demonstrated the effectiveness of the program during exercise events and response to Commonwealth disasters. The composition of the PSWG includes membership representing utilities, commodities, transportation, communications, infrastructures, logistics, food, and hospitality. **Appendix 2-4** records which organizations currently serve in the PSWG.

### **Kentucky Geological Survey (KGS)**

Though there will be no product presented in this 2013 update of Kentucky's hazard mitigation plan, the current planning process must include the initiation of and future work that the nonprofit Kentucky Geological Survey (KGS) is pursuing and plans to pursue.

Kentucky suffers extraordinarily from the effects of karst (namely sinkholes) and landslides. Perhaps and seemingly counter-intuitively, Kentucky suffers so dramatically from these geologic hazards that there exists scant data (both statistical and historical) regarding such events. In other words, Kentucky is one of the most famous karst regions in the world<sup>6</sup>: The entire "Bluegrass" region sits atop karst; Kentucky is defined by its limestone; Kentucky has the massively expansive Mammoth Cave system. Karst (and its effects), then, is so commonplace that very few events are considered important enough to warrant time in recording and storing data concerning them. The same mindset applies for landslide hazards and their identifications.

Thus, the current planning process (which never truly ends, of course) includes the KGS as an "interested group/party" attempting to alleviate these deficiencies in Kentucky's data.

### **Area Development Districts**

Area Development Districts (ADDs) are the means by which to collapse the complexity that results from the extraordinary number of counties that the Commonwealth of Kentucky possesses: Kentucky maintains 120 counties. While certainly not maintaining the most quantity of counties<sup>7</sup>, 120 counties for which to facilitate and coordinate planning (in this specific case) are at best cumbersome and time-consuming. Within a finite geographic space, a larger quantity of counties implies smaller individual units of autonomous local governments. Governments cannot "earn" money, "create" wealth, or "produce" resources. Governments can only "obtain" revenue from other sources that have earned it (e.g. the individual who works and pays a proportion of what is earned to his or her government in the form of taxation) or acquired it (e.g. federalism allowing the federal government and/or states to share "revenue" with its local entities). Thus, smaller individual units of local governments typically imply that each unit will be more limited in its ability to "obtain" finite resources.

The idea that would become the "Area Development District," then, was conceived for Kentucky in the early 1960s with the creation of Area Development *Councils* that were organized *within* each county comprising "Kentucky." The federal Appalachian Regional Development Act and the Public Works and Economic Development Act (both passed in 1965) allowed for the establishment and authorization<sup>8</sup> of the Area Development *District* which provided an organizational and administrative linking of counties who shared

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<sup>6</sup> Currens, James C. [2002]. "Kentucky is Karst Country!: What You Should Know About Sinkholes and Springs." *Kentucky Geological Survey Information Circular 4, Series XII*.

<sup>7</sup> In ascending order, Virginia, Georgia, and Texas maintain 134, 159 and 254 counties, respectively.

<sup>8</sup> Kentucky Revised Statute 147A.050 legally establishes the fifteen (15) Area Development Districts (ADDs).

common economic and general development interests<sup>9</sup>. The Appalachian Regional Development Act of 1965 was the vehicle for direct federal aid to Appalachia which spurred the need for ADDs specifically in that region. The Public Works and Economic Development Act established the Economic Development Administration within the U.S. Department of Commerce which would provide federal grants aimed toward employment and industrial policy within economically distressed areas more generally. This, provided impetus to establish the ADD concept state-wide: Professional administration and substantial resources would be required to apply for these grants and manage them.

From 1966 to 1972, all fifteen of Kentucky's ADDs were established. ADDs are not state agencies. They are partnerships of local city and county governments: By sharing the ADDs' staffs, local governments collectively are able to access the professional expertise which many counties and cities individually could not afford.

Thus, the ADDs' mission: "To bring local civic and governmental leaders together to accomplish major objectives and take advantage of opportunities which cannot be achieved or realized by those governments acting alone<sup>10</sup>."

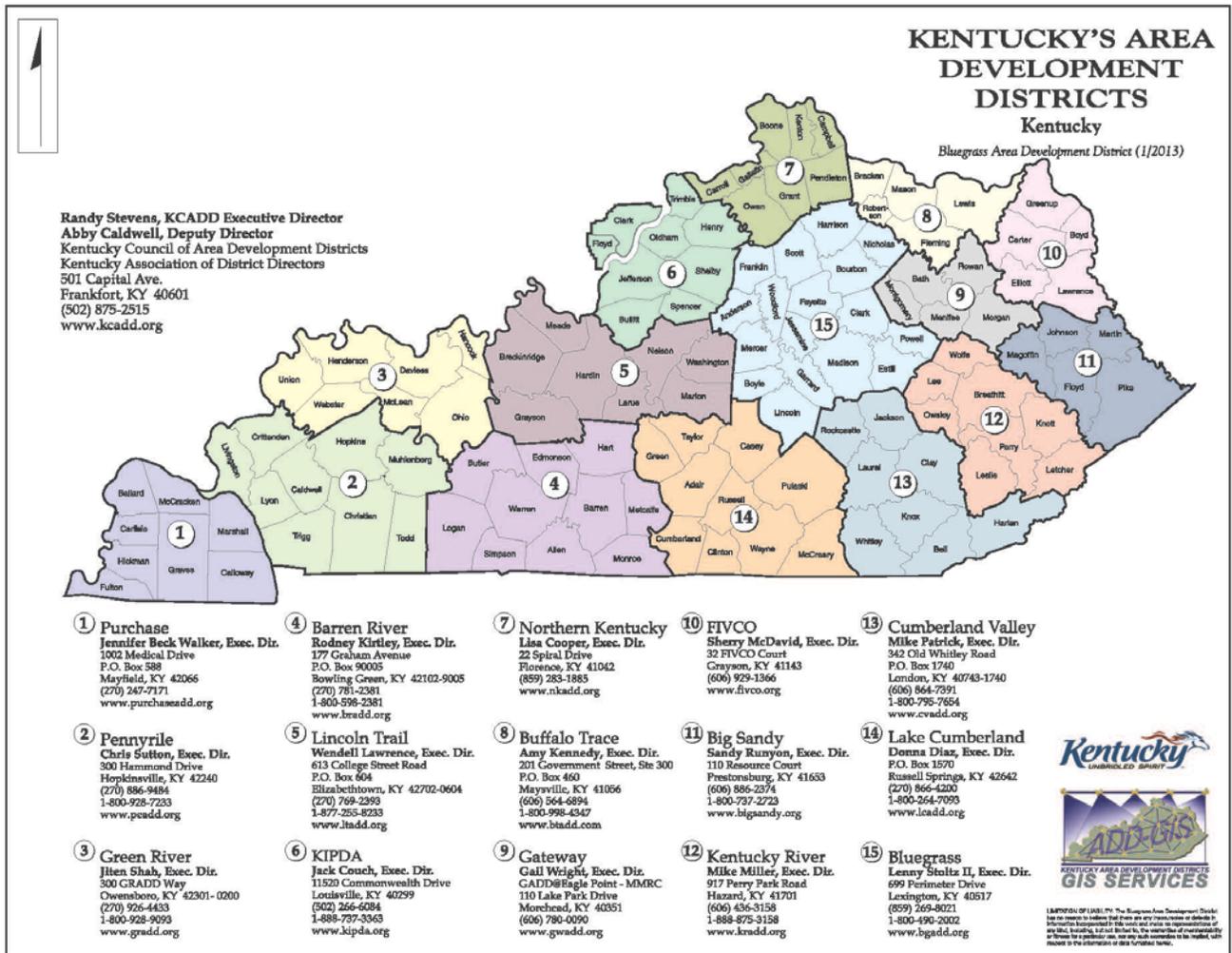
Related, "the ADDs are designed to be the focal point of a necessary Federal-State-Local partnership for improvement of the quality of life in the Commonwealth. Contained in that effort is the elimination of, or certainly lessening of, parochialism; establishment of a forum to discuss and deal with common problems among counties; provision of a professional staff for units of government who individually cannot afford a staff; and to provide a vehicle for the delivery of services in a consistent manner where no other efficient system exists<sup>11</sup>."

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<sup>9</sup> This, of course, implies that most such "Districts" are arranged according to "geographic" commonalities: Geography is assumed to be correlated with economic and development needs. Thus, economic/development commonalities are correlated with geographic commonalities. This geographic commonality to Area Development Districts is an important assumption to the use of them to evaluate and prioritize project and grant selection via the process described in the *Mitigation Strategy and Coordination of Local Planning* sections of this document.

<sup>10</sup> Kentucky Council of Area Development Districts. [2009]. "Our History." [http://www.kcadd.org/Our\\_history.html](http://www.kcadd.org/Our_history.html).

<sup>11</sup> Kentucky Council of Area Development Districts. [2009]. "Our History." [http://www.kcadd.org/Our\\_history.html](http://www.kcadd.org/Our_history.html).



Kentucky's fifteen (15) Area Development Districts are tabulated below, accompanied by the (informal) acronym most typically used to refer to each ADD and by the counties housed under each ADD jurisdiction:

**Table 2-1: ADDs and Their Counties**

<i>Area Development District</i>	<i>Acronym</i>	<i>Number of Counties within</i>	<i>Counties Covered</i>
Barren River	BRADD	10	Allen, Barren, Butler, Edmonson, Hart, Logan, Metcalfe, Monroe, Simpson, Warren
Big Sandy	BSADD	5	Floyd, Johnson, Magoffin, Martin, Pike
Bluegrass	BGADD	17	Anderson, Bourbon, Boyle, Clark, Estill, Fayette, Franklin, Garrard, Harrison, Jessamine, Lincoln, Madison, Mercer, Nicholas, Powell, Scott Woodford
Buffalo Trace	BTADD	5	Bracken, Fleming, Lewis, Mason, Robertson
Cumberland Valley	CVADD	8	Bell, Clay, Harlan, Jackson, Knox, Laurel, Rockcastle, Whitley
FIVCO	FIVCO <sup>12</sup>	5	Boyd, Carter, Elliott, Greenup, Lawrence
Gateway	GWADD	5	Bath, Menifee, Montgomery, Morgan, Rowan
Green River	GRADD	7	Daviess, Hancock, Henderson, McLean, Ohio, Union, Webster
Kentuckiana Regional Planning and Development Agency	KIPDA	7	Bullitt, Henry, Jefferson, Oldham, Shelby, Spencer, Trimble
Kentucky River	KRADD	8	Breathitt, Knott, Lee, Leslie, Letcher, Owsley, Perry, Wolfe
Lake Cumberland	LCADD	10	Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell, Taylor, Wayne
Lincoln Trail	LTADD	8	Breckinridge, Grayson, Hardin, Larue, Marion, Meade, Nelson, Washington
Northern Kentucky	NKADD	8	Boone, Campbell, Carroll, Gallatin, Grant, Kenton, Owen, Pendleton
Pennyrile	PeADD	9	Caldwell, Christian, Crittenden, Hopkins, Livingston, Lyon, Muhlenberg, Todd, Trigg
Purchase	PADD	8	Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, Marshall, McCracken

Related to involvement within the current planning process by “other interested” parties, each ADD is governed by a Board of Directors. This Board of Directors is comprised of elected officials from within the individual counties and individual sub-jurisdictions (cities, communities, et al.) comprising the “District,” and from non-elected citizens from across a wide range of social and economic agencies and institutions housed within the “District.”

Further, two (2) administrative bodies have been created that oversee all fifteen individual ADDs: 1) The Kentucky Council of Area Development Districts (KCADD),

<sup>12</sup> FIVCO is a portmanteau of “Five” and “Counties.”

includes all ADD Board Members; and 2) the Kentucky Association of District Directors (KADD), which is the administrative body comprised of each ADD's Executive Director.

The ADDs' staffs are professionals representing a wide range of fields: economic development, human services, management, grant development, and, most relevantly, planning.

For the Commonwealth of Kentucky and regarding the planning process and the FEMA five-year planning cycle for local jurisdictions generally, it has been each ADD that ultimately has been responsible for the local hazard mitigation plans under which the counties and communities for which the ADD was designated operate and request funding from FEMA for projects that mitigate their specified hazards. Consequently, most of Kentucky's local hazard mitigation plans are "multi-jurisdictional."

Further, once a local (multi-jurisdictional) hazard mitigation plan has been reviewed by both the Commonwealth of Kentucky and FEMA and has been approved by FEMA and adopted by the counties and communities toward which the hazard mitigation plan was developed, ADD "Project Coordinators," "Local Government Analysts," and "Community Development Specialists" (upon request) assist local communities with the application process necessary to apply for funding for projects intended to mitigate the hazards identified in the local hazard mitigation plans. The ADDs will assist in project grant application development, compliance, implementation, data collection necessary to conduct Benefit-Cost Analysis, and other relevant capabilities related to successful project management.

It must be emphasized that though historically it is Kentucky's ADDs that have developed for counties' and communities' local hazard mitigation plans, these plans and recommendations included within them ultimately represent professional advice only. ADDs are not regulatory agencies. They do not have the power to enforce compliance with the plans. Thus, official, FEMA-approved adoption of the ADD-developed plan by the ADD's counties and communities is especially important and actively sought by Kentucky Emergency Management (KYEM) and its partners (namely the University of Kentucky Martin School of Public Policy and Administration's Hazard Mitigation Grants Program). The importance of adoption for the ADDs and, by proxy, for Kentucky's counties and communities ensures that the ADDs devote a disproportionate amount of time on the *planning process* and on incentivizing as much participation from as many of its counties and communities as possible: After all, it is a strain on the resources of the ADD if the ADD has to devote extra time and money after a multi-jurisdictional plan has been approved to address the concerns of a community that wanted to adopt the plan but feels it cannot because the plan is deficient in concerns relevant to that community.

Finally, regarding this current *statewide* planning process, the individual ADDs were the predominate partner to the update of the 2010 version of Kentucky's hazard mitigation plan (to this 2013 update): The ADDs were the primary source of Kentucky's mitigation strategy and its prioritization and evaluation of hazard mitigation action calculus.

Related to *inductive planning*, it was the intent of the Commonwealth to ensure that all regions and potential stakeholders were afforded the opportunity to participate in the development of the Commonwealth's 2013 Hazard Mitigation Plan. In an attempt to identify and recognize regional hazards and solutions, Kentucky Emergency Management (KYEM) conducted stakeholder meetings across the state during the latter portion of its planning process. These "stakeholder meetings" were held at the individual ADDs themselves and partially directed using analysis of that ADD's local (multi-jurisdictional) hazard mitigation plan.

Invited attendees included Area Development District (ADD) staff, elected local officials, congressional staff, emergency management professionals, private mitigation grant practitioners, educators, and KYEM/UK-HMGP staff. To facilitate dialogue and the thought process, attendees were provided information regarding the impact of hazards within their region, information regarding previously-funded mitigation actions, and the general composition of their regional hazard mitigation plan. **Appendix 2-5** is provided that documents this information disseminated at stakeholder meetings. Further, **Appendix 2-6** records participation at each stakeholder meeting.



Listening to Stakeholder's concerns

During the meetings, attendees identified and ranked both hazards that they considered relevant to their area and interim and long-term strategies that could be pursued to mitigate the previously-identified and ranked hazards. Further, stakeholders defined goals and objectives that would aid in directing implementation toward meeting said strategies.

In other words, during the meetings, participants were training for their own future plan processes while simultaneously providing Kentucky Emergency Management (KYEM) with much-needed insights for its state-wide mitigation planning efforts.

The dates and locations of the stakeholder meetings are as follows:

**Table 2-2: Stakeholder Meeting Dates**

<i>Date of Stakeholder Meeting</i>	<i>ADD Toward Which Meeting Was Directed</i>	<i>Acronym of ADD for Reference</i>
November 7, 2012	Gateway	GWADD
November 26, 2012	Purchase	PADD
November 27, 2012	Pennyrile	PeADD
December 4, 2012	Barren River	BRADD
December 5, 2012	Green River	GRADD
December 6, 2012	Lincoln Trail	LTADD
January 22, 2013	Big Sandy	BSADD
January 23, 2013	FIVCO	FIVCO <sup>13</sup>
February 11, 2013	Kentuckiana Regional Planning and Development Agency	KIPDA
February 12, 2013	Bluegrass	BGADD
February 13, 2013	Northern Kentucky	NKADD
February 26, 2013	Buffalo Trace	BTADD
March 4, 2013	Lake Cumberland	LCADD
March 5, 2013	Cumberland Valley	CVADD
March 19, 2013	Kentucky River	KRADD

<sup>13</sup> Again, FIVCO is not an acronym. Rather, it is a portmanteau of “Five” and “Counties.”

### **Intergovernmental Liaison and Elected Officials**

The stakeholder meetings held at the Area Development Districts that were so fundamental to the Commonwealth of Kentucky's planning process for this 2013 update of its hazard mitigation plan were well-attended by politicians, congressional representatives, and, generally, elected officials.

This represents a marked achievement in the planning process: Arguably, there are few stakeholders that are so important as local elected officials when it comes to planning for their jurisdictions' futures. This especially applies when the planning primarily is aimed toward capital improvements such as planning for hazard mitigation implies. Elected officials are the catalyst for the work of the bureaucrat, public official, emergency manager, et al. In other words, who will inevitably be involved in planning, how those individuals perceive and perform their public tasks, and what they are able to contribute to the substantial amount of input necessary in order to effectively plan and fund capital projects intended to best mitigate the devastating effects of nature and other hazards, is tied directly to a jurisdiction's elected officials. However, because citizens spend the time required to choose those public officials that will best represent them, it is oft-times reflected as superfluous by elected officials that they need to partake directly in the a process that will result in substantial financing for capital improvements.

Kentucky Emergency Management (KYEM), then, fittingly relied upon an experienced and effective Intergovernmental Liaison who was able to cajole elected officials to the all-important stakeholder meetings where their input was invaluable.

### **Commonwealth Emergency Response Commission (CERC)**

The Commonwealth Emergency Response Commission (CERC)<sup>14</sup> serves as an advisory committee for the overall and total emergency management and emergency response programs of the Commonwealth of Kentucky.

Membership consists of appointed and advisory positions. Membership is substantial: Members of CERC encompass all of the primary and secondary stakeholders and partners entrusted with the responsibility to protect and restore the Commonwealth in times of emergency and against the devastating effect of hazards. The CERC organizational structure has been provided as **Appendix 2-7**.

The CERC holds public meetings on a bi-monthly basis. Further, to enhance the participation and accessibility to as many potential stakeholders in emergency management as possible, CERC uses "Live Stream" and other relevant technological sharing and video tools to broadcast each meeting. CERC also hosts a Facebook group page<sup>15</sup> so that members and other interested parties are regularly updated about emergency management and mitigation activity.

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<sup>14</sup> Founded under Kentucky Revised Statute (KRS) Chapter 39A

<sup>15</sup> See **Appendix 2-8**.

The CERC and its delineated “workgroups” and subcommittees (operating under the authority of CERC’s primary committees) coordinate information received from stakeholders and partners-in-emergency management. Further, the workgroups and subcommittees perform analysis, evaluation, and program development that will result in specific recommendations to the full CERC membership to be voted on by the full body for advancement.

All of this input results as one of CERC’s products a strategic plan that has hazard mitigation as a specific goal for “[a] Commonwealth that is organized, efficient, and effective at identifying threats and hazards and taking action to reduce the impact of manmade or natural emergencies.”



A meeting of the Commonwealth Emergency Response Commission

Specifically and currently, the CERC strategic plan<sup>16</sup> houses the following mitigation-oriented objectives:

- **Objective 1:** *That the Commonwealth of Kentucky maintains a fully-recognized Enhanced Mitigation Program that includes broad private and public involvement and that identifies opportunities for coordinated efforts that will reduce or eliminate risk in all Area Development Districts (ADDs) and the eleven (11) Kentucky Emergency Management (KYEM) Regions by December 2015*
- **Objective 2:** *That the Commonwealth of Kentucky, by December 2016, can ensure that over 50% of Kentucky’s counties and accompanying local communities have documentable and robust capabilities to implement successful and meaningful identification of community risk and can subsequently implement solutions that will mitigate said identified risks*
- **Objective 3:** *That the Commonwealth of Kentucky, by December 2014, has recorded completed Disaster and Risk Resilience Assessments that improve community planning and coordination efforts for 75% of Kentucky’s counties*

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<sup>16</sup> “The Commonwealth Emergency Response Commission (CERC) Strategic Event Cycle”

Further, the results of mitigation efforts are reported regularly during each of CERC's bi-monthly meetings.

Specifically related to the development and process behind this 2013 update of the Commonwealth of Kentucky's hazard mitigation plan:

- CERC is headed by the Director of Kentucky Emergency Management, John Heltzel.
- As described above, a direct objective of the CERC is the successful development of the Enhanced Hazard Mitigation Plan.
- The CERC, then, affects the planning process by being the administrative body to which Kentucky Emergency Management (KYEM) receives its goals for mitigation and to which it is accountable as the vehicle through which this plan is developed.

### **Emergency Management Accreditation Program (EMAP)**

For the current planning process (that will produce this 2013 update of Kentucky's hazard mitigation plan), the Emergency Management Accreditation Program (EMAP)<sup>17</sup> is an "interested party" that has had outsized importance.

In an effort to use accountability as a means by which to constantly improve and make more efficient planning for hazard mitigation, Kentucky Emergency Management (and, hence, the Commonwealth of Kentucky) has sought accreditation by the Emergency Management Accreditation Program (EMAP).

EMAP is a standards-based and voluntary assessment and peer review accreditation process for government programs that are responsible for coordinating prevention, mitigation, preparedness, response, and recovery activities for natural and human-caused disasters.

Accreditation is based on compliance with the *Emergency Management Standard by EMAP*<sup>18</sup>. These are a set of nationally-recognized standards intended to "foster excellence and accountability in emergency management and homeland security programs<sup>19</sup>," of which a subsection of the "EMAP Standard" is devoted solely to hazard mitigation.

KYEM will be undergoing the assessment phase of EMAP in the fall of 2013. The hazard mitigation plan will be used as documentation to show that KYEM is compliant with the portions of the "EMAP Standard" related to hazard mitigation.

The "EMAP Standard" devotes five (5) "standards" to hazard mitigation, all under a "Chapter 4.4":



Hazard Mitigation Staff presenting on State Plan

<sup>17</sup> The Emergency Management Accreditation Program (EMAP) is headquartered out of Lexington, Kentucky and is affiliated with the Council of State Governments (CSG). It is, however, an independent 501(c)(3) nonprofit organization.

<sup>18</sup> Abbreviated as "EMAP Standard"

<sup>19</sup> Emergency Management Accreditation Program. [2012]. "Professional Development Series: Hazard Mitigation: Student Manual."

**Table 2-3: EMAP Standards**

STANDARD 4.4.1	"The Emergency Management Program shall develop and implement its mitigation program to eliminate hazards or mitigate the effects of hazards that cannot be reasonably prevented. The mitigation program identifies on-going opportunities and tracks repetitive loss. The Emergency Management Program implements projects according to a plan that sets priorities based upon loss reduction."
STANDARD 4.4.2	"The mitigation program includes participation in applicable federal, state/territorial, tribal, local, and/or public/private mitigation efforts."
STANDARD 4.4.3	"The mitigation program provides technical assistance consistent with the scope of the program such as implementing building codes, fire codes, and land-use ordinances."
STANDARD 4.4.4	"The Emergency Management Program shall implement a process to monitor overall progress of the mitigation strategies, document complete initiatives, and resulting reduction or limitation of hazard impact in the jurisdiction."
STANDARD 4.4.5	"The mitigation plan shall be based on the natural and human-caused hazards identified by the Emergency Management Program and the risk and consequences of those hazards. The mitigation plan for the jurisdiction is developed through formal planning processes involving Emergency Management Program stakeholders and shall establish interim and long-term strategies, goals and objectives, and actions to reduce risk to the hazards identified. The Emergency Management Program implements a process and documents project ranking based upon the greatest opportunity for loss reduction and documents how specific mitigation actions contribute to overall risk reduction."

Related to the current FEMA Commonwealth-wide planning process, then, the desire to be accredited by EMAP influenced the content and the format of this planning document and some of the methodology behind the planning process. While a cursory glance at the "standards" by which the Commonwealth of Kentucky (via Kentucky Emergency Management) will be evaluated by EMAP conveys a seamless integration with the standards by which FEMA will approve this hazard mitigation plan, EMAP has contributed to the planning process calculus resulting in this hazard mitigation plan in the following ways:



General Heltzel leading discussion during an EMAP meeting.

- 1) *Kentucky Emergency Management (KYEM) has been very specific about its repetitive-loss property assessment.* FEMA devotes a whole section of its “Plan Review Tool/Crosswalk” to repetitive-loss and severe repetitive-loss mitigation strategies that can be considered “optional” in the sense that it is only required if the state desires to participate in FEMA’s Severe Repetitive-Loss (SRL) mitigation program which allows 90% reimbursement for actions successfully mitigating repetitive-loss effects from hazards. In other words, repetitive-loss inclusion for FEMA-approved state-wide hazard mitigation is an “opt-in” program. Whereas language regarding repetitive-loss and severe repetitive-loss always has been included in Kentucky’s hazard mitigation plan (i.e. Kentucky always has “opted-in” to FEMA’s Severe Repetitive-Loss program), EMAP certainly was involved in the calculus to continue “opting-in” to FEMA’s SRL program and to ensure that this plan document displays such “opting-in” language prominently and obviously.
- 2) *Kentucky Emergency Management (KYEM) has devised a far more systematic and redundant method for prioritizing its mitigation project selection that emphasizes “the greatest opportunity for loss reduction.”* This method is described in the *Mitigation Strategy and Coordination of Local Planning* sections of this hazard mitigation plan.
- 3) *Kentucky Emergency Management (KYEM) has considered human-caused hazards.* Included as parts of Kentucky’s mitigation strategy and risk assessment are considerations for human-caused disasters.

## **C. *Discussing How Coordination among Federal and State Agencies Changed Since Approval of the 2010 Update***

As far as who as participants were involved in the planning process, this 2013 update of the Commonwealth of Kentucky's hazard mitigation plan does not represent dramatic change from those participants involved during the 2010 planning process: The Area Development Districts (ADDs) were predominate to the 2010 planning process; the Commonwealth Emergency Response Commission (CERC) was still the inclusive administrative body giving impetus to Kentucky Emergency Management (KYEM); Kentucky Emergency Management (KYEM) ultimately was still responsible for the Commonwealth's hazard mitigation plan; the relationships between state and federal agencies still were program-linked (in the case of state agencies) and indirect (in the case of federal agencies); and the University of Louisville's Center for Hazards Research and Policy Development (CHR) and the University of Kentucky Martin School of Public Policy and Administration's Hazard Mitigation Grant Program (UK-HMGP) played vital roles in the planning and documentation process.

However, while the "who" has not changed considerably, the "how" indeed has: As described above, the Area Development Districts (ADDs) were even more predominate in the planning process than was involved for Kentucky's 2010 update of its hazard mitigation plan. Quite literally, for this 2013 update, the ADDs acted as the fulcrum which propped, supported, and moved the planning process and this subsequent document. No other (set of) stakeholders could claim as much centrality to the final outcome of Kentucky's hazard mitigation planning efforts than the ADDs. Related, Kentucky Emergency Management's use of its Intergovernmental Liaison to ensure participation by elected officials as an addition to the centrality of the ADDs is new for this 2013 update of Kentucky's hazard mitigation plan.

The roles of CHR and UK-HMGP have differed in degree for this current planning cycle, as well: UK-HMGP centrally managed and chiefly wrote the hazard mitigation plan for this 2013 update, with CHR providing necessary and innovative technical support and a dramatically retooled and user-friendly risk assessment section. This has changed since the 2010 update when CHR centrally managed the assembly of all plan components upon contract, with Kentucky Emergency Management (KYEM) and UK-HMGP writing, revising, and editing the components. The shift in degree of involvement from CHR to UK-HMGP in the production of the planning document implicitly signifies an increase in the role of Kentucky Emergency Management (KYEM) in its planning activities: UK-HMGP functionally is quite different from CHR in its de facto KYEM "branch office" status vis-à-vis CHR's autonomous status. KYEM not only implemented an effective planning process for this iteration of its hazard mitigation plan; it also created its blueprint and administered a broader array of planning tools that UK-HMGP would later codify and organize resulting in this planning document.

## Commonwealth of Kentucky Enhanced Hazard Mitigation Plan: 2013 Version

### PLANNING PROCESS

## PART III: Program Integration

### **A.** *Describing How Its Planning Process Is Integrated with Other On-Going Planning Efforts*

As mentioned above, integrating the 2013 update of the Commonwealth of Kentucky's hazard mitigation plan with on-going state-wide planning efforts is equivalent to coordinating state agency involvement in the planning process: The following mitigation programs described here and that are so important to the overall planning process are tied to state agencies. Those programs not tied to state agencies will be the second part of this discussion.

#### REQUIREMENT §201.4 (B):

*The Commonwealth of Kentucky's mitigation planning process should be integrated to the extent possible with other ongoing Commonwealth planning efforts as well as other FEMA mitigation programs and initiatives.*

### PROGRAMS TIED TO COMMONWEALTH AGENCIES

#### ***Kentucky Department for Local Governments (DLG)***

##### **Long-Term Recovery Plan**

This on-going project will create long-term economic redevelopment and mitigation strategies which address economic development challenges in areas impacted by federally-declared disasters. This is a collaborative effort between the Department for Local Government (DLG), Kentucky Emergency Management (KYEM), the Federal Economic Development Administration, and the University of Louisville's Center for Hazards Research and Policy Development (CHR). The proposed deliverables of this plan will be directly linked to the Community Hazard Assessment and Mitigation Planning System (CHAMPS) and will build collaboration among multiple agencies. The goals of the project are as follows:

1. Development of a Long-Term Recovery Council (LTRC) to broaden stakeholder awareness and strategies while uniting economic recovery leadership throughout the State
2. Development of a Long-Term Recovery Plan—coordinated by LTRC—which evaluates past losses and best practices for economic and social recovery
3. Incorporation of resulting data products and strategies into the Community Hazard Assessment and Mitigation Planning System (CHAMPS)
4. Development of comprehensive training sessions and outreach of project findings to maximize stakeholder buy-in and participation.

The DLG Action Plan specifically references mitigation efforts statewide in the *Long Term Recovery Plan* section as follows:

*“Kentucky consistently promotes land-use planning at the local level. The state believes that land-use decisions must originate with local government with input from state and federal partners. In response to the flooding, state and federal agencies are providing tools such as enhanced floodplain mapping and mitigation analysis tools to aid local governments in making decisions, particularly on home buy-out programs. Once plans are complete, the state is committed to expedite the regulatory requirements under its purview. In addition, with the Disaster Recovery funds, Kentucky is developing a comprehensive planning and assessment tool that will be designed to integrate planning and mitigation project management into a comprehensive solution that supports local planning for mitigation with statewide management capabilities and transparency. The tool will support community planning, economic recovery and preparedness for the individual, including housing, and for the community including utilities and public infrastructure and local business.*

*The state, through the Area Development Districts (ADDs), promotes the adoption of hazard mitigation plans for each local government.”*

Thus, the DLG long-term recovery plan integrates common mitigation goals from the Enhanced Commonwealth Hazard Mitigation Plan with its internal action plan for response and recovery.

## ***Kentucky Energy and Environmental Cabinet's Division of Water (KDOW):***

### **Dam Safety Program**

The Kentucky Energy and Environment Cabinet's Division of Water Dam Safety Section periodically inspects all functional and operational dams. Each inspection starts with a complete file desk review to identify any deficiencies. The inspector also reviews all hydrologic evaluations. Some dams do not have hydrologic evaluations, or the evaluation needs to be updated.

When sufficient data is available, the inspector performs a field evaluation. In the field, the inspector conducts a complete visual inspection. Surveys are completed for dams with missing measurements. Photographs help provide a permanent record of observations. Following the inspection, a letter and report are prepared for the owner. The letter and report describe the observations and instruct the owner to remedy any deficiencies. As necessary, the inspector follows up to ensure required remedial work is completed. Sometimes it is necessary to take enforcement actions to prompt an owner to properly maintain or modify a dam. Approximately 300 dams are inspected each year.

The Dam Safety Section takes emergency action if a structure is in danger of failing and poses a threat to life or may cause serious property damage. KRS 151.297 empowers the Natural Resources and Environmental Protection Cabinet to take emergency action if an owner abandons a dam or refuses to take necessary action.

Dam failure has been identified as a potential hazard. However, many mitigation specialists across Kentucky do not work directly with dam safety and may be uninformed regarding the dangers of dam failure and how dams are monitored for safety. To address this, educational opportunities are provided through cooperative efforts between the Kentucky Association of Mitigation Managers (KAMM) and the Dam Safety Program of the Kentucky Division of Water (KDOW).

For example, past presentations by KDOW's Dam Safety Program have included lectures on the *National Levee Safety Program* and *Dam Failures: Manmade Natural Hazard*. These lectures fully explained the overall potential hazard of dam failures and the ways in which the Dam Safety Program works to prevent losses and injuries. In this way, the partnership between KYEM and the Dam Safety Program integrates the hazard of dam failure with FEMA's mitigation programs to provide information and guidance to mitigation specialists and government officials statewide.

### **Dam Failure Mitigation Plan**

Related to the Dam Safety Program, during this 2010-2013 planning cycle, Kentucky's Division of Water (KDOW) was approved for funding to conduct methodological improvements on assessing the risk resulting from dam failure. The grant resulted in a dam failure mitigation plan that represents Kentucky's desire to work with its executive agencies and focus its mitigation strategy on *Public Good-Types*<sup>20</sup> and on the role that Kentucky can play in facilitating and coordinating the mitigation planning efforts of its local jurisdictions.

While this plan includes a risk assessment of dam failure that uses a revised model previously developed and implemented by the University of Louisville's Center for Hazards Research and Policy Development (CHR), the results deriving from the KDOW's methodological study is an important contribution to future risk assessment methodology that Kentucky Emergency Management and CHR will incorporate.

An excerpt of the results of this dam failure mitigation plan is provided as an appendix to this plan (**Appendix 4-3**).

### **Floodplain Management**

Floodplain Management is interwoven throughout Kentucky's hazard mitigation efforts and is a crucial element of mitigating flood damages and injuries. Through state and local statutes and ordinances, National Flood Insurance Program (NFIP) participation, education and training, and implementation of flood control projects, floodplain management is an integral component of Federal Emergency Management Agency (FEMA) mitigation efforts throughout Kentucky.

Chapter 151 of the Kentucky Revised Statutes (KRS 151) addresses the development of floodplain areas. The most pertinent sections of KRS 151 are (1) KRS 151.250 which establishes the requirements for obtaining a floodplain development permit; and (2) KRS 151.125 which establishes the authority and powers of the Secretary of the Kentucky Energy and Environment Cabinet to administer KRS 151.

Based on KRS 151, the Kentucky Department for Environmental Protection's Division of Water (KDOW) is designated as the state's coordinating agency for the National Flood Insurance Program (NFIP). As the coordinating agency, the Division of Water assists local governments and state agencies by answering all questions concerning the program.

In general, to apply for FEMA mitigation funds, communities must be participants in "good standing" in the NFIP. As meeting this requirement is fundamental to the success of the mitigation program, KYEM partners with KDOW to ensure communities understand this requirement as related to mitigation. During post-disaster briefings to mitigation fund applicants, Kentucky Emergency Management (KYEM) explains NFIP-compliance as integral to local sub-grantee eligibility. Additionally, KYEM has worked

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<sup>20</sup> To be defined and discussed in the *Mitigation Strategy* section of this hazard mitigation plan.

with local communities and KDOW to inform those communities about the steps necessary to move from NFIP non-compliance to compliance. While KDOW works with local communities to ensure that all NFIP requirements have been met to maintain good standing, KYEM promotes the importance of compliance to all interested applicants.

Floodplain Management education and training is offered for mitigation specialists through annual state (e.g., KAMM<sup>21</sup>) and national (e.g., ASFPM<sup>22</sup>) conferences, FEMA and KDOW training opportunities, and the Emergency Management Institute (EMI) classes and workshops. Mitigation specialists statewide participate in many of these sessions as both trainers and attendees.

Mitigation specialists also have completed the EMI course *National Flood Insurance Program/Community Rating System (NFIP/CRS) (E278)*. This course covers the CRS, a nationwide initiative of FEMA's National Flood Insurance Program. It describes activities eligible for credit under the Community Rating System (CRS), how a community applies, and how a community modifies an application to improve its classification. This course assists those performing floodplain services for local governments in learning about the CRS in order to provide technical assistance to communities seeking to apply for CRS credit. Participants are required to work specifically with floodplain management.

The National Flood Insurance Program (NFIP) also is a prominent component in KYEM's signature Applicant Agent Certification Seminars.

KYEM works with communities across the State to develop and implement flood control projects. Several of these projects are funded through FEMA's HMA programs and have mitigated property damage, injuries, and loss of life in many flood-prone areas. Past mitigation projects have included acquisition and demolition of structures damaged by flooding, drainage improvements and culvert upgrades, and the construction of detention and retention basins. Kentucky has mitigated many Repetitive-Loss and Severe Repetitive-Loss properties through the use of FEMA mitigation funds, and through the implementation of flood control projects has reduced losses associated with flood damages to public and private property, swift water rescues and other emergency dispatches, injury accidents, and loss of life.

### **Business Plans and Grants**

The Kentucky Division of Water (KDOW) Business Plan addresses issues related to floodplain management and dam safety. The plan is a working document and is updated annually. KDOW and Kentucky Emergency Management (KYEM) have a strong relationship and continue to jointly plan projects which are focused on mitigating flood-related damages.

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<sup>21</sup> KAMM: Kentucky Association of Mitigation Managers

<sup>22</sup> ASFPM: Association of State Floodplain Managers

The Division of Water (KDOW) receives several federal grants which fund mitigation activities. These include:

- Cooperating Technical Partners (CTP) grants for the scoping, production, and post-preliminary processing and mapping the floodplains of all of Kentucky's counties
- Map Modernization Management and Support (MMMS) grants for management, outreach, and public information purposes
- Community Assistance Program (CAP) grants used to further the provisions of the National Flood Insurance Program (NFIP) and to increase statewide awareness of floodplain management
- RiskMAP activities that have presented an opportunity for KYEM and the Division of Water to collaboratively focus on mapping, assessment, and planning. The two agencies continually have been working with their respective local, state, and federal partners to create an overarching vision of complete hazard mitigation needs and opportunities through hazard mitigation planning and RiskMAP activities. Also, the Community Hazard Assessment and Mitigation Planning (CHAMP) System aids in the overall RiskMAP process.

In addition to administering the NFIP for the Commonwealth and monitoring dam safety, the KDOW supports and enhances both Kentucky and FEMA hazard mitigation efforts through its planning and subsequent plans, its active participation and leadership in mitigation activities, and its use of grants to promote floodplain management awareness and techniques.

KYEM has collaborated and continues to collaborate with KDOW regarding what once was "Flood Map Modernization" (i.e., Map Mod) and is currently "Risk Mapping, Assessment, and Planning" (RiskMAP) programs. KDOW, with FEMA, has initiated the RiskMAP program in Kentucky. FEMA and KDOW's vision for the RiskMAP program is to deliver quality data that increases public awareness and leads to mitigation actions that reduce risk to life and property. To achieve this vision, FEMA and KDOW have transformed the traditional flood identification and mapping efforts into a more integrated process of accurately identifying, assessing, communicating, planning for, and mitigating natural hazard-related risks.

Building on the success of the Map Modernization (Map Mod) effort, FEMA and KDOW continue to collaborate with federal, commonwealth, and local community stakeholders, with KYEM being a key stakeholder in the process. As such, KYEM staff members consistently have been selected to participate in RiskMAP focus groups that have helped create a Risk Communication Toolbox that is used in Kentucky (and potentially in other states and communities nationwide) to identify short- and long-term outreach needs, to define pertinent audiences, and to develop potential tools that aid in enhancing risk mitigation.

KYEM's commitment to this effort is extremely valuable to helping to achieve the goals of RiskMAP, which have been integrated into Kentucky's planning process.

The stated RiskMAP goals are and regarding:

- 1) *Flood Hazard Data:* Address gaps in flood hazard data to form a solid foundation for risk assessment, floodplain management, and actuarial soundness of the National Flood Insurance Program (NFIP).
- 2) *Public Awareness and Outreach:* Ensure that a measurable increase of the public's awareness and understanding of risk results in a measurable reduction of current and future vulnerability.
- 3) *Hazard Mitigation Planning:* Lead and support states and local communities to effectively engage in risk-based mitigation planning, resulting in sustainable actions that reduce or eliminate risks to life and property from natural hazards.
- 4) *Enhanced Digital Platform:* Provide an enhanced digital platform that improves communication and sharing of risk data and related products to all levels of government and the public.
- 5) *Alignment and Synergies:* Align Risk Analysis programs and develop synergies to enhance decision-making capabilities through effective risk communication and management.



Mitigation Staff working with KDW partners

In addition to its other mitigation activities, the Kentucky Division of Water (KDW), through FEMA funding, has compiled new Digital Federal Insurance Rate Maps (DFIRMs) for the Commonwealth of Kentucky. The maps created through this process are invaluable to hazard mitigation activities.

During the benefit cost analysis and application-development process for FEMA, Hazard Mitigation Assistance<sup>23</sup> (HMA) grant proposals, KDOW provides updated Flood Insurance Risk Maps (FIRMs) and Flood Insurance Studies to KYEM mitigation staff and local communities working to develop hazard mitigation projects. Access to these resources is crucial to the accurate determination of project sites relative to mapped flood zones.

### **Repetitive-Loss Property Buyouts**

Kentucky Emergency Management (KYEM) works to eliminate or reduce damages to property and the disruption of life caused by repeated flooding of the same properties. A specific target group of repetitive-loss properties is identified and serviced separately from other National Flood Insurance Program (NFIP) policies.

The Kentucky Division of Water (KDOW) maintains a listing of properties which have experienced severe and repetitive losses due to flooding.

Consistently, KYEM's UK-HMGP Office notifies the relevant local official regarding affected properties as to the availability of buyout opportunities. Through this and like work, KYEM has mitigated numerous Repetitive-Loss and Severe Repetitive-Loss properties through the use of Federal Emergency Management Agency (FEMA) mitigation funds. When these property acquisitions occur, KYEM notifies KDOW of the removal of the structure. KDOW in turn updates its records accordingly.

These records are of obvious importance to Kentucky's current (and past) planning processes.

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<sup>23</sup> Hazard Mitigation Assistance programs are discussed below.

## ***Kentucky Department of Housing, Buildings, and Construction Division of Building Codes Enforcement (K-DBCE)***

### **Kentucky Building Code**

The Kentucky Building Code proactively addresses issues concerning seismic and severe wind construction in response to the Commonwealth's potential earthquake and wind threats. The Kentucky Department of Housing, Buildings, and Construction's Division of Building Codes Enforcement (K-DBCE) regulates the Kentucky Building Code as it pertains to the construction of new buildings and alterations, additions, and changes of occupancy to existing buildings.

Responsibilities for the enforcement of the Kentucky Building Code are shared between K-DBCE and the local government building departments. The K-DBCE reviews architectural plans prior to construction and conducts field inspections to ensure compliance with the Kentucky Building Code. Inspections are conducted of approved projects to ensure construction is completed according to approved plans. Any variations must be approved. Upon successful completion of the final inspection, an occupancy permit is issued and the case file is transferred to the General Inspection Section of the Division of Fire Prevention for future inspections. All inspectors must be certified with the Kentucky Building Inspector Certification.

Kentucky Building Codes support the overall goals of both Commonwealth and FEMA mitigation efforts by helping to ensure that new construction statewide is resistant to damages from severe winds, tornados, and seismic activity, thus helping Kentucky Emergency Management (KYEM) to meet the local jurisdiction-centered mitigation strategy later identified in this mitigation plan by helping local jurisdictions perform better construction aimed toward mitigating hazards.

## ***Kentucky Division of Forestry (KDF)***

### **Wildfire Mitigation Program**

The Kentucky "Firewise" program encourages local solutions for wildfire safety by involving homeowners, community leaders, planners, developers, firefighters, and others in the effort to protect people and property from the risk of wildfire. Kentucky Firewise is part of the National Firewise Communities program organized by the National Fire Protection Association (NFPA) and co-sponsored by the U.S. Department of Agriculture's (USDA) Forest Service, the U.S. Department of the Interior, and the National Association of State Foresters. Kentucky Emergency Management (KYEM) works with the Firewise programs in an effort to promote mitigation of wildfires.

The work of the Firewise program and subsequent wildfire mitigation program has been integrated into Kentucky's current planning process. Kentucky's Division of Forestry (KDF) has submitted an appendix that concerns the wildfire mitigation program (***Appendix 4-2***).

## ***Kentucky Department of Insurance (K-DOI)***

### **Mine Subsidence Insurance Fund (KMSIF)**

The Mine Subsidence Fund (KMSIF) is administered by the State Risk and Insurance Services Division of the Kentucky Department of Insurance. The fund provides insurance to property owners in 34 coal producing counties to protect property against possible loss from mine-related subsidence. The purpose of the KMSIF is to establish reasonable and fair policy endorsement terms and conditions which provide standard and uniform coverage and rates for all like risks, similarly situated, without regard to the primary direct insurer chosen by the property owner to provide other basic insurance coverage on structures eligible for mine subsidence coverage.

Mine subsidence has been identified as a hazard to be mitigated in the Commonwealth. Examples of hazards that can be found from abandoned mine sites include landslides, water-filled pits, open mine portals, and dilapidated equipment and buildings. The KMSIF exists to help property owners mitigate personal losses associated with abandoned mines.

Mitigation specialists are educated through annual Kentucky Association of Mitigation Manager (KAMM) conference sessions that are led by professionals from Kentucky's Energy and Environment Cabinet - Department for Natural Resources Division of Abandoned Mine Lands. One particularly oft-repeated training session concerns "Hazards Caused by Mining and Reclaiming Hazards Caused by Mining." Training such as this enables mitigation specialists to more fully assist local communities in developing mitigation projects which reduce the impacts of subsidence from abandoned mines and to more fully disseminate the KMSIF information statewide.

## ***Kentucky Heritage Council (KHC)***

The Kentucky Heritage Council protects the Commonwealth's historic legacy. The Council assists individuals, communities, and local governments with making historic preservation an important and well-understood component of planning and development. Through Section 106 Review of the National Historic Preservation Act (NHPS) of 1966, federal agencies must consider the effect of their activities on properties listed or determined eligible for listing in the National Register of Historic Places. These activities include any federally-funded, permitted, or licensed projects, under which encompass Kentucky Emergency Management's (KYEM) hazard mitigation program activities.

KYEM coordinates with the Council to ensure historic properties will not be negatively impacted by the mitigation actions and projects toward which FEMA's funding is designated. One important consideration unique to Kentucky concerns the historic sites of Native Americans whose lineage no longer resides within the Commonwealth of Kentucky.

## ***Kentucky Division of Emergency Management (KYEM)***

### **Applicant Agent Certification**

The KYEM Recovery Branch has implemented the first Applicant Agent Certification Program in the United States. This certification enables designated “Applicant Agents” to maximize federal disaster-related funding associated with the FEMA disaster-related programs. Certification is awarded to those who successfully complete the Applicant Agent training.

Certified Applicant Agents are better prepared to ensure that a devastated county or city is included within a presidential disaster declaration. This course includes a wealth of information regarding Public Assistance such as disaster project management and tips on how to avoid de-obligation of federal funding on projects. Course topics include detailed information regarding Individual Assistance, Volunteer Coordination, 404 and 406 Hazard Mitigation, and other potential funding sources such as the Natural Resources and Conservation services, the Small Business Administration, and various State agencies with disaster-designated assistance funds and services.

Related to the current planning process, these courses also act as de facto outreach to local communities: The topics covered that lead to certification explicitly include and indirectly provide information relevant to successful planning as well. Further, this course provides an economic and professional incentive to attend (i.e. one does not simply attend because he/she must or “is being trained” or has an intrinsic interest in the subject matter): Certification incentivizes a broad array of interests that is so important to a planning process. Through Applicant Agent Certification, Kentucky Emergency Management has trained local Judge/Executives, Treasurers, Emergency Management Directors, Road Foremen, Fire Chiefs, private contractors, representatives from Kentucky’s executive agencies (e.g., Transportation, Fish and Wildlife, Parks, Health and Family Services, Auditor of Public Accounts), and even some FEMA staff. Consequently, in learning about things ultimately relevant to planning, Kentucky Emergency Management received feedback that was so important for its planning process from Judge/Executives, Treasurers, EM Directors, Road Foremen, Fire Chiefs, private contractors, representatives from Kentucky’s executive agencies, and, perhaps, from FEMA.

The course is offered quarterly and to date approximately 400 attends have obtained certification. To convey how broad the reach of Applicant Agent Certification across the state of Kentucky, below is inserted a map conveying from where participants in the program traveled.





Mitigation Staff Presenting at the 2012 GEMW

**Kentucky Weather Preparedness Committee (KWPC)**

The Kentucky Weather Preparedness Committee (KWPC) (operating under the support of the Kentucky Emergency Management) is dedicated to raising the awareness of how weather events can impact Kentucky and demonstrating to all citizens how they can better prepare for and protect against potentially life-threatening weather events. The purpose of the committee is to: bring attention to Kentucky’s weather events and their related consequences, educate and prepare Kentuckians for said weather-event consequences, and engage in a variety of efforts (e.g., multi-media campaigns, workshops, conferences) designed to raise weather-event awareness.

Through a FEMA Hazard Mitigation Grant Program<sup>24</sup> (HMGP)-funded grant, the KWPC successfully completed an educational initiative which included the purchase and distribution of weather radios, the production and distribution of educational materials on severe weather hazards and preparedness, and an exhibit at the Kentucky State Fair. In this way, KWPC (in partnership with FEMA) furthered the educational goals of the Commonwealth of Kentucky’s mitigation past (2010) mitigation plan. Such educational and awareness goals continue with this 2013 update of Kentucky’s hazard mitigation plan, thus continuing the relevance of KWPC to the planning process.

<sup>24</sup> See element B. of this section for a discussion of HMGP and other FEMA-funded grant programs.

## PROGRAMS NOT TIED TO ONE COMMONWEALTH AGENCY

### ***Community Hazard Assessment and Mitigation Planning System (CHAMPS)***

The Community Hazard Assessment and Mitigation Planning System (CHAMPS) is a state-wide program that develops a tool that local jurisdictions, executive branch agencies, and generally stakeholders involved or wanting to get involved in hazard mitigation can utilize.

Entities involved with its development include:

- Federal Emergency Management Agency (FEMA)
- Kentucky Emergency Management (KYEM)
- Kentucky Department of Local Government (DLG)
- University of Louisville’s Center for Hazards Research and Policy Development (CHR)
- University of Kentucky Martin School of Public Policy and Administration’s Hazard Mitigation Grants Program (UK-HMGP)
- Stantec

The purpose of CHAMPS is to:

- assist local jurisdictions with their hazard assessments;
- highlight mitigation efforts and allocated funds that can be used toward such efforts;
- guide local jurisdictions through hazard mitigation planning, funding, and project management; and
- store information relevant to hazard mitigation and risk assessment in one centralized location that thusly can be more readily accessed.

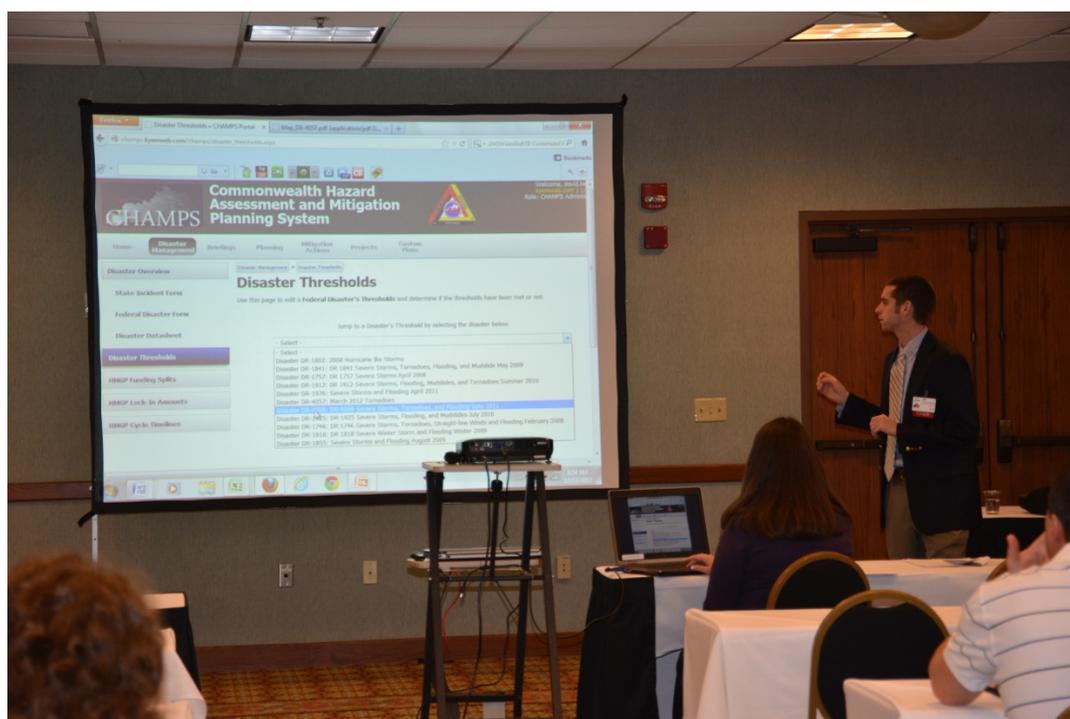
CHAMPS, ultimately, is a software program. Since the 2010 planning cycle, a “version 1” (v1) has been developed and implemented with all relevant stakeholders recovery trained. By the publication of this 2013 update of the Commonwealth of Kentucky’s hazard mitigation plan, a “version 2” (v2) will have been fully developed and available for use.

The difference and improvements between CHAMPS version 1 (v1) versus its version 2 (v2) is tabulated below:

**Table 2-4: CHAMPS v1 vis-à-vis CHAMPS v2**

CHAMPS v1	CHAMPS v2
Completely mitigation-based	Deals with all areas of emergency management
Templates cannot be changed or altered from original design.	New customizable modules were added.
The Planning Module includes FEMA's "Plan Review Tool/Crosswalk." However, there is little option available to adjust the "Plan Review Tool"-guided Planning Module if FEMA makes any changes to it.	New templates guiding plan-writing can be used to create custom plans. While hazard mitigation planning still is guided by FEMA's "Plan Review Tool," the ability to create new templates allows for the ability to make changes to the "Plan Review Tool" if FEMA makes such changes.
Disaster damage assessment data must be submitted to Frankfort where it is manually input into the system	Apps have been created that will allow data to be input into the CHAMP System in real time by damage assessors at impacted sites

It is obvious how Kentucky's hazard mitigation planning process is integrated with this on-going and state-wide program: If the goal of CHAMPS is to be a tool that makes planning more accessible, more logical, and more efficient, then in this development stage, the goals of the hazard mitigation plan must be in harmony with the goals of CHAMPS. Further, this plan very much reflects the ideal behind CHAMPS: That local jurisdictions lead hazard mitigation within a state. CHAMPS' impetus is the ability for increased local contribution by providing software and a system that streamlines and makes more logical hazard mitigation activities for the local jurisdictions. This 2013 update of Kentucky's planning process reflects this ideal, as well.



Hazard Mitigation Staff presenting about CHAMPS

### ***Kentucky Association Mitigation Managers (KAMM)***

The Kentucky Association of Mitigation Managers (KAMM) was formed to promote floodplain management and mitigation in Kentucky. Its members represent local floodplain coordinators, planning and zoning officials, engineers, surveyors, GIS specialists, hydrologists, and local emergency managers.

The purpose of KAMM is to provide a means for state and local floodplain managers to join with others regarding floodplain management policies and activities. Additionally, KAMM exists to advance the study, research, and exchange of information on the technical aspects of floodplain management to reduce flood damage within the Commonwealth of Kentucky. KYEM Mitigation staff has a history of serving on the KAMM board, helping to ensure mitigation is interwoven into floodplain management activities.

### ***Kentucky Silver Jackets Program***

Kentucky participates in the Silver Jackets Program; a state-level program which includes participation of the US Army Corps of Engineers (USACE), FEMA, other Federal agencies, and multiple state agencies. The goal of the program is to create an interagency team to develop and implement solutions to state natural hazard priorities. The Silver Jackets Program provides a formal and consistent strategy for an interagency approach to planning and implementing measures to reduce the risks associated with natural hazards. The program's primary goals are to leverage information and resources, improve public risk communication through a united effort, and create a mechanism to collaboratively solve issues and implement initiatives.

The Silver Jackets program provides communities with an opportunity to work with all appropriate state and Federal agencies to develop a comprehensive flood risk management program. The KYEM State Mitigation Officer and staff will promote mitigation project development through its representation on the Silver Jackets team, thereby integrating both FEMA and the State's goals to mitigate flood-related damages and losses statewide.

## PROGRAMS TIED TO FEDERAL AGENCIES AND LEGISLATION

### ***Section 406 Mitigation***

The mission of the Federal Emergency Management Agency (FEMA) Public Assistance Program is to assist communities in recovering from the devastating effects of disasters by providing technical assistance and financial grants. Mitigation, if delivered effectively, can restore communities in a manner which prevents or reduces the threat of future damage.

Continually since approval of Kentucky's 2007 "enhanced" mitigation plan, Kentucky Emergency Management (KYEM) employed a Public Assistance Officer who must successfully complete the FEMA 406 Hazard Mitigation course regularly. The training, which also is frequently shared with other KYEM staff, has proven invaluable in the recognizing and advancing of mitigation opportunities.

As previously mentioned, KYEM conducts a weeklong Applicant Agent Certification Course regarding recovery and mitigation programs one significant area of emphases is 406 Mitigation funding available for PA projects attendees are encouraged to constantly assess and identify potential 406 opportunities. Additionally agents are encouraged to maintain detailed damage records from non-declaration events.

As required by FEMA, KYEM conducts disaster applicant briefings with all potential Public Assistance Program (PA) applicants immediately after a declaration is issued. In addition to instructing potential applicants regarding PA recovery matters, there is an in-depth discussion regarding hazard mitigation opportunities. Members of the KYEM's Recovery Branch Hazard Mitigation Program Section attend each PA briefing and present information on both 404 and 406 Hazard Mitigation projects. These briefings generally are well-attended and all of Kentucky's 120 counties have been represented as such briefings.

Potential applicants are encouraged to carefully review disaster damages prior to their first meeting with FEMA PA teams to determine if mitigation opportunities exist. The KYEM Recovery Branch Manager and Public Assistance Officer meet with FEMA prior to FEMA "Kickoff Meetings" and project worksheet development to ensure there will be a focused attempt by FEMA PA staff to identify, develop, and obligate projects with 406 Mitigation efforts.

In situations where a specific community has experienced intense, repetitive losses KYEM conducts a focused meeting to explore the mitigation needs and potential for the community. In addition to KYEM staff, other attendees will include agencies such as the Natural Resource Conservation Service, the Kentucky Division of Water (KDOW), and the U.S. Army Corps of Engineers (USACE). Further, community leaders, FEMA 404 representatives, FEMA 406 representatives, FEMA Emergency Support Function (ESF) staff, and representatives from the National Flood Insurance Program (NFIP) will attend these repetitive-loss meetings.

The guidelines and rules of the FEMA 406 program necessarily are integrated into the state-wide planning process: It is to the FEMA 406 program that applicants and sub-applicants will request funding for the inclusion hazard mitigation efforts within PA projects for which local jurisdictions and the Commonwealth of Kentucky itself planned.

### ***National Earthquake Hazards Reduction Program (NEHRP)***

In October 1977, Congress passed the Earthquake Hazards Reduction Act to lessen the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program. Consequently, the Act established the National Earthquake Hazards Reduction Program (NEHRP) to accomplish its goal.

The four (4) participating NEHRP agencies are the:

- 1) Federal Emergency Management Agency (FEMA),
- 2) National Institute of Standards and Technology (NIST),
- 3) National Science Foundation (NSF), and
- 4) United States Geological Survey (USGS).

The mission of NEHRP includes:

- improved understanding, characterization, and prediction of hazards and vulnerabilities
- improved model building codes and land-use practices
- risk reduction through post-earthquake investigations and education
- development and improvement of design and construction techniques
- improved mitigation capacity
- accelerated application of research results

The Act designates FEMA as the program's lead agency and assigns it several planning, coordinating, and reporting responsibilities.

Organizations such as the NEHRP assist Kentucky communities through dissemination of information which may be useful in developing seismic mitigation projects. The work of NEHRP and like organization is integrated into Kentucky's hazard mitigation planning process.

### ***Abandoned Mine Land Program***

The Abandoned Mine Land (AML) program is 100% federally funded. All federal funds received for AML must be used solely for the administration of the AML program and on-ground reclamation. The program is authorized under Title IV of the Surface Mining Control and Reclamation Act of 1977, P.L. 95-87. Kentucky Revised Statute (KRS) 350 contains language mirroring the federal AML legislation in order to authorize Kentucky's AML program.

Each year the Commonwealth of Kentucky receives an annual AML federal grant of approximately \$14 million. Each grant has a three-year lifecycle. AML funds must be expended for program administration and projects which reduce hazards from mines abandoned prior to May 1982. Hazards caused by abandoned mines include landslides, dangerous "high-walls," mine drainage, sedimentation and flooding, dangerous impoundments, open portals and shafts, open pits, dangerous piles and embankments, refuse piles, refuse fires, mine fires, effects from hazardous facilities and equipment, and polluted water (including polluted surface- and ground-water).

To promote the mitigation of abandoned mine hazards, mitigation specialists receive training at the annual Kentucky Association of Mitigation Managers (KAMM) conference that is conducted by AML professionals. Among others, topics have included "Hazards Caused by Mining" and "Reclaiming Hazards Caused by Mining." Training such as this enables mitigation specialists to more fully assist communities in coal production areas to develop mitigation projects which reduce the impacts of subsidence from abandoned mines.

This training influences the feedback that Kentucky receives regarding the planning process.

## ***B. Describing That the Planning Process Is Integrated with FEMA Mitigation Programs and Initiatives***

The integration of Kentucky's current planning process with Federal Emergency Management Agency (FEMA) programs and initiatives primarily have involved the hazard mitigation grant programs that FEMA historically has offered. Commonwealth of Kentucky's hazard mitigation plan necessarily must consider the needs and requirements of what is termed FEMA's Hazard Mitigation Assistance (HMA) grant funding. It is to these that mitigation strategies, both local and Commonwealth-wide, will appeal for funding in order to implement the strategies.

Typically and historically, Kentucky Emergency Management (KYEM) has administered five (5) FEMA hazard mitigation grant programs which exist under the umbrella of Hazard Mitigation Assistance (HMA) grant funding:

- 1) Hazard Mitigation Grant Program (HMGP)
- 2) Pre-Disaster Mitigation Program (PDM)
- 3) Flood Mitigation Assistance Program (FMA)
- 4) Repetitive-Flood Claims Program (RFC)
- 5) Severe Repetitive-Loss program (SRL)

These programs provide a significant portion of the resources used by state, local, university, and relevant nonprofit organizations to implement mitigation strategies. Funding from the PDM and HMGP programs assist Kentucky's local governments and universities in developing and updating their local hazard mitigation plans.

During the 2010-2013 planning cycle about which this update of Kentucky's hazard mitigation plan addresses, there have been some (potentially temporary) changes in the availability of the above five (5) hazard mitigation grant programs. Pre-Disaster Mitigation Program (PDM) funds have been discontinued and the future status of the program is uncertain at the time of this plan's publication. Further, the Repetitive-Flood Claims Program (RFC) and Severe Repetitive-Loss (SRL) programs may be collapsed into the Flood Mitigation Assistance (FMA) Program. Finally, the FMA program may offer funding for plan-creation/-updating; though, such planning by definition will focus uniquely upon planning for the effects of flooding.

Regardless, the Commonwealth's hazard mitigation plan serves as the foundation for project selection, after which selected projects are submitted to FEMA for approval as funds become available. The plan contains the Commonwealth's project selection criteria relevant for these programs. The Commonwealth's mitigation strategy defines the goals, objectives, and activities of the state. Grant funds from these programs are used to help achieve many of those goals, objectives, and activities.

Past mitigation projects funded through FEMA HMA grants have included the acquisition and demolition of flood-prone structures, the installation of nonresidential safe rooms, the burying of overhead utility lines, the improvement of drainage and the upgrading of culverts, the construction of detention and retention basins, the relocation of flood-prone utilities out of flood zones, the stabilization of soil stabilization, the installation of early-warning systems, the installation of emergency backup power for critical facilities, and the implementation of public educational campaigns.