

Lincoln Trail Region Hazard Mitigation Plan 2020 Update



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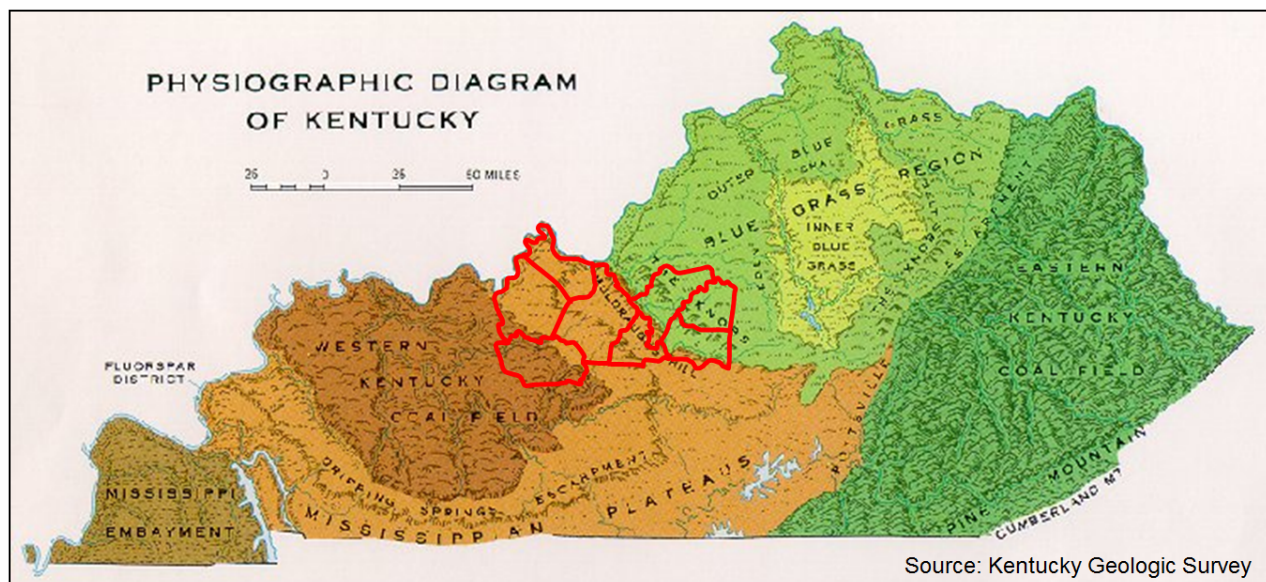
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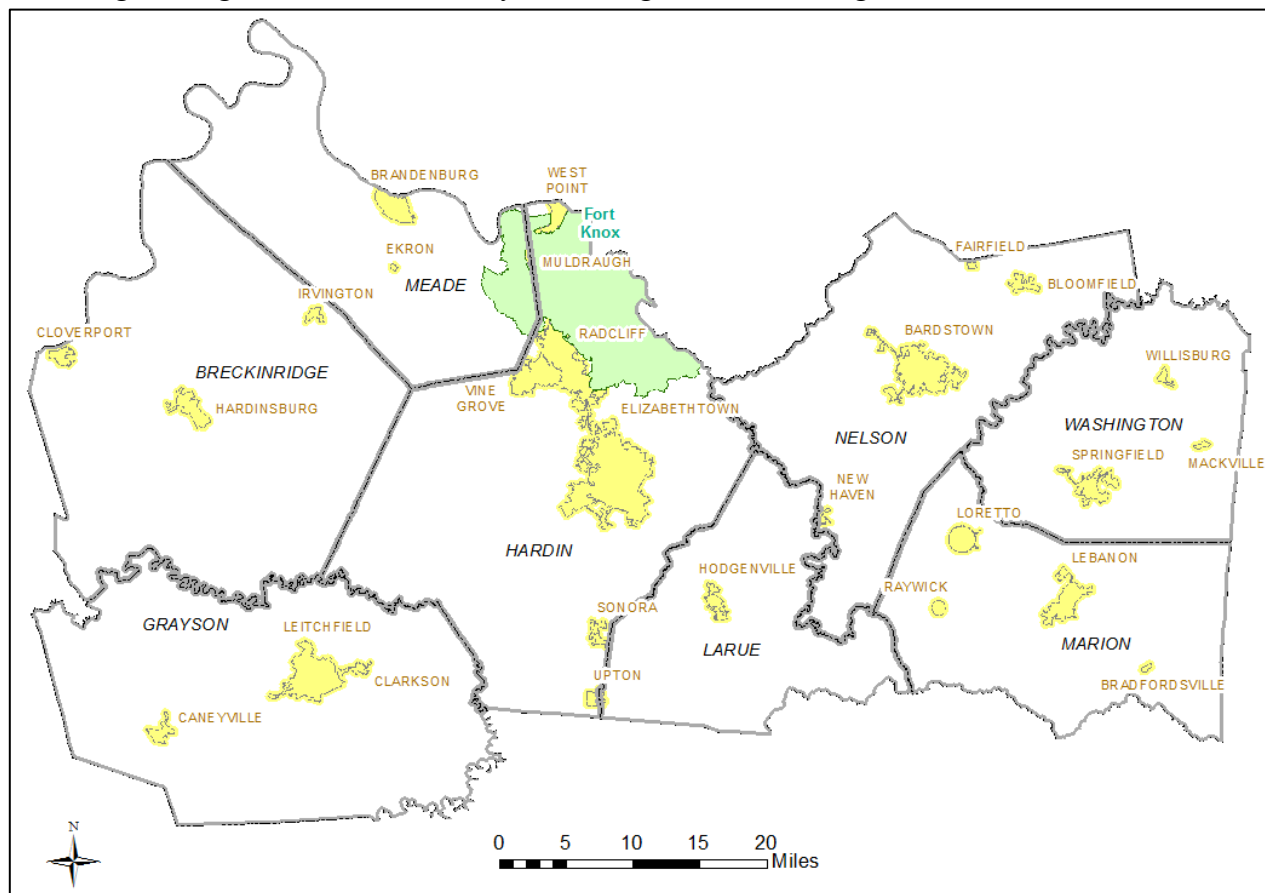
Introduction

The Lincoln Trail Area Development District (LTADD) was officially designated as one of Kentucky's fifteen Area Development Districts on March 23, 1968. Composed of eight counties and twenty-seven cities, Lincoln Trail Area Development District is located immediately south of and contiguous to, the Louisville Metropolitan Statistical Area (MSA). LTADD is bordered by the Western Coal Field on its western border and is part of the Bluegrass Physiographic Region to its east. The district transects the Knobs Region, but the majority of the land is flat to gently rolling. The area is endowed with numerous physical attributes, including a temperate climate, generally uniform terrain, and great scenic beauty. The people of this rural region are self-reliant, and strongly rooted in traditional values.



Prior to the Civil War, the LTADD region exerted a strong influence on the development of Kentucky and the United States west of the Appalachian Mountains. However, for approximately seventy-five years following 1860, the area remained agrarian and did not benefit from the rapid commercial and industrial development of the time. The creation of Fort Knox in 1933 and completion of the Kentucky Turnpike between Louisville and Elizabethtown in 1956, thrust the region into rapid commercial and industrial development. Since the 1950's, significant industrial growth has impacted the area and provided diverse employment opportunities and new payrolls. Tourism also developed based on the historic significance of the region, as well as its scenic beauty, and numerous man-made attractions. The Lincoln Trail Area Development District is still predominantly rural but has experienced significant growth in population. The Hardin County area that includes Fort Knox, remains the region's "growth center" with a population equal to about 39% of the entire eight-county area. It is considered a major growth area in Kentucky, aided in part by the transportation corridors of I65, the Bluegrass Parkway, the Western Kentucky Parkway, and KY Highway 313 that run through it.

The Lincoln Trail Regional Hazard Mitigation Plan is the result of the region’s desire to preserve all local natural resources and protect the lives and property of the people who live here. The Hazard Mitigation Plan is a guide for determining the best methods for reducing or eliminating the loss of life, property, or damage as the result of both natural and man-made disasters. The following table gives a brief summary of each governmental organization within the LTADD



The Lincoln Trail Region

region and its respective size and population. The map shows the region with the locations of each county and city. All eight counties and twenty-seven cities within the region have participated in the plan update.

Existing Governmental Structures

Table 3.1.1 briefly outlines the jurisdictions that are included in the Lincoln Trail Regional Hazard Mitigation Plan as well as, the characteristics of each governing body.

Table I - Lincoln Trail Regional Units of Government		
Jurisdiction	Population 2020 Census	Type of Government
Breckinridge County encompasses 567.17 square miles with a population density of approximately 36.02 people per square mile.		
Breckinridge County	20,432	One County Judge/Executive & Six Fiscal Court Magistrates
City of Cloverport	1,119	One Mayor & Six City Council Members
City of Hardinsburg	1,231	One Mayor & Six City Council Members
City of Irvington	2,385	One Mayor & Six City Council Members
Grayson County encompasses 496.7 square miles with a population density of approximately 53.2 people per square mile.		
Grayson County	26,420	One County Judge/Executive & Six Fiscal Court Magistrates
City of Caneyville	529	One Mayor & Four City Commissioners
City of Clarkson	933	One Mayor & Four City Commissioners
City of Leitchfield	6,404	One Mayor & Six City Council Members
Hardin County encompasses 623.28 square miles with a population density of approximately 177.6 people per square mile.		
Hardin County	110,702	One County Judge/Executive & Eight Fiscal Court Magistrates
City of Elizabethtown	31,394	One Mayor & Six City Council Members
City of Radcliff	23,042	One Mayor & Six City Council Members
City of Sonora	565	One Mayor & Four City Commissioners
City of Upton	704	One Mayor & Four City Commissioners
City of Vine Grove	6,559	One Mayor & Six City Council Members

City of West Point	952	One Mayor & Six City Council Members
LaRue County encompasses 261.52 square miles of land with a population density of approximately 56.8 people per square mile.		
LaRue County	14,867	One County Judge/Executive & Four Fiscal Court Magistrates
City of Hodgenville	3,325	One Mayor & Six City Council Members
Marion County encompasses 343.01 square miles of land with a population density of approximately 57.1 people per square mile.		
Marion County	19,581	One County Judge/Executive & Five Fiscal Court Magistrates
City of Bradfordsville	270	One Mayor & Four City Commissioners
City of Lebanon	6,274	One Mayor & Six City Council Members
City of Loretto	723	One Mayor & Four City Commissioners
City of Raywick	155	One Mayor & Four City Commissioners
Meade County encompasses 305.42 square miles of land with a population density of approximately 98.2 people per square mile.		
Meade County	30,003	One County Judge/Executive & Six Fiscal Court Magistrates
City of Brandenburg	2,894	One Mayor & Six City Council Members
City of Ekron	175	One Mayor & Four City Commissioners
City of Muldraugh	1,040	One Mayor & Six City Council Members
Nelson County encompasses 417.51 square miles of land with a population density of approximately 111.9 people per square mile.		
Nelson County	46,738	One County Judge/Executive & Five Fiscal Court Magistrates
City of Bardstown	13,567	One Mayor & Six City Council Members

City of Bloomfield	961	One Mayor & Six City Council Members
City of Fairfield	118	One Mayor & Four City Commissioners
City of New Haven	798	One Mayor & Four City Commissioners
Washington County encompasses 297.27 square miles of land with a population density of approximately 40.5 people per square mile		
Washington County	12,027	One County Judge/Executive & Six Fiscal Court Magistrates
City of Mackville	222	One Mayor & Four City Commissioners
City of Springfield	2,846	One Mayor & Six City Council Members
City of Willisburg	300	One Mayor & Four City commissioners

Area Development Staff

The professional staff of the Lincoln Trail Area Development District has experience and knowledge in the areas of economic and community development, human services, transportation, land use planning and mapping. LTADD provides services and assistance to the local units of government within its region that they might not otherwise have access to due to size and/or fiscal constraints.

LTADD staff assisted in the research and development of the 2020 Lincoln Trail Regional Hazard Mitigation Plan Update.

Kentucky Area Development Districts receive Federal funding through the Public Works and Economic Development Act of 1965. The intention behind creation of the ADDs was to assist locally elected officials, and business and civic leaders in expanding economic development opportunities.

Lincoln Trail Regional Hazard Mitigation Planning Effort

Officially approved by FEMA in September of 2005, the Lincoln Trail Regional Mitigation Plan is the result of a partnership created by the Kentucky Emergency Management Agency and LTADD through a Federal Emergency Management Agency (FEMA) Mitigation Planning Grant. In 2008, LTADD applied for funding through the Pre-Disaster Mitigation Grant Program to do a comprehensive review and update of the regional plan. In 2013, LTADD applied for funding through the Pre-Disaster Mitigation Planning Grant and through the FEMA Flood Mitigation Assistance Program to complete a comprehensive review and update of the Lincoln Trail Regional

Hazard and Flood Mitigation Plan. In 2019, LTADD again applied for funding through the Pre-Disaster Mitigation Planning Grant and through the FEMA Flood Mitigation Assistance Program to complete a comprehensive review and update of the Lincoln Trail Regional Hazard and Flood Mitigation Plan

Lincoln Trail ADD assisted the Regional Mitigation Council (LTHMC) with the review and update process by pursuing broad based and diverse community participation. To ensure that the plan is relevant and complies with the Robert T. Stafford Disaster Relief and Emergency Assistance Act as amended by the Disaster Mitigation Act of 2000 (Public Law 106-390, October 30, 2000), the plan has been reviewed regularly as each FEMA grant is announced. The regional mitigation plan is comprised of the following sections:

- 3.1: Prerequisites – Adoption by Local Units of Government
- 3.2: A description of the Planning Process/ Plan Maintenance Procedures (added to planning process)
- 3.3: Risk Assessment
- 3.4: Mitigation Strategies

3.1 Prerequisites

3.1.1 Adoption by Local Governing Body

Once each local unit of government has reviewed the Lincoln Trail multi-jurisdictional plan update, it will be brought before the Lincoln Trail Area Development District Board of Directors for adoption.

3.1.2 Multi-Jurisdictional Plan Adoption

Upon acceptance and approval by FEMA, the Lincoln Trail Regional Hazard Mitigation Plan Update will be submitted to each participating jurisdiction for adoption. Each local unit of government will be given an adoption resolution to be passed and signed and attached to the final plan. (Appendix C)

3.1.3 Multi-Jurisdictional Participation

The Lincoln Trail Regional Hazard Mitigation Plan Update planning process was designed to incorporate data and input from each of the eight counties and twenty-seven cities within the region, on an active and equitable basis. Participation in this plan is defined as an active and extensive involvement in the planning and data gathering process that is extended to every citizen within each jurisdiction. The head of each jurisdiction and/or his/her designee became part of the Lincoln Trail Hazard Mitigation Committee (LTHMC). The entire region was advised of the Plan Update at the January 20th, 2021, LTADD Board of Directors Meeting. In years past, a regional meeting was held, where local leaders and community members were given insights and guidance about the review and update process for the Hazard Mitigation Plan, as well as an overview about the plan's mission. Due to the ongoing coronavirus pandemic and social distancing measures, a regional meeting was not held. Instead, each county and its respective communities conducted a zoom meeting with the LTADD staff. A total of eight county meetings were held. The community leaders were presented information about the hazard mitigation plan and its goals, as well as the plan's update process and their role in the process. They were given information update worksheets that they were asked to complete and return to the LTADD staff. Information included updated knowledge on emergency response personnel, emergency response equipment, critical facilities in their community, their hazard mitigation project listings, and notable weather events having affected their community. All eight counties were given a public opinion survey developed by the LTADD staff that was designed to engage the public's perspective about their community and their own disaster preparedness. All thirty-five jurisdictions were instructed on the importance of planning, resiliency, and the inclusion of a broad range of community partners and citizens in their mitigation planning process.

LTADD staff guided the entire planning process to ensure that it was complete and in compliance with federal guidelines. Collaborative work also included the County Emergency Managers in all participating jurisdictions to further evaluate risks, strategies and plans for inclusion in the Regional Plan. An emphasis was placed on planning, preparedness, and resiliency. In addition, staff worked diligently to review extensive sources of information about weather events and regional data for the last five years. Incorporated into the regional plan, this information formed

the basis for planning and review at each jurisdictional meeting. LTADD staff also researched data pertaining to weather events, demographic information, and regional progress in mitigation efforts. ADD staff organized all meetings, trainings, and planning efforts

Throughout the planning and update process for the Lincoln Trail Regional Hazard Mitigation Plan, the impetus has been on inclusive participation, extensive research, and increased regional preparedness and resiliency. LTADD staff has been instrumental in this process to plan for all aspects of hazard mitigation from safeguarding local water systems to planning for emergency evacuations. Research sources include, but are not limited to local emergency managers, community leaders and citizens; the National Climate Data Center; Kentucky MESONET; and FEMA data. The Lincoln Trail Hazard Mitigation Committee (LTHMC) was not only a source of information on the update, but also was the group that reviewed each element of the plan update. LTHMC has:

- Encouraged public participation
- Reviewed public comments
- Reviewed and approved incorporation of existing documentation and information
- Reviewed and approved each component of risk assessment, mitigation strategy, and plan maintenance procedures
- Reviewed the contents of the draft plan update prior to submission to the State

Since the LTHMC was completely composed of people from all participating jurisdictions, it was an inclusive group able to access information from all people within their respective jurisdictions to include first responders, business and insurance people, city and county workers, social service agencies, the media, and the general public. This inclusive approach was instrumental in gathering information and developing strategies in keeping with each jurisdiction's culture, values, and local situations. Also considered, were the discrepancies in resources available to each of the thirty-five unique communities within the region.

In addition to one public meeting within each county, other meetings were convened as necessary, to gather and review all the information contained in the Lincoln Trail Regional Hazard Mitigation Plan Update.

Section Update Summary: The "Prerequisites" section of the Lincoln Trail Regional Hazard Mitigation Plan Update required some changes to the content during the update process. Updates to tables 3.1.3.1 and 3.1.3.2 reflect changes in people participating in regional positions.

The following table outlines the Lincoln Trail Area Development District's Board of Directors and their respective County affiliations.

Table 3.1.3.1 - Regional Council	
Breckinridge County Maurice Lucas, County Judge Executive Candy Weatherholt, Mayor of Cloverport Wayne Macy, Mayor of Hardinsburg Yvonne Kennedy, Mayor of Irvington Dean Schamore, WDB Chair Ted Brown, Citizen Member Gwan Bickett, Citizen Member	Grayson County Kevin Henderson, County Judge/Executive Rick Embry, Mayor of Leitchfield Paul Steenbergen, Citizen Member Becky Miller, Citizen Member
Hardin County Harry Berry, County Judge/Executive Jeff Gregory, Mayor of Elizabethtown JJ Duvall, Mayor of Radcliff Pam Ogden, Mayor of Vine Grove William Ash, Mayor of West Point Brad Richardson, Citizen Member Jim Roberts, Citizen Member Kenneth Saltsman, Citizen Member Darrin Powell, Citizen Member Laura LaRue, Citizen Member Kendra Stewart-Scott, Citizen Member	LaRue County Blake Durrett, County Judge/Executive Jim Phelps, Mayor of Hodgenville Tom Claycomb, Citizen Member Tommy Turner, Citizen Member
Marion County David Daugherty, County Judge/Executive Gary Crenshaw, Mayor of Lebanon John Thomas, City of Lebanon Designated Rep. Stanley Gaddie, Citizen Member George Spragens, Citizen Member Jerry Evans, Citizen Member	Meade County Leslie Stith, County Judge/Executive Ronnie Joyner, Mayor of Brandenburg Joseph Noon, Sr., Mayor of Muldraugh Bill Corum, Citizen Member Janet Hobbs, Aging Advisory Council Chair
Nelson County Dean Watts, County Judge/Executive Dick Heaton, Mayor of Bardstown Chris Dudgeon, Mayor of Bloomfield	Washington County Tim Graves, County Judge/Executive Debbie Wakefield, Mayor of Springfield Kathy Elliott, City of Springfield – Designated Rep. Dorothy Logsdon, Citizen Member Buddy Parker, Citizen Member
Legislative Representatives Jim DuPlessis, House Dennis Parrett, Senate	Fort Knox Jason Root, Designated Rep. – Director of Public Works

The following table outlines the representatives from each of the eight counties and twenty-seven cities in the Lincoln Trail Region who have provided input in the planning, review, and update of the Lincoln Trail Regional Hazard Mitigation Plan Update.

Table 3.1.3.2 - Lincoln Trail Region Representatives

Jurisdiction	Name	Title/Affiliation
Breckinridge County	Maurice Lucas	County Judge Executive
	Eric Vertrees	Emergency Management Director
City of Cloverport	Candy Weatherholt	Mayor
City of Hardinsburg	Stephen Clark	City Clerk
City of Irvington	Yvonne Kennedy	Mayor
	Mona Drane	City Clerk
Grayson County	Tony Willen	Emergency Management Director
City of Caneyville	Connie Gootee	City Clerk
City of Clarkson	Scotty Gore	City Clerk
City of Leitchfield	Rick Embry	Mayor
	Lori Woosley	City Clerk
Hardin County	Bryce Shumate	Emergency Management Director
	Charlie Allen	County Engineer
City of Elizabethtown	Mark Malone	Fire Chief
	Jeff Gregory	Mayor
	Ed Poppe	City Administrator
	Jessica Graham	City Clerk
City of Radcliff	Ashley Russo	City Clerk
	Murray Wanner	City Planner
City of Sonora	Larry Copelin	Mayor
City of Upton	Austin Sadler	Mayor
City of Vine Grove	Jessica Irwin	City Clerk
	Steve New	Fire Chief
City of West Point	Duanne Culver	Assistant City Clerk
LaRue County	Blake Durrett	County Judge Executive
	Troy Williams	Emergency Manager
City of Hodgenville	Toni Burton	City Clerk
Marion County	David Daugherty	County Judge Executive
	Laurie Heckel	Emergency Manager
City of Bradfordsville	David Edelen	Mayor
City of Lebanon	John Thomas	City Administrator
	Nikki Wheatley	City Clerk

City of Loretto	Tom Brahm	Mayor
	Pat Edelen	City Clerk
City of Raywick	Phyllis Troutman	Mayor
Meade County	Leslie Stith	County Judge Executive
	Ron Dotson	Emergency Manager
	Kris Reichmuth	Executive assistant to Judge
City of Brandenburg	Ronnie Joyner	Mayor
	Karen Haynes	City Clerk
City of Ekron	Cory Trent	Mayor
City of Muldraugh	Joseph Noon Sr.	Mayor
	Caroline Cline	City Clerk
Nelson County	Dean Watts	County Judge Executive
	Joe Prewitt	Emergency Manager
	John Hendricks	Deputy Emergency Manager
City of Bardstown	Kin Kraezig	Police Chief
	Gary Little	City Clerk
	Billy Mattingly	Fire Chief
	Jessica Filiatreau	City Civil Engineer
	Greg Ashworth	Human Resource
City of Bloomfield	Christopher Dudgeon	Mayor
	Scott Thompson	Utilities Manager
	Karen Biederman	City Clerk
City of Fairfield	Joe Prewitt	Nelson County Emergency Manager
City of New Haven	Tessie Cecil	Mayor
Washington County	Timothy Graves	County Judge/Executive
	Kevin Devine	Emergency /Flood Plain Manager
City of Mackville	Carl Gabhart	Mayor
City of Springfield	Kathy Elliot	Assistant City Project Coordinator
	Laurie Smith	City Clerk/Treasurer
City of Willisburg	Wanda Thompson	Mayor

3.2 The Planning Process

3.2.1 - Open Public Involvement

To facilitate developing mitigation measures endorsed by a majority of public and private sector stakeholders and be indicative of community needs; public participation was an integral part of the planning process. This broad approach to public participation was encouraged to build partnerships, and to solicit the most comprehensive amount of information possible, so that the Lincoln Trail Regional Hazard Mitigation Plan Update can be as inclusive as possible. Please see sub-sections 3.1.3, 3.2.2, and 3.2.3 for additional information. To further enhance an inclusive approach, the Regional Plan and all the planning information, has been put on the LTADD website (<http://ltadd.org/hazardmitigation>) for review and comment from interested persons, businesses, educators, and agencies across the State. Comments can be made during the entire update process, from draft stage to final plan approval. Comments may be directed to LTADD via the website, by phone or by mail.

3.2.2 - Opportunity for Public Comment

Public meetings were held during the drafting stage of the planning process and prior to plan approval, to encourage public review of, and comment on the plan. In addition, individual citizen surveys were given to each participating jurisdiction to solicit input into the planning process (See Appendix A “Forms”). This survey was also posted to the LTADD Facebook Page for easy access by the entire region. The individual surveys could be completed by those people unable to attend local or public meetings, and vastly expanded opportunities for input from the public. In addition, direct access to plan drafts provided residents of the region with the opportunity to learn about local risks, and the strategies developed to mitigate them. Table 3.2.2.1 outlines the initial meetings held with cities and counties to review the plan update and gather information.

Table 3.2.2.1 - City & County Meetings (To Gather and Analyze Data)			
Jurisdiction	Meeting Date	Jurisdiction	Meeting Date
Breckinridge Co. Irvington Cloverport Hardinsburg	3/18/21	Marion Co. Bradfordsville Lebanon Loretto Raywick	3/15/21
Grayson Co. Caneyville Clarkson Leitchfield	5/4/21	Meade Co. Brandenburg Ekron Muldraugh	3/19/21
Hardin Co. Elizabethtown Radcliff Sonora Upton Vine Grove West Point	3/12/21	Nelson Co. Bardstown Bloomfield Fairfield New Haven	3/23/21
LaRue Co. Hodgenville	3/25/21	Washington Co. Mackville Springfield Willisburg	3/2/21

In addition to the meetings noted above, Hazard Mitigation was discussed with the municipal clerks at regional meetings held on 4/28/2021 and 2/24/2021.

Throughout the first three quarters of 2021, meetings were held with every county emergency manager at least once. These meetings included discussion about the Hazard Mitigation Planning process and data analysis. Several meetings with emergency managers were held during the entire plan update and rewrite to solidify regional projects and gather accurate data. At each of the meetings listed in Table 3.2.2.1 county Judge Executives or their proxies were present to discuss the regional plan rewrite. Also present were the county's emergency managers. These meetings included discussion about the Hazard Mitigation Planning process and data analysis. Several meetings with emergency managers were held during the entire plan update and rewrite to solidify regional projects and gather accurate data. Mayors and city officials of each county were also present to learn about the update and provide input.

Hazard Mitigation was discussed and presented at the Meetings of the Lincoln Trail ADD Board of Directors on multiple occasions, including October 12th, 2020; January 20th, 2021; February 17th, 2021; and March 17th, 2021. Information about the plan and the data it contains was presented; discussion about contents was encouraged.

Once a draft of the plan was completed. Individual meetings with each city and county were held virtually to discuss the contents of the plan and allow cities and counties to provide input and request any changes to their projects in the plan. These meetings were held in the months of September and October of 2021.

The public was able to review plan drafts, as well as the Lincoln Trail Regional Hazard Mitigation Plan Update, at the offices of local units of government and the LTADD website. Instructions for submitting comments were attached to the drafts.

3.2.3 - Opportunity for Public/Private Participation

The tables in subsection 3.1.3 outline local communities, local and regional agencies involved in hazard mitigation activities, agencies authorized to regulate development, businesses, academia, and other private and non-profit organizations that were invited to meetings, and actively encouraged to participate in the planning process. LTADD staff was responsible for informing each jurisdiction in the region of the requirements of the mitigation plan, and the impact of the plan on each jurisdiction. Local units of government, agencies, and organizations, which may be affected by the mitigation plan, were invited to attend all meetings, and given the opportunity to participate.

Invitations to participate were extended to locally elected officials, disaster relief agencies, county/city employees, emergency management personnel, first response agencies, local business and industry, educational facilities, other area development districts, and private citizens, by the LTADD staff or LTHMC members.

3.2.4 Review and Incorporation of Existing Plans, Studies, Reports, and Technical Information

LTADD staff has reviewed and, when applicable, incorporated other regional plans into the Lincoln Trail Regional Hazard Mitigation Plan. Those plans include, but are not limited to, the *LTADD Area Agency on Aging Disaster Preparedness Plan*, the *LTADD Water Management Plan*, the *LTADD Comprehensive Economic Development Strategy*, local City and/or County Comprehensive Plans, local Capital Improvement Plans, and County Emergency Operation Plans. Conversely, all local units of government are encouraged to incorporate the regional hazard mitigation plan into their comprehensive plans, community planning efforts, county emergency operations plans and all planning and zoning ordinances. This is evidenced in the mitigation strategy section of this plan.

Other materials reviewed and considered for inclusion in the plan were studies, reports, and technical information obtained from local communities, research, State and Federal agencies, and universities. These materials included but were not limited to relevant USACE mitigation documents, the National Flood Insurance Program's *Answers to Questions About Substantially Damaged Buildings*, *The HUD Disaster Recovery Initiative: A Flexible Tool for Rebuilding*

Communities, The Long-Term Flood Economic Recovery Strategy for Lincoln Trail Area Development District, Addressing Your Community's Flood Problems.

The Lincoln Trail Regional Hazard Mitigation Plan received dual approval from FEMA. It was originally the first plan in Kentucky to be approved as a Multi-Jurisdictional Mitigation Plan and a Flood Mitigation Assistance (FMA) plan. With this dual designation, all Lincoln Trail jurisdictions covered by the plan are eligible for all FEMA mitigation grant programs.

Several jurisdictions have utilized FEMA grant opportunities to undertake mitigation activities and projects. These actions are incorporated in the Section 3.4, Community Projects. Local mitigation planning activities have been reviewed and included in the plan and referenced throughout.

The City of Radcliff in Hardin County is currently the only jurisdictions in the Lincoln Trail Regional participating in the Community Rating System (CRS) program. Radcliff has an effective date of 10/95 and has a class rating of 9, which provides residents with a 5% discount on flood insurance for properties in a Special Flood Hazard Area.

LTADD staff along with representatives and citizens from every participating jurisdiction, have researched and collected data from numerous sources as cited throughout the plan. All data and information collected has been reviewed for relevancy, comprehensiveness, and accuracy before inclusion in the mitigation plan. Once the review and comment process were complete, the information was evaluated and incorporated into the regional plan as deemed appropriate, and in keeping with 44 CFR §201.6(c)(i) and 44 CFR §201.6(b)(2).

3.2.5 Documentation of the Planning/Update Process

The staff of Lincoln Trail Area Development District has a broad range of knowledge, skills, and abilities, and work with each of the thirty-five jurisdictions within the region to facilitate economic development, compliance with federal and state laws and regulations, community health and safety, quality of life, job opportunities, and educational achievement. This is accomplished with educational opportunities, regional planning councils, project management, land use planning, grant writing, and general assistance. All these efforts are interrelated and lend themselves to ongoing hazard mitigation planning and mitigation projects. Helping each jurisdiction recognize its potential and developing a plan for dealing with each unique environment, enables LTADD staff to know and win the trust of each community. This plan update was another opportunity to evaluate regional hazards, and their related risks, with what each community has accomplished over the last five years, and to determine what each still needs to plan for. Regional grant funds from the Kentucky Area Development Fund (ADF), Community Development Block Grant (CDBG), Citizen Corps funds, and Homeland Security have enabled our communities to purchase first responder communication equipment, outdoor siren warning systems, generators, and facilities that could be used for shelters.

As with the Lincoln Trail Regional Hazard Plan Updates in 2004, 2009/2010, and 2015 every jurisdiction in the region participated in the 2020 update. Opportunities for participation existed at every local and regional meeting when discussion ensued about risk assessment, plan maintenance and the review of findings and data.

The update began with a discussion of the plan at the monthly Lincoln Trail Area Board of Directors meeting. Next the LTADD staff held informational meetings with representatives from each county and their jurisdictions. At these meetings the plan was revisited, and the group was given information update worksheets specifically made for each community. The update worksheets asked each community about their emergency responders, their emergency response equipment, their critical facilities in harm's way of natural disasters, the mitigation strategies and projects completed or upcoming. The groups were asked to return these worksheets to the LTADD staff.

These local mitigation committees participated in each phase of the review and update process. Sub-section 3.1.3 describes the methods used for selecting the members who participated. The risk assessment portion of the plan is covered in section 3.3. Local participants were aided in the process with information pertaining to hazard identification and vulnerability assessment that included historic and technical data, and input from individual jurisdictions. The risk assessment section was researched and prepared by LTADD staff, before being presented to the Regional Mitigation Council for inclusion in the plan update. Each section of the Lincoln Trail Regional Hazard Mitigation Plan Update was reviewed by committee members, during the update process. Data and information collected from each individual jurisdiction, as well as that researched by LTADD staff, was incorporated into the update along with that from the original document. The information gained from each jurisdiction greatly enhanced the data from state and national sources. Meeting notes, maps, information, and attendance records are on file at the Lincoln Trail Area Development District office.

All sections of the plan were originally developed and updated using the best available data in the Lincoln Trail Region. Past Geographic Information Systems (GIS) mapping in conjunction with information gathered from each jurisdiction was used to forecast future losses. During the process of identifying hazards, each hazard was discussed and rated as a potential threat or categorized as "low" or "no risk." Additional information regarding the physical and economic impacts of hazards was gathered and added to existing data. Sources used to gather information from the last five years included county emergency management offices, local media, insurance records, local planning and zoning commissions, the public, each participating jurisdiction and historical knowledge.

Utilizing data from numerous sources, the information contained in the Lincoln Trail Regional Hazard Mitigation Plan Update, defined the vulnerabilities each participating jurisdiction must address. A review of the 2015 mitigation strategy gave the region a base from which to draft community specific mitigation projects. A review of projects that were in progress when the original plan was completed enabled the committee to create the status report shown in section 3.4. From there information about complaints and problems related to recent storms and events was compiled. Review and discussion of this data resulted in a list of projects with the propensity to serve the greatest number of people, prevent the greatest economic losses and be the most cost effective. The completed list was then presented to elected officials for review. Discussion on both city and county levels produced additional projects for consideration.

All appropriate feedback received from elected officials and community members was considered and incorporated into the Lincoln Trail Hazard Mitigation Plan Update.

3.2.6 Plan Maintenance Procedures

Monitoring, Evaluating and Updating the Lincoln Trail Regional Hazard Mitigation Plan

The Lincoln Trail Regional Hazard Mitigation Plan is updated every five years per 44 CFR §201.6(c)(4)(i). However, the twenty-seven cities and eight counties in the Region are committed to keeping the plan up to date per 44 CFR §201.6(c)(4)(iii).

Monitoring Implementation and Evaluating Effectiveness Annually

Each local unit of government will review and discuss the Regional Plan at an officially called meeting of the city council/commission or fiscal court, on an annual basis. At that time, each will review the goals of the plan and gauge how those goals have been addressed during the preceding year. Elected officials will evaluate the progress of the community they represent in meeting the goals of the plan, and implementing the actions described for accomplishing each goal.

This review will also include consideration of hazard events that have occurred over the year and the effectiveness of the plan in helping the community handle the effects of the hazard(s). The review will also afford officials the opportunity to assess the efforts made to mitigate the hazards the community is vulnerable to and determine if additional actions need to be added to the Plan before the next 5-year update process. At this time, each community can review the comments and concerns contributed by local citizens through the *Hazard Mitigation Public Opinion Survey* forms available to them on the LTADD website, or from direct contact. Local leaders from business, education, and service provider agencies, as well as residents, will be encouraged to attend the review sessions and contribute ideas, changes that have occurred over the past year, and concerns.

This review by each jurisdiction will take place in November of each year; LTADD will send out reminders to each participating jurisdiction. The Lincoln Trail Hazard Mitigation Committee will be responsible for the annual review and provide *The Hazard Mitigation Plan Update Evaluation Worksheet* for each jurisdiction to use during the annual review process (See Appendix A “Forms”). This will enable each community to evaluate the same criteria and report the information to Lincoln Trail Area Development District for inclusion in the annual regional review. LTADD will then report any annual changes to the regional plan, to the State. LTADD will also incorporate any comments or information it receives in responses from the citizen Hazard Mitigation Public Opinion Surveys. Both the *Hazard Mitigation Plan Update Evaluation Worksheet* and *Hazard Mitigation Public Opinion Surveys* are available on the LTADD website.

Section Update Summary: The planning process required a few changes to be more inclusive and specific. However, it closely adhered to the process developed for the original plan that proved to be very successful. Review of the mitigation projects completed since the 2015 update, renewed the interest and understanding the regional communities have in planning for community resiliency

and the ability to recover from a disaster. The Regional Plan Maintenance Policy was incorporated into the Planning section of the 2020 Regional Hazard Mitigation Plan.

Lincoln Trail Region Hazards

The geographic location of the Lincoln Trail Region makes it vulnerable to variety of natural hazard events that have the potential to threaten life and property. The following list of natural hazard events is inclusive; not all of these hazards impact this region, but all are profiled in this chapter.

- **Flooding**
- **Tornados**
- **Severe Thunderstorms**
- **Severe Winter Storms**
- **Lightning**
- **Hail**
- **Landslides**
- **Karst/Sinkhole Topography**
- **Subsidence**
- **Drought**
- **Wildfire**
- **Dam Safety**
- **Earthquakes**
- **Hurricanes**
- **Tsunamis**

Some of these hazard events are interrelated; severe thunderstorms can cause flooding and include lightning, they can also produce hail, high winds, and tornados. This chapter provides the characteristics and potential impacts associated with each of these events. Those hazards that affect the Lincoln Trail Region are identified along with their associated potential risks. Historical data is used to determine which events the region is vulnerable to, and the level of associated potential risk. The degree of risk is dependent upon the reliability and accuracy of the data collected.