#### Introduction

## Purpose of the Hazard Mitigation Plan

This revision of the Jackson Purchase Hazard Mitigation (JPHM) Plan is the result of a multijurisdictional planning process. It is a product of a partnership created by the Kentucky Department of Emergency Management and the Purchase Area Development District (PADD) through a Mitigation Planning Grant award from the Federal Emergency Management Agency (FEMA).

The purpose of this revision is to further the existing plan's objectives of reducing casualties and property damage caused by natural hazards and encourage the jurisdictions of the Purchase Region to consider natural hazards in all planning and development decisions. The various phases of the update process often occurred in conjunction with other phases. Each phase was constantly revisited to reflect changes that occurred and new information obtained from stakeholders. A brief overview of each of the above phases follows.

#### 1. Review 2018 IPHM Plan.

The 2018 plan was revisited by the Jackson Purchase Hazard Mitigation Council (JPHMC), PADD Staff, and Local Mitigation Planning Teams (MPTs) to identify areas requiring significant updating. It served as the blueprint for development of the 2023 JPHM Plan. Also, the FEMA crosswalk was reviewed to identify weak points from the previous plan to be addressed in the update and revision.

2. Encourage stakeholder participation during the planning process.

Stakeholder participation was encouraged throughout the planning process. All jurisdictions clearly recognized the importance of participation by hazard mitigation stakeholders. Consequently, throughout the planning process, over 200 stakeholders participated in the four JPHMC meetings and 32 local MPT meetings.

3. Update the "Identifying Hazards" and "Profiles of Hazard Events Sections" of the 2018 Plan and each county chapter.

Due to a number of significant events having occurred since the 2018 plan, hazard areas were carefully reviewed to ensure completeness.

4. Update the "Risk Assessment" Section [Specifically the "Assessing Vulnerability by Jurisdiction" and "Estimating Potential Losses" Subsections] of the 2023 JPHM Plan. Advancements in data resolution and availability associated with risk assessments are constantly evolving. The HAZUS results generated by the Mid-America Earthquake Center in 2008 to support the NLE were incorporated as an Appendix to the plan. All census-derived data and analysis in the 2018 plan were updated with 2020 U.S. Census Bureau 2016-2020 American Community Survey 5 Year Estimate data. Data from the 2020 Census was utilized in instances where American Community Survey information was not available. All flood plain data was updated, reviewed,

**Commented [RS1]:** Where would this be for the 2018 plan?

**Commented [RS2]:** Update Numbers after all meetings are complete

and analyzed using the 2016 FEMA Revised Flood Hazard data/maps, and most recent digital aerial imagery to include at-risk structure point extraction by the PADD Staff.

# 5. Update the "Mitigation Strategies" Section of the 2023 JPHM Plan.

Stakeholders provided information which was reflected in the updated Mitigation Strategy. The 2023 update presented an opportunity to review the Mitigation Strategy using the information gained through the multiple hazard occurrences that the Purchase Region has over the past five years. The actions created for the 2023 update were reviewed and kept within the plan unless any projects were completed, and new projects were added based off of each jurisdiction.

**6. Update of the "Plan Monitoring" and "Maintenance" Sections of the 2018 JPHM Plan.** These topics were assessed to ensure the 2023 plan would have the flexibility to identify strengths and weakness and provide the capacity to quickly react and adjust accordingly.

#### 7. Integrate Stakeholder Input.

Stakeholder meetings provided opportunities for mitigation partners region-wide to provide mitigation activity information, identify needs, and express concerns. Information obtained regarding existing data, projects, relationships, and activities in the field of hazard identification and hazard mitigation were incorporated into this plan.

8. Develop a Comprehensive Update of the 2018 JPHM Plan as the 2023 JPHM Plan.

Every section was evaluated, updated, and improved via a thorough review of the 2018 plan and the County Annexes. The constant change surrounding hazard mitigation activities throughout the region and the subsequent data it produces was considered.

The implementation strategy is that this plan continues to serve as the initial focal point for the Natural Hazard Mitigation activities of individuals, organizations, local governments, and private industry for the region. Further, the plan provides a frame of reference for the consideration of mitigation projects in the future.

#### **About Area Development Districts**

Area Development Districts (ADD) of Kentucky are a product of federal funding by the Appalachian Regional Development Act and the Public Work and Economic Development Act of 1965. The PADD was organized as a nonprofit corporation in 1969 and became one of fifteen such Local Development Districts in Kentucky. Kentucky Revised Statute 147, adopted in 1972, formalized the Area Development Districts as a part of local and state government, but not as a branch of either. ADDs should be thought of as partnerships of local units of government. The PADD has no authority over the activities of any of its member jurisdictions. As required by legislation, the PADD is governed by a Board of Directors composed of 51% elected officials. This includes the judge-executive of each county, and the mayor of each county seat. The remaining members represent other municipalities, labor, low-income families, industry, finance, utilities, the aged, business, minorities, emergency services, women, and education.

The ADD's staff is made up of professionals with a wide range of backgrounds in such areas as economic development, human services, management, planning and mapping services. By sharing the expertise found at the ADD level, local governments are collectively able to have the professional staff that many counties and cities could not afford otherwise.

## 1.:1.2 General Description of the Planning Area

#### Table 1 Location of the Purchase Region



MAP OF KENTUCKY
Showing the
Purchase Area Development District

The PADD operates in the eight western counties of Kentucky. Andrew Jackson and Governor Isaac Shelby negotiated the purchase of this territory from the Chickasaw Indians in 1818. Hence, it has been known as the Jackson Purchase. Clockwise from the west, it is bounded by the Mississippi River, Ohio River, Tennessee River (Kentucky Lake), and the State of Tennessee. It includes the lowest elevations in the state.

The PADD operates from its centrally located office in Mayfield, Kentucky. The three major cities in the Purchase are: Paducah (27,137), Murray (17,307), and Mayfield (10,017) based on 2020 Census. There are an additional 15 incorporated municipalities in the region. The area is

characterized by rolling farmland and dense, temperate, mixed hardwood forest. Consequently, farming and forestry are important parts of the regional economy.

Figure 1.2 Detailed Map of the Jackson Purchase Region



As is true for the rest of the state, roads form the backbone of an inter-modal transportation system serving the area.

- The Purchase Parkway (I-69) bisects the Purchase at a forty-five-degree angle, from Calvert City in the northeast, to Fulton in the southwest.
- Interstate 24 passes through the northeast quarter of the Purchase, crossing Marshall County and exiting the State midway across McCracken County at Paducah.
- KY 121/KY 80 mirrors the Parkway, running from Wickliffe in the northwest to Murray in the southeast, where it intersects US 641, the north-south route from Calvert City, through Murray and on to Tennessee.

- KY 94 is an east-west link from Murray to Hickman, as is KY 58/402 from Hardin to Columbus across the center of the area.
- US 45 bisects the Purchase from Paducah in the north to Fulton in the south.
- US 60 completes the task of I-24, crossing the north of the region, and linking Paducah with Wickliffe. In Wickliffe, US 60 meets US 51, which then heads southbound to Fulton after crossing the Ohio River out of Cairo, Illinois.

Barkley Regional Airport is located in the City of Paducah and is the only airport offering commercial flights. It is served by United Express Airlines and has an Instrument Landing System (ILS). The existence of the ILS was critical to the selection of the facility as a location for a Kentucky National Guard Armory. There are paved General Aviation (GA) airfields at Fulton, Murray, Mayfield, and Gilbertsville.

Reaches of three of the nation's primary inland waterways surround the area on three sides. River ports on the Mississippi, Ohio, and Tennessee Rivers provide road/rail water transshipment nodes and are an essential part of the region's economy.

The Burlington Northern Santa Fe, Canadian National, Paducah and Louisville, and CSX railroads provide freight service to the area. AMTRAK offers two trains a day through its station located in the City of Fulton.

The population residing in the Purchase Region is 196,876, spreads over an area of 2,371.1 square miles. The following is a brief description of each county and each city's setting, size, population, and organization of government.

*Ballard County*, population 7,728, is located in the far-western part of Kentucky. It is bordered on the north by the Ohio River and on the west by the Mississippi River. The county is 246.7 square miles in size and is governed by a Judge Executive and five Magistrates

- The City of Barlow, a Class 6 city, is located in western Ballard County and has a population
  of 1,420. It is located where KY 1105 intersects US 60. It is governed by a mayor and four
  City Commissioners.
- The City of Kevil, a Class 6 city, sits astride the intersection of KY 473 and US 60, in east central Ballard County. Its population is approximately 591. It is governed by a mayor and four City Commissioners
- The City of LaCenter, a Class 5 city, sits in the center of Ballard County. It is located at the intersection of US 60, KY 358, and KY 802. The population is 860. It is governed by a mayor and a six-member City Council.

• The City of Wickliffe, a Class 5 city, has a population of 2,333. Wickliffe is the county seat of Ballard County and is located at the intersection of US 51 and US 60 and the Mississippi River. It is governed by a mayor and a six- member City Council.

*Calloway County*, population 27,103 (over 385 square miles), is located in the southeast portion of the Purchase Area. It is bordered to the east by Kentucky Lake (the Tennessee River), to the south by Tennessee, and to the north by Marshall County. It is governed by a Judge Executive and four Magistrates (who are called "Squires").

- The City of Hazel, a Class 6 city, is located in the southeast corner of Calloway County and the Purchase Region. It is situated at the point where US 641 enters Tennessee. The population is 3,209. It is governed by a mayor and four Trustees.
- The City of Murray, a Class 3 city, has a population of 21,818. It serves as the Calloway
  County seat. The city is located at the junction of US 641 and KY 94. Murray is governed by
  a mayor and a twelve- member City Council.

*Carlisle County*, population 5,351 (over 189.4 square miles), is located in the west-central portion of the Purchase Area. To the north lies Ballard County, to the west the Mississippi River, to the east is Graves County, and to the south is Hickman County. It is governed by a Judge Executive and three Magistrates.

- The City of Arlington, a Class 6 city, has a population of 1,488. The city is located in the south of Carlisle County at the intersection of US 51 and KY 80. It is governed by a mayor and four Trustees.
- The City of Bardwell, a Class 5 city, has a population of 1,784. It serves as the county seat.
   The city is centrally located at the intersection of US 51 and US 62. It is governed by a mayor and a six-member council.

*Fulton County*, population 6,515 (over 205.9 square miles), is located in the southwestern portion of the Purchase Area and the State. Tennessee borders it to the south, the Mississippi River to the west, and Hickman County to the north and east. The county seat is the City of Hickman. It is governed by a Judge Executive and four Magistrates.

- The City of Fulton, a Class 4 city, has a population of 3,567. It is located on the border with Tennessee and the junction of US 51, US 45, and the Purchase Parkway. It is governed by a mayor and four City Commissioners.
- The City of Hickman, a Class 4 city, has a population of 2,939. It is located in the western part of the county along the bluffs of the Mississippi River. It is governed by a mayor and four City Commissioners.

*Graves County,* the largest of the Purchase counties in area, at 551.8 square miles, is also considered the heart of the area. It has a population of 36,649. It is governed by a Judge Executive and three Magistrates.

- The City of Mayfield, a Class 3 city, has a population of 15,019. It serves as the county seat. It is located near the center of the County at the junction of the Purchase Parkway, US 45, and KY 80. It is governed by a mayor and a ten-member City Council.
- The City of Wingo, a Class 6 city, has a population of 3,708. It sits astride US 45 and the
  intersection of KY 303 with the Purchase Parkway. It is governed by a mayor and four City
  Commissioners.

*Hickman County* is also a western county bordering the Mississippi River. It has 242.3 square miles and a population of 4,521. The county seat is Clinton. It is governed by a Judge Executive and three Magistrates.

- The City of Clinton, a Class 5 city, has a population of 4,125. It serves as the county seat. It is
  located in the center of Hickman County, at the junction of US 51 and KY68. It is governed
  by a mayor and a six- member council.
- The City of Columbus, a Class 5 (legacy) city, has a population of 396. It sits on the bluffs of the Mississippi River and is governed by a mayor and a four-member City Council.

*Marshall County* has a population of 31,659 (across 301.3 square miles). It is bordered by the Ohio River to the north, Kentucky Lake to the east, and Calloway County to the south. It is governed by a Judge Executive and three Magistrates (called "Squires").

- The City of Benton, a Class 4 city, has a population of 11,205. It serves as the seat of Marshall County. It lies on the East Fork of the Clark's River, which runs near the center of the county. It is governed by a mayor and six-member City Council.
- The City of Calvert City, a Class 4 city, has a population of 14,034. It is an industrial town on the banks of the Ohio. It is governed by a mayor and a six-member City Council.
- Hardin, a Class 5 city, has a small-town population of 583. It is located in the south-central
  part of the county at the intersection of KY 80 and US 641. It is governed by a mayor and
  six-member council.

*McCracken County* has a population of 67,875 over an area of 248.7 square miles. It sits in the north-central part of the Purchase Area region. At 273 people per square mile, it is by far the most densely populated county in the Purchase Area. McCracken County and its "queen" city, Paducah, are situated on the Ohio River, which forms its northern border. It is governed by a Judge Executive and three Commissioners.

•	The City of Paducah, a Class 2 city, has a population of 27,137. It serves as the seat of McCracken County. It is located on the Ohio River below the mouth of the Tennessee River. It is served by I-24, US 45, US 60, and US 62; Barkley Regional airport; and two railroads. It
	is governed by a mayor and four City Commissioners.
	Introduction Page 8

#### 1:1.3 Plan Organization

The PADD established the JPHMC. This established council guided the development of the plan through broad-based and diverse community participation activities, focused at the county and city levels. Although there are many similarities among the eight counties of the Purchase Region, it is their differences that have driven the focus and organization of this plan. Consequently, in addition to the regional portion of the plan, organized as shown below, there is an Annex for each county.

The regional portion of the plan is necessarily general. A regional government or regional authority does not exist. As previously mentioned, the PADD is a planning organization without authority, but with staff resources that are beyond the means of most counties. In addition, the PADD is not the only regional organization operating in the region. The Kentucky Transportation Cabinet's District 1, Kentucky State Police Post 1, the Department of Emergency Management, and The Four Rivers Basin Team are some of the organizations that have planning, development or coordination mandates in the area. Cooperation among and between these organizations is voluntary, not mandatory. Fortunately, that cooperation does exist. The purpose of the regional portion of the plan is to address those goals, objectives, and strategies that cut across county boundaries.

The county Annexes are intended to serve as standalone plans. The hazards, risks, goals, and strategies are tailored to each county's needs and priorities. The purpose of the Annexes is to focus each county's limited fiscal and personnel resources, and to give them ownership and responsibility for the plan, its maintenance, and its revision. In addition, it is intended that the county Annexes may serve to support or augment other planning documents like comprehensive plans, economic development plans, or emergency operations plans.

The JPHM Plan is organized into the following six sections:

- Introduction
- Prerequisites Adoption by Governing Bodies
- A Description of the Planning Process
- Risk Assessment
- Mitigation Strategies
- Plan Maintenance Procedure

After the above-mentioned six sections of the general Regional Plan follows the individual *County Annexes*, which will be subdivided similarly to this Regional Plan, starting with Section 3.3 (Risk Assessment). In other words, the formats and content of the individual *County Annexes* mirror the format and content of this Regional Plan. For regulatory purposes, any regulation addressed in this general Regional Plan will also be addressed in the individual *County Annexes*.

The JPHM Plan has been developed in accordance with the current rules and regulations governing regional mitigation plans. The plan shall be routinely monitored, as defined in this plan, to maintain compliance 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).

Finally, two appendices are attached to this plan:

Appendix 1: All Weather Events January 1, 1950 - March 31, 2022

Appendix 2: (Excerpts from) FEMA Ready Business Severe Wind / Tornado Toolkit

Appendix 3: (Excerpts from) Impact of New Madrid Seismic Zone Earthquakes on the Central USA

# 1:2 Prerequisites

# 1:2.1 Adoption by the Local Governing Body

On October 23, 2023, the JPHMC recommended approval of the JPHM Plan. This action is reflected in the meeting minutes. A resolution for adoption of the JPHM Plan will be brought before the PADD Board of Directors adopting on October 23, 2023.

# Table 1.1 Multi-Jurisdictional Plan Adoption

Appendix 3 of this plan contains copies of the resolutions passed by each jurisdiction.

Jurisdiction	Date of Resolution
Ballard County Fiscal Court	
City of Barlow	
City of Kevil	
City of LaCenter	
City of Wickliffe	
Calloway County Fiscal Court	
City of Hazel	
City of Murray	
Carlisle County Fiscal Court	
City of Arlington	
City of Bardwell	
Fulton County Fiscal Court	
City of Fulton	
City of Hickman	
Graves County Fiscal Court	
City of Mayfield	
City of Wingo	
Hickman County Fiscal Court	
City of Clinton	
City of Columbus	
Marshall County Fiscal Court	
City of Benton	
City of Calvert City	
City of Hardin	
McCracken County Fiscal Court	
City of Paducah	

Samn	ما	Reco	lution	#
Samu	ч	VE20	luuon	Ħ

**WHEREAS** the (City/County) of \_\_\_has experienced damage from severe thunderstorms (lightning, hail, wind, or tornadoes) and flooding on many occasions in the past century, resulting in property loss, loss of life, economic hardships, and threats to public health & safety and the potential for similar loss from an earthquake.

**WHEREAS** the Jackson Purchase Hazard Mitigation Plan (the Plan) has been updated and revised after more than one year of research and work by the staff of the Purchase Area Development District (PADD), the members of the Jackson Purchase Hazard Mitigation Council (the Council), and the representatives of the community.

**WHEREAS** the Plan recommends hazard mitigation actions that will protect the people and property affected by the natural hazards that face the PADD; and

WHEREAS public meetings were held as required by law.

# NOW THEREFORE BE IT RESOLVED by the (mayor/judge) and the (city council/county commissioners) of the (city/county) that:

- 1. The Jackson Purchase Region Natural Hazard Mitigation Plan has hereby adopted as an official plan of the Purchase counties and the jurisdictions within: Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, Marshall, and McCracken.
- 2. The respective (city/county) officials identified in the strategy of the Plan are hereby directed to implement the recommended actions assigned to them. These officials will report yearly on their activities, accomplishments, and progress to the Council.
- 3. The Jackson Purchase Region Natural Hazard Mitigation Committee will provide annual progress reports on the status of implementation of the Plan to the (mayor/judge) and the (city council/county commissioners) of the (city/county). This report shall be submitted to the (city/county) in November of each year.

Passed by the (city council/fiscal co	urt) of (city/county), this the	day of_, 2018.
Name of Mayor/Judge/Executive		

#### 1:2.2 Multi-Jurisdictional Participation

Participation from each jurisdiction occurred through the PADD Board of Directors, the JPHMC, and the MPTs which were county based. These groups of people represent many aspects of the Purchase Region.

PADD Physical Planning Department initiated the update and revision of the plan process in accordance with the FEMA Getting Started How-to-Guide and steps taken to update the Commonwealth's Plan. Each jurisdiction, city and county, in the Purchase Region was invited to appoint a representative to serve on the JPHMC. Recommendations were made to mayors and county judge-executives on whom to appoint, in order to have a council with a broad variety of backgrounds and experience. Council members include a county judge-executive, mayors, city council members, city engineers, E-911 coordinators, county directors of emergency management, school superintendents, fire chiefs, police chiefs, planning and zoning members, and public works operators. The first council meeting included an overview of 44CFR 201.6 requirements and the requirements for the plan revision and update.

Subcommittees or MPTs were formed for each county, from the JPHMC to include knowledgeable individuals from every jurisdiction and included interested citizens. The judge-executive or his designer serving as the MPT Chair. MPTs provided input on refining the risk assessment and mitigation strategy elements before consideration by the full council. MPT members encouraged public participation, by extending personal invitations.

A meeting notice was placed on the PADD website, PADD newsletter, PADD social media account and sent to each jurisdiction's newspaper. Hardcopy and electronic notices were sent to interested parties in the region prior to each council meeting. A jurisdiction was deemed to be a participant in the planning process if they met three criteria:

- A representative attended JPHMC meetings.
- Participated in MPT meetings.
- If, having a mapped flood hazard area in their jurisdiction, they were a participant in the National Flood Insurance Program (NFIP).

Everyone that attended meetings was permitted to participate in the planning process; however, each jurisdiction had one vote regardless of the number of representatives present. All Class 6 cities and nonparticipating cities could be represented by its county.

One jurisdiction, Hickman County, does not participate in the NFIP and therefore is not eligible for Pre-Disaster Mitigation funding. However, the City of Clinton within Hickman County is a participant and has been included in this planning process.

# 1:2.3 Multi-Jurisdictional Planning Participation

# **Jackson Purchase Hazard Mitigation Council Stakeholders** Chairman – Greg Terry, Carlisle County Judge/Executive

Ballard County Fiscal Court	Todd Cooper, County Judge/Executive
Ballard Co EM Director	Travis Holder
City of Barlow	WTP Tyler & Tanner Shepherd
City of Kevil	WTP Tim Myatt
City of LaCenter	Mayor Bob Morrow
City of LaCenter	WTP Jody Brown
City of Wickliffe	WTP Guy Johnson
Calloway County Fiscal Court	Kenny Imes, County Judge/Executive
City of Murray Director of Planning	Dannetta Clay
City of Murray Director of Public Works	Shane Knight
Calloway County Deputy J/E	
Calloway County EM Director	Jeff Steen
City of Hazel	Mayor John Paschall
Murray Police Chief	•
Murray Deputy Fire Chief	
Calloway County SWC / FPC	
Calloway Co 911 Director	
Magistrate District 4	
Carlisle County Fiscal Court	Greg Terry, County Judge/Executive
Carlisle County Fiscal Court	
Carlisle County EM Director	Josh Glover
Carlisle County EM Director	Josh Glover Jessica Galloway
Carlisle County EM Director	Josh Glover Jessica Galloway Mayor Bobby McGee
Carlisle County EM Director	Josh Glover Jessica Galloway Mayor Bobby McGee
Carlisle County EM Director Carlisle Co Finance Officer City of Arlington City of Bardwell	Josh Glover Jessica Galloway Mayor Bobby McGee Mayor Phillip King
Carlisle County EM Director Carlisle Co Finance Officer City of Arlington City of Bardwell Fulton County Fiscal Court	Josh Glover Jessica Galloway Mayor Bobby McGee Mayor Phillip King Jim Martin, County Judge/Executive
Carlisle County EM Director Carlisle Co Finance Officer City of Arlington City of Bardwell Fulton County Fiscal Court City of Fulton	Josh Glover Jessica Galloway Mayor Bobby McGee Mayor Phillip King Jim Martin, County Judge/Executive City Manager Mike Gunn
Carlisle County EM Director Carlisle Co Finance Officer City of Arlington City of Bardwell Fulton County Fiscal Court City of Fulton City of Hickman	Josh Glover Jessica Galloway Mayor Bobby McGee Mayor Phillip King Jim Martin, County Judge/Executive City Manager Mike Gunn City Manager David Gallagher
Carlisle County EM Director Carlisle Co Finance Officer City of Arlington City of Bardwell Fulton County Fiscal Court City of Fulton	Josh Glover Jessica Galloway Mayor Bobby McGee Mayor Phillip King Jim Martin, County Judge/Executive City Manager Mike Gunn City Manager David Gallagher
Carlisle County EM Director Carlisle Co Finance Officer City of Arlington City of Bardwell  Fulton County Fiscal Court City of Fulton City of Hickman Fulton County EM Director	Josh Glover Jessica Galloway Mayor Bobby McGee Mayor Phillip King Jim Martin, County Judge/Executive City Manager Mike Gunn City Manager David Gallagher J.L. Atwill
Carlisle County EM Director Carlisle Co Finance Officer City of Arlington City of Bardwell  Fulton County Fiscal Court City of Fulton City of Hickman Fulton County EM Director  Graves County Fiscal Court	Josh Glover Jessica Galloway Mayor Bobby McGee Mayor Phillip King Jim Martin, County Judge/Executive City Manager Mike Gunn City Manager David Gallagher J.L. Atwill Jesse Perry, County Judge/Executive
Carlisle County EM Director Carlisle Co Finance Officer City of Arlington City of Bardwell  Fulton County Fiscal Court City of Fulton City of Hickman Fulton County EM Director  Graves County Fiscal Court. City of Mayfield	Josh Glover Jessica Galloway Mayor Bobby McGee Mayor Phillip King Jim Martin, County Judge/Executive City Manager Mike Gunn City Manager David Gallagher J.L. Atwill Jesse Perry, County Judge/Executive Mayor Kathy O'Nan
Carlisle County EM Director Carlisle Co Finance Officer City of Arlington City of Bardwell  Fulton County Fiscal Court City of Fulton City of Hickman Fulton County EM Director  Graves County Fiscal Court City of Mayfield City of Wingo	Josh Glover Jessica Galloway Mayor Bobby McGee Mayor Phillip King Jim Martin, County Judge/Executive City Manager Mike Gunn City Manager David Gallagher J.L. Atwill Jesse Perry, County Judge/Executive Mayor Kathy O'Nan Mayor Charles Shelby
Carlisle County EM Director Carlisle Co Finance Officer City of Arlington City of Bardwell  Fulton County Fiscal Court City of Fulton City of Hickman Fulton County EM Director  Graves County Fiscal Court City of Mayfield City of Wingo Graves Co EM Director	Josh Glover Jessica Galloway Mayor Bobby McGee Mayor Phillip King Jim Martin, County Judge/Executive City Manager Mike Gunn City Manager David Gallagher J.L. Atwill Jesse Perry, County Judge/Executive Mayor Kathy O'Nan Mayor Charles Shelby Tracey Warner
Carlisle County EM Director Carlisle Co Finance Officer City of Arlington City of Bardwell  Fulton County Fiscal Court City of Fulton City of Hickman Fulton County EM Director  Graves County Fiscal Court City of Mayfield City of Wingo Graves Co EM Director  Mayfield Police Dept	Josh Glover Jessica Galloway Mayor Bobby McGee Mayor Phillip King Jim Martin, County Judge/Executive City Manager Mike Gunn City Manager David Gallagher J.L. Atwill Jesse Perry, County Judge/Executive Mayor Kathy O'Nan Mayor Charles Shelby Tracey Warner Nathan Kent, Police Chief
Carlisle County EM Director Carlisle Co Finance Officer City of Arlington City of Bardwell  Fulton County Fiscal Court City of Fulton City of Hickman Fulton County EM Director  Graves County Fiscal Court City of Mayfield City of Wingo Graves Co EM Director  Mayfield Police Dept Mayfield Fire Dept	Josh Glover Jessica Galloway Mayor Bobby McGee Mayor Phillip King Jim Martin, County Judge/Executive City Manager Mike Gunn City Manager David Gallagher J.L. Atwill Jesse Perry, County Judge/Executive Mayor Kathy O'Nan Mayor Charles Shelby Tracey Warner Nathan Kent, Police Chief David Warner
Carlisle County EM Director Carlisle Co Finance Officer City of Arlington City of Bardwell  Fulton County Fiscal Court City of Fulton City of Hickman Fulton County EM Director  Graves County Fiscal Court City of Mayfield City of Wingo Graves Co EM Director  Mayfield Police Dept	Josh Glover Jessica Galloway Mayor Bobby McGee Mayor Phillip King Jim Martin, County Judge/Executive City Manager Mike Gunn City Manager David Gallagher J.L. Atwill Jesse Perry, County Judge/Executive Mayor Kathy O'Nan Mayor Charles Shelby Tracey Warner Nathan Kent, Police Chief David WarnerDavid Archer, Captain

Graves County Road Department	Kiesha Ditto				
Graves County Schools					
Mayfield Independent Schools	Kelly Stinson				
Wing Water and Sewer					
Hickman County Fiscal Court	Kenny Wilson, County				
Judge/Executive					
City of Clinton					
City of Columbus	Mayor Kay Ferguson				
City of Clinton Police / City Manager	Tim Dickson				
Hickman Co EM Director					
Hickman Co EM	Scott Smith				
14 1 NO					
Marshall County	Kevin Spraggs, County				
Judge/Executive	M. Die D.				
City of Benton					
City of Calvert City					
City of Benton					
Marshall County EM Director					
Marshall County EM					
Marshall County Sheriff					
City of Benton					
City of Benton	William York; Planning and Zoning				
Administrator	I I MY I C'. A I I I				
City of Calvert City	John Ward, City Administrator				
McCracken County	Craig Clymer County Judge/Executive				
City of Paducah					
McCracken Co EM Director					
McCracken Co EM					
Paducah Fire Dept					
Paducah Police Department					
City of Paducah					
Paducah Grants Admin					
Paducah McCracken Co JSA					
McCracken Sheriff					
Hendron Fire Chief					
Concord Fire Chief	•				
State & Regional Participants					
KYEM Region I	Daniel Newcomb				
UKY-HMGP					
National Weather Service					
Kentucky Transportation Cabinet	Kyle Poat				

Kentucky State Police	David Archer; Captain
Kentucky Department of Health	Tina Massengill

The PADD Board of Directors makes decisions, establish partnerships, and define goals and objectives for the Purchase Region. Their meetings are held the 3rd Monday of each month at the office of the PADD. These meetings are open to the public and the local media is advised of these meetings.

Table 1.2 PADD Board of Directors, the jurisdictions they represent and their position within the community.

	Purchase Area Developm BOARD OF DIRECT	
Officers	Judge / Executive Kenny Wilson Mayor Rita Dotson Judge / Executive Todd Cooper Arthur Boykin Tamie Johnson	Chairman Vice-Chairman Secretary Treasurer
Ballard County	Todd Cooper Ms. Cathy Pigg Mr. Justin Puckett	County Judge/Executive Designee for Mayor of Wickliffe Citizen Member
Calloway County	Kenny Imes Bob Rogers Mark Manning Sue Outland	County Judge/Executive Mayor of Murray Citizen Member Citizen Member
Carlisle County	Greg Terry Bill Fraser Nancy Henley	County Judge/Executive Citizen Member Designee for Mayor of Bardwell
Fulton County	Jim Martin Mr. John Wiley Mr. Mike Gunn Mr. Perry Turner Mr. Greg Curlin	County Judge/Executive Designee for Mayor of Hickman Designee for Mayor of Fulton Citizen Member Citizen Member
Graves County	Richie Galloway Kathy O'Nan Charles Shelby Mr. Kenneth Galloway Ms. Monica Jackson Mr. George Hurd	Designee for Judge/Executive Mayor of Mayfield Mayor of Wingo Citizen Member Citizen Member Citizen Member

Hickman County	Kenny Wilson Mayor John Kelly Mr. Ethan Cunningham Ms. Wynita Dillard	County Judge/Executive Mayor of Clinton Citizen Member Citizen Member
Marshall County	Kevin Spraggs Mayor Rita Dotson Mr. John Ward Mr. Andrew Pagel	County Judge/Executive Mayor of Benton Designee for Mayor of Calvert City Deputy Judge Executive
McCracken County	Craig Clymer George Bray Arthur Boykin Matthew Snow Bill Bartleman	County Judge/Executive Mayor of Paducah Citizen Member Citizen Member Citizen Member

Active staff participants in the hazard mitigation planning process at the PADD include the following: Stacey Courtney Associate Director for Physical Planning Director, James Smith, GIS Manager, Rachel Stuckey, GIS Technician, Kim Toon, Office Manager, and Rachel Foley, Community Development Specialist.

Table 1.3 National Flood Insurance Program Participation by Jurisdiction

Jurisdiction	Floodplain Management Ordinance	SFHA in Jurisdictional Limits	Comments	City Class
Ballard County	X	X		
City of Barlow			No mapped SFHA	6
City of Kevil			No mapped SFHA	6
City of La Center		X	SFHA mapped in 2009, NFIP under consideration	5
City of Wickliffe	X	X		5
Calloway County	X	X		
City of Murray	X	X		3
City of Hazel			No mapped SFHA	6
Carlisle County	X	X		
City of Bardwell	X	X		5
City of Arlington	X	X		6
Fulton County	X	X		
City of Fulton	X	X		4
City of Hickman	X	X		4
Graves County	X	X		
City of Mayfield	X	X		3
City of Wingo		X		6
Hickman County		X	Mapped SFHA, non-participant	
City of Clinton	X	X		5
City of Columbus			No mapped SFHA	5
Marshall County	X	X		
City of Benton	X	X		4
City of Calvert City	X	X		4
City of Hardin	X	X		5
McCracken County	X	X		
City of Paducah	X	X		2

Information from the FEMA Community Status Book as of 03/17/2022

#### 1:3 The Planning Process

#### 1:3.1 Open Public Involvement

Open public involvement was integrated into the plan and made both public and private stakeholders aware of the planning process for the JPHM Plan. The local level MPTs created opportunities for participation in various PADD, city, and county meetings throughout the planning process. Each judge-executive and mayor was also provided with a copy of the draft plan to review. Each MPT was chaired by the judge-executive of each county. If the judge-executive did not chair an MPT, the county emergency manager served as his proxy. Public officials from each jurisdiction participated in the planning process through the JPHMC. All regional council and local MPT meetings were open to the public.

The PADD staff made contact with neighboring communities through the surrounding ADDs. The JPHM Plan coordinators at the adjoining ADDs were contacted for advice and materials used in the planning process. Public service announcements afforded neighboring communities the opportunity to participate.

Local MPT meetings were conducted to serve as a forum for the discussion of natural hazards that affect the Purchase Region and the conceptualization of mitigation measures. Comments from each MPT were tabulated and used to determine the hazards that affect each county and the cities therein, prioritize the threat, risk, and measures that could be taken to mitigate the hazards for the county Annexes in the JPHM Plan. The results resemble those hazards listed in the county emergency operations plans that were used as a source of local hazard information.

#### 1:3.2 Opportunity for Public Comment

Opportunity for public comment was provided to the citizens of the Purchase Region in three ways: through the JPHMC, through MPTs advertising public meetings for plan draft and final draft reviews, and through the PADD website and placement of plan drafts in city and county offices. A draft plan has been posted at http://www.purchaseadd.org/. The final draft will also be posted and maintained on this site after and upon FEMA approval.

JPHMC and MPT meetings were held at locations suitable for the public. Community members were encouraged to attend these meetings and to participate in the planning process.

Special advertised public meetings were held for the public to review and comment on the draft and final version of the plan. The first public input meeting was held following the completion of the first draft after the local mitigation planning review their county portion in coordination with county Fiscal Courts. Final public meetings were held prior to plan approval. Notice for each public meeting was included in a press release in the paper for the corresponding counties. The PADD blog and social media resources were also utilized to make information available and solicit

input. Social Media was used to share the drafts to community members via emergency managers, magistrates, city council members, etc. The press release notice included the following media firms: The Murray Ledger & Times (Kentucky & Tennessee circulation), The Paducah Sun (Kentucky & Illinois circulation), The Mayfield Messenger, The Current (Kentucky & Tennessee circulation), The Hickman County Gazette, The Carlisle County News, Ballard County Advance Yeoman and the Marshall County Tribune Courier. These newspapers were selected to ensure circulation throughout the Purchase and surrounding regions.

Public comment was solicited through online via Google Form (https://docs.google.com/forms/d/e/1FAIpQLScLvCNoDlnzjZw4aVbQMuM3iX2mp4VBNWVwrW jRpcPhnLYDPg/viewform ) that was distributed to the PADD's regional distribution list. Citizen participation was also solicited through the PADD website and Facebook page. JPHMC meeting notices as well as meeting summaries were placed on the PADD website. Drafts of each section of the mitigation plan were also placed on the website and made available for the public to download. Comment sheets with contact information for the PADD staff were included with all copies available for public review. Drafts of the plan were also sent to each judge-executive, mayor and other county / city officials to review the plan.

The PADD staff and the JPHMC reviewed comments received from the public to determine their impact on the mitigation plan.

#### 1:3.3 Opportunity for Public/Private Participation

Participation in the planning process was open to the general public, planning agencies, neighboring communities, non-profit agencies and private interests. A notice of the public meetings was published in newspapers stations approximately one week prior to each JPHMC meeting.

The PADD staff was responsible for informing each jurisdiction of the new requirements and impacts the mitigation plan would have on their community. The PADD staff reviewed each jurisdiction to identify non-profit as well as other government agencies that might be affected by the mitigation plan. These individuals or groups were invited to attend the regional council and MPT meetings.

In addition to providing a press release and link to materials to local media, the PADD staff made contact with neighboring communities through the surrounding ADDs. The hazard mitigation plan coordinators at the surrounding ADDs were contacted for advice and materials used in the planning process.

Christine Wielgos, of the National Weather Service, addressed the JPHMC on September 22, 2022. She provided an overview of the NOAA Storm Events Database, procedures for submitting local data for inclusion in this database, and weather trends throughout the Purchase Region. A discussion followed regarding the increase in extreme rain events which has resulted in issues

related to flash flooding over the last 60 years. She also discussed the December 2021 tornados and the impact the changing climate has on the Purchase Region.

Representatives of the Kentucky Department for Health took part in this planning process to ensure that the public health impact of a disaster was considered in this process. During this planning process the Purchase Region Disaster Resilience Plan was completed to discuss the impact of the Covid-19 Pandemic on the region.

There were few, if any, private sector participants in this process even though they were afforded the opportunity. In this region, the prevalent thought is that emergency response is the responsibility of the public sector. The private sector is represented on the PADD Board of Directors, and also participates in the Regional Transportation Committee.

Emergency Management Specialist from Federal Emergency Management Agency attended the Regional Kick Off meeting April 21, 2022. PADD Physical Planning staff attended all regional meetings and local MPT meetings.

The PADD staff was responsible for educating, training, and informing the committee members and participants about the mitigation planning goals and for notifying them of meetings as needed.

# 1:3.4 Review and Incorporation of Existing Plans, Studies, Reports, and Technical Information

Existing plans, studies, reports and technical information were researched by the PADD staff in order to determine any relevance to hazard mitigation planning. Resources were found containing information on natural hazards, historical damage from natural hazards, vulnerable areas and assets, mitigation actions and mitigation projects. The following items were reviewed in the preparation of this plan:

#### • County Emergency Operations Plans (EOP)

Ballard County Emergency Operations Plan Calloway County Emergency Operations Plan Carlisle County Emergency Operations Plan Fulton County Emergency Operations Plan Graves County Emergency Operations Plan Hickman County Emergency Operations Plan Marshall County Emergency Operations Plan McCracken County Emergency Operations Plan

Each county creates and maintains an emergency response plan in accordance with KRS Chapters 39A to 39F. These plans were a source for hazard analysis and hazard maps. They include organizational charts and mutual aid agreements. The EOPs include emergency communications capabilities and severe weather warning systems. They include information on first responders, volunteer and nonprofit agencies. These EOPs were a valuable source of information for both risk assessment and vulnerability assessment for the hazard mitigation plan.

On April 21, 2022, PADD and UK-HMGP staff discussed this planning process with the Emergency Management personnel in each Purchase County. The following Directors were present: Jeff Steen (Calloway County), Josh Glover (Carlisle County), J.L. Atwill (Fulton County), Tracy Warner (Graves County), Darlene Lynn (Marshall County). Emergency management for McCracken County and Hickman County were unable to attend but the meeting was recorded via Webex and presented. In addition, Area 1 Emergency Manager was present to represent Region I of the Kentucky Office of Emergency Management.

Disaster Mitigation Planning Documents (Calloway County and McCracken County)
 These documents were prepared by Western Kentucky University and Murray State University with Disaster Mitigation Award #04-69-04980. These planning documents include flood insurance rate maps (FIRM) and HAZUS reports for likely earthquake scenarios. These documents were useful in providing flood plain maps for counties that do not participate in the NFIP.

#### • Most Recent Purchase ADD Comprehensive Economic Development Strategy

The PADD Comprehensive Economic Development Strategy (CEDS) is prepared and maintained by the PADD. It includes maps and exhaustive lists of information and action plans in areas including the following:

Information Scan of the Area, Area Organizations and Governance, Transportation, Natural Resources and Physical Environment, Human Resources, Public Protection, Economy, Infrastructure and Services, Health Services, Housing

The CEDS also includes a list of projects organized by jurisdiction. This document proved to be a valuable source for the vulnerability assessment phase of the plan and to identify existing and proposed projects to include in the JPHM Plan.

#### • Local Comprehensive plans

Comprehensive plans from the region's local planning commissions were reviewed by the PADD staff during the planning process. The following jurisdictions had comprehensive plans that were used in the hazard mitigation planning process:

- City of Benton
- City of Calvert City
- City of Fulton
- City of Hickman

- City of Mayfield
- City of Murray
- · City of Paducah
- McCracken County

#### • Kentucky Agricultural Emergency Management Plan

These plans were created by the Kentucky Department of Agriculture. The plans reference food, safety, animal emergencies, and environmental emergencies in addition to natural hazards. Agriculture is the largest economic segment in the Purchase Region and these plans provided information on natural hazards related to agriculture. Because only hazards that affect the safety, life and property in the Purchase Region, no strategies were developed relating to agriculture.

The Office of the State Veterinarian (OSV) is the contact for livestock and poultry emergency response to Foreign Animal Disease outbreaks and natural disasters of flood, tornadoes or earthquakes. The Kentucky response plan identifies that each county has an Emergency Operating Center (EOC).

#### Disaster Preparedness Plan for the Purchase Area Agency on Aging

The Purchase ADD houses the Disaster Preparedness Plan for the Purchase Area Agency on Aging. This plan serves a vulnerable elderly population, including those dependent on in-home services and nursing homes. This plan provided information on critical facilities information found in the plan and identifying vulnerable populations.

#### • Purchase ADD Water Management Plan

The Purchase Water Management Plan is prepared and maintained by the PADD Water Management Council. It includes information about area water resources, water lines, and wastewater. It includes an infrastructure inventory and plans and projects for counties and cities.

## • Purchase ADD Regional Transportation Plan

The Purchase Regional Transportation Plan is created and maintained by the Purchase Regional Transportation committee. It includes a list of identified transportation projects, major traffic and freight generators, airports, rail facilities, riverports, and other transportation infrastructure assets. This information is available for review at the PADD or the PADD website. It should be noted that the importance of transporting resources via air in the event of a natural disaster is particularly relevant to the Purchase Region because the area is access on three sides by structures over major rivers.

#### • Purchase ADD Disaster Resiliency Plan

The Kentucky Area Development Districts in coordination with the Department for Local Government and the Economic Development Administration, engaged in a commonwealth-wide community based and strategic planning process. The Disaster Resiliency plan was created to address the recovery and resiliency efforts that can help the region withstand and avoid future economic shocks. The purpose is to prevent, prepare and respond to the coronavirus pandemic and assist with the resulting economic injury that occurred due to the virus. The plan addresses short-term and long-term approaches to rebuild resilient and sustainable communities throughout the Purchase Region.

Table 1.4 is a summary of relevant planning documents and Authorities for the Jurisdictions in the PADD.

Table 1.4

Table 1.4														
Jurisdiction	Floodplain Management Ordinance	CRS & FMA Plans	Zoning Regulations	Subdivision Regulations	Land Development Plans	Fire Prevention Code	Comprehensive Plan	Capital Improvement Plan	Stormwater Management Plan	CERT Team	NWS Storm Ready Program	Local Economic Development	Regional Economic Development	City Class
Ballard County	X							X		X		X	X	
City of Barlow								X				X	X	6
City of Kevil								X				X	X	6
City of La Center					X		X	X				X	X	5
City of Wickliffe	X							X				X	X	5
Calloway County	X		X	X						X	X	X	X	
City of Murray	X		X	X	X		X		X			X	X	3
City of Hazel												X	X	6
Carlisle County	X									X	X	X	X	
City of Bardwell	X											X	X	5
City of Arlington	X											X	X	6
Fulton County	X									X	X	X	X	
City of Fulton	X		X	X	X		X	X				X	X	4
City of Hickman	X		X		X		X					X	X	4
Graves County	X									X		X	X	
City of Mayfield	X		X	X	X		X		X			X	X	3
City Wingo												X	X	6
Hickman County										X	X	X	X	
City of Clinton	X											X	X	5
City of Columbus												X	X	5
Marshall County	X					X				X	X	X	X	
City of Benton	X		X	X	X	X	X		X			X	X	4
City of Calvert City	X		X	X	X		X	X	X			X	X	4
City of Hardin	X											X	X	5
McCracken County	X		X	X	X	X	X			X	X	X	X	
City of Paducah	X		X	X	X	X	X	X	X			X	X	2

# 1:3.5 Documentation of the Planning Process

The mitigation planning process included public involvement in the task of developing the risk assessment, mitigation strategies, and plan maintenance, and the process of plan adoption in each jurisdiction.

Public participation for the purpose of this plan is defined as an opportunity for each jurisdiction and the citizens of that community to participate in the planning process. Opportunities for public participation were offered through JPHMC and MPT meetings as well as public meetings. Each of these meetings provided an opportunity for input in the development of the risk assessment, mitigation strategies, and plan maintenance. All PADD meetings and all JPHMC meetings were open to the public. All public meetings were advertised in advance. All such meetings are posted on the PADD website. A press release was issued to the media outlets listed below for all activities.

# **Purchase Region Media Contacts**

Editor: Teresa Ann Pearson Email: advanceyeoman@gmail.com Website: http://www.kynews.com/co_yeoman.htm
Email: advanceyeoman@gmail.com
Website: http://www.kynews.com/co_yeoman.htm
Editor: Hawkins Teague
Email: editor@murrayledger.com
Website: <u>www.murrayledger.com</u>
Editor: Larrah Workman
Email: Larrah.workman@gmail.com
www.ky-news.com
Editor: Tom Berry
News email box: news@mayfield-messenger.com
Editor: Gaye Bencini
Email: gaye@thehctimes.com
Website: www.thehctimes.com
Editor: Lloyd Ford
Email: news@thelakenews.com

Phone: (270) 395-5858

Marshall Times - Weekly

Kentucky Publishing Inc. Newspaper Group 1540 McCracken Blvd, Paducah, KY 42001

Phone: (270) 442-7389

Tribune-Courier - Weekly

86A Commercial Blvd, Benton, KY 42025 Fax: 270-527-4567

Phone: 270-527-3162

**Regional Newspapers** 

The Current - Weekly Magic Valley Publishing

PO Box 1200

304 East State Line, Fulton, KY 42041

Phone: 270-472-1121 Fax: 270-472-1129

Paducah Sun

PO Box 2300, Paducah, KY 42002

Phone: 270-575-8600

Public Notices: 270-575-8700

Fax: 270-443-7465

West Kentucky News - Weekly

Kentucky Publishing Inc. Newspaper Group 1540 McCracken Blvd, Paducah, KY 42001

Phone: (270) 442-7389 Fax: (270) 442-7389

Editor: Kelsey Edwards

Email: kpikelsey@gmail.com

Email: editor@tribunecourier.com or

Website: www.tribunecourier.com

Editor: Benita Fuzzell

Email: benita@thecurrent.press Layouts: mark@thecurrent.press

Website: <a href="https://www.thecurrent.press/">https://www.thecurrent.press/</a>

Managing Editor: David Zoeller

Email: dzoller@paducahsun.com

Website: www.paducahsun.com

Editor: Greg LeNeave

Email: kpilayout@gmail.com Website: www.ky-news.com

#### **Jackson Purchase Hazard Mitigation Council Members**

Each jurisdiction within the PADD was asked to designate a representative(s) to participate in the regional mitigation planning process. All persons in attendance participated in the meeting with each jurisdiction having one vote. Staff reported to the PADD Board of Directors on a regular basis regarding the status of this planning process. As part of each report staff encouraged those present to attend meetings and participate in the planning process.

#### **Meeting Documentation**

Summaries of meetings were kept by the PADD staff. Throughout these meetings, the hazards were identified, analyzed, and prioritized by the likelihood of how each threat could affect the Purchase Region. Council members adopted the HAZUS definition of a critical facility and identified those critical facilities in their jurisdiction. All components of the Risk Assessment were developed using the best available data in the Purchase Region. GIS resources and public input were used to identify hazards that affect the PADD. The PADD staff compiled this information to identify hazards and the JPHMC and MPTs reviewed the definitions and discussed their occurrence in the region. Members also participated in identifying goals, objectives, and strategies for each hazard that affects the region. The JPHMC developed and approved a plan maintenance schedule for the JPHM Plan.

#### **Multi-Jurisdictional Participation and Planning Process**

Each jurisdiction participated in the planning process through involvement in the JPHMC and MPTs meetings. Opportunities were also presented at public meetings held prior to a draft submission and final draft submission. For those jurisdictions that did not participate in the mitigation planning meetings, the county appointment represented them in any decisions that were made in the planning process as stated in the bylaws.

#### **Purchase Area Development District Planning Staff Activities**

- James Smith, GIS Manager, aided in developing maps and projects for the plan, participated in the plan development process, attended JPHMC and MPT meetings.
- Rachel Stuckey, GIS Technician, developed maps and projects, facilitated meetings, coordinated overall activities, participated in the plan development process, provided directions to the staff, edited drafts of the plan and secured resources.
- Stacey Courtney, Community Development Associate Director, participated in the plan development process, attended JPHMC and MPT meetings.
- Rachel Foley, Community Development Specialist, assisted with proofing, editing, formatting and production of the final plan, participated in the plan development process and attended JPHMC and MPT meetings.
- Kim Toon, Administrative Assistant, provided secretarial services including typing, proof reading and keeping records of meetings.