Lake Cumberland Area Development District
Regional Multi-Hazard Mitigation Plan

October 22, 2016 (Update)

Prepared for:

LCADD
Member Cities/Counties
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1.0 INTRODUCTION

1.1 Introduction

The Lake Cumberland Regional Multi-Hazard Mitigation Plan covers the Lake Cumberland Area Development District's (LCADD) service area of ten counties and fourteen cities in south central Kentucky. They include:

Adair County
A county judge-executive and seven magistrates govern the county. Each official serves a four-year term.

City of Columbia (Home-rule Class) (formerly 4th Class City)
A Mayor and six council members govern the City of Columbia. The Mayor serves a four-year term and the council members serve two-year terms.

Casey County
A county judge-executive and four magistrates govern the county. Each official serves a four-year term.

City of Liberty (Home-rule Class) (formerly 5th Class City)
A Mayor and six council members govern the City of Liberty. The Mayor serves a four-year term and the council members serve two-year terms.

Clinton County
A county judge and six magistrates govern the county. Each official serves a four-year term.

City of Albany (Home-rule Class) (formerly 4th Class City)
A Mayor and six council members govern the City of Albany. The Mayor serves a four-year term and the council members serve two-year terms.

Cumberland County
A county judge-executive and four magistrates govern the county. Each official serves a four-year term.

City of Burkesville (Home-rule Class) (formerly 5th Class City)
A Mayor and six council members govern the City of Burkesville. The Mayor serves a four-year term and the council members serve two-year terms.

Green County
A county judge-executive and five magistrates govern the county. Each official serves a four-year term.

City of Greensburg (Home-rule Class) (formerly 5th Class City)
A Mayor and six council members govern the City of Greensburg. The Mayor serves a four-year term and the council members serve two-year terms.

McCreary County
A county judge-executive and four magistrates govern the county. Each official serves a four-year term.

(There are no incorporated cities in McCreary County)

Pulaski County
A county judge-executive and five magistrates govern the county. Each official serves a four-year term.

City of Burnside (Home-rule Class) (formerly 4th Class City)
A Mayor and six council members govern the City of Burnside. The Mayor serves a four-year term and the council members serve two-year terms.

City of Eubank (Home-rule Class) (6th Class City)
A Mayor and four city commissioners govern the City of Eubank. The Mayor serves a four-year term and the commissioners serve two-year terms.

City of Ferguson (Home-rule Class) (formerly 5th Class City)
A Mayor and six council members govern the City of Ferguson. The Mayor serves a four-year term and the council members serve two-year terms.

City of Science Hill (Home-rule Class) (formerly 6th Class City)
A Mayor and four council members govern the City of Science Hill. The Mayor serves a four-year term and the council members serve two-year terms.

City of Somerset (Home-rule Class) (formerly 3rd Class City)
A Mayor and twelve council members govern the City of Somerset. The Mayor serves a four-year term and the council members serve two-year terms.

Russell County
A county judge-executive and five magistrates govern the county. Each official serves a four-year term.

City of Jamestown (Home-rule Class) (formerly 5th Class City)
A Mayor and six council members govern the City of Jamestown. The Mayor serves a four-year term and the council members serve two-year terms.

City of Russell Springs (Home-rule Class) (formerly 5th Class City)
A Mayor and six council members govern the City of Russell Springs. The Mayor serves a four-year term and the council members serve two-year terms.

Taylor County
A county judge-executive and six magistrates govern the county. Each official serves a four-year term.

City of Campbellsville (Home-rule Class) (formerly 3rd Class City)
A Mayor and twelve council members govern the City of Campbellsville. The Mayor serves a four-year term and the council members serve two-year terms.

Wayne County
A county judge-executive and four magistrates govern the county. Each official serves a four-year term.

City of Monticello (Home-rule Class) (formerly 4th Class City)
A Mayor and six council members govern the City of Monticello. The Mayor serves a four-year term and the council members serve two-year terms.

The LCADD is made up of the following departments:

- Community and Economic Development
- Planning
- Elderly Services
- Transportation
- Workforce Development
- Finance and Administration

The LCADD Region covers a land area of 3,739 square miles. It stretches from the Appalachian Plateau to the Outer Bluegrass with most of its land area on the Mississippian Plateau (or Pennyroyal). Portions are intensely urbanized and other portions are very sparsely populated and highly rural.

The population of the LCADD Region in 2010 was 207,256. Table 1 shows both the 2010 and the projected 2020 population for each county in the LCADD Region.

Table 1.1(1) – LCADD Population

LCADD Population		
County	**2010 Population**	**Projected 2020**
Adair	18,656	21,166
Casey	15,955	17,428
Clinton	10,272	10,153
Cumberland	6,856	7,629
Green	11,258	13,353
McCreary	18,306	20,199
Pulaski	63,063	66,791
Russell	17,565	18,722
Taylor	24,512	25,067
Wayne	20,813	23,797

*Population numbers: Source: US Census www.census.gov and US Census Quick Facts http://quickfacts.census.gov/qfd/states/21000.html

Over the past decades, the economy in the LCADD Region has shifted away from the agriculture sector to the manufacturing and service sectors. Massive textile losses in the early nineties have led to a more diversified manufacturing sector with high-tech better paying jobs. The area's many recreational lakes and scenic wonders have paved the way for a rapidly growing service and tourism based economy.

The region's transportation system consists of one state parkway, several minor airports, and one freight rail system. Though no interstate highways run through the LCADD region, I-66 is easily accessible from Louie B. Nunn/Cumberland Parkway in the west and I-75 is accessible via KY 80 to the east.

There are two post-secondary schools, Lindsey Wilson College and Campbellsville University; and one community college, Somerset Community College, located in the LCADD area. Nine hospitals are located in the LCADD ten-county region.

1.2 Purpose

The Federal Emergency Management Agency (FEMA) defines hazard mitigation as "any sustained action taken to reduce or eliminate the long-term risk to human life and property from (natural) hazards", such as floods, hurricanes, winter storms, tornadoes, earthquakes, etc. Hazard mitigation may include both structural measures, such as flood control structures, and nonstructural measures, such as regulations and bylaws, to prevent flooding. Regional planning and mitigation efforts allow communities to evaluate existing critical infrastructure susceptible to hazards and identify improvements to reduce damage from natural disasters.

The Cities and Counties of the LCADD Region and LCADD Staff developed this Regional Multi-Hazard Mitigation Plan through a FEMA grant obtained as part of the Hazard Mitigation Grant Program (HMGP). The plan has been developed for the entire Region with the goal of providing sustained actions to reduce or eliminate risk to human life and property damage from a natural hazard event. Objectives of this plan are as follows:

- ≠ Describe the planning process including formation of the (LCHMRPC) and input from the general public;
- ≠ Identify relevant background information on the Region, including geography, climate, land use, and infrastructure;
- ≠ Identify natural hazard risks and areas in Region most likely to be impacted;
- ≠ Complete a risk assessment to profile hazard events, inventory assets, and estimate potential losses;
- ≠ Identify existing disaster mitigation measures already in place;
- ≠ Develop proposed mitigation measures and a mitigation strategy based on the risk assessment;
- ≠ Design a mechanism to keep the plan updated to reflect current conditions and establish a schedule for monitoring, evaluating, and updating the plan; and
- ≠ Define the process where Dartmouth formally adopts the mitigation plan.

Preparation of this Regional Multi-Hazard Mitigation Plan before a major disaster occurs can help each community prevent property damage and loss of life and associated with natural hazards, save money by instituting mitigation measures to protect against natural hazards, allow funding through FEMA for post-disaster remediation, and expedite disaster recovery. The Plan will also help to reduce or eliminate flood losses.

2.0 PLANNING PROCESS

2.1 Planning Process Goals

An open public involvement process is essential to the development of an effective plan and the most successful mitigation plans are developed after participation by a wide range of stakeholders who play a role in identifying and implementing mitigation actions. During preparation of this regional, multi-hazard mitigation plan update, the goals of the planning process included the following:

- ≠ Opportunities for the public to comment on the plan during the drafting stage and prior to final approval;
- ≠ Opportunities for local and regional agencies, academic institutions, and other private industries to be involved in the planning process; and
- ≠ The review and incorporation of existing plans, studies, reports and information.

2.2 Regional Planning Committee

The Lake Cumberland Hazard Mitigation Regional Planning Committee (LCHMRPC) represents all counties and incorporated cities with the Lake Cumberland Area Development District (LCADD). An initial kickoff meeting was held with members of the region and representatives of LCADD to establish a preliminary LCHMRPC. The LCHMRPC consisted of mayors, judge/executives, local floodplain managers, emergency management personnel, business leaders, and other interested agencies to provide critical regional knowledge of the community to facilitate development of this plan. Mayor Nicky Smith of the City of Albany was nominated to serve as the LCHMRPC's Chairman. Throughout the planning process, the LCHMRPC was modified and updated to include the members listed in **Table 2.2(1)**.

Table 2.2(1) – Lake Cumberland Hazard Mitigation Regional Planning Committee Members

REGIONAL HAZARD MITIGATION COMMITTEE		
NAME	**TITLE**	**AGENCY**
Bruce Cundiff	Highway Superintendent	Kentucky Transportation Cabinet (KYTC)
Charles Grimsley	Chairman	Columbia Parks and Recreation
Chris Janes	Project Manager	Columbia/Adair County Airport Board
Carley Fudge	Building Inspector	Adair County Fiscal Court
CR Drake	Fire Chief	Adair County Fire District
Daryl Flatt	Magistrate (District 2)	Adair County Fiscal Court
David Jones	Maintenance/Transportation Director	Adair County Schools
Ellen Zornes	President	Columbia/Adair County Chamber of Commerce
Greg Thomas	Director	Adair County 911
Harrison Moss	Sheriff	Adair County Sheriff's Department
Jason Recter	Safety Course Instructor	American Red Cross
Jeff Feese	PVA	Adair County Property Value Administrator's Office
Jennifer Hutchison Corbin	County Attorney	Adair County Attorney (Adair County Fiscal Court)
Justin Bailey	Mapping and Addressing Coodinator	Adair County Fiscal Court
LeAnn Jessie	Director	Adair County Public Libraries
Lenny Stone	General Manager	Columbia/Adair Utilities
Mark Dykes	Chairman	Columbia/Adair County Economic Development Authority
Mike Glasgow	Chief (City of Columbia)	Columbia/Adair County Fire Department
Mike Keltner	EM Director	Adair County EMA
OD Frazier	Supervisor	City of Columbia Sanitation Department
Rhonda Loy	Board Member	Columbia/Adair County Chamber of Commerce
Ron Cook	Gas Superintendent	Columbia Utilities
Steven Breeding	Superintendent	Adair Utilities District (Stormwater Management)
Sue Stivers	Executive Director	Columbia/Adair County Chamber of Commerce
Terry Corbin	Foreman	Adair County Road Department
Terry Flatt	Chief (Adair County)	Columbia/Adair County Fire Department
Terry Harvey	Chief (Town of Breeding)	Columbia/Adair County Fire Department
Tony Bragg	Director	Adair County EMS
Jerry Coffman	Sheriff	Casey County Sheriff's Office
Randy Dial	Judge/Executive	Casey County Fiscal Court
Gary Johnson	Magistrate	Casey County Fiscal Court
Rick Wesley	EM Director	Casey County EMA
Steven Brown	Mayor	City of Liberty (Casey County)
Steven Garrett	Police Chief	City of Liberty Police Department
Donald Wilson	Chief	City of Liberty Fire Department
Rodger Martin	Assistant Chief	City of Liberty Fire Department
Ronnie J. Wesley	Utility Superintendent	City of Liberty (Casey County)
Eddie Wesley	Chairman	East Casey County Water District
John Switzer	Director	Liberty/Casey County Chamber of Commerce
Andy Davis	Mapping and Addressing Coordinator	Clinton County Fiscal Court
Charles Stockton	Director	Clinton County Emergency Services/911

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REGIONAL HAZARD MITIGATION COMMITTEE		
NAME	**TITLE**	**AGENCY**
Denise Hughes	Risk Management Director	Clinton County Hospital
Ernest Guffey	Police Chief	Clinton County Police Department
Jim Guffey	Sheriff	Clinton County Sheriff's Department
Kevin Groce	Safety Coordinator	Clinton County Schools
Lanny Bowlin	(Former) Mayor	City of Albany (Clinton County)
Larry Koger	School Bus Driver Trainer/Instructor	Clinton County Schools (Transportation)
Lonnie Scott	EMS Chief	Clinton County EMA
Robert Roper	Chief	City of Albany Fire Department
Ronnie Coffey	Paramedic	Clinton County Emergency Services/911
Tuesday Davis	Finance Officer	Clinton County Fiscal Court
Bobby Reneau	Park Director	Mountain View Park (in City of Albany)
Nick Smith	Mayor	City of Albany (Clinton County)
Norb Sohm	City Attorney	City of Albany Attorney's Office
Rick Mercader	President	Clinton County Chamber of Commerce
Tonya Thrasher	Council Member	City of Albany (Clinton County)
Amanda Shotton	Disaster Program Manager	American Red Cross
Greg Cary	EM Director	Cumberland County EMA
Ed Peretto	Superintendent, Water and Sewage	Burkesville City Water Department
John Phelps	Judge/Executive	Cumberland County Fiscal Court
John Rowe	Director	Cumberland County EMS
Michael Arms	Firefighter	City of Marrowbone Fire Department
Scott Daniels	Sheriff	Cumberland County Sheriff's Department
Weldon Rowe	Chief	(City of) Burkesville Fire Department
Anne Matney	Chairman	Green County Emergency Planning Committee (LEPC)
Bill Hargan	Chief	(City of) Exie Volunteer Fire Department
Bill Matney	Owner	Bill Matney Rescue Training
Bill Moore	President	Green County Chamber of Commerce
Dale Curry	Pastor	Greensburg United Methodist Church
Danny Bush	Director	Green County Park Board
David R. Milby	Chief	(City of) Summersville Fire Department
Debbie Judd-Nunn	Safe School Coordinator	Green County Schools
Gordon Davis	Chief	(City of) Grab Volunteer Fire Department
Sean Curry	PVA	Green County Property Value Administrator's Office
Keith Jewell	Director	Green County Schools (Transportation)
John Frank	Judge/Executive	Green County Fiscal Court
Lawrence Gupton	Manager	Green County Fire Department
Robbie Beard	Sheriff	Green County Sheriff's Office
Roger Skaggs	Public Works Director	City of Greensburg, Public Works
Ron Jones	Code Enforcement Officer	City of Greensburg, Code Enforcement
Russ Goff	County Attorney	Green County Attorneys' Office
Shelly Pruitt	Director	Green County Public Libraries
Steve Lewis	Magistrate	Green County Fiscal Court
Todd England	Director	Green County EMS

REGIONAL HAZARD MITIGATION COMMITTEE		
NAME	**TITLE**	**AGENCY**
Adam Stearman	Probate Attorney	Green County Attorneys' Office
Bill Hargan	Disaster Services Supervisor	American Red Cross
Eddie Wright	Waste Water Director	City of Greensburg, Sewage and Waste Water Treatment Plant
George C. Cheatham, II	Mayor	City of Greensburg
Greg Whitlow	EMT	Green County EMS
Jamie Casey	City Clerk	City of Greensburg
Sandi Moran	Councilwoman	City of Greensburg
Wayne Hedgespeth	Police Chief	(City of) Greensburg Police Department
Aaron Anderson	Assistant Superintendent	McCreary County Schools
Bruce Lominac	PVA	McCreary County Property Value Administrator's Office
Conley Chaney	County Attorney	McCreary County Attorneys' Office
Doug Stephens	Judge/Executive	McCreary County Fiscal Court
Dustin Baird	Magistrate (District 4)	McCreary County Fiscal Court
Jimmy Barnett	EMS Director	McCreary County EMS (McCreary County Fiscal Court)
Kay Morrow	Director	McCreary County Public Libraries
Melissa Vanover	Park Manager	McCreary County Park Board
Mike Dossett	Director	Kentucky Emergency Management (KYEM)
Mike King	Superintendent	Kentucky Transportation Cabinet (KYTC)
Randy Water	Sheriff	McCreary County Sheriff's Office
Robert Watson	Board of Trustees Member	West McCreary County Volunteer Fire Department
Rudy Young	EM Director	McCreary County EMA
Steve Owens	President	Kentucky Rural Water Association
Tim Cox	Chief	South McCreary County/Pine Knot Fire District
Tim Perry	Chief	North McCreary County Volunteer Fire Department
Tony Miller	Chief	Whitley City Fire Department
William Duncan	Assistant Chief/Paramedic	McCreary County EMS
Eric Henderson	Chief	(City of) Burnside Fire Department
Steve Kelly	Judge/Executive	Pulaski County Fiscal Court
Stuart Spillman	Director of Environmental Health	Lake Cumberland District Health Department
Tiger Robinson	Public Safety Director	Pulaski County Fiscal Court, Public Safety
Arlene Young	Treasurer	Pulaski County Fiscal Court
Tim Eaton	Superintendent	Pulaski County Board of Education
Peggy Dancy	Head Nurse	Pulaski County Health Department
Tiffany Finley	Executive Secretary	Pulaski County Fiscal Court
Dawnetta Smiley	Administrative Assistant	Pulaski County Fiscal Court
Ron Tarter	Consultant (Retired Planning Director; Adjunct Professor)	(Retired from) Lake Cumberland Area Development District; Eastern Kentucky University
Skip Norfleet	Assistant Chief	(City of) Somerset Fire Department
Don Franklin	Area Manager (Area 12)	Kentucky Emergency Management (KYEM)

REGIONAL HAZARD MITIGATION COMMITTEE		
NAME	**TITLE**	**AGENCY**
Ron Jones	Mayor	City of Burnside
Erin Henderson	Chief	(City of) Burnside Fire Department
Bobby Daws	Water Manager	City of Eubank
Rodney Sneed	Policy Chief	(City of) Eubank Police Department
Allen Dobbs	Mayor	City of Ferguson
Bill Dick	Mayor	City of Science Hill
Doug Miller	Community Planner	City of Somerset
Eddie Girdler	Mayor	City of Somerset
Alex Godsey	City Engineer	City of Somerset
Charlie Dick	Utilities Manager	City of Somerset
Dennis Crist	Zoning Coordinator	City of Somerset
Nick Bradley	City Planner	City of Somerset
Martin Shearer	Director	Somerset/Pulaski County Development Foundation
Jack Keeney	Director	Somerset/Pulaski County Chamber of Commerce
Frey Todd	Mayor	City of Eubank
Terry Hancock	EMS Director	Russell County EMS
Carley Fudge	Building Inspector	Pulaski County (Bluegrass Building Inspections)
Clete McAnnich	Sheriff	Russell County Sheriff's Office
David Rowland	Public Safety Coordinator	Lake Cumberland Area Development District (LCADD)
Donna Diaz	Director	Lake Cumberland Area Development District (LCADD)
HM Bottom	EM Director	Russell County EMA
John Stivers	Chairman of the Board	Russell County Airport Board
Jonathan Dye	Health Environmentalist	Russell County Health Department
Kevin Shearer	County Attorney	Russell County Attorneys' Office
Michael Ford	Superintendent	Russell County Schools
Mitchell Morgan	Owner	Morgan Sanitation
Terry Hancock	EMT Director	Russell County EMS
Terry Russell	Public Works Director	Russell County Fiscal Court, Public Works
Tim Popplewell	PVA	Russell County Property Value Administrator's Office
Ruthie Bender	Registered Nurse (RN)	Taylor County Health Department
Ann Beard	Manager Member Services	Taylor County RECC
Ruth Logsdon	Environmental Director	Cox's Interior
Stephen Morris	Telecommunications Coordinator	Campbellsville University
Eddie Rogers	Judge/Executive	Taylor County Fiscal Court
Tony Young	Mayor	City of Campbellsville
Patricia Thompson	Police Chief	(City of) Campbellsville Police Department
David Gault	Facilities Manager	Taylor County Hospital
Kyle Smith	Chief	(City of) Campbellsville Fire Department
George R Wilson	Chief	Taylor County Fire Department
John Gaines	Magistrate	Taylor County Fiscal Court
Melissa Williams	Treasurer	Taylor County Fiscal Court
Gary Magers	EMS Director/Paramedic	Campbellsville Taylor County EMS (CTCEMS)

REGIONAL HAZARD MITIGATION COMMITTEE		
NAME	**TITLE**	**AGENCY**
Anne Sanders	911 Supervisor	Taylor County 911 Addressing (Campbellsville E-911)
Allen Newton	Sheriff	Taylor County Sheriff's Office
Cary Noe	City Clerk	City of Campbellsville
Bonnie Childers	Floodplain Coordinator; E-911 Address Coordinator	Taylor County Fiscal Court
Connie Wooley	Chief	(City of) Campbellsville Fire Department
Kyle Davis	Director of Safety/Security	Campbellsville University
Mike Close	Manager	Atmos Energy
Allen Crabtree	Public Works Director; Code Enforcement Officer	City of Campbellsville, Public Works
Ron McMahan	Executive Director	Campbellsville/Taylor County Economic Development Authority (CTCEDA)
Bill Brewer	Director	Campbellsville/Taylor County, Parks and Recreation
Chad Shively	PVA	Taylor County Property Value Administrator's Office
Cheryl Sullivan	Comptroller	Campbellsville Water and Sewer Company
Chris Tucker	Planning & Zoning Director	City of Campbellsville, Planning & Zoning
Cody Wood	Communications Officer	(City of) Campbellsville Police Department
Craig Lorimore	Sanitation Director	City of Campbellsville, Sanitation
George Wilson	EM Director	Taylor County Office of Emergency Management
Holland Milby	Foreman	(City of) Campbellsville, Road Department
John Miller	City Attorney	City of Campbellsville
Judy Cox	Director	Campbellsville/Taylor County Chamber of Commerce
Kyle Smith	Chief	(City of) Campbellsville Fire Department
Larry Gilpin	Engineering Design Technician	Kentucky Utilities (KU)
Lori Brewster	Manager, Green River Lake	United States Army Corps of Engineers (USACE)
Mike Deaton	Principal	Campbellsville High School
Mike Humphress	Disaster Team Lead	American Red Cross
Mitch Bailey	Deputy Police Chief	(City of) Campbellsville Police Department
Otto Tennant	Vice President of Finance	Campbellsville University
Paul Osborne	City Council Member	City of Campbellsville
Timothy Catron	Sheriff	Wayne County Sheriff's Office
Sherwin Corder	EM Director/EMS Director	Wayne County EMA
Bo Carroll	Road Foreman	Wayne County, Transportation
Donnie Neal	Transportation Director	Wayne County School District
Hank Bassett	Deputy Judge/Executive	Wayne County Fiscal Court
Mike Anderson	Judge/Executive	Wayne County Fiscal Court
Wayne Roberts	Superintendent	Wayne County School District
Dwight Gregory	Superintendent	City of Monticello, Street Department
Jason McGinnis	Safety Coordinator	Monticello Utility Commission
Jeffrey Edwards	Mayor	City of Monticello
Jerry Ferrell	Chief	(City of) Monticello Fire Department
Joe Bybee	Assistant Police Chief	(City of) Monticello Police Department

REGIONAL HAZARD MITIGATION COMMITTEE		
NAME	**TITLE**	**AGENCY**
Marvin Bertram	Assistant Chief	(City of) Monticello Fire Department
Ralph Miniard	Police Chief	(City of) Monticello Police Department

The bulk of the Lake Cumberland Hazard Mitigation Regional Planning Committee (LCHMRPC) consisted of representatives from regional departments and boards, including executive administration, public works, planning, fire, health, etc. Several other critical organizations located within regional boundaries were invited/represented, including Campbellsville University, Lindsey Wilson College, Somerset Community and Technical College, the United States Army Corps of Engineers (Green River Lake, Cumberland Lake, and Dale Hollow Lake), and the TVA Wolf Creek Dam.

It should also be noted that, primarily as a result of its size (a population of 319 according to 2010 Census) a representative from the City of Eubank was not a formal member of the LCHMRPC and did not attend formal plan participation meetings. Rather, Pulaski County represented on behalf of the City of Eubank and Eubank's input was sought individually by the Lake Cumberland Area Development District. The mitigation goals and actions and the risk assessment justifying them for Pulaski County represent the mitigation needs for the City of Eubank at this time. Amendments to this plan document will be made if the City of Eubank's mitigation action needs change.

2.3 Committee Meetings

The LCHMRPC and representatives from LCADD participated in a number of meetings over an 18 month period of time. All meetings were open to the public and advertised via local newspapers and radio. During the meetings information was provided to and input was solicited from the public and committee members. The Draft Plan was also made available on LCADD's website for public review and comment.

As mentioned previously, the planning process commenced with a kickoff meeting held on March 26, 2015 in conjunction with the 2015 Annual Plan Update meeting. An overview of the requirements and community participation were discussed.

The first meeting was held on May 21, 2015 between select members of the region and LCADD staff to establish a preliminary Lake Cumberland Hazard Mitigation Regional Planning Committee (LCHMRPC) and to review the scope of work.

The second meeting was conducted on August 19, 2015 where representatives of LCADD and the LCHMRPC reviewed the project scope of work, identified additional planning committee members, and reviewed past and identified current high hazard areas in the region as discussed in Section 5.0. LCADD provided background information on the planning process and solicited feedback from the LCHMRPC on the plan, particularly concerning high hazard areas, critical infrastructure, and proposed mapping efforts.

The LCHMRPC convened for the third meeting on October 19, 2015, during which members of the committee members were asked to identify existing emergency procedures such as evacuation routes, emergency shelter access, public information dissemination and training or drills. Members also identified existing and proposed Hazard Mitigation Measures, including structural improvement projects.

The fourth LCHMRPC meeting was held on February 23, 2016. The committee members reviewed the location of critical infrastructure to ensure correct, update maps. Critical infrastructure located in a hazard-prone areas was identified. The LCHMRPC then discussed the vulnerability assessment performed for properties located in hazard areas.

The fifth meeting was conducted on March 31, 2016 in conjunction with the regional annual maintenance meeting. The committee reviewed the plan goals and objectives to insure their continued relevance. The committee entertained recommendations to update the risk assessment portion of the plan, but no recommendations were made. Ideas were solicited to encourage greater participation in local plan maintenance meetings. Jurisdictions that experienced federally declared disasters discussed what if any mitigation activities they conducted.

The sixth meeting was held on May 26, 2016 prior to LCADD's bi-monthly board meeting. Items on the agenda included identification of new flood hazard locations, proposed mitigation measures goal statements, and discussion for improvements to the plan maintenance process. LCADD staff announced their intention to hold local meetings in each of the ten counties in the coming weeks to increase the potential for community involvement.

Throughout the months of June and July 2016, LCADD conducted meetings in each of the ten counties in the Lake Cumberland Area. As with all other LCHMRPC meetings, the local meetings were announced via newspaper and radio. These meetings focused on the mitigation measures of the cities and counties in which the meetings were held.

The seventh LCHMRPC meeting was held on March 23, 2017 and consisted a public information and draft review input session. The event was held in conjunction with and before a LCADD Board meeting and was advertised on the LCADD Website and local newspapers and radio. During the meeting, LCADD provided a presentation outlining the work performed to date, including background information on the plan, development of the LCHMRPC, potential natural hazards to the Lake Cumberland Region, and critical infrastructure within the Region, existing and proposed mitigation measures, and a schedule for plan approval. Upon completion of the presentation, the floor was opened for public comment. No comments were received. The Plan was also made available for a period of 14 days following the meeting on the Region's website for public comment.

The draft plan was also forwarded to the Kentucky State Hazard Mitigation Office for preliminary review. Once comments were received and incorporated into the plan, a final public meeting was held on July 27, 2017, prior to approving the final plan for dissemination to Kentucky State Hazard Mitigation Office and FEMA for review. The event was advertised in advance on the LCADD Website and local newspapers and radio. Additionally, a final draft of the plan was made available for download on the LCADD website in advance of the meeting for public review. During the meeting, LCADD went through the new additions to the plan and answered any final comments. Following the completion of both meetings, the plan was made available on the LCADD Website for public comment.

Further documentation of the planning committee meetings is provided in Appendix A.

2.4 Planning Process

In general, the following steps were taken during the planning process.

Step 1. Outline a Lake Cumberland Hazard Mitigation Regional Planning Committee in charge of completing this Plan;
Step 2. Define the potential natural hazards that could affect the Lake Cumberland Area;
Step 3. Determine high hazard locations and critical infrastructure potentially affected;
Step 4. Conduct a vulnerability assessment of buildings and infrastructure;
Step 5. Identify existing hazard mitigation measures in place;
Step 6. Determine gaps in hazard mitigation preparedness;
Step 7. Define proposed hazard mitigation measures to fill these gaps;
Step 8. Evaluate the feasibility of proposed measures and prioritize mitigation measures.

The above steps will allow implementation of proposed mitigation measures with a goal of reducing damage and improving public safety during a natural disaster.

This Regional Multi-Hazard Mitigation Plan is currently undergoing review by State personnel at the Kentucky Emergency Management Agency (KEMA), and Federal personnel at the Federal Emergency Management Agency. Upon review by KEMA and FEMA, and prior to final adoption by the Region, a second public input session will be held to solicit any final feedback from the general public.

2.5 Other Relevant Studies and Documents

During preparation of this Plan, the following plans, studies, reports and technical information that contain relevant mitigation material were reviewed:

- LCADD Kentucky 2001 - June, 1996 version
- LCADD Comprehensive Economic Development Strategies Plan
- LCADD Water Supply/Management Plan
- McCreary County Water Department Shortage Response Plan
- City of Columbia Planning and Zoning Ordinance
- City of Liberty Planning and Zoning Ordinance
- City of Burkesville Planning and Zoning Ordinance
- City of Greensburg Planning and Zoning Ordinance
- City of Ferguson Planning and Zoning Ordinance
- City of Somerset Planning and Zoning Ordinance
- City of Russell Springs Planning and Zoning Ordinance
- City of Campbellsville Planning and Zoning Ordinance
- City/County Road Department Operation Plans – Roadway Flooding (copies located at local departments where available)

Also, LCADD staff researched relevant studies, reports, technical information, and GIS information obtained through local communities and state and federal agencies. Information reviewed included information obtained from universities and national data sources related to natural hazards. These materials are documented throughout the plan. Currently, our communities do not have any existing FMA or CRS plans. None of the jurisdictions in the LCADD region participate in the CRS program. Planning area mitigation activities were reviewed and incorporated into the Plan as appropriate.

Inclusion of existing plans, studies, reports and technical information is documented throughout this Plan.

The completed Lake Cumberland Regional Hazard Mitigation Plan can be accessed online at http://lcadd.org/hazard-mitigation-plan.

3.0 REGIONAL PROFILE

The following sections outline the Regional profile of the Lake Cumberland Region. Topics include:

- ≠ Area history and Region historic properties;
- ≠ Natural features, including geography, climate, and water bodies;
- ≠ Summary of the Region, including land use, zoning, infrastructure and demographics; and
- ≠ Miscellaneous additional institutions vital to the community

Additionally, expected development trends over the coming years are outlined as necessary in each section, particularly concerning land use and population growth.

3.1 History

The central and eastern Kentucky areas were first explored by British-American surveyors Thomas Walker and Christopher Gist in 1750 and 1751. No Indian nations resided in these areas but the dominant Shawnee and Cherokee tribes utilized the region as a hunting ground, returning to homes in the neighboring territories of Ohio and Tennessee. Early descriptions of Kentucky generated considerable excitement about the fertile land and abundant wildlife. The elimination of French influence after the French and Indian War intensified pressures to open the region to American settlement—pressures that were initially thwarted by Britain's Proclamation of 1763, barring such western migration until Native American interests could be protected. This artificial barrier proved impossible to maintain, however, and the first permanent white settlement in Kentucky was finally established at Harrodstown (now Harrodsburg), just north of the Lake Cumberland Region of south central Kentucky.

Kentucky's image soon changed from "western Eden" to "dark and bloody ground," as it became the scene of frequent clashes between Ohio-based Indians and the growing number of white settlements dotting the central Bluegrass Region. Nevertheless, immigrants continued to come westward, down the Ohio River and through the Cumberland Gap. Kentucky became the

principal conduit for migration into the Mississippi Valley. By the late 1780s, settlements were gaining in population, wealth, and maturity, and it was obvious that Kentucky could not long remain under the proprietorship of distant Virginia. Virginia yielded permission for the drafting of a Kentucky state constitution, and in June 1792, Kentucky entered the Union as the 15th state. The Commonwealth prospered and agriculture became the economic mainstay, with tobacco becoming Kentucky's primary cash crop. Kentucky was also a leading producer of the world's hemp supply, used for making rope and fiber products.

The trails of Indians and buffalo became the first roads in Kentucky. Throughout the 19th century, counties called on their citizens to maintain some roads although maintenance was haphazard. The best roads were the toll roads. However Kentucky found itself bounded by the two largest rivers in North America, water transportation has historically played a major role in Kentucky's economy. The LCADD area has two major watersheds that feed the Cumberland River and Green River Basins. These two rivers and their tributaries provided the early economic transportation system for the region. As the steamboat became the state's most profitable mode of transportation, inland towns found themselves becoming economically isolated. Determined to be a part of all that was going on, they quickly took advantage of the potential of the railroad and numerous short lines were constructed as auxiliaries to the traffic troughs of the Ohio and Mississippi rivers.

The region's modern transportation system consists of one state parkway, several minor airports, and one freight rail system. Though no interstate highways run through the LCADD region, I-65 is easily accessible from Louie B. Nunn/Cumberland Parkway in the west and I-75 is accessible via KY 80 to the east.

In the years after the Civil War Kentucky's and the Region's economy continued to rest firmly on a diversified agricultural base. With the advent of World War II, Kentucky began to shift from an agricultural to an industrial and regional tourism economy, but it was not until 1970 that the state had more urban than rural citizens. South Central Kentucky during the 1990s, saw declines in its traditional sectors—tobacco, textiles, and apparel. Massive textile losses in the early nineties have led to a more diversified manufacturing sector with high-tech better paying jobs. The area's many recreational lakes and scenic wonders have paved the way for a rapidly growing service and tourism based economy.

The Lake Cumberland Area Development District's (LCADD) Regional Mitigation Planning Committee (RMPC) provides hazard mitigation planning for ten counties and fourteen cities in South Central Kentucky. Each of the county and city jurisdictions has relatively small populations. Table 3.1(1) lists each county and city population within the LCADD region. [1]

[1] Kentucky and Regional History
http://digitalcommons.wku.edu/educ_ky_hist/2/
http://www.netstate.com/states/geography/ky_geography.htm
http://www.ksdc.louisville.edu/data-downloads/estimates/

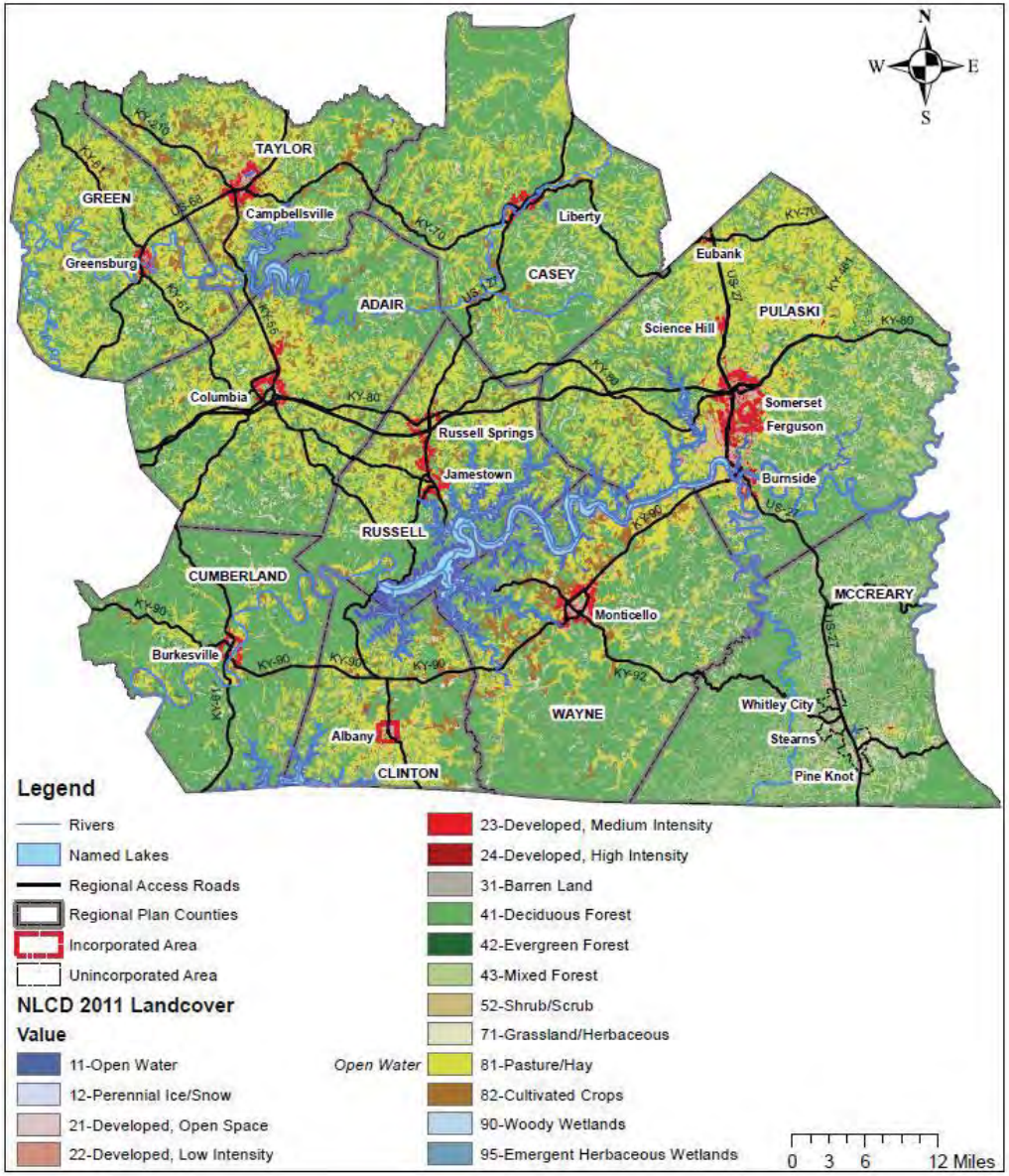
Table 3.1(1)
LCADD Population by County and City (Estimated Populations; *Updated Dec. 2015)*

County / Place	Census 2010	(Population Estimates) 2013	2014	Census 2010-2014 Change Number	Percent
Adair County	18,656	19,135	19,204	548	2.9
Columbia	4,452	4,860	4,880	428	9.6
Balance of Adair County	14,204	14,275	14,324	120	0.8
Casey County	15,955	16,107	15,891	-64	-0.4
Liberty	2,168	2,195	2,173	5	0.2
Balance of Casey County	13,787	13,912	13,718	-69	-0.5
Clinton County	10,272	10,136	10,165	-107	-1.0
Albany	2,033	2,004	2,010	-23	-1.1
Balance of Clinton County	8,239	8,132	8,155	-84	-1.0
Cumberland County	6,856	6,815	6,745	-111	-1.6
Burkesville	1,521	1,527	1,513	-8	-0.5
Balance of Cumberland County	5,335	5,288	5,232	-103	-1.9
Green County	11,258	11,157	11,043	-215	-1.9
Greensburg	2,163	2,149	2,130	-33	-1.5
Balance of Green County	9,095	9,008	8,913	-182	-2.0
McCreary County	18,306	17,941	17,863	-443	-2.4
Pulaski County	63,063	63,688	63,825	762	1.2
Burnside	611	827	829	218	35.7
Eubank (pt.)	283	288	289	6	2.1
Ferguson	924	934	935	11	1.2
Science Hill	693	697	698	5	0.7
Somerset	11,196	11,373	11,422	226	2.0
Balance of Pulaski County	49,356	49,569	49,652	296	0.6
Russell County	17,565	17,698	17,774	209	1.2
Jamestown	1,794	1,811	1,816	22	1.2
Russell Springs	2,441	2,484	2,512	71	2.9
Balance of Russell County	13,330	13,403	13,446	116	0.9
Taylor County	24,512	25,190	25,257	745	3.0
Campbellsville	9,108	11,249	11,282	2,174	23.9
Balance of Taylor County	15,404	13,941	13,975	-1,429	-9.3
Wayne County	20,813	20,659	20,486	-327	-1.6
Monticello	6,188	6,143	6,095	-93	-1.5
Balance of Wayne County	14,625	14,516	14,391	-234	-1.6

Map 3.1(1)
LCADD Region Overview
and
Land Use Map

Data Source: Kentucky's Base Map, U.S. Geological Survey (USGS), LCADD GIS Databases
Online Linkage: http://kygeonet.ky.gov/kybasemap/viewer.htm, http://nationalmap.usgs.gov/
Originator: Water Resource Information System, Kentucky Natural Resources & Environmental Protection Cabinet, USGS's The National Map
Publication Date:2011
Download Date: December 2015

Prepared By:
Lake Cumberland Area Development District



3.2 Geography

The center of the district is located approximately halfway between Cincinnati, Ohio and Chattanooga, Tennessee, or about halfway between Louisville, Kentucky, and Knoxville, Tennessee. The district's easternmost counties include a portion of the Cumberland Plateau in Kentucky, which is a coal-producing area marked by sandstone and shale deposits. Most of the district is located on Kentucky's Mississippian Plateau, or "Pennyroyal" which is dominated by limestone strata and has significant karstic features. Most of Casey County lies in the "Knobs Region" of Kentucky, which contains some heavily eroded Mississippian formations, but is dominated by older formations. The area's physical features are therefore diverse. The LCADD area has two major watersheds that feed the Cumberland River and Green River Basins. The terrain, in the LCADD region, is varied from rugged with steep hills and dense forests to rolling hills. Narrow valleys are formed between the steep slopes, and rock cliffs line sections of many streams and lakes. Within this region there are wide ranges in the area's physical environment including geological and soil conditions, rivers and streams, floodplains, and wetlands, water supply, climate, endangered species, wildlife, vegetation, historic resources, recreational and park facilities. The LCADD region covers a land area of 3,739 square miles. It stretches from the Appalachian Plateau to the Outer Bluegrass with most of its land area on the Mississippian Plateau (or Pennyroyal). Most portions are very sparsely populated and highly rural. The Pennyroyal is largely in farmland where the bedrock is limestone, and most of the Pennyroyal is based on Mississippian age limestone, particularly the St. Louis Limestone or Ste. Genevieve Limestone. In some areas, the limestone is capped with **soft** sandstone. This kind of formation—sandstone over limestone—is featured in the Mammoth Cave area, and has enabled the formation of the world's most extensive cave system. Numerous other caves exist in the Pennyroyal, where some of the most intensely cave-forming limestone of the world **is** to be found. Where the capping sandstone is intact, the land surface is usually forested, rugged hills. Pennyrile soils developed primarily from Mississippian (from about 320 to 360 million years ago) limestone, are excellent for general farming.[2]

3.3 Climate

"South Central Kentucky shares similar climate features as the state of Kentucky as a whole. Kentucky enjoys a temperate climate and generally plentiful rainfall. The climate of Kentucky reflects the interplay of several locational influences. Kentucky's inland location contributes to a continental influences which acting alone tends to produce a large seasonal temperature range between summer and winter. Meanwhile, its position north of the gulf of Mexico contributes a tropical marine influence that moderates temperatures and yields ample precipitation. Kentucky's mid-latitude position places it in a region where weather can be highly variable. While prevailing surface winds are southerly and light, upper level westerly winds steer frontal systems across the state. These systems bring warm, moist air from the south, followed by cooler

[2] Geography of South Central Kentucky
http://www.kyclimate.org/climatography.html#RL
http://www.netstate.com/states/geography/ky_geography.htm
http://www.britannica.com/place/Kentucky#toc78428

and drier air from the north. At a broader scale, Kentucky's climate is influenced by interactions involving the oceans and atmosphere. While these influences originate thousands of miles away, they may contribute to significant variations in Kentucky's climate on a seasonal or annual time frame.
Mean annual temperature ranges from 53 F in the northeast to 59 F in the southwest but there is significant seasonal variation in temperature. Summer days are Typically sunny warm and humid. Most areas of the state receive more than 60 percent of available sunshine during summer. the average daily high temperature for July increases from about 86 F in the east to 90 F in the west. High temperatures exceed 90 F an average of 20 days per year in the north and east and 40 or more days in the south and west. Temperatures occasionally exceed 100 F. The passage of frontal systems is less frequent during summer, so weather patterns are typically more persistent. But when they do arrive, cold fronts bring pleasant conditions that may persist for a few days. Winters are rarely harsh. In January average daily high temperatures increase from 338 F in the north to 44 F in the south. Cloudy skies are more frequent in winter, as most areas receive nearly 40 percent of available sunshine. Polar air masses occasionally affect Kentucky for short periods. Temperatures dip below 0 F an average of about fie days in the north and two days in the south. Spring and fall are generally pleasant seasons, though temperatures can change dramatically with the passage of frontal systems. The diurnal temperature range is about 20 F during the summer and winter but increases to near 25 F during the spring and fall, when warm days and cool nights are prevalent.

Kentucky’s growing season varies across the state. The average date of the last spring freeze ranges from early April in the southwest to early May in the northeast. Meanwhile, the average date of the first fall freeze extends from early October in the northeast to late October in the southwest. The average length of the frost-free period varies from about 165 days in the northeast to 200 days in the southwest, but the average can vary with local topography.

Precipitation is generally plentiful to meet agricultural needs and the needs of municipalities that serve industrial, commercial, and residential users. Average annual precipitation ranges from 42 inches in the north to 52 inches in the south. Much of the range is due to a strong precipitation gradient during the winter season. Summer precipitation patterns are less pronounced.

Fall is normally Kentucky's dry season, while the spring season is typically the wettest. But precipitation is well distributed through the year. Thunderstorms are responsible for much of the rainfall during summer, and they often bring intense rainfall that may be highly localized. Rainfall intensities generally increase towards the southwest. Rates exceeding one inch per hour are not unusual and 24-hour totals of five inches or more occur an average of about one in ten years at a given location. Meanwhile it is common for a location to go for a period of two weeks or more without measurable precipitation in the summer or fall. Snowfall is most likely from December to March, but it occasionally occurs as early as October or as late as April. Seasonal amounts average from nearly 10 inches in the south to more than 20 inches in the north. Amounts are highly variable from year to year. In some years, a single heavy snowfall event may represent a large percentage of the seasonal total. Across southern Kentucky, seasonal totals of less than five inches are fairly common, while totals of more than 20 inches are infrequent. Northern Kentucky areas rarely receive less than 10 inches of snow and occasionally receive as

much as 40 inches or more. Snow cover seldom persists for more than a week in the south or more than two weeks in the north."[3]

3.4 Watersheds

The Lake Cumberland Area Development District covers ten counties in eight watersheds. The two main watersheds are the Upper Green River and Upper Cumberland-Lake Cumberland. The five remaining watersheds are the South Fork Cumberland, Rollin Fork, Lower Kentucky, Rockcastle, Upper Cumberland, and Obey. While Green River Lake, Lake Cumberland, and Dale Hollow Lake prevent extensive flooding in the Region, flash flooding still remains a flood hazard for all counties.

Throughout history, humans have depended upon these watersheds for early transportation, drinking water, recreation, hydro-power and much more. The people of South Central Kentucky continue to rely on these great resources today and should take every measure to protect and restore their ability to safely do so for future generations.[4]

3.5 Land Use and Zoning

As mentioned previously, the region covers a land area of 3,739 square miles. The area has limited zoning restrictions and some areas without local building permit requirements.

Table 3.5(1) Planning and Zoning Statutes by Planning Commissions in the LCADD

Planning Commission	Commission Type: l. Independent Planning Unit 2. Joint Planning Unit 3. Area Planning Unit
Burnside Planning Commission	1
Campbellsville Planning Commission	1
City of Burkesville Planning Commission	1
City of Columbia Planning Commission	2
Ferguson Planning Commission	1
Greensburg/Green County Planning Commission	2
Liberty Planning Commission	1
Russell Springs Planning Commission	1
Somerset Planning Commission	1

[5]

[3] Kentucky Climate
http://www.kyclimate.org/climatography.html#C

[4] Watersheds
http://water.ky.gov/watershed/Pages/UpperCumberlandRiverBasin.aspx
http://water.ky.gov/watershed/Pages/GreenandTradewaterRiversBasin.aspx

[5] Kentucky Legislative Research Commission, http://www.lrc.ky.gov/lrcpubs/ib156.pdf

Up until the early 1990's, the land use and industrial base of the Lake Cumberland region was very limited in its diversity. Textile production was king, with agriculture, tourism, lumber, and natural resource extraction having a major land use and employment role. With the passing of the North American Free Trade Agreement (NAFTA), the Lake Cumberland ADD experienced a mass exodus of textile jobs, and a heavily weakened industrial sector. While initially devastating to the region, this job loss helped to pave the way for a stronger, more diverse economy with many more skilled, higher paying jobs.

Although agriculture usage remains a high percentage of land use in the Lake Cumberland region, Table 3.5(2) indicates the trends in Kentucky and this Region toward the decrease in agriculture land usage to other forms of development. Small farm operations still remain a large part of the LCADD communities as the average age of the farm family increases. Most development of residential properties has been in subdivisions on the edge of established communities and along major roadway corridors. The area has limited zoning restrictions and some areas without local building permit requirements. Little data is available on development trends for the region. Population and employment records are the best available data on overall development trends.

Table 3.5(2) - State Fact Sheets: Kentucky

	2002	2007	2012
Farms (number)	86,541	85,260	77,064
Approximate total land area (acres)	25,426,029	25,275,577	25,271,542
Farmland (acres)	13,843,706	13,993,121	13,049,347
Farmland in total land area (percent)	54.4	55.4	51.6
Cropland (acres)	8,412,354	7,278,098	6,336,247
Woodland (acres)	3,111,626	3,107,137	2,745,655
Pastureland (acres)	1,613,681	2,912,424	3,223,610
Pastureland in farmland (percent)	11.7	20.8	24.7
Land in house lots, ponds, roads, wasteland, etc. (acres)	706,045	695,462	743,835

Tourism has become one of the most successful cluster economies in the Lake Cumberland region. Tourism, to some extent, affects all of the counties in the Lake Cumberland ADD. The largest beneficiaries of tourism tend to be the counties surrounding Lake Cumberland, Green River Lake, and Dale Hollow. These include Pulaski, Russell, Wayne, Clinton, Cumberland, Adair and Taylor. Of these, Pulaski County reaps the largest revenue, at over $111 million per year as of 2010. Russell and Taylor both come in with over $40 million annually. Vacationers and recreational enthusiasts come from all over the state, as well as Ohio, Indiana, and other states to take advantage of the region's many lake-based facilities. While not benefiting from lake access, the other counties in the region have strived to develop their own tourism niche. McCreary County is blessed to have the Big South Fork Recreational Area, the Daniel Boone National Forest, and Cumberland Falls within its boundaries. Scenic wonders abound

throughout the county, including Natural Arch, Blue Herron, and Yahoo Falls. Because of this, 2010 tourism expenditures in the county totaled over $6.5 million. Casey County has historically had little of interest to draw tourists into the county. The Amish and Mennonite communities, as well at the annual Apple Festival, do bring in a few tourists, but only generated three million in the year 2000. To improve its tourism potential, Casey County has recently developed the Casey County Ag/Expo Center. Since its creation, tourism figures have slowly increased. Like Casey County, Green does not have a great deal to offer to the vacationing tourist wanting to spend a week away from home. While the county does have the Green River, an enormous amount of genealogical material, and the oldest Courthouse west of the Alleghenies, these attractions tend to be day, or overnight trips at best. Green County has a great need to further exploit the resources it has available in order to cash in on the region's booming tourism market. Most of the remaining counties have begun adventure tourism and Trail Town development in their communities to utilize available natural resources for tourism.[6]

3.6 Demographics

Population

The Lake Cumberland ADD's population trends over the last 70 years. As can be seen below, shows Pulaski is by far the largest county, holding roughly 30% of the region's population. Conversely, Cumberland County remains the smallest, with just over 3% of the LCADD population. In the case of all counties except Cumberland and Green, 2010 populations have increased over 2000 levels. Cumberland and Green Counties both experienced slight decreases.

One interesting aspect concerning county population levels is the way they have changed over the decades. In most of the counties, populations were fairly high during the 1940's. From there, levels begin to decreases rapidly up until the 1970's and 1980's, where the trend reversed. The most likely cause of this phenomenon relates to industrialization. In the 1940's, 50's, and 60's, there was little industrialization within the Lake Cumberland region. Persons looking for employment tended to look outside the area, and more frequently, outside the state for a job. With the 1970's and 80's came industry and jobs to the area. This led to a lower out migration rate, and a growing in-migration rate.

The median age of persons living in the Lake Cumberland region has increased significantly over the past two decades. As seen in Table 3.2, the LCADD median age rose from 35.0 in 1990, to 41.1 in 2010. In every county, the median age has increased by at least four years or more. These numbers can be partially attributed to the increase in the human life span, and a decrease in child birth. Another factor in these numbers is the increasing number of retirees moving away from the cities, and into the more rural areas. Both the areas around the region's lakes and the more remote farmlands are becoming increasingly popular as retirement centers.

[6] Lake Cumberland ADD Comprehensive Economic Development Strategy 2013 and 2016 Update, http://lcadd.org/comprehensive-economic-development-strategy

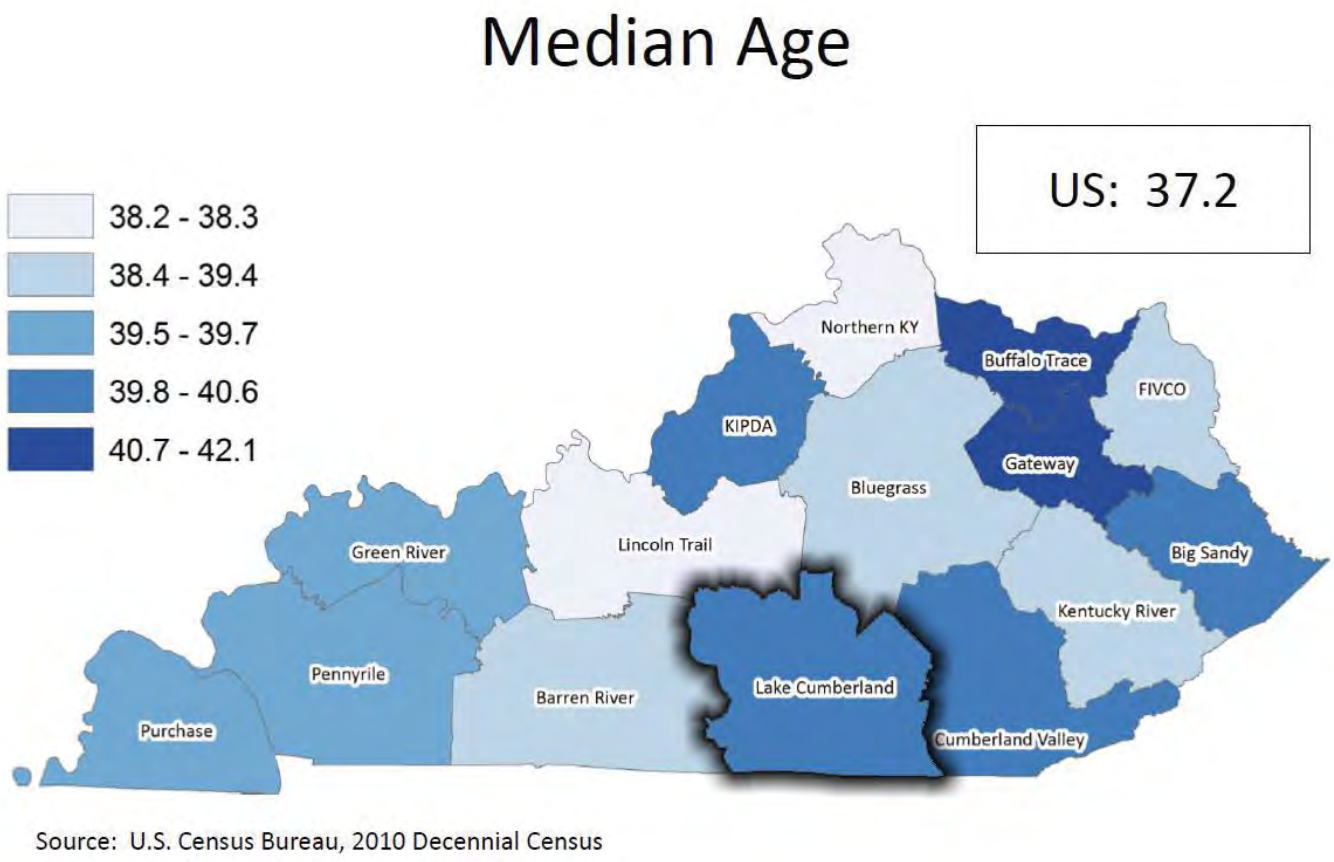
Table 3.6(1) - LCADD Historical Population Trends, By County

County	1940	1950	1960	1970	1980	1990	2000	2010
Adair	18,566	17,603	14,699	13,037	15,233	15,360	17,244	18,656
Casey	19,962	17,746	14,327	12,930	14,818	14,211	15,447	15,955
Clinton	10,279	10,605	8,886	8,174	9,321	9,135	9,634	10,272
Cumberland	11,923	9,309	7,835	6,850	7,289	6,784	7,147	6,856
Green	12,321	11,261	11,249	10,350	11,043	10,371	11,518	11,258
McCreary	16,451	16,660	12,463	12,548	15,634	15,603	17,080	18,306
Pulaski	39,863	38,452	34,403	35,234	45,803	49,489	56,217	63,063
Russell	13,165	13,717	11,076	10,542	13,708	14,716	16,315	17,565
Taylor	13,556	14,403	16,285	17,138	21,178	21,146	22,927	24,512
Wayne	17,204	16,475	14,700	14,268	17,022	17,468	19,923	20,813
LCADD	**173,290**	**166,231**	**145,923**	**141,071**	**171,049**	**174,283**	**193,452**	**207,256**

Table 3.6(2) - LCADD Median Age Characteristics, By County

County	Population	Median Age	Population	Median Age	Population	Median Age
	1990	1990	2000	2000	2010	2010
Adair	15,360	34.9	17,244	36.9	18,656	39.0
Casey	14,211	35.1	15,447	37.8	15,955	40.6
Clinton	9,135	35.5	9,634	39.0	10,272	41.6
Cumberland	6,784	37.1	7,147	40.1	6,856	43.8
Green	10,371	37.4	11,518	40.0	11,258	42.6
McCreary	15,603	30.8	17,080	34.2	18,306	37.9
Pulaski	49,489	35.2	56,217	38.5	63,063	41.1
Russell	14,716	36.1	16,315	39.9	17,565	42.2
Taylor	21,146	34.6	22,927	38.1	24,512	39.4
Wayne	17,468	33.9	19,923	36.6	20,813	41.1
LCADD	174,283	35	193,452	38.1	207,256	40.7

Map 3.6(1)



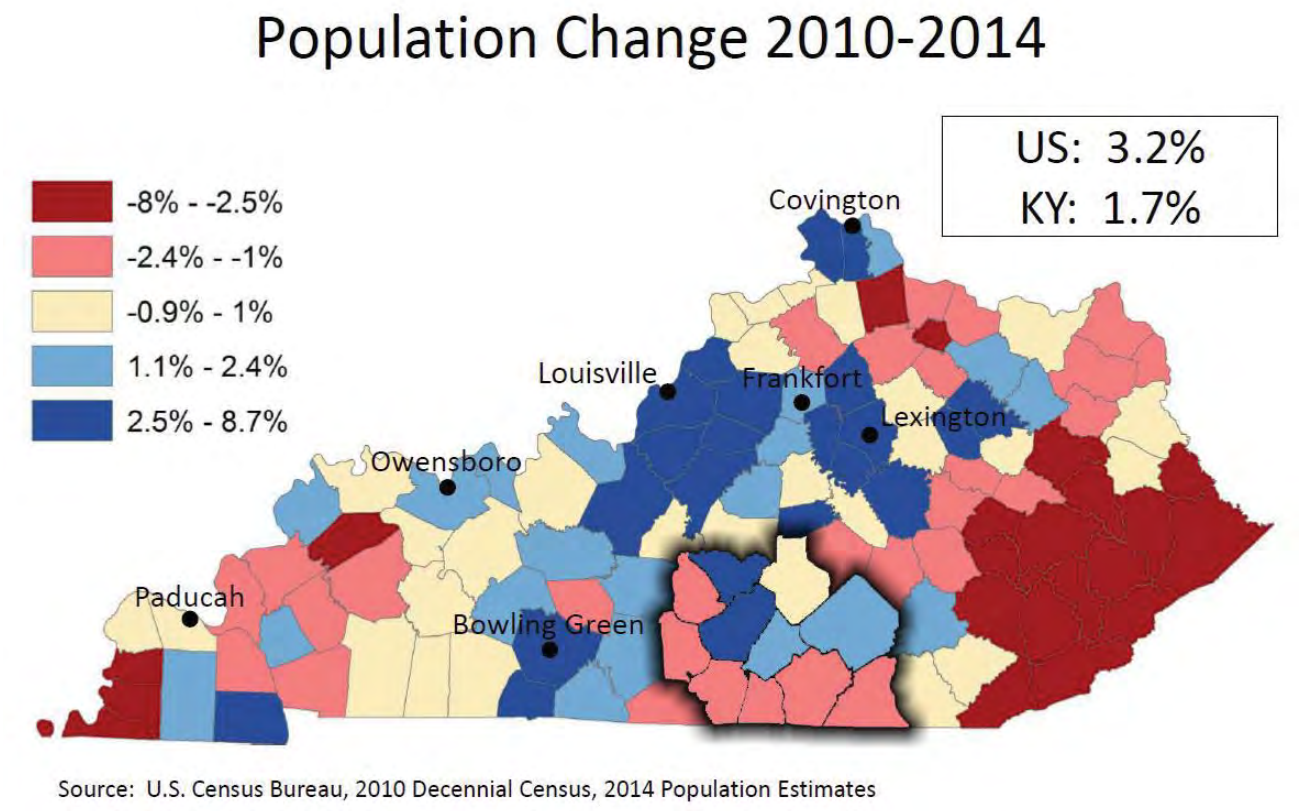
The aging of the population does pose some future problems for the area. With more and more seniors in the area, greater levels of service are needed in the health care and the senior care services sectors. Secondly, while seniors are working longer, and living fuller lives than ever before, an older population tends to lead to a smaller tax base for local communities. This could lead to a larger strain on government services that may be already operating on shoe-string budgets. [8]

In the last few decades, population migration within Kentucky has followed the national trend toward suburbanization. Although Kentucky has a more rural population (24%), than the U.S. as a whole (6.3%), this population is declining. The majority of population growth in the state is occurring in the metro areas.

[7] The Kentucky State Data Center (KSDC)
http://www.ksdc.louisville.edu/

[8] Lake Cumberland ADD Comprehensive Economic Development Strategy 2013 and 2016 Update,
http://lcadd.org/comprehensive-economic-development-strategy

Map 3.6(2)



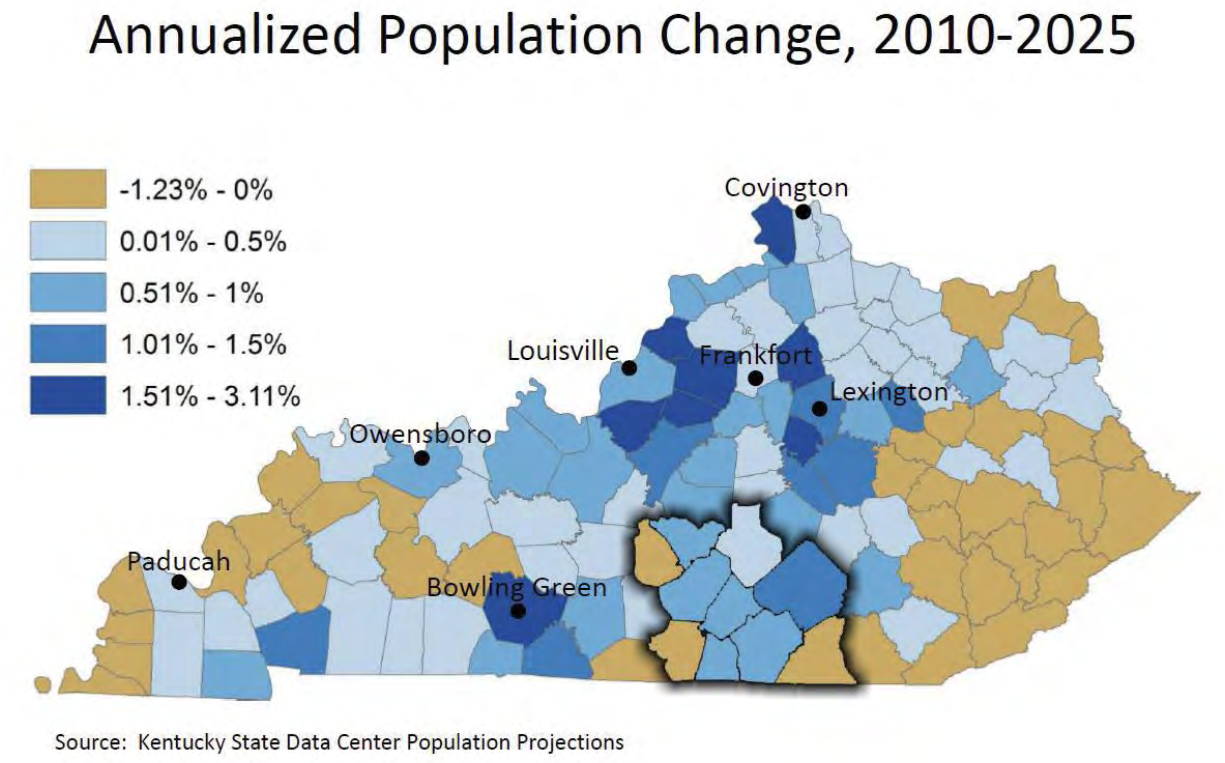
County population change includes two major components: natural change and net migration.

Since 2010, the increase in rural population from natural change (230,000 more births than deaths) has not matched the loss from net migration (346,000 more people moved out of rural counties than moved in). Nearly 300 rural counties lost population due to natural change during 2010-14. Such natural decrease results from two separate demographic processes operating over several decades: retiree attraction, which leads to a more elderly population with more deaths and fewer births; and outmigration of young adults of childbearing age who would otherwise contribute to more births.[10] These trends are projected to continue in the years 2010-2025:

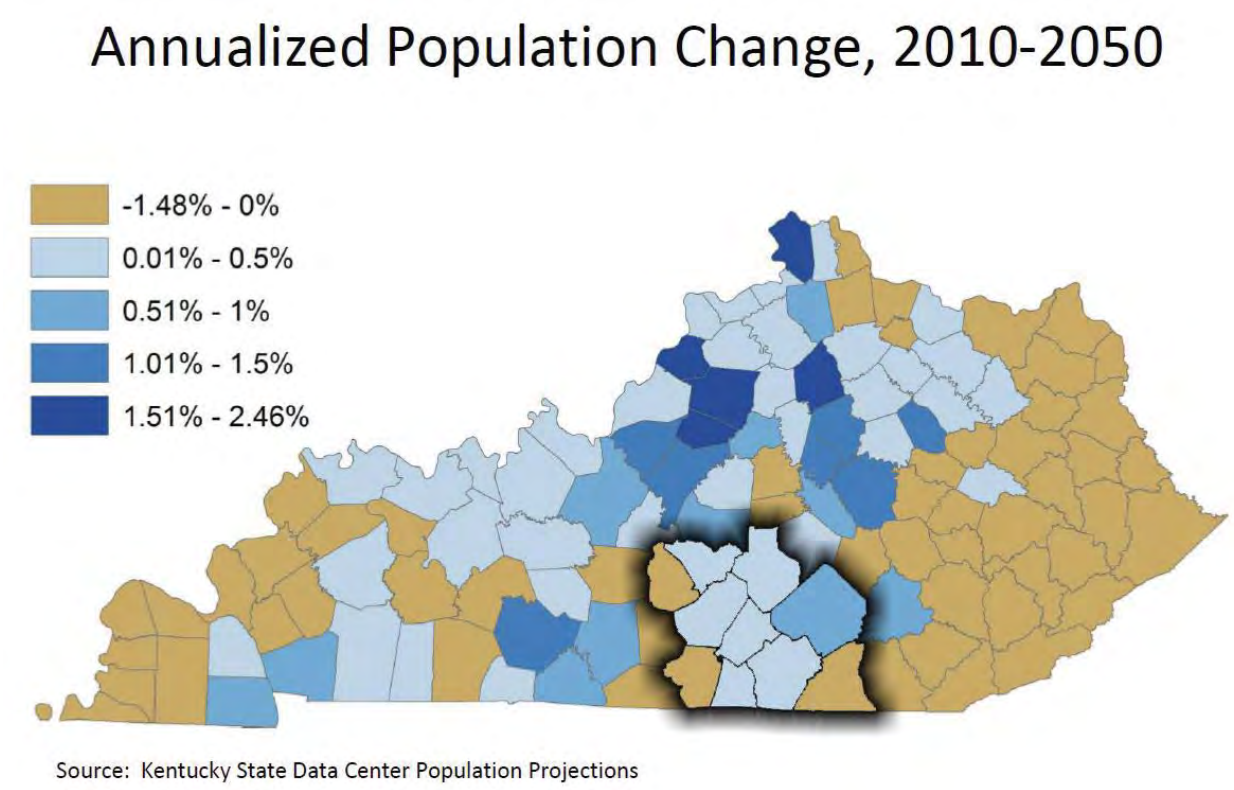
[9] University of Louisville Kentucky State Data Center, Kentucky Demographics: Present and Future http://www.ksdc.louisville.edu/wp-content/uploads/2015/08/kysu.pdf

[10] U.S. Department of Agriculture; Economic Research Service; Rural America at a Glance, 2015 Edition http://passthrough.fw-notify.net/download/238870/http://www.ers.usda.gov/media/1952235/eib145.pdf

Map 3.6(3)


Annualized Population Change, 2010-2025
-1.23% - 0%
0.01% - 0.5%
0.51% - 1%
1.01% - 1.5%
1.51% - 3.11%
Covington
Louisville
Frankfort
Lexington
Owensboro
Paducah
Bowling Green
Source: Kentucky State Data Center Population Projections
KSDC
UNIVERSITY OF LOUISVILLE.

Map 3.6(4)



11

Employment

Rural employment has started to recover from its recessionary low during 2007-2014. Employment grew more than one percent (1%) in rural areas during the year that ended in the second quarter of 2015. This is a marked improvement from previous years of very slow growth or decline. Nonetheless, rural employment in mid-2015 was still 3.2 percent below its pre-recession peak in 2007. In contrast, urban employment rose nearly 2 percent in the past year, continuing a trend of consistent growth since 2011, and is now well above its pre-recession peak. In both urban and rural areas, employment growth is running slightly ahead of population growth.

The unemployment rate has fallen considerably and fairly consistently in both rural and urban areas over the last 5 years. Unemployment rates fell by a full percentage point or more in each of the last 2 calendar years in both rural and urban areas. The parallel declines in rural and urban unemployment rates reflect the fact that in rural areas population and labor force growth is near

[11] University of Louisville Kentucky State Data Center, Kentucky Demographics: Present and Future http://www.ksdc.louisville.edu/wp-content/uploads/2015/08/kysu.pdf

zero, while employment is growing slowly, whereas in urban areas, population and labor force growth are positive, and employment growth is higher.

While urban employment levels have now recovered from the 2007-09 recession, the share of adults who are working remains 3 percentage points below its level prior to the recession in both rural and urban areas. Part of the decline in this ratio since 2007 reflects the aging of the population, with a larger proportion of adults advancing into ages where most are retired. But retirement does not fully explain the persistence of low employment rates: the share of the prime working-age adult population (25-54) that is employed also dropped, from 80 percent in the first quarter of 2007 to 75 percent in the first quarter of 2010, before recovering to 77 percent in September 2015. [12]

Table 3.6(3)
LCADD Unemployment Data 2006 - 2015

COUNTY	2006 Percent Unemployed	2007 Percent Unemployed	2008 Percent Unemploye	2009 Percent Unemploye	2010 Percent Unemployed
Adair	5.5	5.3	6.2	11.2	11.9
Casey	7.0	5.4	6.3	10.9	11.1
Clinton	5.4	4.6	5.1	9.4	10.4
Cumberland	7.4	6.5	6.0	12.7	11.0
Green	5.6	6.3	6.8	12.3	12.0
McCreary	10.3	9.0	9.1	14.5	14.1
Pulaski	6.5	5.7	6.3	10.4	9.9
Russell	6.3	5.8	6.3	11.8	12.8
Taylor	4.9	5.2	5.7	11.3	12.1
Wayne	6.1	5.9	7.3	14.2	13.2
LCADD	6.3	5.8	6.4	11.5	11.5
Kentucky	5.6	5.2	5.9	10.6	10.0

[12] U.S. Department of Agriculture; Economic Research Service; Rural America at a Glance, 2015 Edition
http://passthrough.fw-notify.net/download/238870/http://www.ers.usda.gov/media/1952235/eib145.pdf

LCADD Unemployment Data 2006 – 2015 (continued)

COUNTY	2011 Percent Unemploye	May 2012 Percent Unemployed	May 2013 Percent Unemployed	May 2014 Percent Unemployed	May 2015 Percent Unemployed
Adair	11.8	8.8	9.0	8.0	6.8
Casey	10.0	7.9	8.1	6.9	6.0
Clinton	10.9	10.0	10.3	9.3	7.0
Cumberland	11.0	10.0	10.6	7.7	5.6
Green	9.7	8.0	8.2	6.7	5.3
McCreary	15.2	12.1	12.8	10.9	8.0
Pulaski	10.2	9.1	9.0	7.5	6.0
Russell	10.9	9.5	10.4	9.0	9.7
Taylor	10.7	9.3	9.2	7.6	6.0
Wayne	13.9	12.7	11.7	10.6	7.7
LCADD	11.1	9.6	9.6	8.1	6.6
Kentucky	9.4	8.0	8.1	6.7	5.3

[13]

Poverty

In 2014, the U.S. poverty rate was an estimated 15.5 percent, based on the official poverty measure and the American Community Survey (ACS). The rural poverty rate in 2014 was an estimated 18.1 percent, while the urban rate was 15.1 percent, both slightly below the previous year. Since the early 1980s, poverty rates in rural America have ranged from 13.4 to 18.4 percent, while the urban rate has ranged from 10.8 to 15.5 percent.3 In rural areas, poverty rates peaked following the recessions of 1980-82 and 2007-09. Recovery from the latter recession has been modest for rural areas overall and stagnant for most rural groups.[14]

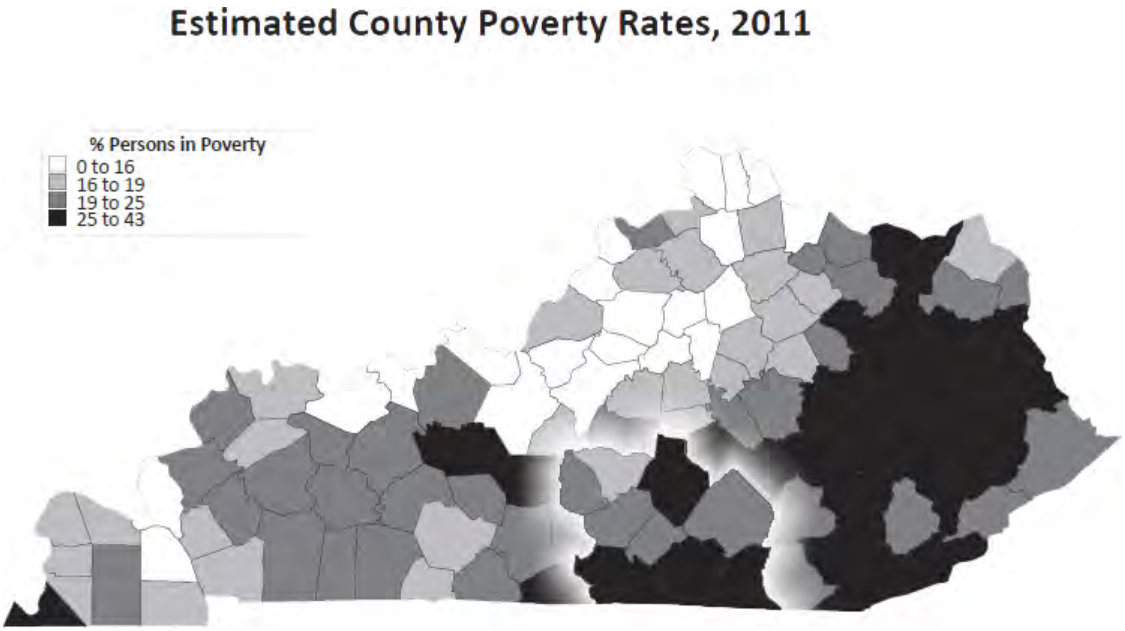
For 2013, the federal poverty threshold is $23,624 for a family of four with two children. Children living in families with incomes below the federal poverty threshold are referred to as poor. But research suggests that, on average, families need an income of about twice the federal poverty threshold to meet their basic needs. The United States measures poverty by an outdated standard developed in the 1960s.

Kentucky's persistently poor counties are concentrated in Eastern Kentucky, but high poverty is found across the state. Poverty rates in Bell, Clay, Mar n, and Owsley Counties are hovering around 40 percent the highest in the state while Boone, Oldham, and Spencer Counties have rates in the single digits. There can be, of course, concentrated pockets of poverty within counties with relatively low rates. At nearly 25 percent, the "mostly rural" counties generally have higher poverty rates than "slightly rural" (20%) and metro counties (15.5%).

[13] Labor Market Statistics, Local Area Unemployment Statistics Program https://kylmi.ky.gov/vosnet/dashboards/defaultana.aspx?menuid=MENU_START_PAGE_DASHBOARD_ANA

[14] [14] U.S. Department of Agriculture; Economic Research Service; Rural America at a Glance, 2015 Edition http://passthrough.fw-notify.net/download/238870/http://www.ers.usda.gov/media/1952235/eib145.pdf

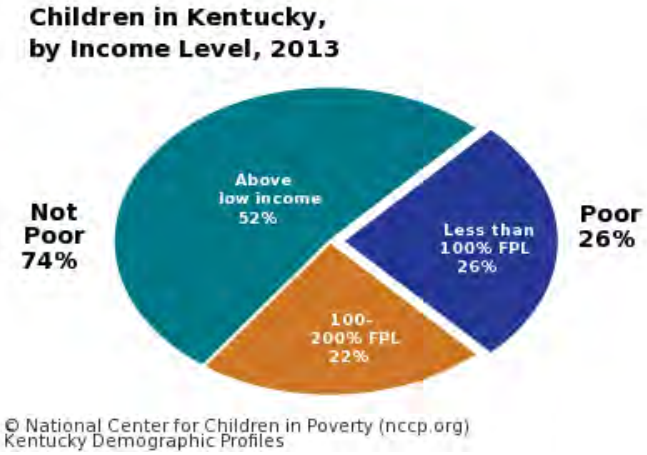
Map 3.6(4)



Child poverty and all that it bodes for the future, continues to be disturbing and vexing problems for Kentucky. Here we illustrate child poverty rates for Kentucky, the competitor states, and the U.S. The rates shown are for children who live in households with incomes below 100 percent of the federal poverty level. Kentucky's poverty rate in 2012 was 26.5 percent, a significant increase over the last decade it was 20 percent in 2000. While Kentucky ranks the fifth highest among the competitor states, there is not a statistically significant difference between Kentucky and several other states, such as West Virginia, Tennessee, North Carolina, South Carolina, Georgia. Kentucky's child poverty rate is significantly higher than the U.S. rate of 22.6 percent. At 34.7 percent, Mississippi has the highest child poverty rate in the nation.[15]

Table 3.6(4)

[15] Kentucky Annual Economic Report; Center for Business and Economic Research Gatton College of Business and Economics
University of Kentucky, http://cber.uky.edu/Downloads/CBER_2014_AnnualReport.pdf



3.7 Government

The following charts summarize the governmental structure for each jurisdiction in the Lake Cumberland Region. Each jurisdiction will be responsible for implementation of the Mitigation Strategies for their service area. Committee members reviewed the governmental structure of each jurisdiction to determine their capabilities to implement and enforce existing and future authorities, policies, programs, and resources.

The following chart summarizes the governmental structure of the county governments.

County Governments of the Lake Cumberland Area

County	Type of Government
Adair	Judge/Executive and 7 magistrates
Casey	Judge/Executive and 4 magistrates
Clinton	Judge/Executive and 6 magistrates
Cumberland	Judge/Executive and 4 magistrates
Green	Judge/Executive and 5 magistrates
McCreary	Judge/Executive and 4 magistrates
Pulaski	Judge/Executive and 5 magistrates
Russell	Judge/Executive and 5 magistrates
Taylor	Judge/Executive and 6 magistrates
Wayne	Judge/Executive and 4 magistrates

The following chart summarizes the governmental structure and class of each city jurisdiction.

Incorporated Cities of the Lake Cumberland Area			
City	Class	County	Type of Government
Columbia	Home Rule	Adair	Mayor, 6 Council Members
Liberty	Home Rule	Casey	Mayor, 6 Council Members
Albany	Home Rule	Clinton	Mayor, 6 Council Members
Burkesville	Home Rule	Cumberland	Mayor, 6 Council Members
Greensburg	Home Rule	Green	Mayor, 6 Council Members
Burnside	Home Rule	Pulaski	Mayor, 6 Council Members
Eubank	Home Rule	Pulaski	Mayor, 4 Council Members
Ferguson	Home Rule	Pulaski	Mayor, 5 Council Members
Science Hill	Home Rule	Pulaski	Mayor, 4 Council Members
Somerset	Home Rule	Pulaski	Mayor, 12 Council Membe
Jamestown	Home Rule	Russell	Mayor, 6 Council Members
Russell Springs	Home Rule	Russell	Mayor, 6 Council Member
Campbellsville	Home Rule	Taylor	Mayor, 6 Council Members
Monticello	Home Rule	Wayne	Mayor, 6 Council Members

Legal Authority of Local Jurisdictions

Local governments in Kentucky have a wide range of tools available to them for implementing mitigation programs, policies and actions. A hazard mitigation program can utilize any or all of the four broad types of government powers granted by the State of Kentucky, which are (a) Regulation, (b) Acquisition; (c) Taxation; and (d) Spending.

A. <u>Regulation</u>

GENERAL POLICE POWER

Local governments have been granted broad regulatory powers in their jurisdictions. Kentucky Revised Statutes bestow the general police power on local governments, allowing them to enact and enforce ordinances that define, prohibit, regulate or abate acts, omissions, or conditions detrimental to the health, safety, and welfare of the people, and to define and abate nuisances (including public health nuisances).

Since hazard mitigation can be included under the police power (as protection of public health, safety and welfare), towns, cities and counties may include requirements for hazard mitigation in local ordinances. Local governments may also use their ordinance-making power to abate "nuisances," which could include, by local

definition, any activity or condition that threatens the general health and safety of the public.

All jurisdictions in the planning area have enacted and enforce regulatory ordinances designed to promote the public health, safety and general welfare of its citizenry.

BUILDING CODES AND BUILDING INSPECTION

Many structural mitigation measures involve constructing and retrofitting homes, businesses and other structures according to standards designed to make the buildings more resilient to the impacts of natural hazards. Many of these standards are imposed through the use of building codes.

The following chart shows the jurisdictions under contract with the Lake Cumberland Housing Agency for building inspections. These inspections are for commercial new construction, renovations or change of use.

Adair County City of Columbia
Casey County City of Liberty
Clinton County City of Albany
Cumberland County City of Burkesville
Green County City of Greensburg
McCreary County
Pulaski County City of Science Hill
Russell County City of Jamestown City of Russell Springs
Taylor County Wayne County

The City of Somerset employs a building inspector for inspections on new commercial and residential construction.

Jurisdictions have the opportunity and the power to develop and enforce building codes.

LAND USE

Regulatory powers granted by the state to local governments are the most basic manner in which a local government can control the use of land within its jurisdiction. Through various land use regulatory powers, a local government can control the amount, timing, density, quality, and location of new development. All these characteristics of growth can determine the level of vulnerability of the community in the event of a natural hazard. Land use regulatory powers include the power to engage in planning, enact and enforce zoning ordinances, floodplain ordinances, and subdivision controls.

Planning

Local jurisdictions have the authority to perform a number of duties related to planning, including: make studies of the area; determine objectives; prepare and adopt plans for achieving those objectives; develop and recommend policies, ordinances, and administrative means to implement plans.

Zoning

Zoning is the traditional and most common tool available to local governments to control the use of land. The statutory purpose for the grant of power is to promote health, safety, morals, or the general welfare of the community. Land "uses" controlled by zoning include the type of use (e.g., residential, commercial, industrial) as well as minimum specifications for use such as lot size, building height and set backs, density of population, etc.

Subdivision Regulations

Subdivision regulations control the division of land into parcels for the purpose of building development or sale. Flood-related subdivision controls typically require installation of adequate drainage facilities and design water and sewer systems to minimize flood damage and contamination. They prohibit the subdivision of land subject to flooding unless flood hazards are overcome through filling or other measures, and they prohibit filling of floodway areas. Subdivision regulations require that subdivision plans be approved prior to the division/sale of land. Subdivision regulations are a more limited tool than zoning and only indirectly affect the type of use made of land or minimum specifications for structures.

Floodplain Ordinance

The purpose of the local floodplain ordinance is to (1) minimize the extent of floods by preventing obstructions that inhibit water flow and increase flood height and damage; (2) prevent and minimize loss of life, injuries, property damage and other losses in flood hazard areas; and (3) promote the public health, safety and welfare of citizens of the jurisdiction in flood hazard areas. The ordinance also makes certain

that they meet the minimum requirements of participation in the National Flood Insurance Program (NFIP).

The incentive for local governments adopting such ordinances is that they will afford their residents the ability to purchase flood insurance through the NFIP and be eligible for state Hazard Mitigation funding.

B. Acquisition

The power of acquisition can be a useful tool for pursuing local mitigation goals. Local governments may find the most effective method for completely "hazard proofing" a particular piece of property or area is to acquire the property (either in fee or a lesser interest, such as an easement), thus removing the property from the private market and eliminating or reducing the possibility of inappropriate development occurring. The state of Kentucky legislation empowers cities, towns, and counties to acquire property for public purpose.

C. Taxation

The power to levy taxes and special assessments is an important tool delegated to local governments by the State of Kentucky. The power of taxation extends beyond merely the collection of revenue, and can have a profound impact on the pattern of development in the community.

D. Spending

The fourth major power that has been delegated from the Kentucky General Assembly to local governments is the power to make expenditures in the public interest. Hazard mitigation principles can be made a routine part of all spending decisions made by the local government, including the adoption in annual budgets.

POLITICAL WILLPOWER

Most residents of the jurisdictions have a general knowledge about the potential hazards that their community faces. However, residents have had very little education concerning actions that increase or decrease the community's vulnerability to certain hazards. Education concerning mitigation strategies and potential losses will be a key factor for all jurisdictions in the planning area.

In the past ten years, flooding is the only hazard that has had a serious effect on the LCADD region. Because of this there is little or no support for advancing future hazard mitigation strategies. All jurisdictions in the LCADD region have participated in the hazard mitigation planning process, but there is little interest in the NFIP program and building and zoning code enforcement.

A. Existing Professional Staff Departments

Committee members also reviewed the existing capabilities of the governmental agencies based upon the existing Professional Staff Departments that are currently available to each jurisdiction. The following chart provides a summary of the existing professional staff for each jurisdiction. In the areas of gray on the chart, these areas are provided to the cities through the county department.

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
October 2016
Table 3.7(1) - CAPABILITIES ASSESSMENT - EXISTING PROFESSIONAL STAFF DEPARTMENTS

CAPABILITIES ASSESSMENT - EXISTING PROFESSIONAL STAFF DEPARTMENTS													
JURSIDICTION	**BOARD OF ECUCATION (countywide)**	**BUILDING INSPECTIONS**	**CLERK OF COURTS**	**EMERGENCY MANAGEMENT**	**COUNTY/CITY TREASURER**	**MAYOR/COUNTY JUDGE EXECUTIVE**	**HEALTH DEPT**	**ROAD DEPT**	**SHERIFF DEPT**	**CITY POLICE DEPT**	**PVA**	**SOCIAL SERVICES**	**UTILITIES DEPT**
Adair County	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
City of Columbia		YES			YES	YES		YES	NO	YES			YES
Casey County	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
City of Liberty		YES			YES	YES		YES	NO	YES			YES
Clinton County	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
City of Albany		YES			YES	YES		YES	NO	YES			YES
Cumberland County	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
City of Burkesville		YES			YES	YES		YES	NO	YES			YES
Green County	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
City of Greensburg		YES			YES	YES		YES	NO	YES			YES
McCreary County	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
Pulaski County	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
City of Burnside		NO			YES	YES		YES	NO	YES			YES
City of Eubank		NO			YES	YES		YES	NO	YES			YES
City of Ferguson		NO			YES	YES		YES	NO	YES			YES
City of Science Hill		YES			YES	YES		YES	NO	YES			YES
City of Somerset		YES			YES	YES		YES	NO	YES			YES
Russell County	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
City of Jamestown		YES			YES	YES		YES	NO	YES			YES
City of Russell Springs		YES			YES	YES		YES	NO	YES			YES
Taylor County	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
City of Campbellsville					YES	YES		YES	NO	YES			YES
Wayne County	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
City of Monticello					YES	YES		YES	NO	YES			YES

Committee members were directly involved in summarizing and analyzing the duties of each department. During the public input and committee meetings, it was determined that the implementation of mitigation actions would depend greatly on the capabilities of the departments of each jurisdiction.

The following information summarizes the duties and responsibilities of the professional staff departments listed in the chart above.

The **Board of Education** is responsible for the operation of the county school system and is also elected at large by the people. County funds usually maintain the buildings and provide funds for other capital projects, with state funds paying salaries, purchasing textbooks and supplies.

The **Building Inspections Department** enforces the State Building Code, the National Flood Insurance Program, the Community Rating System, and other applicable local codes through a program of inspection and permitting.

The **PVA, Clerk of Courts** and the **Sheriff** are elected every four years. The PVA is responsible for the valuation of property for tax purposes. The Clerk of Court is custodian of the court system in each county and that office is financed completely by the State of Kentucky. The Sheriff operates on a budget approved annually by the commissioners or magistrates of each county. The sheriff is responsible for the collection of taxes and enforcement of state and local laws.

The **City Police Departments** are responsible for the enforcement of local and state laws in their jurisdictions.

The **Road Departments** are responsible for the maintenance and care of public roadways.

The **Utilities Departments** are responsible for providing water, gas, electric and sewer services to the public.

The **Emergency Management** office is responsible for the mitigation, preparedness, response and recovery operations that deal with both natural and man-made disaster events. The formation of an emergency management office in each county is mandated under Kentucky Revised Statutes.

The **County and City Treasurer** is responsible for the oversight and management of the County's budget and fiscal programs, including the administration of state and federal grants.

The **Mayor and County Judge** of each jurisdiction is responsible for the oversight of the daily operations of County and City government. Enforcement of County and City policies and regulations are their responsibility.

The **Health Department** and **Social Services** have separate boards that are appointed by the commissioners. Hiring of employees in these departments is approved by the commissioners with state personnel policies applying. These agencies protect the public health and provide

social services in the areas of medical care and governmental social programs to families displaced from home or job.

Of the above-listed departments, the following have been assigned specifically delegated responsibilities to carry out mitigation activities or hazard control tasks: **Emergency Management, Road Department, Building Inspections,** and the **Utilities Department.** Each of these departments have been involved in the development of this mitigation plan by participating on the local mitigation committees. The committees with these staff were able to identify gaps, weaknesses or opportunities for enhancement with existing mitigation programs.

For the most part, it was determined that each of these departments is short-staffed, and fulfills multiple duties within their departments. All jurisdictions are limited in funding and resources for the hiring of additional staff. Each department staff member is adequately trained and funded to accomplish their current workloads. Increase in work activities will increase the need for additional staff to effectively perform tasks.

As a result of staffing and funding issues, the Lake Cumberland Area Development District becomes the primary resource of technical assistance. Lake Cumberland ADD staff are professional staff trained in planning, GIS/GPS, fiscal management and project development. The ADD is the regional planning agency that provides extended services and technical assistance to all jurisdictions in the planning area.

Summary of Findings

Expansion and improvement of existing authorities, policies, programs, and resources to reduce potential losses depends upon the local jurisdictions staff and financial resources.

After reviewing the above summary tables, the local committees recognize that the county governments supply the majority of services and professional departments that are responsible for implementing, maintaining and enforcing mitigation activities. Each county in the Lake Cumberland region are equal in their ability to enforce and implement mitigation strategies. Mitigation planning committees are organized at the county level to include all jurisdictions in the county for this reason. Cities in the Lake Cumberland region, depend largely upon the county government to support and combine resources to perform projects that improve the quality of life for residents. These projects include mitigation projects and activities.

The cities of Somerset and Campbellsville are the largest cities in the Lake Cumberland Region. When reviewing the existing authorities chart, the City of Somerset has only 3 areas lacking in existing authorities, plans and policies. The City of Campbellsville is not lacking in any of the authorities, plans and polices listed on the existing authorities chart. The City of Somerset has the capability to implement and enforce existing and future policies within its jurisdiction. Both the cities of Somerset and Campbellsville require assistance through partnership and regional projects to insure success.

The cities of Columbia, Liberty, Albany, Burkesville, Greensburg, Jamestown, Russell Springs and Monticello have limited resources and few paid staff department's currently in place to

implement and enforce existing and future policies. These cities are limited in the amount of existing authorities, policies, programs and resources, and have a limited ability to implement strategies that will enhance their capabilities in future mitigation activities.

The remaining cities of Burnside, Eubank, Ferguson and Science Hill have very local limited funding and very limited existing authorities, programs and resources available to implement mitigation strategies. These jurisdictions have a strong desire to enhance the quality of life for residents, but depend upon the county government to assist in the funding, implementation and enforcement of policies and programs due to their small size and very limited fiscal capability.

Each jurisdiction has participated in the mitigation planning committees and has chosen specific projects for their areas. The responsibility for implementation of these projects lies with the Mayor or Judge-Executive of that jurisdiction. The LCADD staff has provided the professional assistance in GIS and plan development to fill in the gaps and enhance the local jurisdictions capability to implement mitigation strategies that will reduce potential losses that are identified in the risk assessment.

3.8 Infrastructure

Over the past decades, the economy in the LCADD region has shifted away from the agriculture sector to the manufacturing and service sectors. Massive textile losses in the early nineties have led to a more diversified manufacturing sector with high-tech better paying jobs. The area's many recreational lakes and scenic wonders have paved the way for a rapidly growing service and tourism based economy.

The region's transportation system consists of one state parkway, several minor airports, and one freight rail system. Though no interstate highways run through the LCADD region, I-66 is easily accessible from Louie B. Nunn/Cumberland Parkway in the west and I-75 is accessible via KY 80 to the east.

There are two post-secondary schools, Lindsey Wilson College and Campbellsville University; and one community college, Somerset Community College, located in the LCADD area. Nine hospitals are located in the LCADD ten county region.

The Region operates water treatment facilities and wastewater treatment plants servicing 24 jurisdictions and related infrastructure such as drinking water and sewage pipes, pump stations, etc. The Region receives gas and electric service provided by Rural Electric Coops, and local utilities.

3.9 Historic Properties

The National Register of Historic Places is the official list of the Nation's historic places worthy of preservation, and is part of a national program to coordinate and support efforts to identify, evaluate, and protect America's historic and archeological resources. The National Register of Historic Places lists the following locations within the Region:[16]

[16] National Register of Historic Places Program: Research; https://www.nps.gov/nr/research/index.htm

Table 3.9(1) - LCADD Region Key Historical/Cultural Assets

Property Name	Address	City	County	Estimated Value/ Risk Exposure
Adair County Courthouse	500 Public Sq.	Columbia	Adair	None Available
Archeological Site 15 Ad 33	Address Restricted	Columbia	Adair	None Available
Archeological Site 15 Ad 36	Address Restricted	Glens Fork	Adair	None Available
Archeological Site 15 Ad 54	Address Restricted	Columbia	Adair	None Available
Field, John, House	111 E. Fortune St.	Columbia	Adair	None Available
Gaither, Dr. Nathan, House	100 S. High St.	Columbia	Adair	None Available
Giles, Janice Holt and Henry, Log House	302 Spout Springs Rd.	Knifley	Adair	None Available
Trabue, Daniel, House	299 Jamestown St.	Columbia	Adair	None Available
Zion Meetinghouse and School	SE of Columbia on KY 55	Columbia	Adair	None Available
Casey County Courthouse	Courthouse Sq.	Liberty	Casey	None Available
Liberty Downtown Historic District	1st blk. of Campbellsville Rd., Hustonville & Middleburg Sts., & Courthouse Sq.	Liberty	Casey	None Available
Huddleston, Judge Killis, House	Jct. of US 127 and KY 734	Albany	Clinton	None Available
Noland, Jesse, House	RR1 KY 969	Albany	Clinton	None Available

Baker, James, House	Columbia Rd.	Burkesville	Cumberland	None Available
Coe House	433 N. Main St.	Burkesville	Cumberland	None Available
Marrowbone Historic District	KY 90	Marrowbone	Cumberland	None Available
Allen, John C., House	KY 61	Summersville	Green	None Available
Allen's, James, Inn	103 E. Court St.	Greensburg	Green	None Available
Anderson House	KY 1913	Haskingsville	Green	None Available
Barrett-Blakeman House	Hodgenville Rd.	Greensburg	Green	None Available
Brents-Lisle House	US 68	Greensburg	Green	None Available
Chewning House	KY 88	Donansburg	Green	None Available
Christie, Christopher Columbus, House	KY 1915	Haskingsville	Green	None Available
Court Clerk's Office-County & Circuit	East Court St.	Greensburg	Green	None Available
Cowherd, Francis, House	Off U.S. 68	Greensburg	Green	None Available
Creal Store	KY 61	Creal	Green	None Available
Creel, Elijah, House	E. Columbia Ave.	Greensburg	Green	None Available
Downtown Greensburg Historic District	Public Square and bounded by N. and S. Main St., and E. and W. Court Sts.	Greensburg	Green	None Available
Ebenezer School	Off KY 61	Greensburg	Green	None Available

Edwards House	KY 745	Exie	Green	None Available
Edwards, David, House	Off KY 745	Exie	Green	None Available
Elmore-Carter House	KY 793	Summersville	Green	None Available
Emory-Blakeman-Penick House	Off KY 487	Greensburg	Green	None Available
Federal House	S. Main and E. Columbia	Greensburg	Green	None Available
Goose Creek Foot Bridge	Court and Depot Sts.	Greensburg	Green	None Available
Greensburg Academy	101 2nd St.	Greensburg	Green	None Available
Greensburg Bank Building	E. Court St.	Greensburg	Green	None Available
Greensburg Cumberland Presbyterian Church	Hodgenville Ave. and N. 1st St.	Greensburg	Green	None Available
Groves-Cabell House	Off KY 61	Gresham	Green	None Available
Herndon, William H., House	203 S. Main St.	Greensburg	Green	None Available
Hilliard, David, House	Off KY 487	Greensburg	Green	None Available
Hobson, William, House	102 S. Depot St.	Greensburg	Green	None Available
Keltner House	KY 1913	Haskingsville	Green	None Available
L & N Passenger Depot	103 N. Depot St.	Greensburg	Green	None Available
Lewis, Woodson, House	Main St. and Hodgenville Ave.	Greensburg	Green	None Available

Livesay House	Off KY 208	Campbellsville	Green	None Available
Mears House	KY 61	Greensburg	Green	None Available
Montgomery House	Off KY 1464	Donansburg	Green	None Available
Montgomery's Mill	Off KY 88	Greensburg	Green	None Available
Mt. Gilead Baptist Church	KY 767	Haskingsville	Green	None Available
Mud Brick House in Greensburg	429 Campbellsville Rd.	Greensburg	Green	None Available
Old Courthouse	Public Sq.	Greensburg	Green	None Available
Philpot House	KY 729	Exie	Green	None Available
Sandidge House	KY 88	Donansburg	Green	None Available
Simpson Log House	KY 1464	Webbs	Green	None Available
Wallace, Napoleon, House	Off KY 218	Pierce	Green	None Available
Webbs Female Academy	Off KY 88	Webbs	Green	None Available
White-Penick House	106 S. Depot St.	Greensburg	Green	None Available
Whitlock Log Cabin	US 68	Exie	Green	None Available
Williams, Daniel Motley, House	KY 323	Summersville	Green	None Available
Wilson, R. H., House	402 N. Water St.	Greensburg	Green	None Available

Woodward House	Off US 68	Greensburg	Green	None Available
Barren Fork Coal Camp and Mine Archeological District	Address Restricted	Whitley City	McCreary	None Available
Stearns Administrative and Commercial District	Old US 27	Stearns	McCreary	None Available
Battle of Dutton's Hill Monument	Old Crab Orchard Rd. 1 mi. N of Jct. of KY 39 and KY 80	Somerset	Pulaski	None Available
Battle of Mill Springs Historic Areas	Roughly, three discontiguous areas, one S of Nancy, one in Mill Springs and one to the N across the Cumberland R.	Nancy	Pulaski	None Available
Battle of Mill Springs Historic Areas (Boundary Increase)	Four discontiguous areas; two along KY 235 and two along the Cumberland River	Nancy	Pulaski	None Available
Beatty-Newell House	Off KY 90	Bronston	Pulaski	None Available
Boland House	Lakeshore Dr.	Burnside	Pulaski	None Available
Buck-Mercer House	Waynesburg Rd.	Somerset	Pulaski	None Available
Burnside Historic District	Lakeshore Dr. and French Ave.	Burnside	Pulaski	None Available
Burnside Lodge	Off US 27	Burnside	Pulaski	None Available
Burnside Methodist Church	Off U.S. 27	Burnside	Pulaski	None Available
City Hall	400 E. Mt. Vernon St.	Somerset	Pulaski	None Available
Confederate Mass Grave Monument in Somerset	Zollicoffer Park Cemetery. 0.3 mi. S of jct of KY 761 and KY 235	Somerset	Pulaski	None Available
Crawford House	121 Maple St.	Somerset	Pulaski	None Available
Crawford, A. Jackson, Building	207 S. Main St.	Somerset	Pulaski	None Available

Dabney Post Office	KY 39	Dabney	Pulaski	None Available
Evans House	KY 461	Shopville	Pulaski	None Available
Fox, William, House	206 W. Columbia St.	Somerset	Pulaski	None Available
Gover--Hardin House	307 W. Mt. Vernon St.	Somerset	Pulaski	None Available
Harvey's Hill Historic District	401-527 N. Main St., and 402-526 N. Main St.	Somerset	Pulaski	None Available
Hotel Beecher	203 S. Main St.	Somerset	Pulaski	None Available
James-Hansford House	On KY 80	Shopville	Pulaski	None Available
James-Owens House	Off KY 80	Shopville	Pulaski	None Available
Mill Springs National Cemetery	9044 West Hwy 80	Nancy	Pulaski	None Available
Morrow House	208 E. Oak St.	Somerset	Pulaski	None Available
North Main Street Historic District	N. Main and Columbia Sts.	Somerset	Pulaski	None Available
Parker House	206 N. Vine St.	Somerset	Pulaski	None Available
Payne House	Off SR 1247	Eubank	Pulaski	None Available
Payne Mill	Off SR 1247	Eubank	Pulaski	None Available
Perkins, Dr. John Milton, House	109 N. Main St.	Somerset	Pulaski	None Available
Robinson Mill	S. Main St.	Somerset	Pulaski	None Available

Scott, Dill, House	200 N. Main St.	Somerset	Pulaski	None Available
Smith House	200 N. College St.	Somerset	Pulaski	None Available
Smith, Beecher, House	405 College St.	Somerset	Pulaski	None Available
Somerset Armory	109 Grand Ave.	Somerset	Pulaski	None Available
Somerset City School and Carnegie Library	300 College St.	Somerset	Pulaski	None Available
Somerset Downtown Commercial District	108--236 and 201--223 E. Mt. Vernon St.	Somerset	Pulaski	None Available
South Courthouse Square Historic District	Public Sq., Zachary Way, W. Mt. Vernon, S. Main, and S. Maple Sts.	Somerset	Pulaski	None Available
US Post Office--Bronston	KY 790	Bronston	Pulaski	None Available
Waddle-Prather House	311 N. College St.	Somerset	Pulaski	None Available
West Columbia Street District	201-303 W. Columbia St.	Somerset	Pulaski	None Available
Withers House	116 Maple St.	Somerset	Pulaski	None Available
Zollicoffer, Gen. Felix K., Monument	Zollicoffer Park Cemetery. 0.3 mi. S of jct. of KY 761 and KY 235	Nancy	Pulaski	None Available
Russell Lodge No. 284	Public Square	Jamestown	Russell	None Available
Battle of Tebbs Bend	Off KY 55, Tebbs Bend Rd.	Campbellsville	Taylor	None Available
Battle of Tebbs Bend (Boundary Increase)	Off KY55, W of Tebbs Bend Rd. and the Green R	Campbellsville	Taylor	None Available
Battle of Tebb's Bend Monument	Romine Loop Rd. 0.5 mi. N of jct. of Romine Loop Rd. and KY 55	Campbellsville	Taylor	None Available

Campbellsville Historic Commercial District	Roughly bounded by Columbia Ave., Broadway, 1st, Hotchkiss Sts., Central Ave. (both sides), and RR tracks	Campbellsville	Taylor	None Available
Campbellsville Residential Historic District	Roughly bounded by Central Ave., & Duffy, Maple & Jackson Sts.	Campbellsville	Taylor	None Available
Campbellsville School, Stadium and Athletic Field	230 W. Main St.	Campbellsville	Taylor	None Available
Chandler, John, House	Off KY 210	Campbellsville	Taylor	None Available
Clay Hill	5 mi. N of Campbellsville on KY 55	Campbellsville	Taylor	None Available
Cowherd, Jonathan, Jr., House	W of Campbellsville off KY 70	Campbellsville	Taylor	None Available
Hiestand, Jacob, House	W of Campbellsville off KY 210	Campbellsville	Taylor	None Available
Merchant's Hotel	102 E. Main St.	Campbellsville	Taylor	None Available
Sanders, Durham, House	1251 Sanders Rd.	Campbellsville	Taylor	None Available
Tate, Isaac, Farm	Five mi. S of Campbellsville on KY 55	Campbellsville	Taylor	None Available
Taylor County Clerk's Office	Courthouse Sq.	Campbellsville	Taylor	None Available
Adkins--Hurt Mill	Off KY 167	Mount Pisgah	Wayne	None Available
Fairchild House	302 S. Main St.	Monticello	Wayne	None Available
Hotel Breeding	201--211 N. Main St.	Monticello	Wayne	None Available
Mill Springs Mill	Off KY 90	Mill Springs	Wayne	None Available

Monticello Historic Commercial District	Main and Columbus Sts.	Monticello	Wayne	None Available
West-Metcalfe House	1.75 mi. S of Mill Springs off KY 90	Mill Springs	Wayne	None Available

4.0 NATURAL HAZARDS

FEMA defines a hazard as an act or phenomenon that has the potential to produce harm or other undesirable consequences to a person or thing. All natural disasters pose hazards to property damage and loss of human life, and have the ability to limit access to electrical power, telecommunication services, potable water, wastewater collection/treatment and transportation. Downed trees and tree limbs may also limit emergency access and hinder cleanup efforts.
The Lake Cumberland Area Development (LCADD) Region must take steps to protect its infrastructure from natural disasters as much as possible, such that essential utilities and services continue when needed most.

Hazards associated with natural disasters typically encountered (e.g. flood events, ice storms, winter storms) in Lake Cumberland Region include high winds, heavy rains and regionalized flooding. Natural disasters occurring less frequently (e.g. tornadoes, earthquakes, and forest fires) may pose other hazards, presenting unique challenges to residents and community officials, as hazards may not have been encountered before in recent memory.

Table 4.0(1) and **Table 4.1(2)** depict major disaster declarations and emergency declarations, respectively, for the Lake Cumberland Region.

Table 4.0(1) – Major Disaster Declarations for the Lake Cumberland Region

Incident Description & Disaster Number	Date	LCADD Counties Included
Kentucky Severe Storms, Tornadoes, Straight-line Winds, Flooding, Landslides, and Mudslides (DR-4239)	Incident period: July 11, 2015 to July 20, 2015	Major Disaster Declaration declared on August 12, 2015, Cumberland – Public Assistance
Kentucky Severe Winter Storm, Snowstorm, Flooding, Landslides, and Mudslides (DR-4218)	Incident period: March 3, 2015 to March 9, 2015	Major Disaster Declaration declared on May 12, 2015, Casey – Public Assistance
Kentucky Severe Winter Storms, Snowstorms, Flooding, Landslides, and Mudslides (DR-4216)	Incident period: February 15, 2015 to February 22, 2015	Major Disaster Declaration declared on April 30, 2015, Adair, Taylor, Wayne – Public Assistance

Incident Description & Disaster Number	Date	LCADD Counties Included
Kentucky Severe Storms, Tornadoes, Straight-line Winds, and Flooding (DR-4057)	Incident period: February 29, 2012 to March 3, 2012	Major Disaster Declaration declared on March 6, 2012, Adair, Public Assistance; Russell, Individual Assistance
Kentucky Severe Storms, Tornadoes, and Flooding (DR-1976)	Incident period: April 12, 2011 to May 20, 2011	Major Disaster Declaration declared on May 4, 2011, Green – Public Assistance
Kentucky Severe Storms, Flooding, Mudslides, and Tornadoes (DR-1912)	Incident period: May 1, 2010 to June 1, 2010	Major Disaster Declaration declared on May 11, 2010, Casey, Individual Assistance
Kentucky Severe Storms, Tornadoes, Flooding, and Mudslides (DR-1841)	Incident period: May 3, 2009 to May 20, 2009	Major Disaster Declaration declared on May 29, 2009, Russell – Public Assistance
Kentucky Severe Winter Storm and Flooding (DR-1818)	Incident period: January 26, 2009 to February 13, 2009	Major Disaster Declaration declared on February 5, 2009, Green – Public Assistance
Kentucky Severe Storms and Flooding (DR-1537)	Incident period: July 13, 2004 to July 15, 2004	Major Disaster Declaration declared on August 6, 2004, Adair, Clinton, Cumberland, Green, Russell, Taylor, Wayne – Public Assistance
Kentucky Severe Storms, Tornadoes, Flooding, and Mudslides (DR-1523)	Incident period: May 26, 2004 to June 18, 2004	Major Disaster Declaration declared on June 10, 2004, Casey, Pulaski - Individual Assistance
Kentucky Severe Winter Storms (DR-1454)	Incident period: February 15, 2003 to February 26, 2003	Major Disaster Declaration declared on March 14, 2003, Green – Public Assistance
Kentucky Severe Storms, Tornadoes and Flooding (DR-1414)	Incident period: April 27, 2002 to May 10, 2002	Major Disaster Declaration declared on May 7, 2002, Casey, McCreary, Pulaski, Taylor - Individual Assistance
Kentucky Storms and Flooding (DR-1407)	Incident period: March 17, 2002 to March 21, 2002	Major Disaster Declaration declared on April 4, 2002, McCreary, Wayne - Public Assistance; McCreary - Individual Assistance
Kentucky Severe Storms, Tornadoes and Flooding (DR-1216)	Incident period: April 16, 1998 to May 10, 1998	Major Disaster Declaration declared on April 29, 1998, Adair, Pulaski - Public Assistance; Adair, Casey - Individual Assistance
Kentucky Severe Winter Storm (DR-1207)	Incident period: February 4, 1998 to February 6, 1998	Major Disaster Declaration declared on March 3, 1998, Adair, Casey, Clinton, McCreary, Pulaski, Russell, Wayne - Public Assistance

Incident Description & Disaster Number	Date	LCADD Counties Included
Kentucky Severe Storms/Flooding (DR-1163)	Incident period: March 1, 1997 to March 31, 1997	Major Disaster Declaration declared on March 4, 1997, All the Lake Cumberland Regional Counties - Public Assistance
Kentucky Severe Storms/Tornadoes (DR-1117)	May 28, 1996	Major Disaster Declaration declared on June 1, 1996, All the Lake Cumberland Regional Counties - Public Assistance
Kentucky Blizzard (DR-1089)	Incident period: January 5, 1996 to January 12, 1996	Major Disaster Declaration declared on January 13, 1996, All the Lake Cumberland Regional Counties - Public Assistance
Kentucky Severe Storm, Tornadoes, Hail (DR-1055)	Incident period: May 13, 1995 to May 19, 1995	Major Disaster Declaration declared on June 13, 1995, Adair, Casey, Cumberland, Green, Pulaski, Russell, Taylor - Public Assistance
Kentucky Severe Storm, Freezing Rain, Sleet, Snow (DR-1018)	Incident period: February 9, 1994 to February 11, 1994	Major Disaster Declaration declared on March 16, 1994, All the Lake Cumberland Regional Counties - Public Assistance
Kentucky Flooding, Severe Storm (DR-893)	Incident period: December 6, 1990 to February 2, 1991	Major Disaster Declaration declared on January 29, 1991, All the Lake Cumberland Regional Counties - allows the States to use a one-time effort to apply HMGP eligibility criteria statewide for all disasters declared before April 7, 1997. The notices for the indicated major disasters in the specified States are hereby amended to include among those areas determined to be eligible for HMGP: the counties and parishes on the list following this notice, ‘‘Retroactive Statewide Use of Hazard Mitigation Grant Program Funds’’

Incident Description & Disaster Number	Date	LCADD Counties Included
Kentucky Severe Storms, Mudslides, Flooding (DR-846)	Incident period: October 16, 1989 to October 18, 1989	Major Disaster Declaration declared on October 30, 1989, All the Lake Cumberland Regional Counties - allows the States to use a one-time effort to apply HMGP eligibility criteria statewide for all disasters declared before April 7, 1997. The notices for the indicated major disasters in the specified States are hereby amended to include among those areas determined to be eligible for HMGP: the counties and parishes on the list following this notice, ‘‘Retroactive Statewide Use of Hazard Mitigation Grant Program Funds’’
Kentucky SEVERE STORMS, FLOODING (DR-834)	Incident period: June 15, 1989 to July 6, 1989	Major Disaster Declaration declared on June 30, 1989, All the Lake Cumberland Regional Counties - allows the States to use a one-time effort to apply HMGP eligibility criteria statewide for all disasters declared before April 7, 1997. The notices for the indicated major disasters in the specified States are hereby amended to include among those areas determined to be eligible for HMGP: the counties and parishes on the list following this notice, ‘‘Retroactive Statewide Use of Hazard Mitigation Grant Program Funds’’
Kentucky SEVERE STORMS, FLOODING (DR-821)	Incident period: January 13, 1989 to March 8, 1989	Major Disaster Declaration declared on February 24, 1989, All the Lake Cumberland Regional Counties - allows the States to use a one-time effort to apply HMGP eligibility criteria statewide for all disasters declared before April 7, 1997. The notices for the indicated major disasters in the specified States are hereby amended to include among those areas determined to be eligible for HMGP: the counties and parishes on the list following this notice, ‘‘Retroactive Statewide Use of Hazard Mitigation Grant Program Funds’’

Incident Description & Disaster Number	Date	LCADD Counties Included
Kentucky High Winds, Tornadoes, Flooding (DR-705)	May 15, 1984	Major Disaster Declaration declared on May 15, 1984, Casey, Pulaski, Wayne - Public Assistance; Adair, Casey, Green, Pulaski, Taylor, Wayne - Individual Assistance
Kentucky SEVERE STORMS, FLOODING (DR-568)	December 12, 1978	Major Disaster Declaration declared on December 12, 1978, Casey - Public Assistance; Casey - Individual Assistance
Kentucky SEVERE STORMS, FLOODING (DR-461)	March 29, 1975	Major Disaster Declaration declared on March 29, 1975, Pulaski - Public Assistance; Pulaski - Individual Assistance
Kentucky TORNADOES (DR-420)	April 4, 1974	Major Disaster Declaration declared on April 4, 1974, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Taylor, Wayne - Public Assistance; Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Taylor, Wayne - Individual Assistance
Kentucky Heavy Rains, Flooding (DR-332)	May 15, 1972	Major Disaster Declaration declared on May 15, 1972, Wayne - Public Assistance; Wayne - Individual Assistance
Kentucky TORNADO (DR-305)	May 10, 1971	Major Disaster Declaration declared on May 10, 1971, Adair, Green, Pulaski, Russell - Public Assistance; Adair, Green, Pulaski, Russell - Individual Assistance
Kentucky SEVERE STORMS, FLOODING (DR-288)	June 5, 1970	Major Disaster Declaration declared on June 5, 1970, Casey - Public Assistance; Casey - Individual Assistance
Kentucky SEVERE STORMS, FLOODING (DR-265)	July 15, 1969	Major Disaster Declaration declared on July 15, 1969, Cumberland - Public Assistance; Cumberland - Individual Assistance
Kentucky SEVERE STORMS, FLOODING (DR-163)	March 17, 1964	Major Disaster Declaration declared on March 17, 1964, No notices have been issued for this disaster.
Kentucky SEVERE STORMS, FLOODING (DR-148)	March 13, 1963	Major Disaster Declaration declared on March 13, 1963, No notices have been issued for this disaster.
Kentucky FLOODS (DR-128)	March 12, 1962	Major Disaster Declaration declared on March 12, 1962, No notices have been issued for this disaster.

Table 4.0(2) – Emergency Disaster Declarations for the Lake Cumberland Region

Kentucky Severe Winter Storm (EM-3302)	Incident period: January 27, 2009 to February 5, 2009	Emergency Declaration declared on January 28, 2009, Casey, Green, Taylor - Public Assistance
Kentucky Hurricane Katrina Evacuation (EM-3231)	Incident period: August 29, 2005 to October 1, 2005	Emergency Declaration declared on September 10, 2005, All the Lake Cumberland Regional Counties - Public Assistance
Kentucky Severe Snowfall and Winter Storm (EM-3104)	Incident period: March 13, 1993 to March 17, 1993	Emergency Declaration declared on March 16, 1993, All the Lake Cumberland Regional Counties - Public Assistance
Kentucky High Winds (EM-3009)	March 19, 1975	Emergency Declaration declared on March 19, 1975, No notices have been issued for this disaster.

[17]

In order to outline the natural disasters and associated hazards potentially afflicting the Lake Cumberland Region, the following sources were used:

≠ A review of the 2013 Kentucky State Hazard Mitigation Plan;
≠ A review of FEMA emergency declarations;
≠ A review of past events documented in news articles and internet sources; and
≠ Conversations with members of the LCHMRPC and other Regional stakeholders.

Based on information obtained from the sources described above, the following natural disasters and associated hazards have been identified as a threat to the Lake Cumberland Region as shown in **Table 4.0(4)**.

Natural disasters are described in detail in the following sections.

Specific hazards are assigned a point value for each of these items based on the expected severity of the hazard. Point values and descriptions for each category are shown in **Hazard Identification Criteria Table**. This information was then used to establish a Hazard Index for each type of natural hazard and associated risk level based on the total score as shown in **Risk Level Table**. Hazards associated with the highest index value were determined to have the greatest potential impact to the LCR. The entire scoring matrix is provided as Natural **Hazard Index Table**.

Table 4.0(3).Hazard Identification Criteria

Score	Category	Description
Likelihood of Occurrence		
3	Highly Likely	50% to 100% probability in the next year

[17] FEMA, http://www.fema.gov/disasters

2	Likely	Between 10% and 50% probability in the next year
1	Possible	Between 1% and 10% probability in the next year
0	Unlikely	Less than 1% probability in the next year
Geographic Scale		
3	Large	More than 50% of the town affected
2	Medium	10% to 50% of the town affected
1	Small	Less than 10% of the town affected
Impacts		
3	Catastrophic	Multiple deaths & injuries possible, >50% property severely damaged Complete shutdown of facilities for 30 days or more
2	Critical	Multiple injuries possible, <50% to >25% property severely damaged Complete shutdown of critical facilities for at least 1 week
1	Limited	Minor injuries only, <25% to >10% property severely damaged Complete shutdown of critical facilities for more
0	Minor	Very few injuries, if any, only minor property damage Shutdown of critical facilities and services for 24 hours or

Risk Level

Hazard Index Score	Risk Level
8-9	Extremely High
6-7	Very High
5	High
4	Moderate
3	Low
1-2	Very Low

Natural Disasters and Associated Hazards
Table 4.0(4) – Regional Natural Hazard Index

Natural Hazard	Hazard Index Score[1]	Risk Level
Floods		
Flash Flooding	5	High
Riverine Flooding	3	Low
Flooding from Storm Runoff	4	Moderate
Erosion	3	Low
Winter Storm Events		
Snowstorms and Blizzards	6	Very High
Ice Storm	5	High
Tornadoes and Thunderstorms		
Tornadoes	6	Very High
Thunderstorms/Lighting	5	High
Windstorm (Straight Line Winds)	5	High
Hailstorm	5	High
Geologic Hazards		
Earthquakes	4	Moderate
Land Subsidence (Landslides)	2	Very Low
Sinkholes	3	Low
Other Hazards		
Drought	4	Moderate
Forest Fires / Wildfires	4	Moderate
Dam/Levee Failures	3	Low
Expansive Soil	1	Very Low
Extreme Summer Weather	4	Moderate

Manmade Hazard	Hazard Index Score[1]	Risk Level
Technological and Other Hazards (Although not required by the FEMA manmade hazards such as hazardous materials release, nuclear materials release, and terrorism were also Disaster Mitigation Act of 2000, manmade hazards such as hazardous materials release, nuclear materials release, and terrorism were also reviewed by the Lake Cumberland Regional Hazard Mitigation Committee.)		
Natural Biohazard	3	Low
Nuclear Facilities	1	Very Low
Hazardous Material Sites	3	Low
Non-Regional Hazards (Determined not to be a hazard threat and therefore is not profiled.)		
Coastal Erosion	not profiled	not apply
Snow Avalanche	not profiled	not apply
Storm Surge	not profiled	not apply
Tsunami Event	not profiled	not apply
Volcano	not profiled	not apply
Hurricane (Tropical Cyclone)	not profiled	not apply

4.1 Hazard - Floods

Flooding is defined as the accumulation of water within a water body and the overflow of excess water onto adjacent floodplain lands. The floodplain is the land adjoining the channel of a river, stream, ocean, lake, or other watercourse or water body that is susceptible to flooding.

The statistical meaning of terms like “25-year storm” and “100-year flood” can be confusing. Simply stated, a floodplain can be located anywhere; it just depends on how large and how often a flood event occurs. Floodplains are those areas that are subject to inundation from flooding. Floods and the floodplains associated with them are often described in terms of the percent chance of a flood event happening in any given year. As a community management or planning term, “floodplain” most often refers to an area that is subject to inundation by a flood that has a one percent chance of occurring in any given year (commonly and incorrectly referred to as the 100-year floodplain).

What Is a 100-Year Flood?
Floods are random, variable events. Hydrologists characterize them as 50-year, 100-year, or 500-year floods. What exactly is a “100-year flood”? It is a flood that has a one-percent chance of being equaled or exceeded in any given year.

A young Missouri farmer has provided an ingenious explanation of the possibility of experiencing a 100-year flood. He described a bag full of 100 marbles with 99 clear marbles and one black marble. Every time you pull one of those marbles out and it's black, you've got a 100-year flood. After each draw, you put the marble back in the bag and shake it up. It's

possible, although not likely, that you could pull the black one out two or even three times in a row.

This example points out the importance of proper terminology. The term "100-year flood" is used in an attempt to simplify the definition of a flood that statistically has a 1-percent chance of occurring in any given year. Likewise, the term "100-year storm" is used to define a rainfall event that statistically has this same 1-percent chance of occurring. In other words, over the course of 1 million years, these events would be expected to occur 10,000 times. But, just because it rained 10 inches in one day last year doesn't mean it can't rain 10 inches in one day again this year.

Table 4.1(1) – Recurrence Intervals And Probabilities Of Occurrences

Recurrence interval, in years	Probability of occurrence in any given year	Percent chance of occurrence in any given year	Annual exceedance percentage (AEP)
100	1 in 100	1	1
50	1 in 50	2	0.50
25	1 in 25	4	0.25
10	1 in 10	10	0.10
5	1 in 5	20	0.05
2	1 in 2	50	0.02

[18]

As commonly applied, the concept of a 100-year floodplain can be misleading. Technically, only the outer edge of a 100-year floodplain has a risk of one percent of being flooded in any given year. The risk rises for sites closer to the river, and also at lower elevations, yet many people think of the entire area between the water body and the outer edge of the 100-year floodplain as subject to the same risk. This risk variability is not usually shown on floodplain maps. It should be kept in mind that mapping floodplain boundaries is at best an imperfect science.

Flood maps designate zones where flooding is likely to occur.

Zone AE – areas that will be inundated by the 1-percent-annual-chance flood where base flood elevations (1-percent-annual-chance flood elevations) have been determined. These zones are generally found on major flooding sources and in areas with high development potential.

[18] Floods: Recurrence intervals and 100-year floods (USGS); http://water.usgs.gov/edu/100yearflood.html

Zone A – areas that will be inundated by the 1-percent-annual-chance flood where no base flood elevations (1-percent-annual-chance flood elevations) have been determined.

Zone X (0.2-percent-annual-chance floodplain) – areas that will be inundated by the 0.2-percent-annual-chance (500-year) flood. These areas are only associated with Zone AE. While not a regulatory standard, large floods often occur and require the designation of the 0.2-percent-annual-chance floodplain.

Zone X – areas outside the 1-percent- and 0.2-percent-annual-chance floodplain.

Keep in mind that approximately 30 percent of all flood insurance claims come from Zone X areas. Even though you may not be in a designated floodplain, there is a chance that flooding may occur in your area.

The following list indicates current status of the Kentucky Division of Water Digital Flood Insurance Rate Map (DFIRM). The Kentucky statewide DFIRMs are summarized below:

Effective DFIRMs: Anderson, Bell, Boone, Boyd, Bracken, Breathitt, Breckinridge, Bullitt, Caldwell, Campbell, Carroll, ***Casey***, Christian, Clay, Crittenden, Daviess, Fayette, Franklin, Gallatin, Greenup, Hancock, Hardin, Harlan, Hopkins, Jackson, Jefferson, Kenton, Knott, Knox, LaRue, Laurel, Lee, Leslie, Letcher, Lewis, Magoffin, Mason, ***McCreary***, Mercer, Morgan, Oldham, Owsley, Pendleton, Perry, Pike, Rockcastle, Shelby, Spencer, Trimble, Union, Warren, ***Wayne***, Whitley and Wolfe counties.

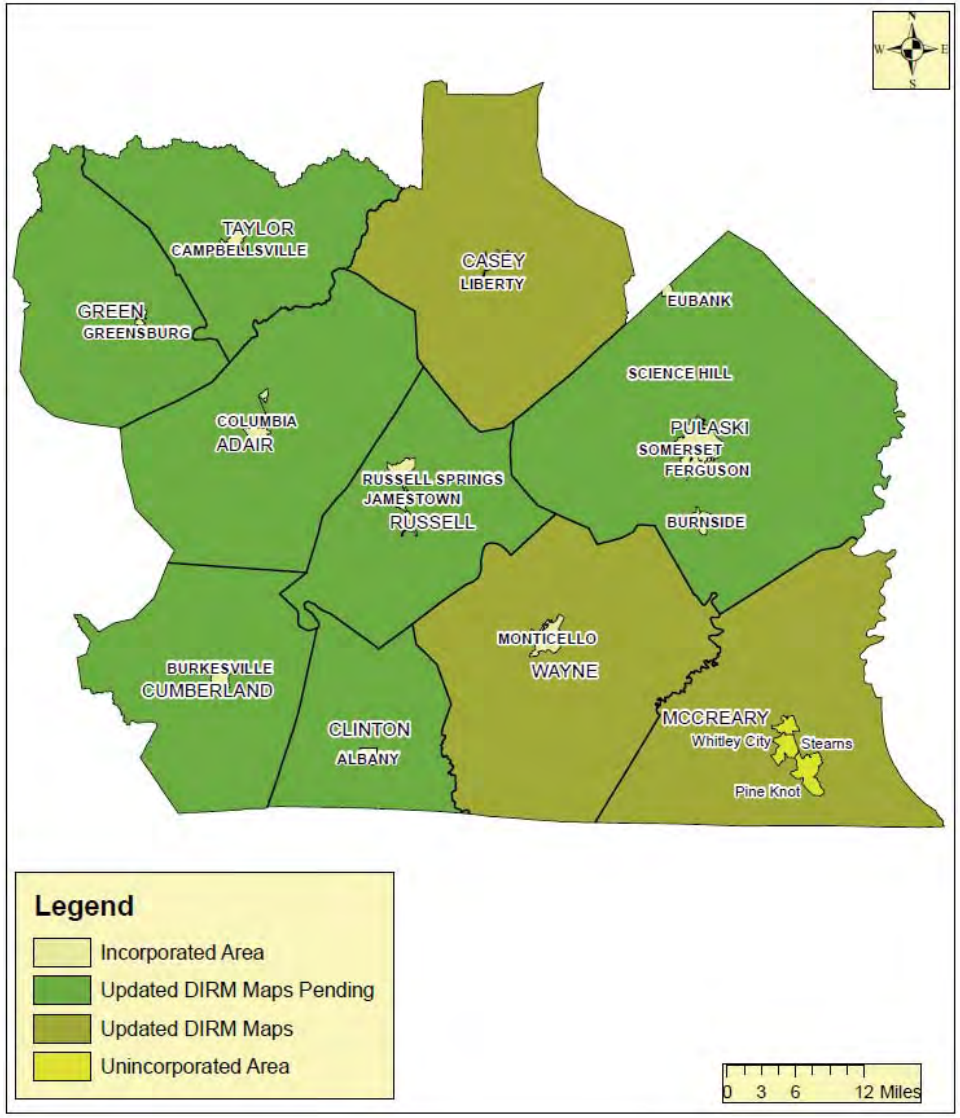
Preliminary DFIRMs: ***Adair***, Allen, Ballard, Barren, Bath, Boyle, Butler, Calloway, Carlisle, Clark, ***Clinton, Cumberland***, Edmonson, Elliott, Estill, Fleming, Fulton, Garrard, Grant, Grayson, ***Green***, Graves, Hart, Henderson, Henry, Hickman, Jessamine, Johnson, Lawrence, Lincoln, Livingston, Logan, Lyon, Madison, Marshall, Martin, Marion, McLean, Meade, Menifee, Metcalfe, Monroe, Montgomery, Nelson, Nicholas, Ohio, Powell, ***Pulaski***, Robertson, **Russel**l, Scott, Simpson, ***Taylor***, Todd, Trigg, Washington, Webster and Woodford counties.[19]

[19] Kentucky Division of Water Map Modernization; http://water.ky.gov/floodplain/Pages/DFirmStudyStatus.aspx; retrieved 3/17/2016

Map 4.1.1(1)
LCADD Region
Overview DFIRM Status

Data Source:Kentucky Division of Water
Digital Flood Insurance Rate Map (DFIRM) Study Status;
http://water.ky.gov/floodplain/Pages/DFirmStudyStatus.aspx
Download Date: March 2016

Prepared By:
Lake Cumberland Area Development District



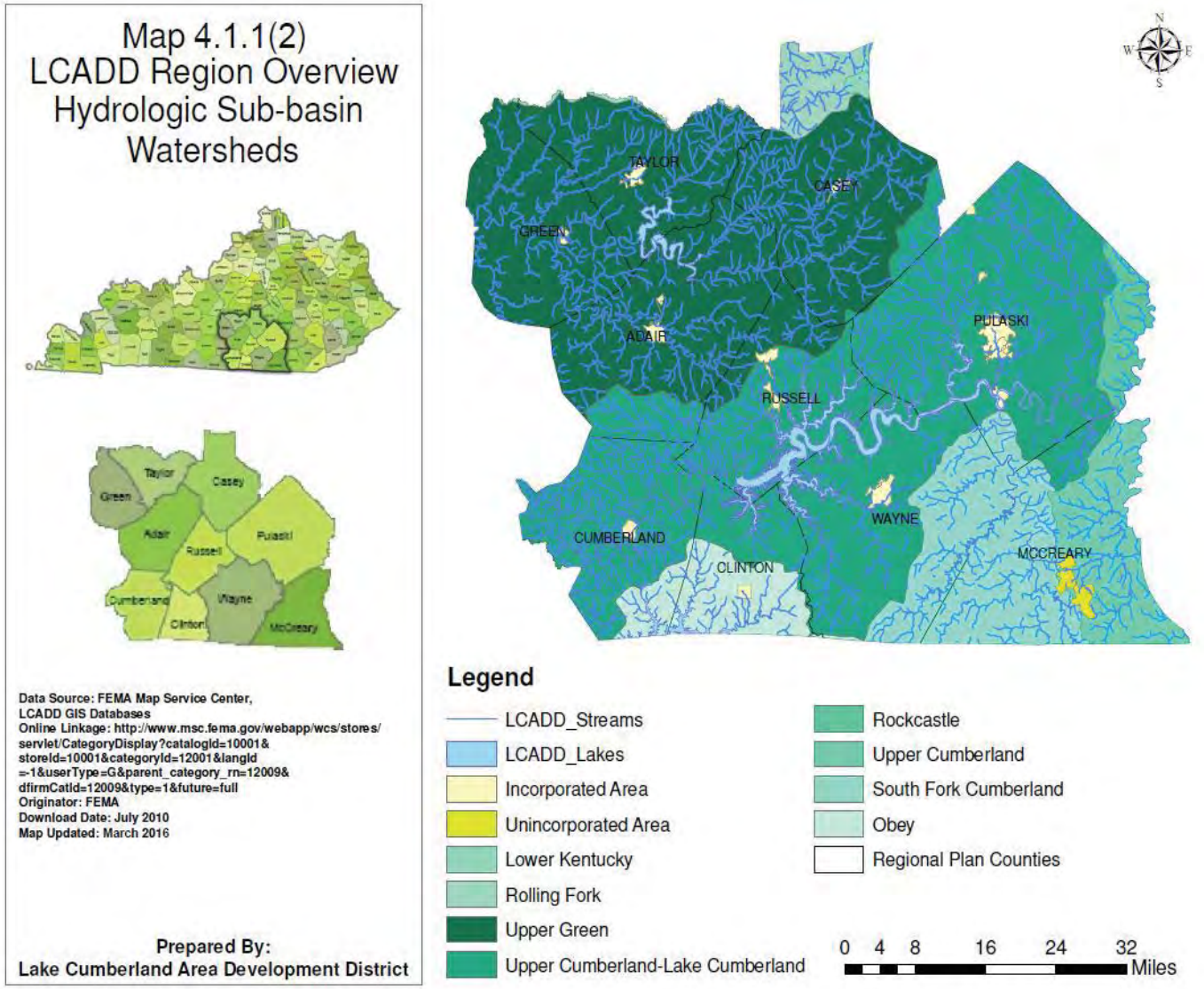
According to the Federal Interagency Floodplain Management Task Force, flooding in the United States can be separated into several types:

Riverine Flooding
Includes overflow from a river channel, flash floods, alluvial fan floods, and ice jam floods. Overbank flooding of rivers and streams is the most common type of flood event. Flooding in large rivers usually results from large-scale weather systems generating prolonged rainfall over wide areas. These same weather systems can cause flooding in smaller basins that drain to major rivers.

Flash Floods
Flash floods are characterized by a rapid rise in water level, high velocity and large amounts of debris. Major factors in flash flooding are the intensity and duration of rainfall and the steepness of watershed
and stream gradients. The amount of watershed vegetation, the natural and artificial flood storage
areas and the configuration of the streambed and floodplain are also factors. Flash floods may also
result from the failure of a dam or the sudden breakup of an ice jam. They are capable of tearing out trees, undermining buildings and bridges and scouring new channels.

Local Drainage or High Groundwater Levels
This type can be caused by heavy local precipitation flooding areas other than delineated floodplains or along recognizable drainage channels. If local conditions cannot accommodate intense precipitation through a combination of infiltration and surface runoff, water may accumulate and cause flooding problems. Flooding of this nature generally occur in areas with flat gradients, and generally increase with urbanization which speeds the accumulation of floodwaters because of impervious areas.

Flood History of the Lake Cumberland Region
The Lake Cumberland Area Development District covers ten counties in eight watersheds. The two main watersheds are the Upper Green River and Upper Cumberland-Lake Cumberland. The five remaining watersheds are the South Fork Cumberland, Rollin Fork, Lower Kentucky, Rockcastle, Upper Cumberland, and Obey. While Green River Lake, Lake Cumberland, and Dale Hollow Lake prevent extensive flooding in the Region, flash flooding still remains a flood hazard for all counties. The following map is the Hydrologic Sub-basin Watersheds for the Lake Cumberland Region.



[20]

[20] The USDA Geospatial Data Gateway (GDG); https://gdg.sc.egov.usda.gov

Table 4.1(2) Storm Events Database

Event Types: Flash Flood, Flood
Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell, Taylor and Wayne counties contain the following zones:
'Green', 'Taylor', 'Casey', 'Adair', 'Russell', 'Pulaski', 'Cumberland', 'Clinton', 'Wayne', 'McCreary'
228 events were reported between 01/01/1950 and 12/31/2015 (24106 days)

Summary Info:

Number of County/Zone areas affected:	20
Number of Days with Event:	109
Number of Days with Event and Death:	1
Number of Days with Event and Death or Injury:	1
Number of Days with Event and Property Damage:	35
Number of Days with Event and Crop Damage:	4
Number of Event Types reported:	2

Column Definitions:
'Mag': Magnitude, 'Dth': Deaths, 'Inj': Injuries, 'PrD': Property Damage, 'CrD': Crop Damage

*Click on **Location** below to display details.*
Available Event Types have changed over time. Please refer to the Database Details for more information.

Table 4.1(2) Storm Events Database - Flood

COUNTY/ZONE	LOCATION	DATE	TIME (EST)	EVENT TYPE	DEATHS	INJURIES	DAMAGE PROPERTY	DAMAGE CROPS
PULASKI CO.	NORTHEASTERN PART	7/19/1996	2005	Flash Flood	0	0	$0.00	$0.00
CASEY CO.	NORTHERN PART	7/19/1996	2115	Flash Flood	0	0	$20,000.00	$3,000,000.00
TAYLOR CO.	COUNTYWIDE	7/19/1996	2115	Flash Flood	0	0	$200,000.00	$500,000.00
MCCREARY CO.	STEARNS	9/7/1996	1545	Flash Flood	0	0	$0.00	$0.00
MCCREARY CO.	HOLLYHILL	11/30/1996	1800	Flash Flood	0	0	$10,000.00	$0.00
CASEY CO.	COUNTYWIDE	2/3/1997	800	Flash Flood	0	0	$0.00	$0.00
CUMBERLAND CO.	COUNTYWIDE	3/1/1997	745	Flash Flood	0	0	$0.00	$0.00
ADAIR CO.	COUNTYWIDE	3/1/1997	745	Flash Flood	0	0	$0.00	$0.00
CASEY (ZONE)		3/1/1997	1530	Flood	0	0	$500,000.00	$0.00
TAYLOR (ZONE)		3/1/1997	1530	Flood	0	0	$500,000.00	$0.00
GREEN (ZONE)		3/1/1997	1530	Flood	0	0	$0.00	$0.00
ADAIR CO.	COUNTYWIDE	3/1/1997	1800	Flash Flood	0	0	$0.00	$0.00
CLINTON (ZONE)		3/1/1997	1800	Flood	0	0	$0.00	$0.00
CASEY CO.	COUNTYWIDE	3/1/1997	1800	Flash Flood	0	0	$0.00	$0.00
CUMBERLAND (ZONE)		3/1/1997	1800	Flood	0	0	$0.00	$0.00
RUSSELL CO.	COUNTYWIDE	3/1/1997	1800	Flash Flood	0	0	$0.00	$0.00
GREEN (ZONE)		3/1/1997	1800	Flood	0	0	$0.00	$0.00
TAYLOR (ZONE)		3/1/1997	1800	Flood	0	0	$0.00	$0.00
TAYLOR CO.	COUNTYWIDE	3/1/1997	2100	Flash Flood	0	0	$0.00	$0.00
GREEN CO.	COUNTYWIDE	3/1/1997	2100	Flash Flood	0	0	$0.00	$0.00
ADAIR (ZONE)		3/1/1997	2300	Flood	0	0	$0.00	$0.00
WAYNE CO.	MONTICELLO	3/2/1997	30	Flash Flood	0	0	$20,000.00	$0.00
RUSSELL CO.	COUNTYWIDE	3/2/1997	30	Flash Flood	0	0	$0.00	$0.00
CASEY CO.	COUNTYWIDE	3/2/1997	30	Flash Flood	0	0	$0.00	$0.00

PULASKI CO.	SOMERSET	3/2/1997	30	Flash Flood	0	0	$20,000.00	$0.00
WAYNE CO.	OIL VLY	3/3/1997	900	Flood	0	0	$0.00	$0.00
RUSSELL CO.	COUNTYWIDE	3/5/1997	900	Flash Flood	0	0	$0.00	$0.00
CUMBERLAND CO.	COUNTYWIDE	3/5/1997	900	Flash Flood	0	0	$0.00	$0.00
CLINTON CO.	COUNTYWIDE	3/5/1997	900	Flash Flood	0	0	$0.00	$0.00
ADAIR CO.	COUNTYWIDE	3/5/1997	1000	Flash Flood	0	0	$0.00	$0.00
GREEN CO.	COUNTYWIDE	3/5/1997	1230	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	COUNTYWIDE	3/5/1997	1230	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	SOMERSET	3/18/1997	2100	Flash Flood	0	0	$3,000.00	$0.00
MCCREARY CO.	WHITLEY CITY	6/12/1997	1645	Flash Flood	0	0	$5,000.00	$0.00
PULASKI CO.	BRONSTON	1/7/1998	1500	Flash Flood	0	0	$10,000.00	$0.00
MCCREARY CO.	COUNTYWIDE	4/16/1998	1900	Flash Flood	0	0	$0.00	$0.00
WAYNE CO.	COUNTYWIDE	4/16/1998	1900	Flash Flood	0	0	$5,000.00	$0.00
PULASKI CO.	COUNTYWIDE	4/16/1998	1900	Flash Flood	0	0	$5,000.00	$0.00
MCCREARY (ZONE)		4/17/1998	645	Flood	0	0	$0.00	$0.00
PULASKI (ZONE)		4/17/1998	645	Flood	0	0	$0.00	$0.00
MCCREARY CO.	COUNTYWIDE	4/18/1998	2200	Flash Flood	0	0	$10,000.00	$0.00
PULASKI CO.	COUNTYWIDE	5/31/1998	2200	Flash Flood	0	0	$0.00	$0.00
ADAIR CO.	COLUMBIA	5/31/1998	2230	Flash Flood	0	0	$0.00	$0.00
ADAIR CO.	GRADYVILLE	5/31/1998	2230	Flash Flood	0	0	$0.00	$0.00
RUSSELL CO.	JAMESTOWN	5/31/1998	2230	Flash Flood	0	0	$0.00	$0.00
WAYNE CO.	COUNTYWIDE	5/31/1998	2300	Flash Flood	0	0	$0.00	$0.00
WAYNE CO.	COUNTYWIDE	6/1/1998	0	Flash Flood	0	0	$0.00	$0.00
ADAIR CO.	KNIFLEY	6/21/1998	600	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	YUMA	6/21/1998	600	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	NORTH PORTION	4/28/1999	1900	Flash Flood	0	0	$2,000.00	$0.00
MCCREARY CO.	WHITLEY CITY	6/27/2000	1900	Flood	0	0	$0.00	$0.00
CUMBERLAND CO.	BURKESVILLE	7/31/2000	2045	Flash Flood	0	0	$0.00	$0.00
GREEN CO.	GREENSBURG	6/4/2001	730	Flash Flood	0	0	$0.00	$0.00

ADAIR CO.	COLUMBIA	6/4/2001	830	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	SOMERSET	6/4/2001	1650	Flash Flood	0	0	$0.00	$0.00
MCCREARY CO.	STEARNS	6/21/2001	1832	Flash Flood	0	0	$0.00	$0.00
WAYNE CO.	MONTICELLO	6/26/2001	1800	Flash Flood	0	0	$0.00	$0.00
WAYNE CO.	MONTICELLO	7/28/2001	2005	Flash Flood	0	0	$0.00	$0.00
CLINTON CO.	COUNTYWIDE	7/29/2001	930	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	SOMERSET	7/29/2001	1000	Flash Flood	0	0	$0.00	$0.00
MCCREARY CO.	STEARNS	8/9/2001	1730	Flash Flood	0	0	$2,000.00	$0.00
WAYNE CO.	MONTICELLO	1/24/2002	640	Flash Flood	0	0	$0.00	$0.00
WAYNE CO.	MONTICELLO	1/24/2002	653	Flash Flood	0	0	$0.00	$0.00
MCCREARY CO.	STRUNK	1/24/2002	1200	Flash Flood	0	0	$0.00	$0.00
MCCREARY CO.	PINE KNOT	1/24/2002	1900	Flash Flood	0	0	$0.00	$0.00
WAYNE CO.	MONTICELLO	3/17/2002	600	Flood	0	0	$0.00	$0.00
MCCREARY CO.	STEARNS	3/17/2002	2030	Flash Flood	0	0	$10,000.00	$0.00
CLINTON CO.	COUNTYWIDE	3/17/2002	2120	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	SOMERSET	3/17/2002	2200	Flash Flood	0	0	$50,000.00	$0.00
WAYNE CO.	MONTICELLO	3/17/2002	2220	Flash Flood	0	0	$10,000.00	$0.00
GREEN CO.	COUNTYWIDE	3/20/2002	830	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	COUNTYWIDE	3/20/2002	830	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	COUNTYWIDE	5/2/2002	1600	Flash Flood	0	0	$0.00	$0.00
RUSSELL CO.	RUSSELL SPGS	5/17/2002	2122	Flash Flood	0	0	$25,000.00	$0.00
ADAIR CO.	COUNTYWIDE	5/17/2002	2145	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	SCIENCE HILL	5/17/2002	2230	Flash Flood	0	0	$0.00	$0.00
CASEY CO.	LIBERTY	6/4/2002	2300	Flash Flood	0	0	$0.00	$0.00
WAYNE (ZONE)		2/16/2003	900	Flood	0	0	$0.00	$0.00
PULASKI CO.	SCIENCE HILL	7/9/2003	1345	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	SOMERSET	7/16/2003	357	Flash Flood	0	0	$0.00	$0.00
WAYNE CO.	MONTICELLO	8/2/2003	505	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	SHOPVILLE	8/3/2003	830	Flash Flood	0	0	$0.00	$0.00

PULASKI CO.	SOMERSET	8/11/2003	1630	Flash Flood	0	0	$10,000.00	$0.00
WAYNE CO.	WAIT	8/31/2003	2230	Flash Flood	0	0	$0.00	$0.00
WAYNE CO.	COUNTYWIDE	9/1/2003	10	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	COUNTYWIDE	9/2/2003	1200	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	CAMPBELLSVILLE	1/2/2004	900	Flash Flood	0	0	$100,000.00	$0.00
PULASKI CO.	NANCY	1/2/2004	1120	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	COUNTYWIDE	2/5/2004	1430	Flash Flood	0	0	$0.00	$0.00
RUSSELL CO.	SALEM	2/5/2004	1530	Flash Flood	0	0	$0.00	$0.00
WAYNE CO.	COUNTYWIDE	2/5/2004	1530	Flash Flood	0	0	$0.00	$0.00
CUMBERLAND CO.	COUNTYWIDE	2/5/2004	1600	Flash Flood	0	0	$40,000.00	$0.00
CLINTON CO.	ALBANY	2/5/2004	1700	Flash Flood	0	0	$0.00	$0.00
MCCREARY CO.	COUNTYWIDE	2/5/2004	1709	Flash Flood	0	0	$0.00	$0.00
CASEY (ZONE)		2/5/2004	1800	Flood	0	0	$50,000.00	$0.00
MCCREARY (ZONE)		2/5/2004	1900	Flood	0	0	$0.00	$0.00
WAYNE (ZONE)		2/5/2004	1900	Flood	0	0	$0.00	$0.00
PULASKI (ZONE)		2/5/2004	1900	Flood	0	0	$0.00	$0.00
RUSSELL (ZONE)		2/5/2004	2100	Flood	0	0	$0.00	$0.00
CLINTON (ZONE)		2/5/2004	2100	Flood	0	0	$0.00	$0.00
CUMBERLAND (ZONE)		2/5/2004	2100	Flood	0	0	$0.00	$0.00
CUMBERLAND CO.	MARROWBONE	3/6/2004	10	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	SOMERSET	5/27/2004	100	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	SOMERSET	5/27/2004	200	Flash Flood	0	0	$0.00	$0.00
WAYNE CO.	MILL SPGS	6/4/2004	300	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	TATEVILLE	6/4/2004	315	Flash Flood	0	0	$100,000.00	$0.00
CUMBERLAND CO.	BURKESVILLE	7/31/2004	743	Flash Flood	0	0	$0.00	$0.00
CLINTON CO.	ALBANY	7/31/2004	818	Flash Flood	0	0	$0.00	$0.00
MCCREARY (ZONE)		9/17/2004	915	Flood	0	0	$0.00	$0.00
MCCREARY (ZONE)		9/18/2004	227	Flood	0	0	$0.00	$0.00

PULASKI (ZONE)		9/18/2004	227	Flood	0	0	$0.00	$0.00
PULASKI CO.	SOMERSET	12/7/2004	730	Flash Flood	0	0	$0.00	$0.00
PULASKI (ZONE)		1/7/2005	1030	Flood	0	0	$0.00	$0.00
CASEY CO.	COUNTYWIDE	1/22/2006	2324	Flash Flood	0	0	$0.00	$0.00
CUMBERLAND CO.	COUNTYWIDE	1/23/2006	35	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	CAMPBELLSVILLE	1/23/2006	47	Flash Flood	0	0	$0.00	$0.00
WAYNE CO.	MONTICELLO	1/23/2006	130	Flash Flood	0	0	$0.00	$0.00
GREEN CO.	COUNTYWIDE	1/23/2006	209	Flash Flood	0	0	$0.00	$0.00
ADAIR CO.	COUNTYWIDE	1/23/2006	233	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	COUNTYWIDE	5/25/2006	2326	Flash Flood	0	0	$0.00	$0.00
ADAIR CO.	COLUMBIA	6/25/2006	1806	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	SOMERSET	8/8/2006	1424	Flash Flood	0	0	$0.00	$0.00
RUSSELL CO.	COUNTYWIDE	8/10/2006	1744	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	FAUBUSH	8/10/2006	1758	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	SOMERSET	8/10/2006	1914	Flash Flood	0	0	$0.00	$0.00
MCCREARY CO.	WHITLEY CITY	8/29/2006	1637	Flash Flood	0	0	$0.00	$0.00
RUSSELL CO.	RUSSELL SPGS	8/29/2006	1710	Flood	0	0	$0.00	$0.00
GREEN CO.	SUMMERSVILLE	9/23/2006	1606	Flash Flood	0	0	$0.00	$0.00
WAYNE CO.	MONTICELLO	9/23/2006	1653	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	CAMPBELLSVILLE	7/27/2007	1645	Flash Flood	0	0	$0.00	$0.00
RUSSELL CO.	DALLO	1/10/2008	1646	Flash Flood	0	0	$0.00	$0.00
CASEY CO.	BEECH BOTTOM	2/6/2008	423	Flood	0	0	$0.00	$0.00
CLINTON CO.	ALBANY	6/1/2008	1553	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	CAMPBELLSVILLE	5/8/2009	1631	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	LORAIN	5/8/2009	1750	Flash Flood	0	0	$0.00	$0.00
ADAIR CO.	COLUMBIA	5/9/2009	659	Flash Flood	0	0	$0.00	$0.00
MCCREARY CO.	REVELO	6/11/2009	600	Flood	0	0	$0.00	$0.00
TAYLOR CO.	SPECK	6/26/2009	1549	Flash Flood	0	0	$0.00	$0.00
ADAIR CO.	COBURG	6/26/2009	1600	Flash Flood	0	0	$0.00	$0.00

TAYLOR CO.	ATCHISON	6/26/2009	1645	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	MANNSVILLE	6/26/2009	1645	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	MANNSVILLE	7/31/2009	421	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	HATCHER	7/31/2009	556	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	DABNEY	9/26/2009	515	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	RINGGOLD	9/26/2009	515	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	SHAFTER	9/26/2009	525	Flash Flood	0	0	$0.00	$0.00
ADAIR CO.	BREEDING	12/8/2009	1500	Flood	1	0	$10,000.00	$0.00
TAYLOR CO.	LORAIN	5/2/2010	413	Flash Flood	0	0	$5,000.00	$0.00
ADAIR CO.	COLUMBIA	5/2/2010	900	Flash Flood	0	0	$100,000.00	$0.00
GREEN CO.	HASKINGSVILLE	5/2/2010	953	Flash Flood	0	0	$0.00	$0.00
CUMBERLAND CO.	MARROWBONE	5/2/2010	953	Flood	0	0	$0.00	$0.00
RUSSELL CO.	ESTO	5/2/2010	1000	Flash Flood	0	0	$100,000.00	$0.00
CLINTON CO.	WAGO	5/2/2010	1100	Flash Flood	0	0	$100,000.00	$0.00
CUMBERLAND CO.	BURKESVILLE	5/2/2010	1100	Flash Flood	0	0	$100,000.00	$0.00
TAYLOR CO.	CAMPBELLSVILLE	5/2/2010	1231	Flash Flood	0	0	$20,000.00	$0.00
CASEY CO.	KIDDS STORE	5/2/2010	1250	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	OAK HILL	5/2/2010	1300	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	DELMER	5/2/2010	1300	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	EUBANK	5/2/2010	1330	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	ELK HORN	5/2/2010	1357	Flash Flood	0	0	$20,000.00	$0.00
PULASKI CO.	SCIENCE HILL	5/2/2010	1430	Flood	0	0	$0.00	$0.00
CASEY CO.	LIBERTY	5/2/2010	1509	Flood	0	0	$0.00	$0.00
CASEY CO.	LIBERTY	5/2/2010	1747	Flood	0	0	$0.00	$0.00
PULASKI CO.	BEE LICK	5/3/2010	230	Flash Flood	0	0	$0.00	$0.00
WAYNE CO.	MONTICELLO	7/16/2010	1400	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	RINGGOLD	8/14/2010	1900	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	RINGGOLD	9/11/2010	130	Flood	0	0	$0.00	$0.00
PULASKI CO.	WEST	9/11/2010	130	Flood	0	0	$0.00	$0.00

	SOMERSET							
PULASKI CO.	TATEVILLE	9/11/2010	130	Flood	0	0	$0.00	$0.00
PULASKI CO.	SARDIS	9/11/2010	515	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	BURNETTA	9/11/2010	830	Flash Flood	0	0	$0.00	$0.00
MCCREARY CO.	EXODUS	11/30/2010	1045	Flood	0	0	$0.00	$0.00
MCCREARY CO.	HONEYBEE	11/30/2010	1045	Flood	0	0	$1,000.00	$1,000.00
MCCREARY CO.	PINE KNOT	11/30/2010	1700	Flash Flood	0	0	$1,000.00	$1,000.00
MCCREARY CO.	STEARNS	11/30/2010	1700	Flood	0	0	$1,000.00	$1,000.00
MCCREARY CO.	HOLLYHILL	11/30/2010	1700	Flood	0	0	$1,000.00	$1,000.00
MCCREARY CO.	WHITLEY CITY	11/30/2010	1800	Flash Flood	0	0	$1,000.00	$1,000.00
WAYNE CO.	MONTICELLO WAYNE ARP	2/24/2011	1000	Flood	0	0	$0.00	$0.00
RUSSELL CO.	MIDDLETOWN	2/25/2011	30	Flash Flood	0	0	$0.00	$0.00
RUSSELL CO.	DALLO	2/25/2011	30	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	CAMPBELLSVILLE ARPT	2/25/2011	133	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	SPURLINGTON	2/25/2011	133	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	MANGUM	2/28/2011	700	Flood	0	0	$0.00	$0.00
MCCREARY CO.	BELL FARM	4/27/2011	2105	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	CAMPBELLSVILLE ARPT	5/3/2011	935	Flood	0	0	$0.00	$0.00
PULASKI CO.	SOMERSET	6/19/2011	700	Flood	0	0	$0.00	$0.00
PULASKI CO.	SHAFTER	11/28/2011	1200	Flood	0	0	$0.00	$0.00
RUSSELL CO.	JAMESTOWN	11/28/2011	1833	Flood	0	0	$0.00	$0.00
GREEN CO.	GREENSBURG	2/29/2012	1255	Flash Flood	0	0	$0.00	$0.00
MCCREARY CO.	PINE KNOT	4/3/2012	1908	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	BOURBON	9/17/2012	2245	Flash Flood	0	0	$0.00	$0.00
ADAIR CO.	COLUMBIA	3/18/2013	844	Flood	0	0	$0.00	$0.00
ADAIR CO.	FLATWOOD	3/18/2013	1019	Flood	0	0	$0.00	$0.00

CASEY CO.	DUNNVILLE	3/18/2013	1031	Flood	0	0	$0.00	$0.00
CASEY CO.	PUMPKIN CHAPEL	3/18/2013	1032	Flood	0	0	$0.00	$0.00
CASEY CO.	BUTCHERTOWN	6/17/2013	1850	Flash Flood	0	0	$10,000.00	$0.00
GREEN CO.	EXIE	7/1/2013	1426	Flash Flood	0	0	$0.00	$0.00
GREEN CO.	ROLLINGBURG	7/1/2013	1518	Flash Flood	0	0	$0.00	$0.00
TAYLOR CO.	ARISTA	7/4/2013	1422	Flood	0	0	$0.00	$0.00
TAYLOR CO.	ACTON	7/4/2013	1554	Flood	0	0	$0.00	$0.00
GREEN CO.	GRESHAM	7/5/2013	1851	Flood	0	0	$0.00	$0.00
TAYLOR CO.	CAMPBELLSVILLE	7/5/2013	1953	Flash Flood	0	0	$0.00	$0.00
MCCREARY CO.	CREEKMORE	7/9/2013	1720	Flash Flood	0	0	$1,000.00	$0.00
MCCREARY CO.	SWAIN	7/9/2013	1720	Flash Flood	0	0	$1,000.00	$1,000.00
MCCREARY CO.	SWAIN	7/9/2013	1830	Flash Flood	0	0	$1,000.00	$1,000.00
TAYLOR CO.	CAMPBELLSVILLE	7/10/2013	1427	Flood	0	0	$0.00	$0.00
MCCREARY CO.	CREEKMORE	8/10/2013	1217	Flash Flood	0	0	$1,000.00	$1,000.00
WAYNE CO.	MONTICELLO	8/12/2013	2350	Flash Flood	0	0	$1,000.00	$0.00
PULASKI CO.	SOMERSET	8/31/2013	1910	Flood	0	0	$1,000.00	$0.00
WAYNE CO.	SLAT	9/1/2013	505	Flood	0	0	$1,000.00	$0.00
TAYLOR CO.	ACTON	4/3/2014	1727	Flood	0	0	$0.00	$0.00
PULASKI CO.	OAK HILL	4/30/2014	714	Flood	0	0	$0.00	$0.00
PULASKI CO.	PULASKI	7/14/2014	2119	Flash Flood	0	0	$1,000.00	$0.00
WAYNE CO.	MONTICELLO WAYNE ARP	8/20/2014	1745	Flash Flood	0	0	$1,000.00	$0.00
PULASKI CO.	RINGGOLD	2/21/2015	1448	Flood	0	0	$1,000.00	$0.00
MCCREARY CO.	HOLLYHILL	3/4/2015	2030	Flood	0	0	$1,000.00	$0.00
TAYLOR CO.	CAMPBELLSVILLE	4/14/2015	645	Flood	0	0	$0.00	$0.00
ADAIR CO.	COLUMBIA	4/14/2015	646	Flood	0	0	$0.00	$0.00
PULASKI CO.	COIN	4/14/2015	937	Flood	0	0	$1,000.00	$0.00
PULASKI CO.	DABNEY	4/14/2015	1142	Flood	0	0	$1,000.00	$0.00

PULASKI CO.	FAUBUSH	7/1/2015	1915	Flash Flood	0	0	$1,000.00	$0.00
PULASKI CO.	BOURBON	7/1/2015	2015	Flash Flood	0	0	$5,000.00	$0.00
ADAIR CO.	COLUMBIA	7/3/2015	1010	Flood	0	0	$0.00	$0.00
TAYLOR CO.	CAMPBELLSVILLE	7/3/2015	1050	Flash Flood	0	0	$0.00	$0.00
PULASKI CO.	ACORN	7/4/2015	2350	Flash Flood	0	0	$1,000.00	$0.00
WAYNE CO.	OIL VLY	7/14/2015	1130	Flash Flood	0	0	$1,000.00	$0.00
PULASKI CO.	SOMERSET	7/14/2015	1954	Flash Flood	0	0	$1,000.00	$0.00
MCCREARY CO.	GILREATH	7/14/2015	2200	Flash Flood	0	0	$1,000.00	$0.00
ADAIR CO.	COLUMBIA	12/25/2015	940	Flood	0	0	$0.00	$0.00
ADAIR CO.	MC GAHA	12/25/2015	940	Flood	0	0	$0.00	$0.00
PULASKI CO.	DABNEY	12/25/2015	1104	Flood	0	0	$1,000.00	$0.00
PULASKI CO.	DABNEY	12/25/2015	1104	Flood	0	0	$1,000.00	$0.00
MCCREARY CO.	HOLLYHILL	12/25/2015	1203	Flood	0	0	$1,000.00	$0.00
WAYNE CO.	BARRIER	12/25/2015	1400	Flood	0	0	$1,000.00	$0.00
LAKE CUMBERLAND REGION TOTALS					**1**	**0**	**$2,204,000.00**	**$3,508,000.00**

21

[21] NOAA Storm Events Database; http://www.ncdc.noaa.gov/stormevents/

Map 4.1.1(3) Lake Cumberland Region Flood Loss Data Summary

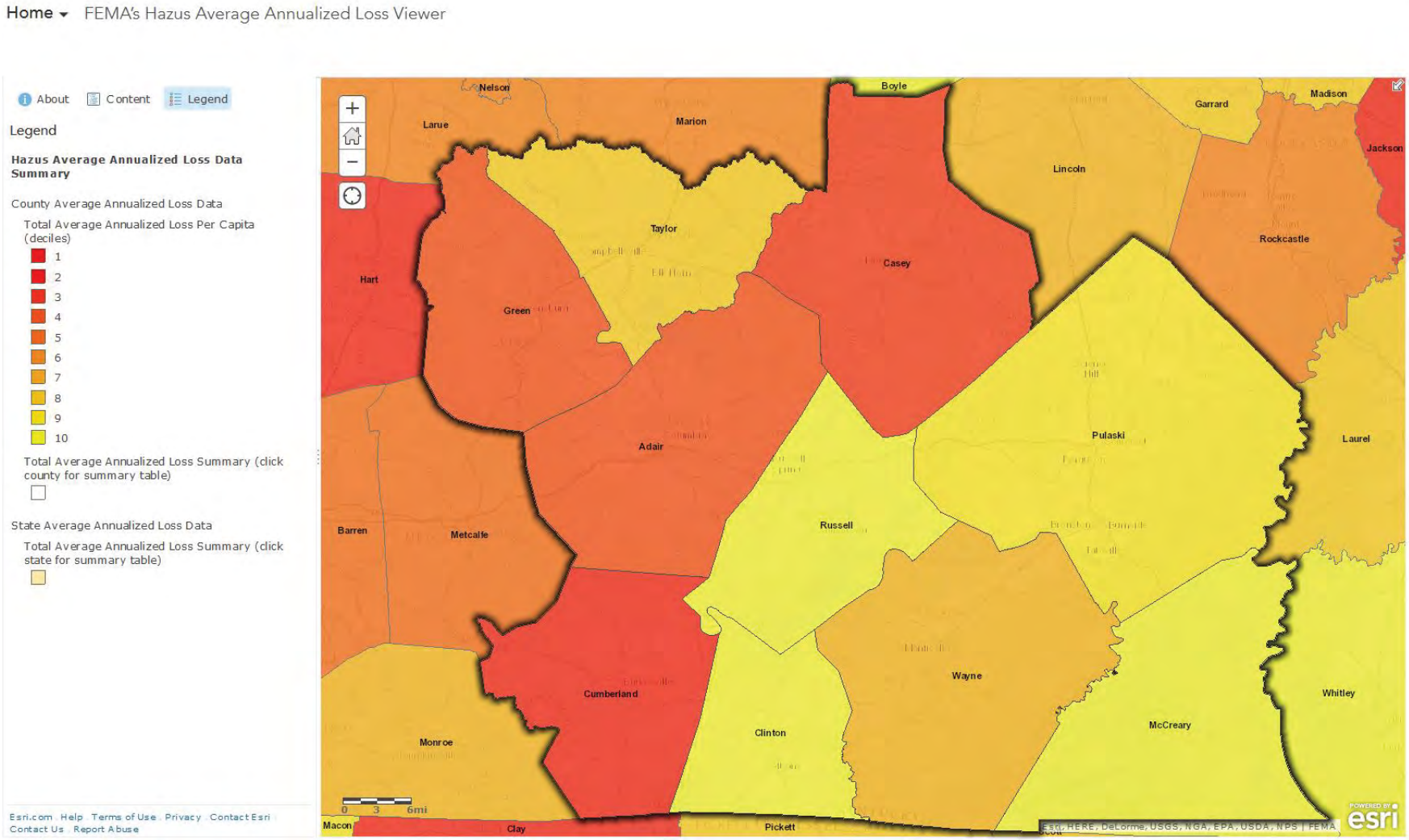


Table 4.1(3) the Lake Cumberland Region Flood Loss Data Summary

Total Average Annualized Loss Summary (click state for summary table): Kentucky	
State Name	Kentucky
FEMA Region	IV
Population (2010)	4,339,367
Total Average Annualized Loss ($)	563,709,000
Total Average Annualized Loss Per Capita ($)	130
Total Average Annualized by Deciles	5
Total Average Annualized Loss Per Capita by Deciles	6

Total Average Annualized Loss Summary: Cumberland	
County Name	Cumberland
Population	6,856
FEMA Region	IV
Total Average Annualized Loss ($)	5,283,000
Total Average Annualized Loss Per Capita ($)	771
Total Average Annualized Loss by Deciles	4

Total Average Annualized Loss Summary: Adair	
County Name	**Adair**
Population	18,656
FEMA Region	IV
Total Average Annualized Loss ($)	2,735,000
Total Average Annualized Loss Per Capita ($)	147
Total Average Annualized Loss by Deciles	5

Total Average Annualized Loss Summary: Green	
County Name	Green
Population	11,258
FEMA Region	IV
Total Average Annualized Loss ($)	2,012,000
Total Average Annualized Loss Per Capita ($)	179
Total Average Annualized Loss by Deciles	6

Total Average Annualized Loss Summary: Casey	
County Name	Casey
Population	15,955
FEMA Region	IV
Total Average Annualized Loss ($)	3,892,000
Total Average Annualized Loss Per Capita ($)	244
Total Average Annualized Loss by Deciles	5

Total Average Annualized Loss Summary: McCreary	
County Name	McCreary
Population	18,306
FEMA Region	IV
Total Average Annualized Loss ($)	233,000
Total Average Annualized Loss Per Capita ($)	13
Total Average Annualized Loss by Deciles	10

Total Average Annualized Loss Summary: Clinton	
County Name	Clinton
Population	10,272
FEMA Region	IV
Total Average Annualized Loss ($)	98,000
Total Average Annualized Loss Per Capita ($)	10
Total Average Annualized Loss by Deciles	10

Total Average Annualized Loss Summary: Pulaski	
County Name	Pulaski
Population	63,063
FEMA Region	IV
Total Average Annualized Loss ($)	2,063,000
Total Average Annualized Loss Per Capita ($)	33
Total Average Annualized Loss by Deciles	6

Total Average Annualized Loss Summary: Russell	
County Name	Russell
Population	17,565
FEMA Region	IV
Total Average Annualized Loss ($)	149,000
Total Average Annualized Loss Per Capita ($)	8
Total Average Annualized Loss by Deciles	10

Total Average Annualized Loss Summary: Wayne	
County Name	Wayne
Population	20,813
FEMA Region	IV
Total Average Annualized Loss ($)	1,223,000
Total Average Annualized Loss Per Capita ($)	59
Total Average Annualized Loss by Deciles	7

Total Average Annualized Loss Summary: Taylor	
County Name	Taylor
Population	24,512
FEMA Region	IV
Total Average Annualized Loss ($)	1,348,000
Total Average Annualized Loss Per Capita ($)	55
Total Average Annualized Loss by Deciles	7

22

[22] FEMA's Hazus Average Annualized Loss Viewer; Retrieved 3/8/2016, from http://fema.maps.arcgis.com/home/webmap/viewer.html?webmap=cb8228309e9d405ca6b4db6027df36d9

Repetitive Loss Properties

Presently, one of FEMA's highest priorities is to break the cycle of repetitive losses on structures insured by the National Flood Insurance Program (NFIP). Through hazard mitigation planning, FEMA is strongly encouraging local communities to mitigate repetitive loss properties. When the term "repetitive loss" is used, FEMA defines it as those properties insured by the National Flood Insurance Program (NFIP) that have experienced at least 2 paid losses of more than $1,000 each in any 10-year period. At the national level, FEMA has identified over 10,000 high priority repetitive loss properties, out of a total of about 48,000 such properties.

A review of data on Repetitive Loss Properties in Kentucky, provided by the Kentucky Department of Emergency Management, showed one property, listed in Pulaski County as Severe Repetitive Loss, for the LCADD region. The following table shows the current jurisdictions participating in the National Flood Insurance Program.

Table 4.1(4)

FEMA Community Status Book Report Communities Participating in the National Flood Program							
CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Effective Map Date	Reg-Emer Date	Tribal
210333#	ADAIR COUNTY *	ADAIR COUNTY		12/17/2010	12/17/2010	12/17/2010	No
210434#	COLUMBIA, CITY OF	ADAIR COUNTY		12/17/2010	12/17/10(M)	12/17/2010	No
210054#	LIBERTY, CITY OF	CASEY COUNTY	05/24/74	07/03/86	07/07/09	07/03/86	No
210059#	ALBANY, CITY OF	CLINTON COUNTY	05/10/74	02/27/76	07/22/10(M)	06/17/86	No
210327#	CLINTON COUNTY *	CLINTON COUNTY	07/15/77	08/19/86	07/22/10	08/19/86	No
210061#	BURKESVILLE, CITY OF	CUMBERLAND CO.	02/15/74	07/03/86	07/03/86(M)	07/03/86	No
210283#	GREEN COUNTY*	GREEN COUNTY		05/03/10	05/03/10(M)	05/03/10	No
210086#	GREENSBURG, CITY OF	GREEN COUNTY	01/25/74	05/03/10	05/03/10(M)	05/15/86	No
210343#	MCCREARY COUNTY *	MCCREARY COUNTY	11/25/1977	09/02/09	09/02/09	09/02/09	No
210197#	PULASKI COUNTY *	PULASKI COUNTY	07/22/77	07/16/90	07/22/10	07/16/90	No
210199#	SOMERSET, CITY OF	PULASKI COUNTY	05/24/74	09/04/85	07/22/10(M)	09/04/85	No
210206#	JAMESTOWN, CITY OF	RUSSELL COUNTY	05/10/74	06/25/76	08/19/10	06/25/76	No
210205#	RUSSELL COUNTY *	RUSSELL COUNTY	07/15/77	09/28/90	08/19/10	12/12/2007	No
210213	CAMPBELLSVILLE, CITY OF	TAYLOR COUNTY	05/24/74	08/05/86	08/05/86(M)	08/05/86	No
210212#	TAYLOR COUNTY *	TAYLOR COUNTY	10/18/1974	02/06/91	02/06/91	02/06/91	No
210221#	MONTICELLO, CITY OF	WAYNE COUNTY	05/24/74	09/18/85	09/02/09	09/18/85	No
210348#	WAYNE COUNTY *	WAYNE COUNTY	01/06/78	09/18/85	09/02/09	09/18/85	No
Communities Not in the National Flood Program							
210053#	CASEY COUNTY *	CASEY COUNTY	12/13/1974	07/07/09	07/07/09	12/13/1975	No
210426#	BURNSIDE, CITY OF	PULASKI COUNTY		07/22/10	07/22/10	07/22/11	No
210470#	FERGUSON, CITY OF	PULASKI COUNTY		07/22/10	07/22/10	07/22/11	No
210429#	RUSSELL SPRINGS, CITY OF	RUSSELL COUNTY		08/19/10	08/19/10	08/19/11	No

[23] The National Flood Insurance Program Community Status Book; https://www.fema.gov/cis/KY.html

Risk Assessment – Flooding

Overall Process & Vulnerability Summary

Each city/county examined available data and determined that Flooding does affect the LCADD region. The LCHMRPC completed a hazard profile as outlined in Table 4.1(4). During the hazard profile subcommittees provided individual knowledge of local flood prone areas for each county/city if they exist. Additional information was researched through local newspaper archives where available to supplement subcommittee knowledge. This information was then used to develop hazard ratings.

The Lake Cumberland Hazard Mitigation Regional Planning Committee (LCHMRPC) completed an analysis of historical flooding events and a review of the individual knowledge presented by committee members. Additionally the group reviewed the National Flood Insurance Program data provided. The Committee identified areas of each city/county that regularly had flood events. These were relatively few in number and flood loss figures for structures or locations could not be assigned specifically for a loss event(s). The analysis clearly demonstrate that flooding hazards for the region are primary the result of flash floods. Flash Floods in turn cause flooding of roadways and localized drainage flooding problems, and affect nearly every community in the region. However the impact, on the region, in injuries/deaths appears to be limited to vehicles crossing flooded roadways or similar events from Flash Flooding. Property damage, or economic loss is not well documented and no accurate conclusions can be made for the limited data. It was the consensus of the Committee that most losses were to roadway or other infrastructure. Mitigation efforts will be directed toward identifying and correcting causes of roadway flooding, improving participation in the National Flood Insurance Program, improvement of data to identify flood prone areas and education of citizens prior to locating within a flood plain or flood prone area. It was the consensus of Committee members that final approved flood mapping (where none is available) is needed for DFIRM pending counties in the Lake Cumberland Region.

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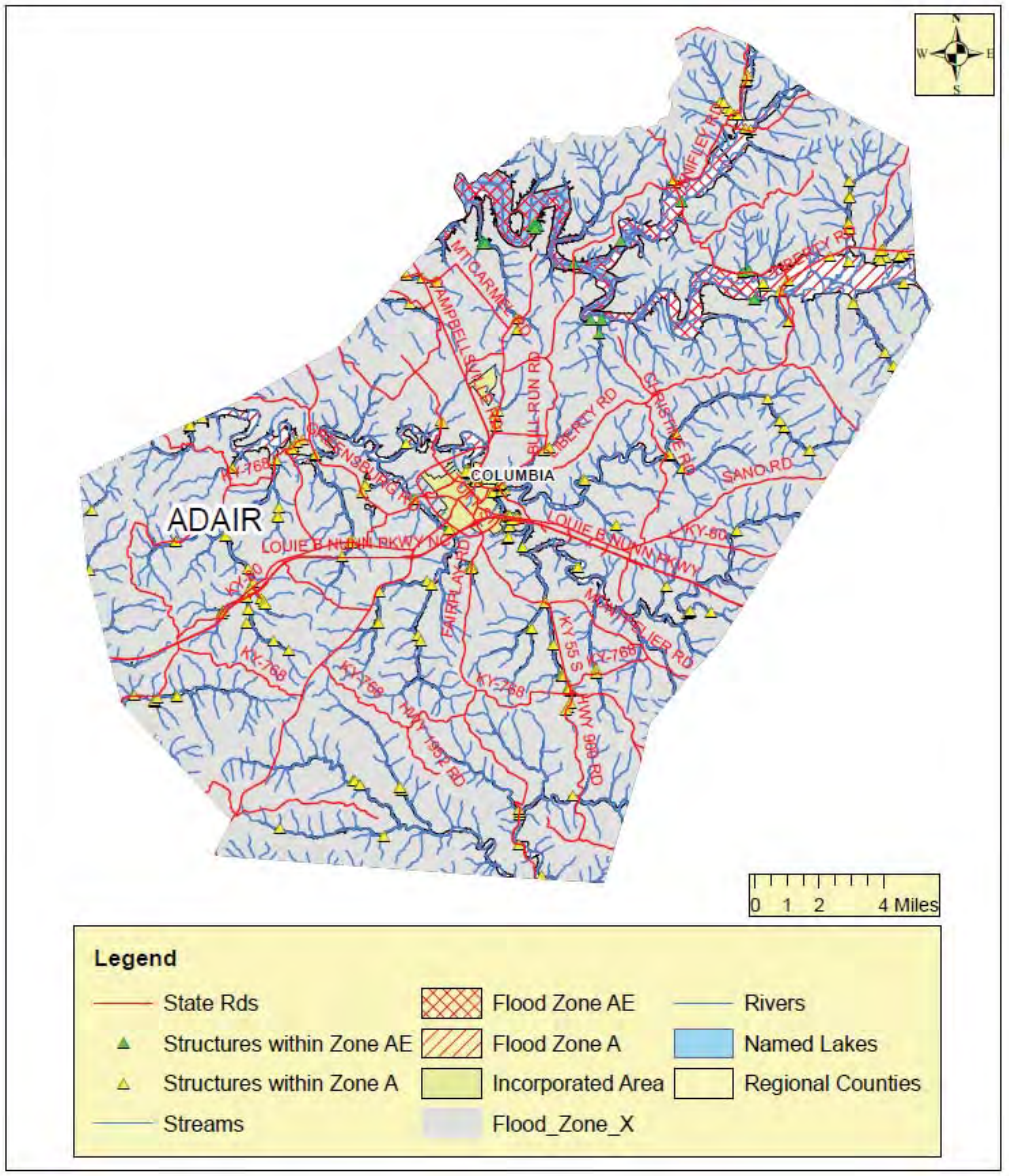
Map 4.1.1(3a)
LCADD Region
Adair County
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

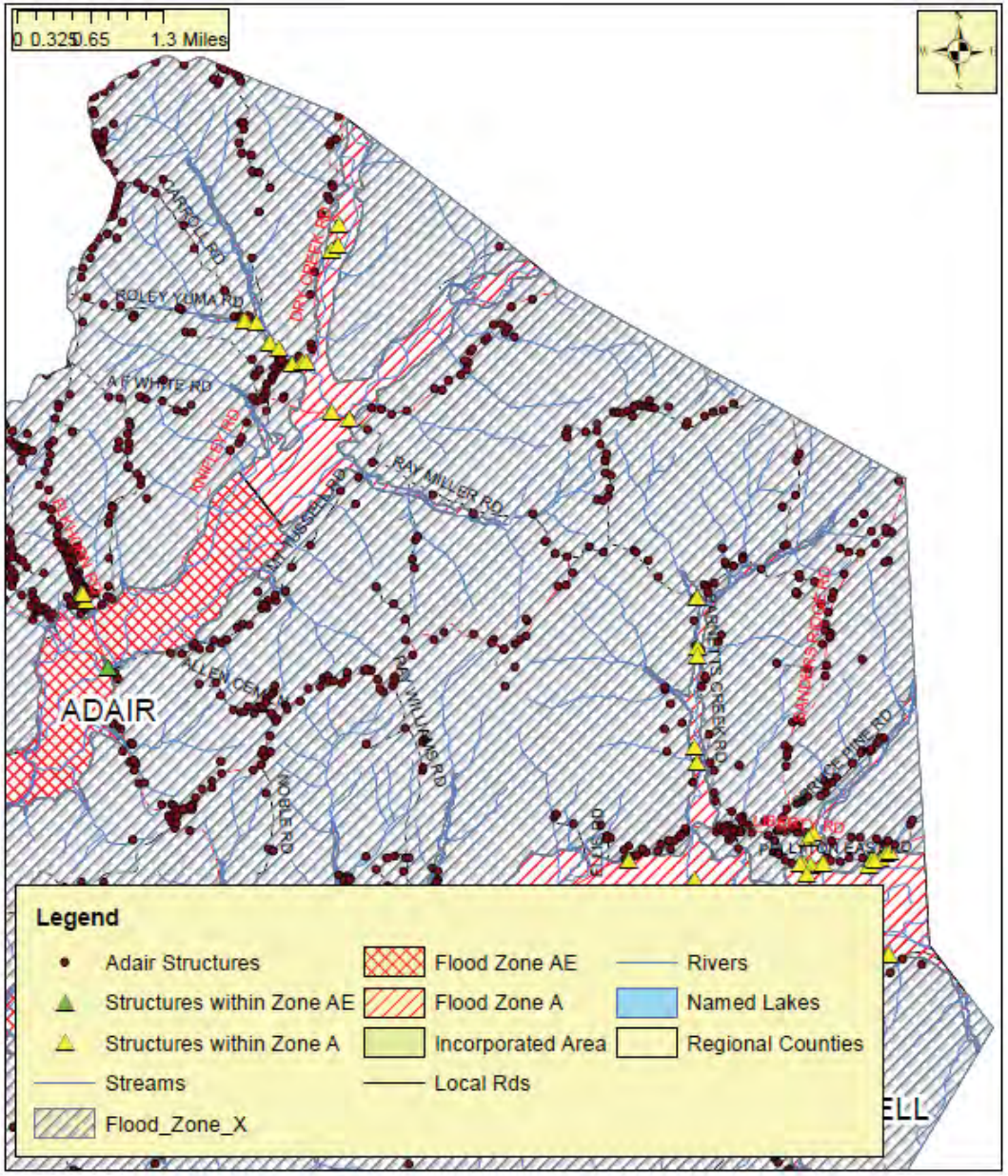
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(3b)
LCADD Region
Adair County (NE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

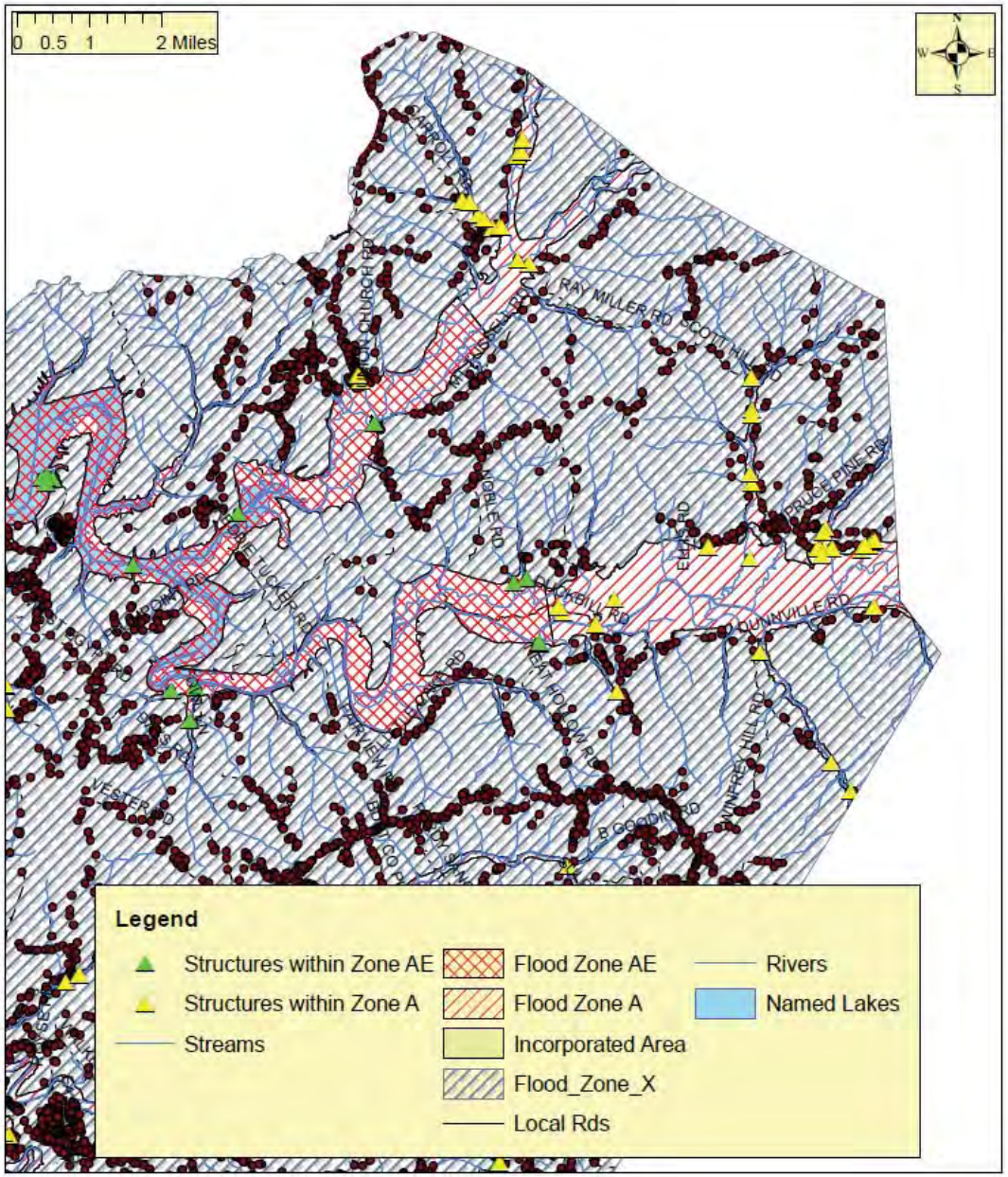
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(3b)
LCADD Region
Adair County (NE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

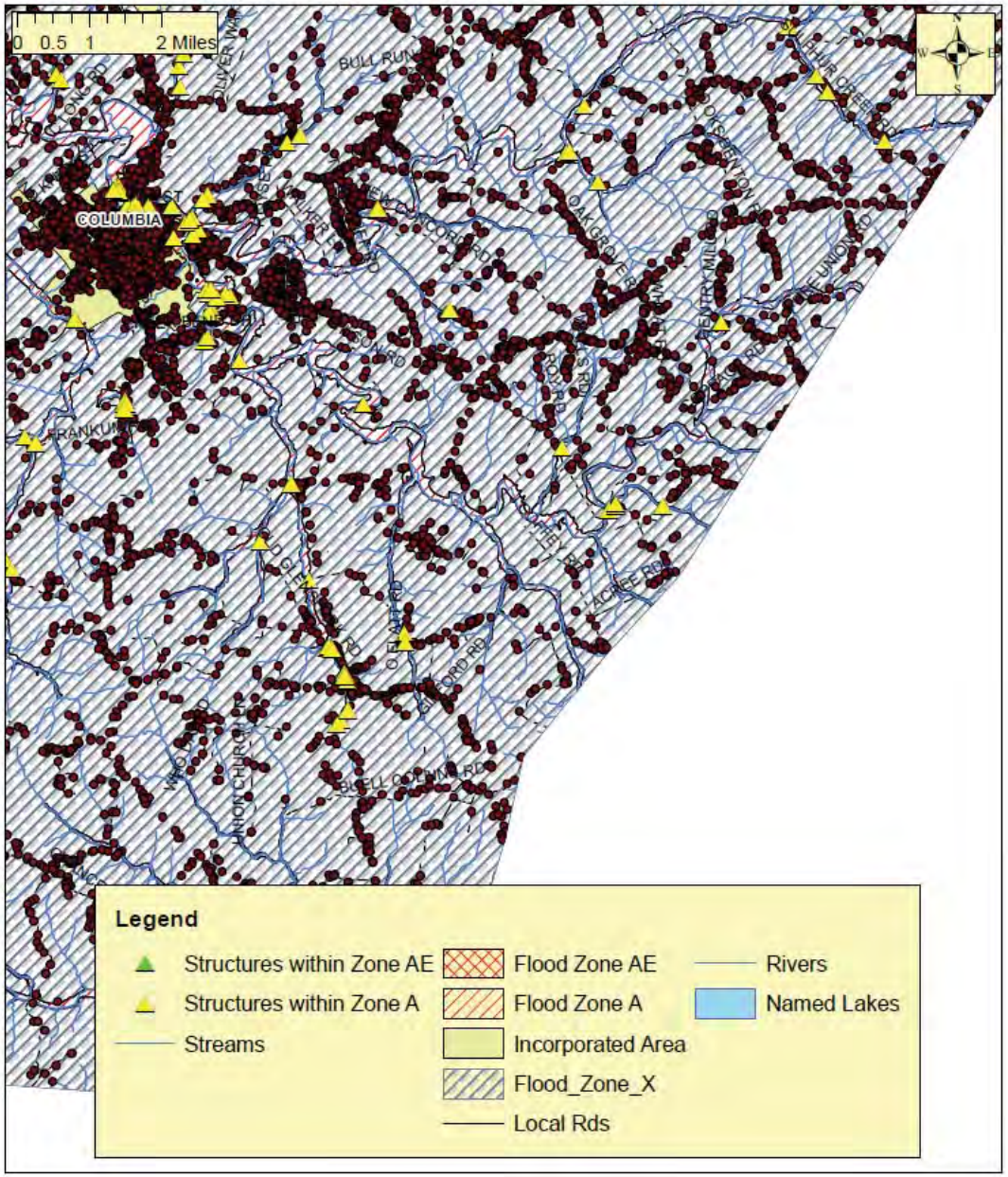
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(3c)
LCADD Region
Adair County (SE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

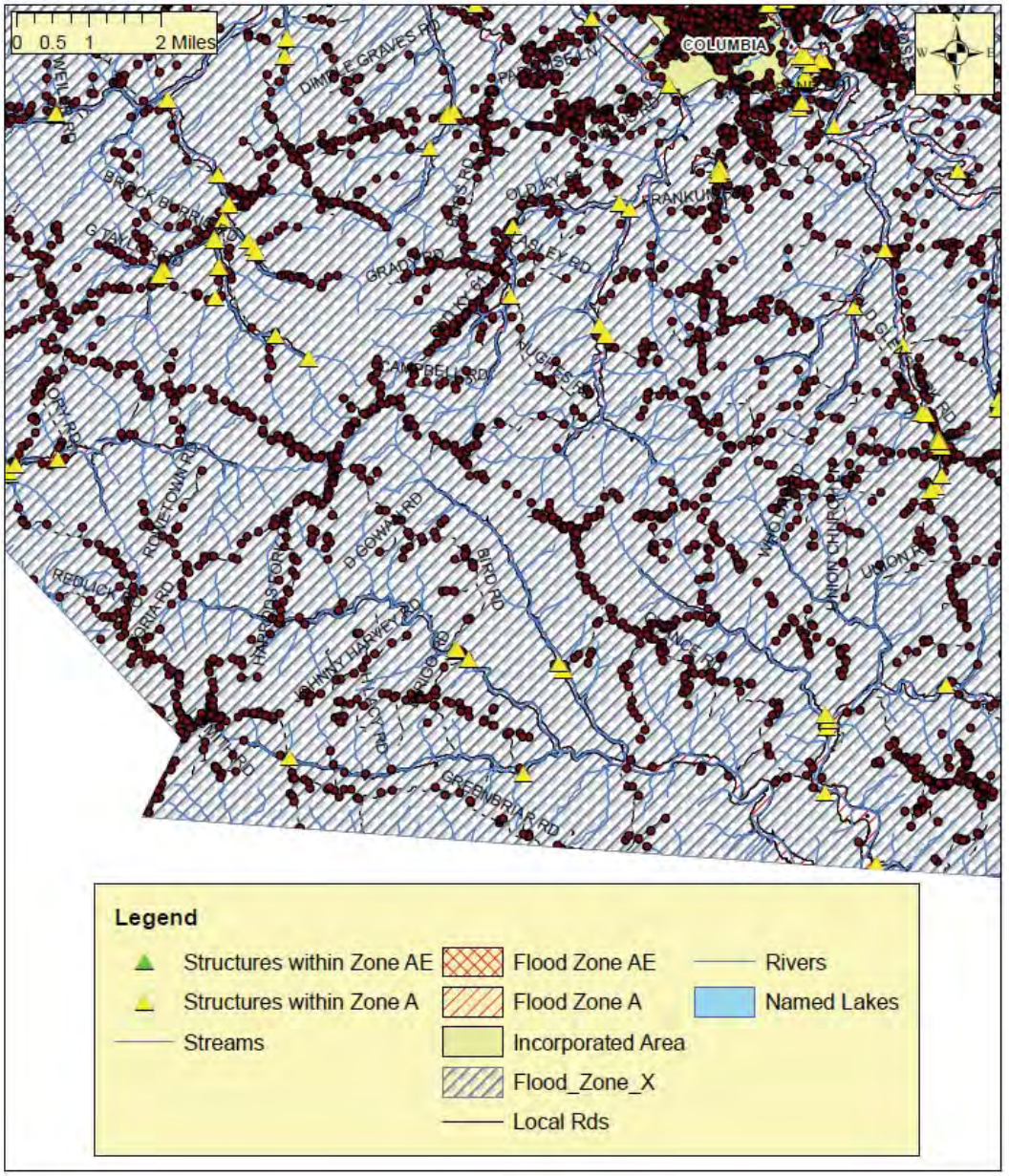
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(3d)
LCADD Region
Adair County (SW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

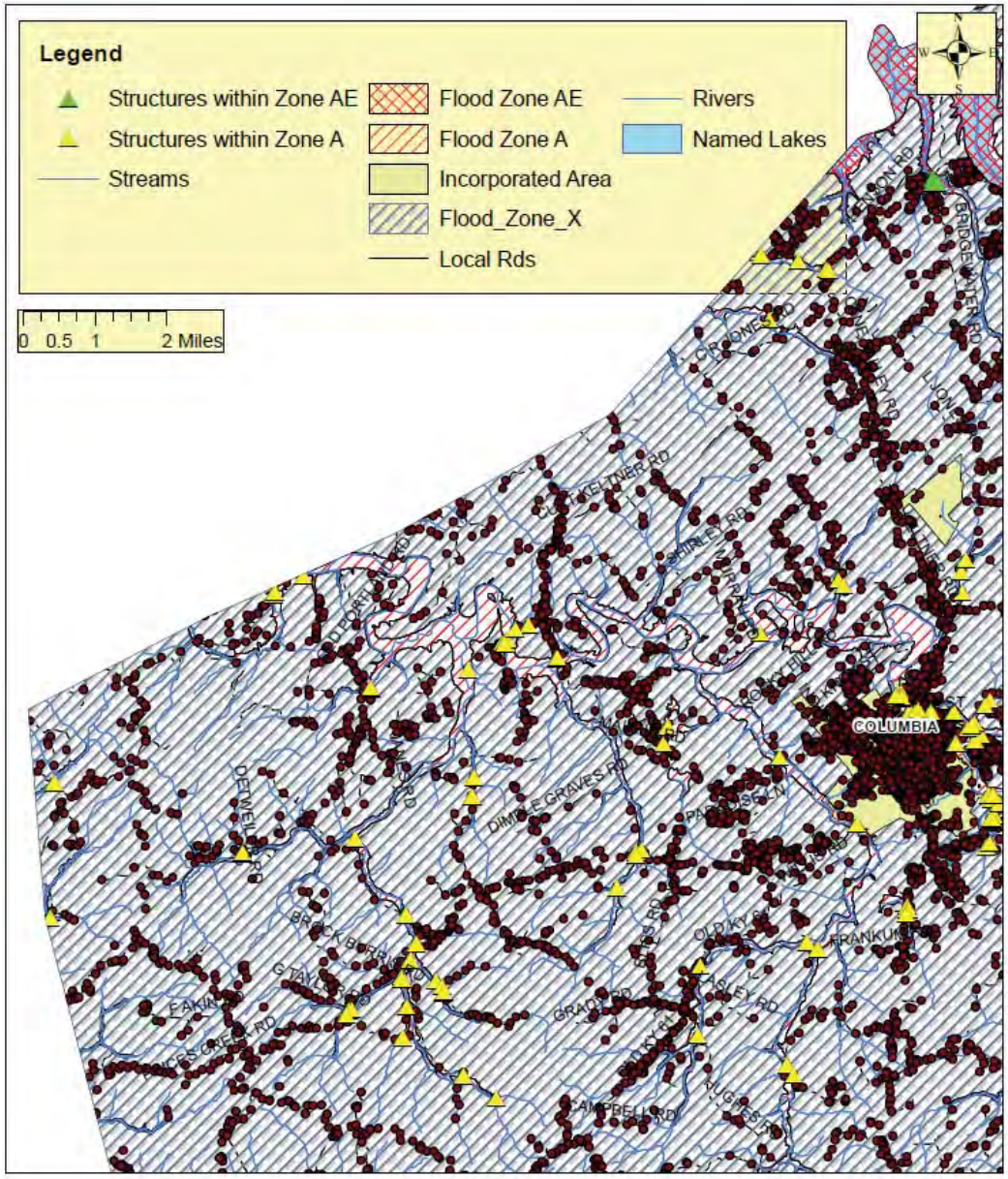
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(3e)
LCADD Region
Adair County (NW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

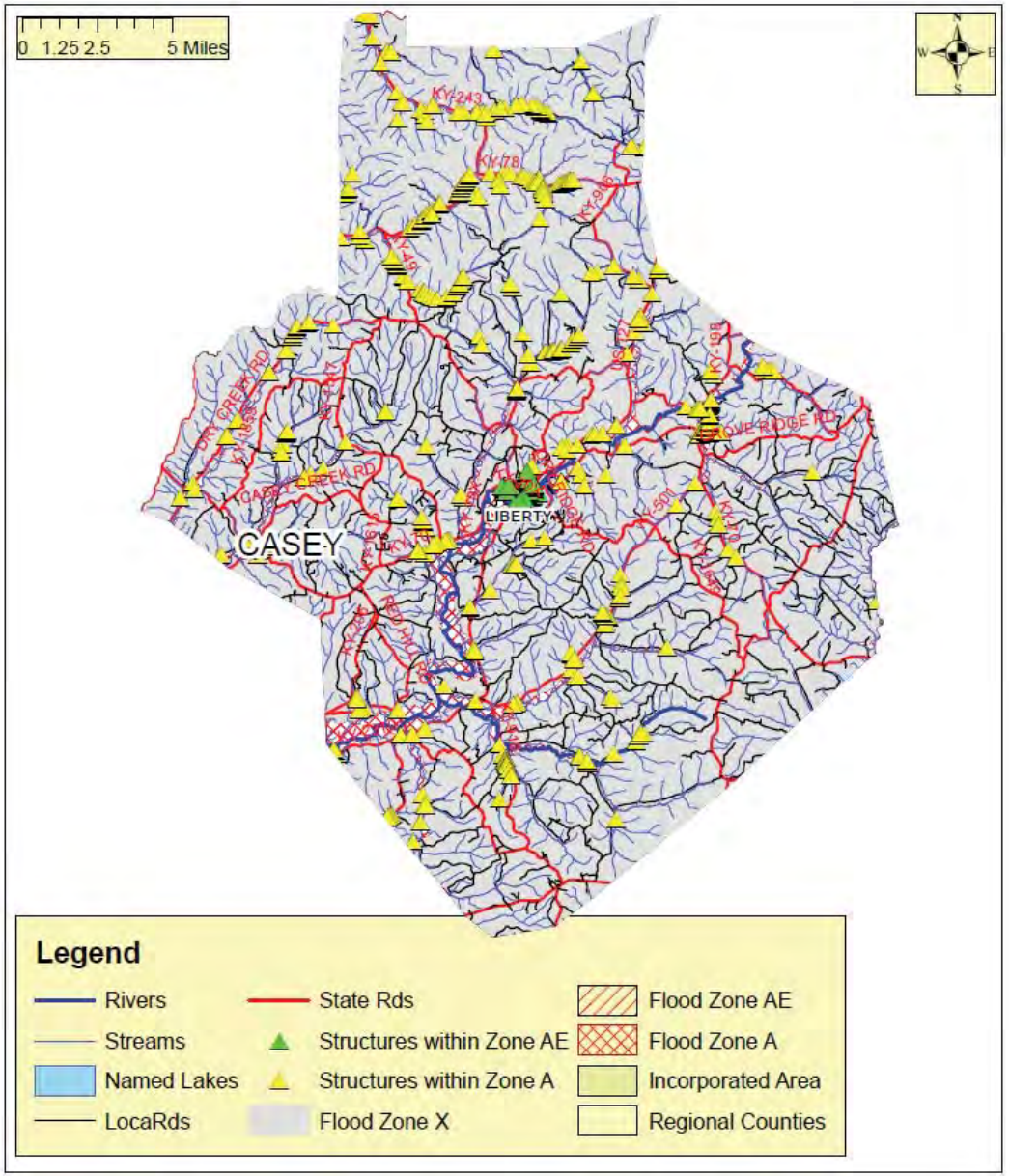
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(4a)
LCADD Region
Casey County
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

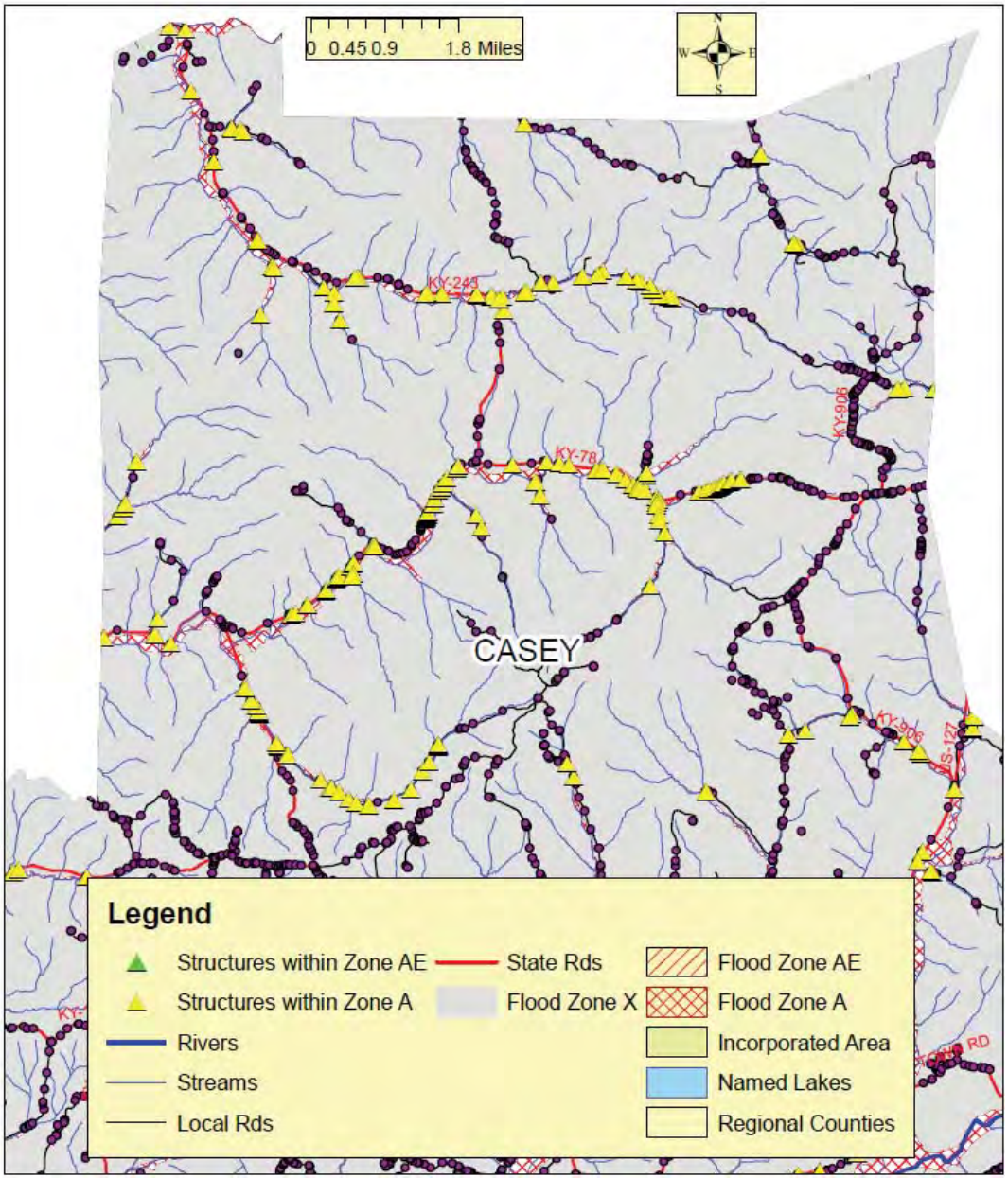
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(4b)
LCADD Region
Casey County (NC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

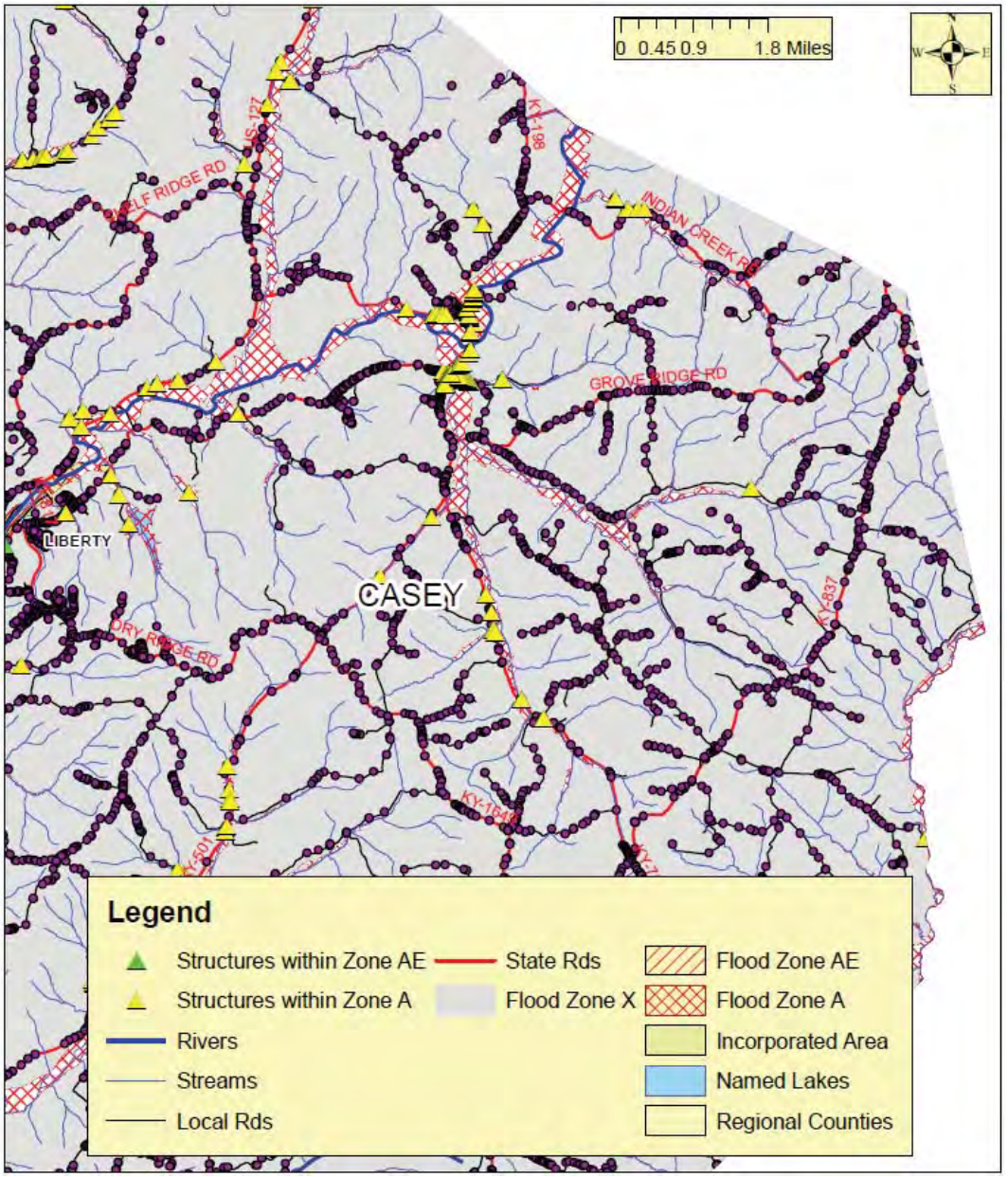
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(4c)
LCADD Region
Casey County (EC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

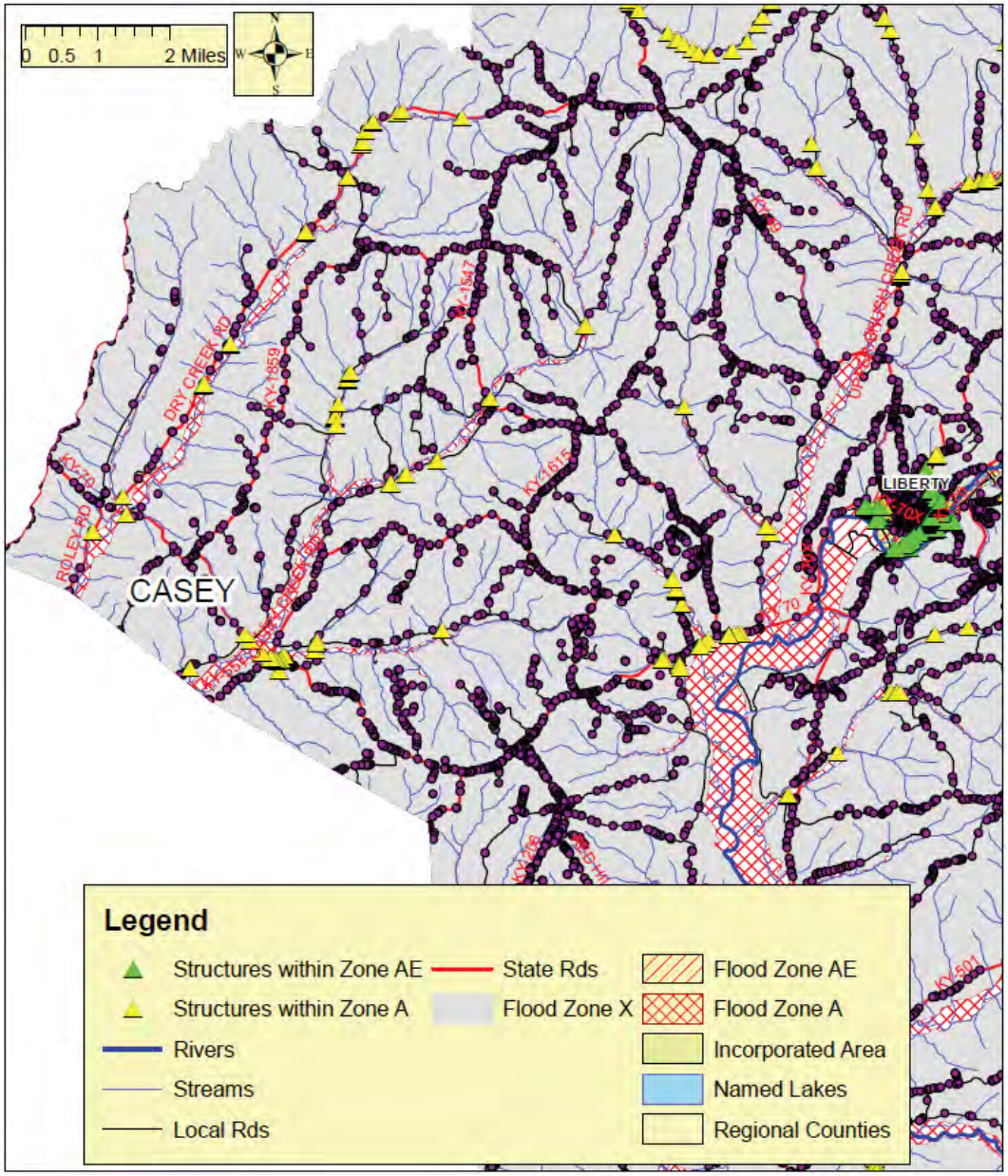
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(4d)
LCADD Region
Casey County (WC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

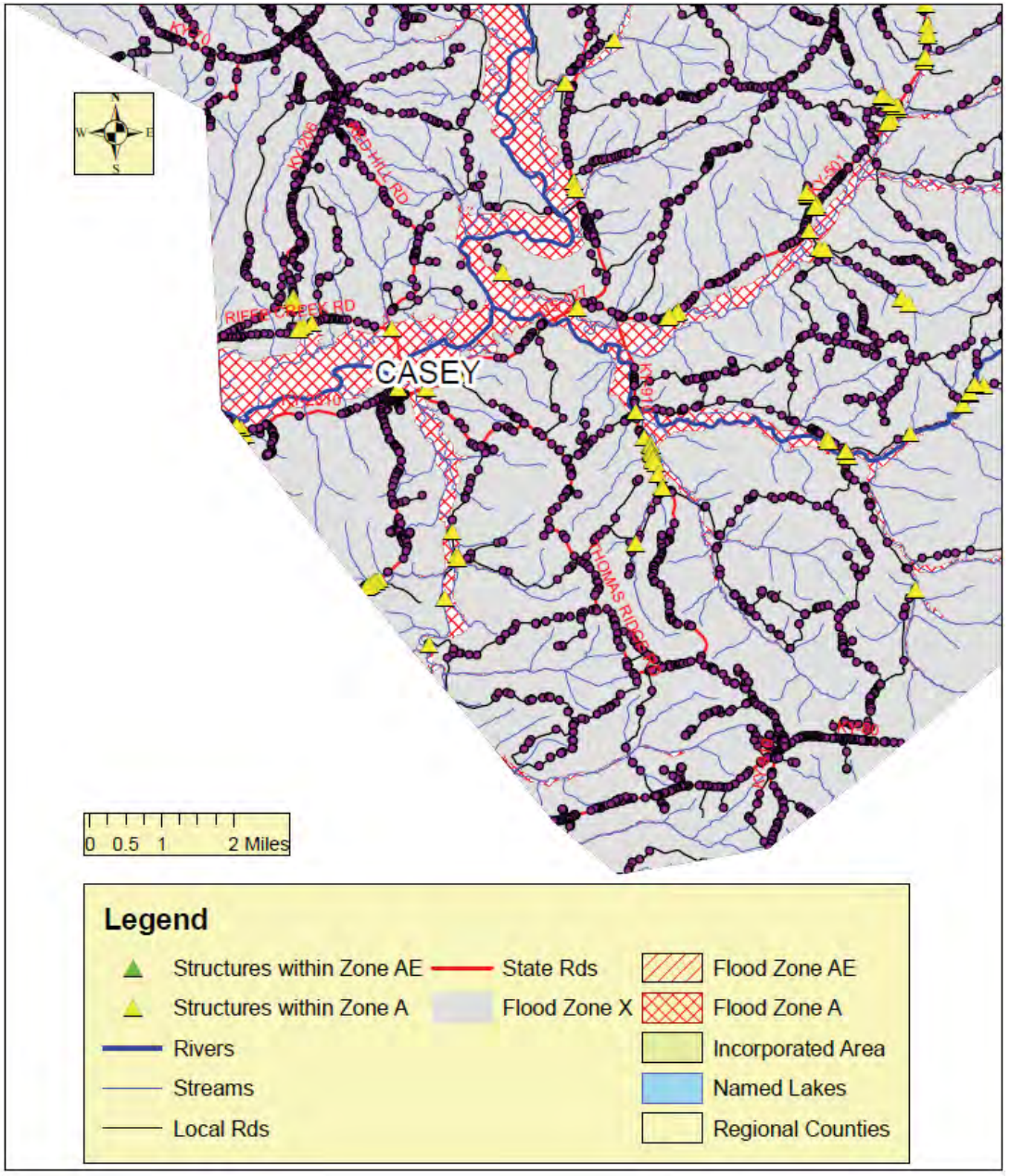
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(4e)
LCADD Region
Casey County (SW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

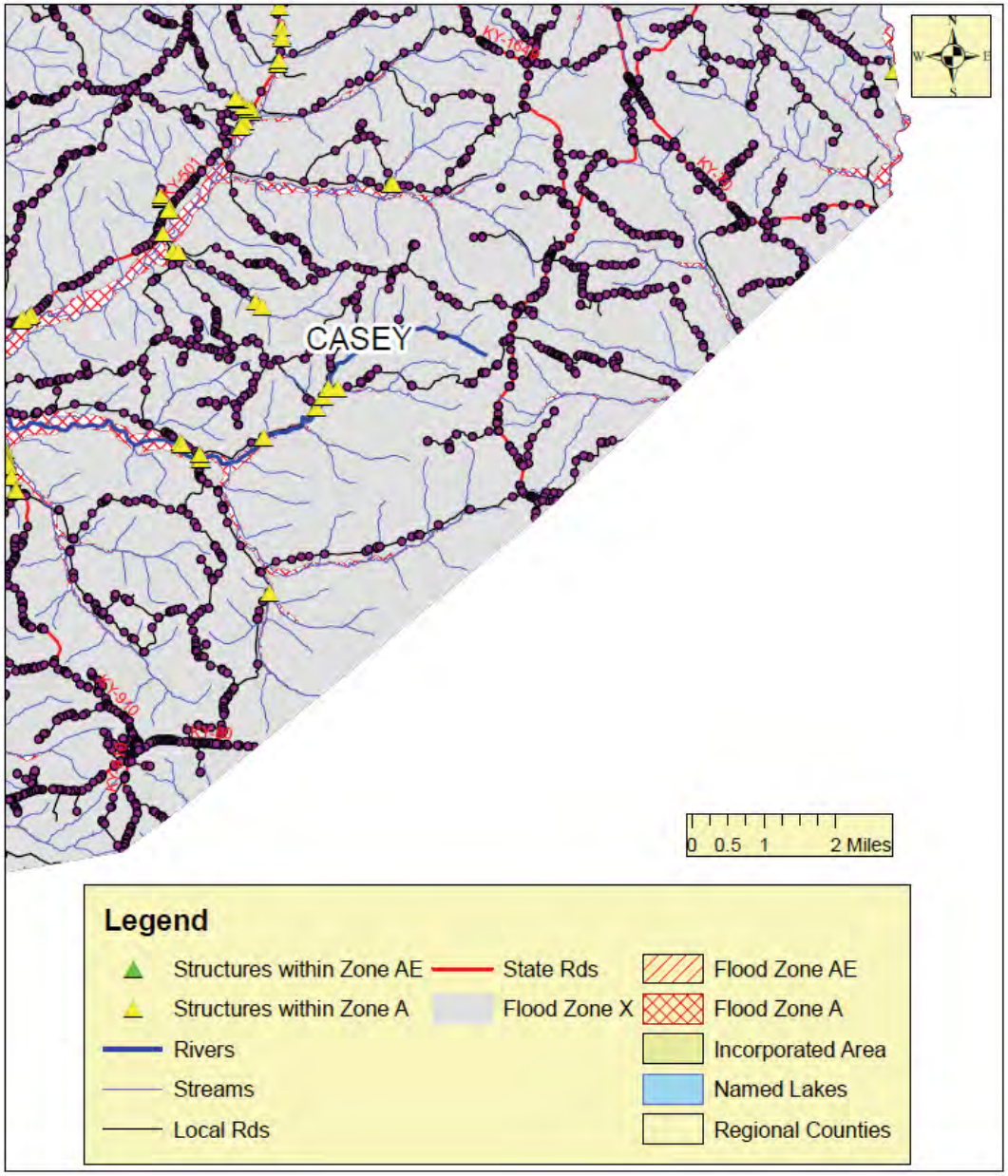
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(4f)
LCADD Region
Casey County (SE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

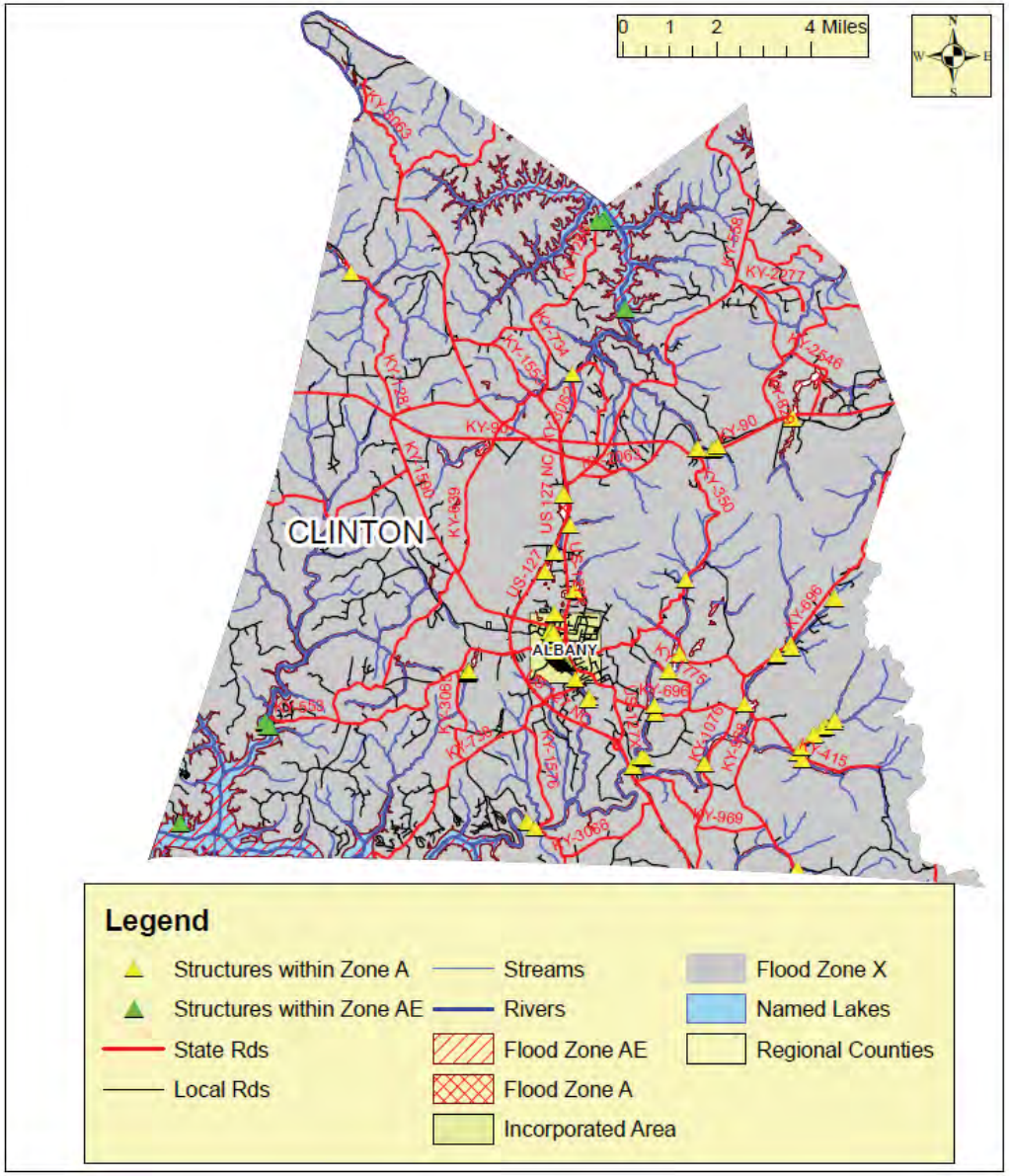
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(5a)
LCADD Region
Clinton County
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(5b)
LCADD Region
Clinton County (NE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
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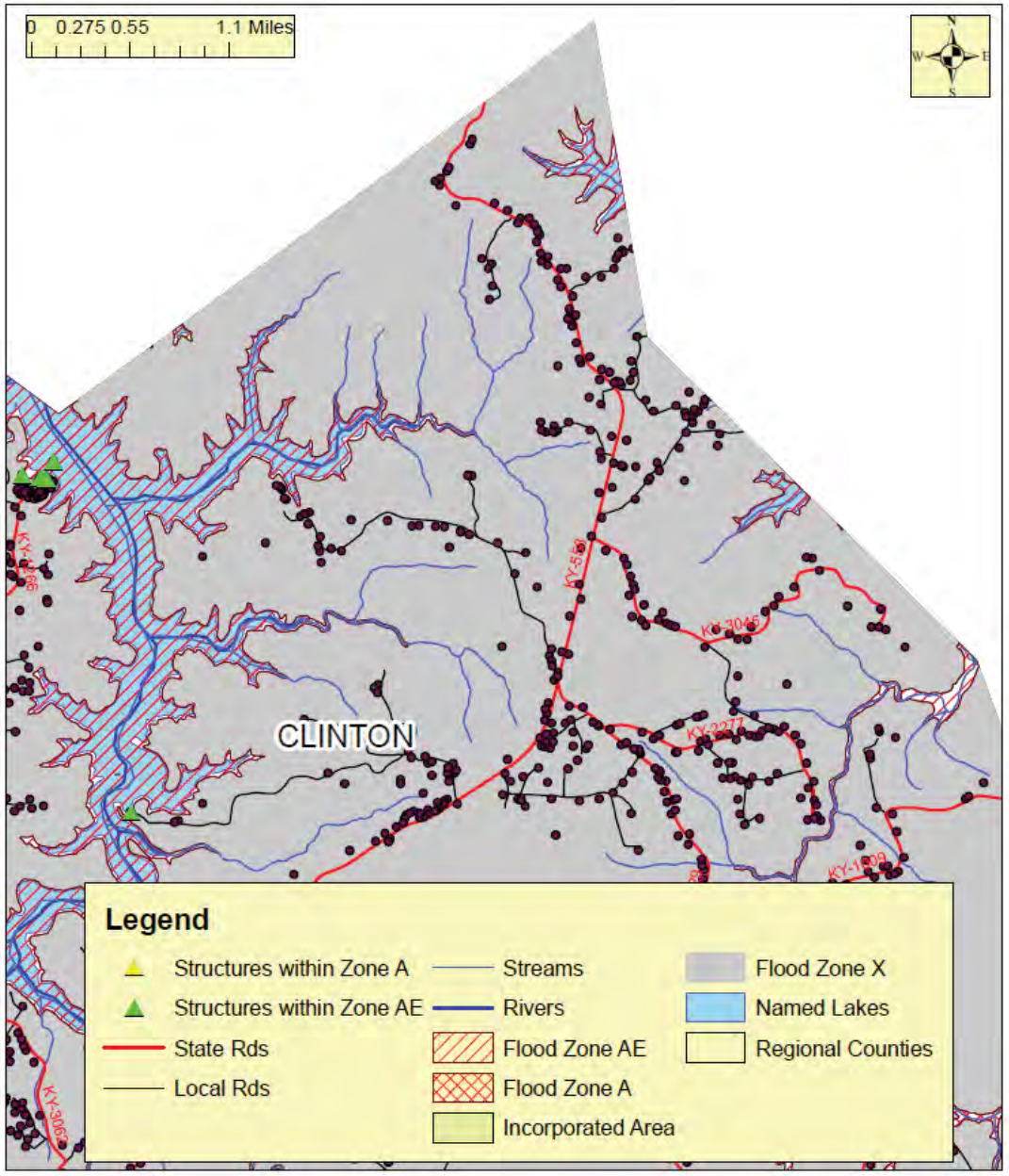
Retreived Jan. 2016

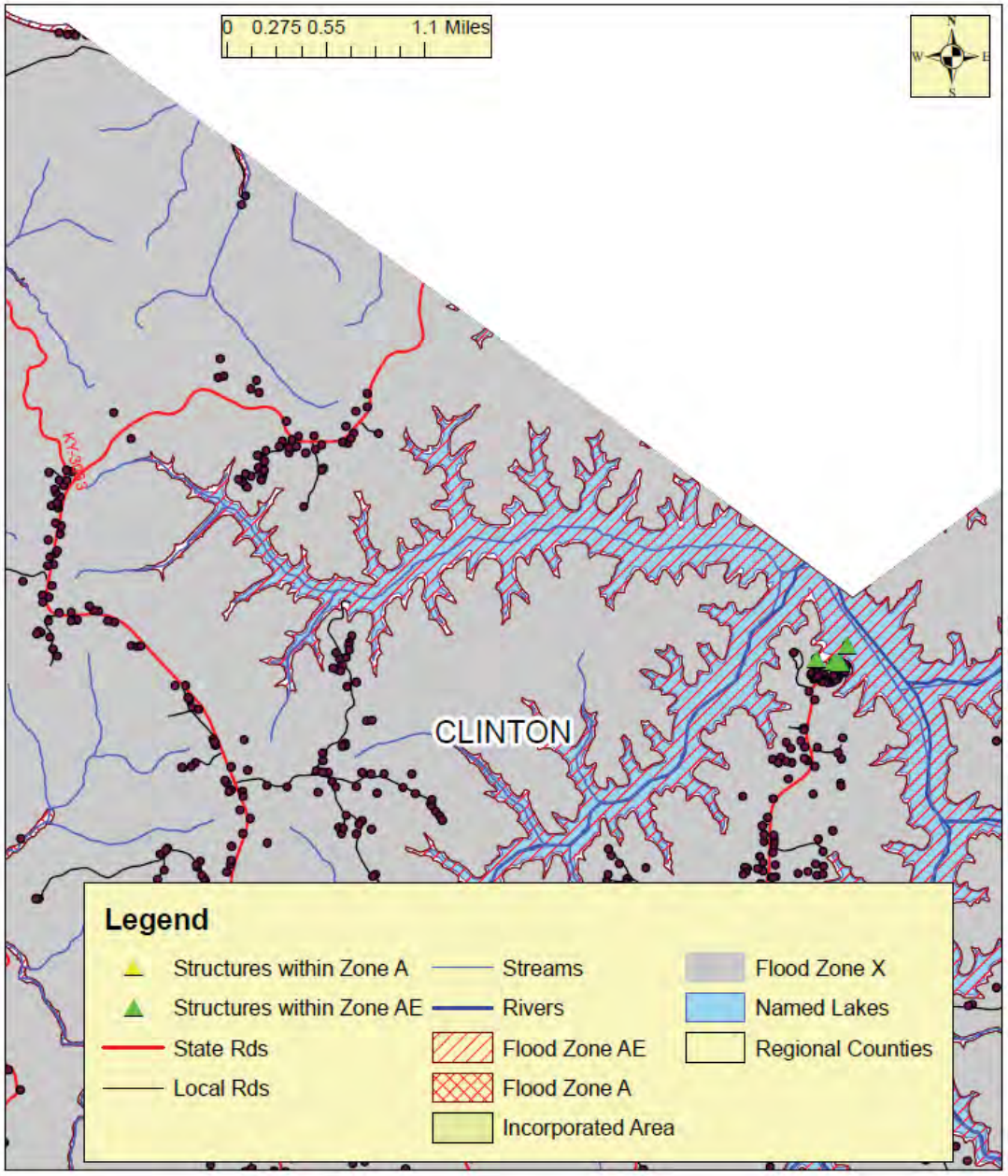
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(5c)
LCADD Region
Clinton County (NC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

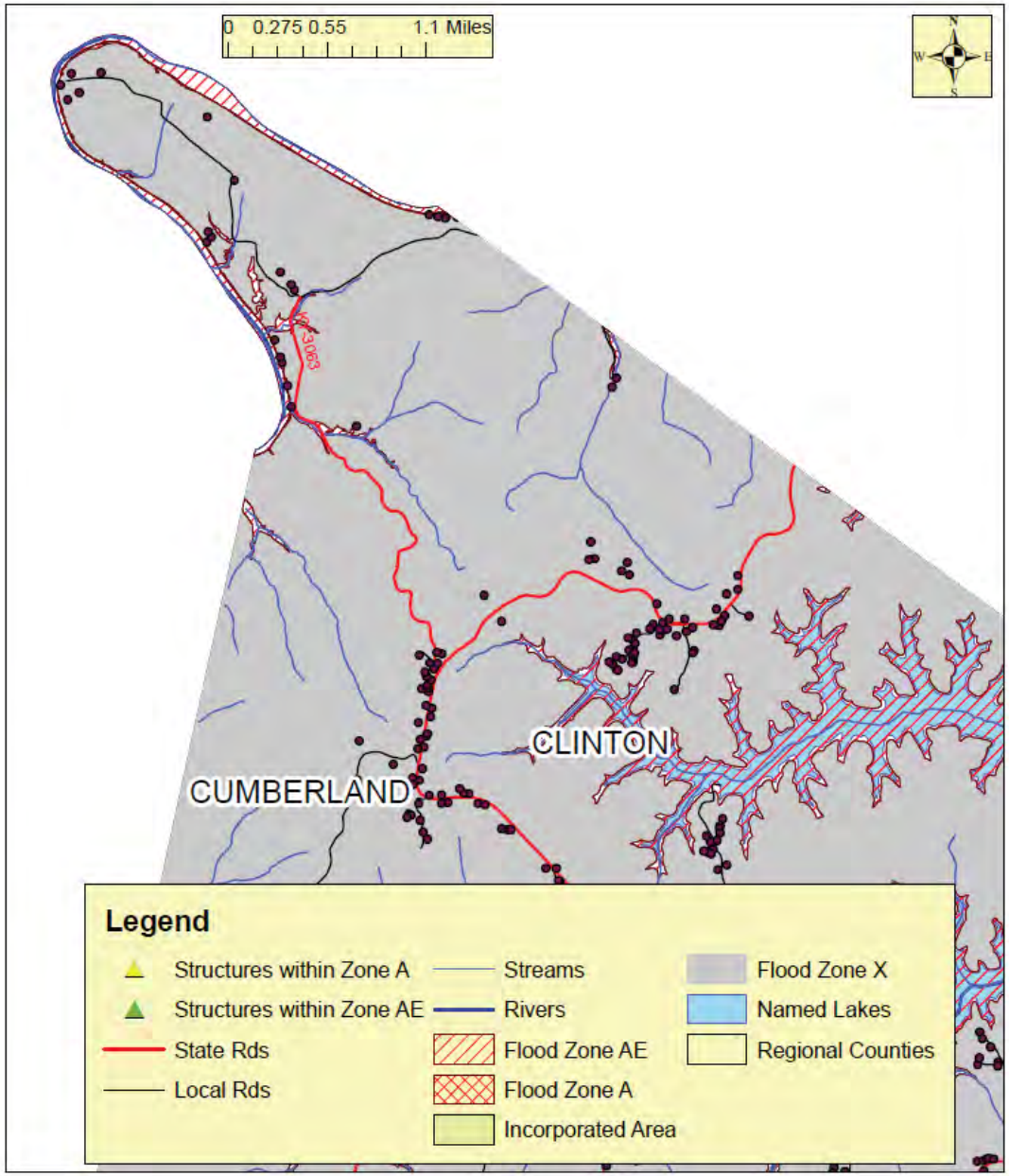
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(5d)
LCADD Region
Clinton County (NW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(5e)
LCADD Region
Clinton County (CW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
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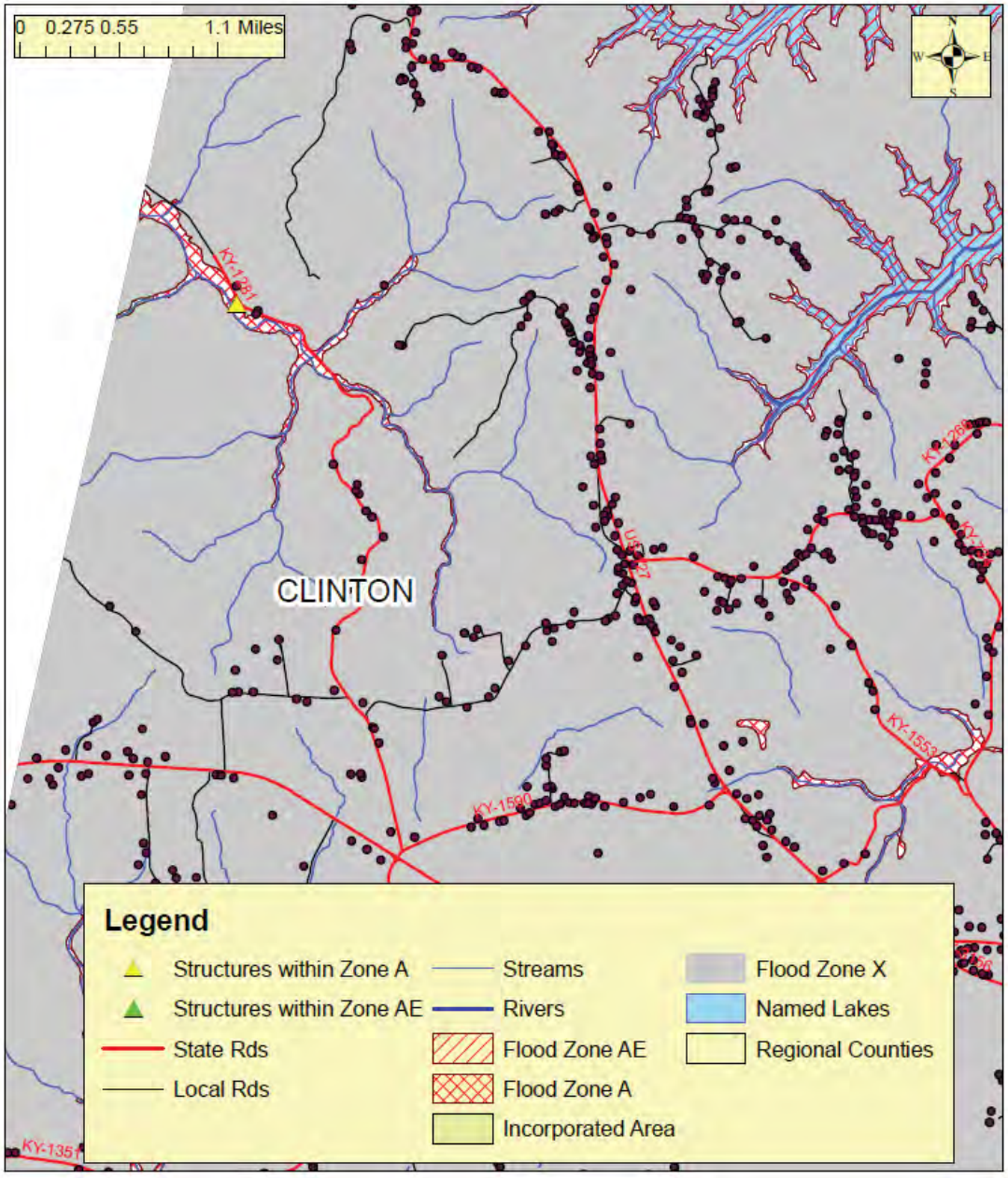
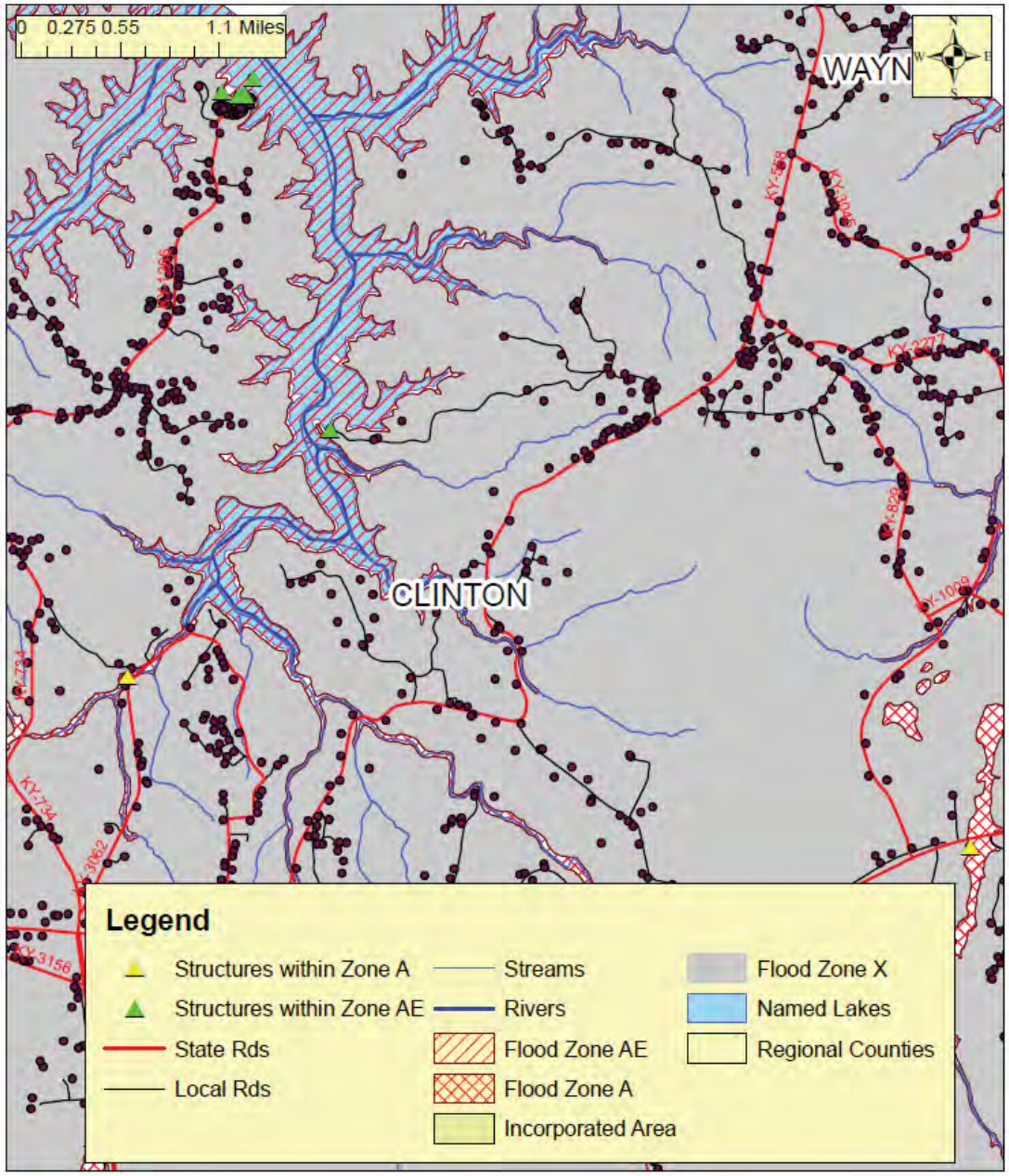


Prepared By:
Lake Cumberland Area Development District

Map 4.1.1(5f)
LCADD Region
Clinton County (CC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

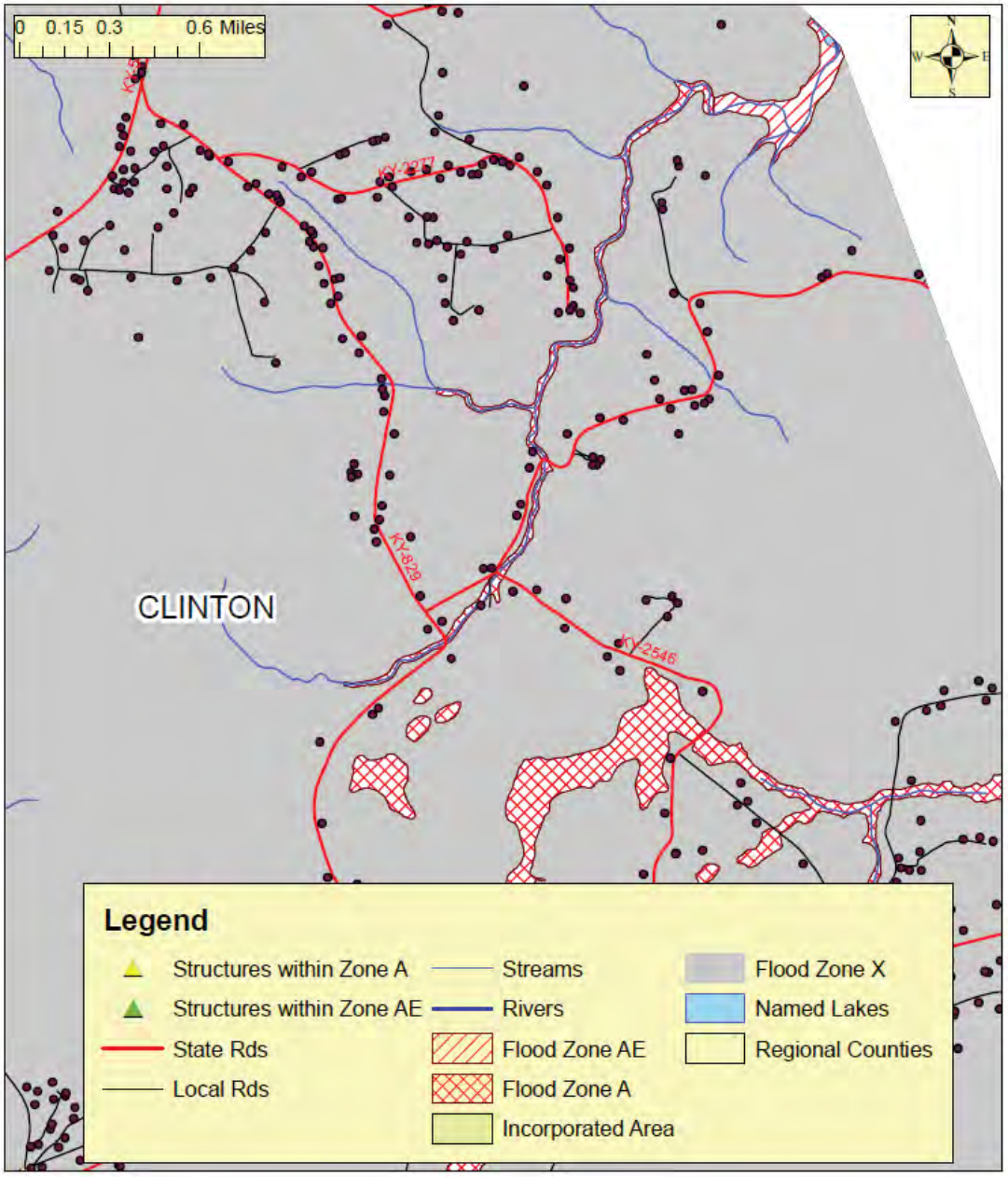
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(5g)
LCADD Region
Clinton County (EC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

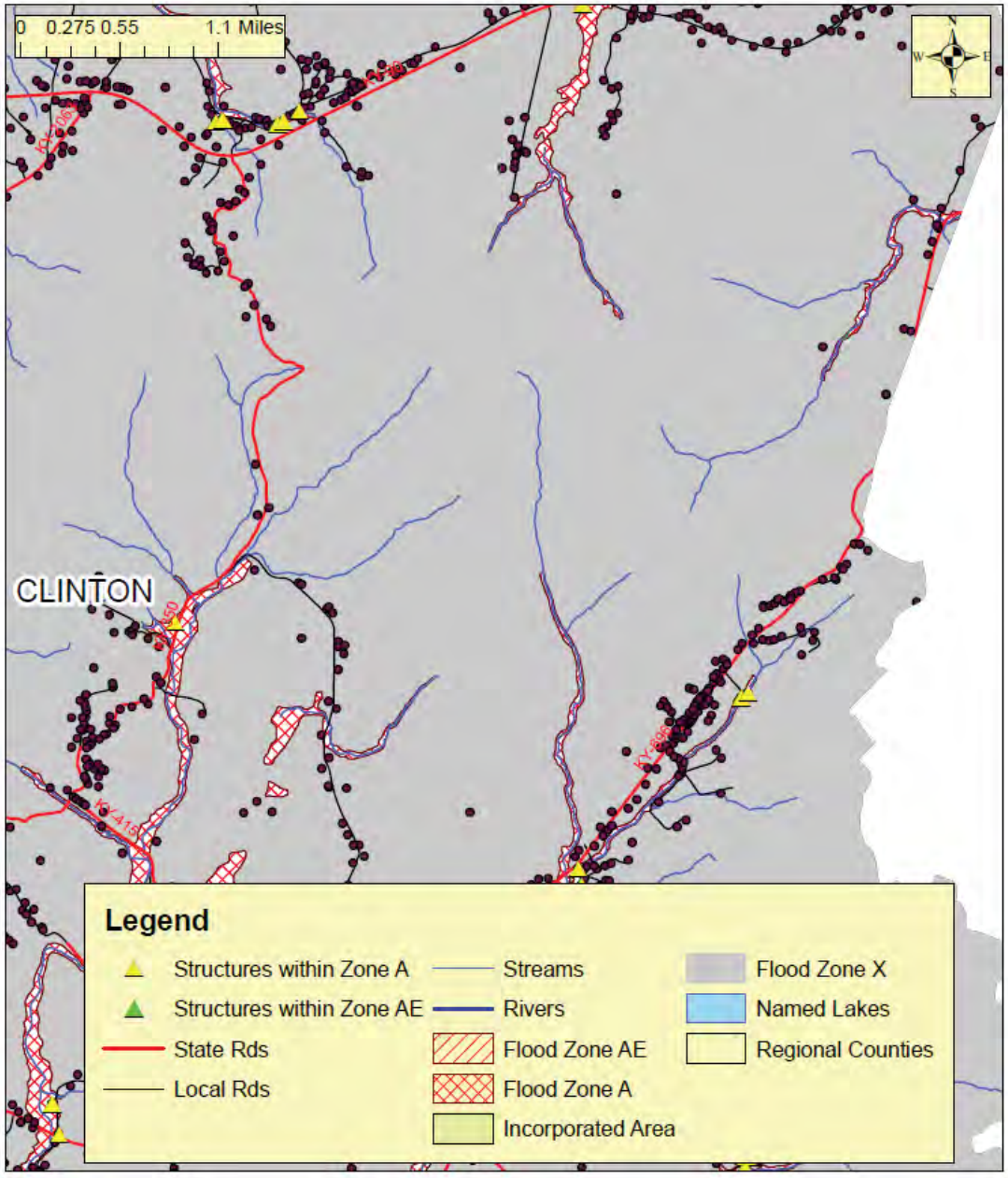
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(5h)
LCADD Region
Clinton County (SEC)
Identified Flood Areas

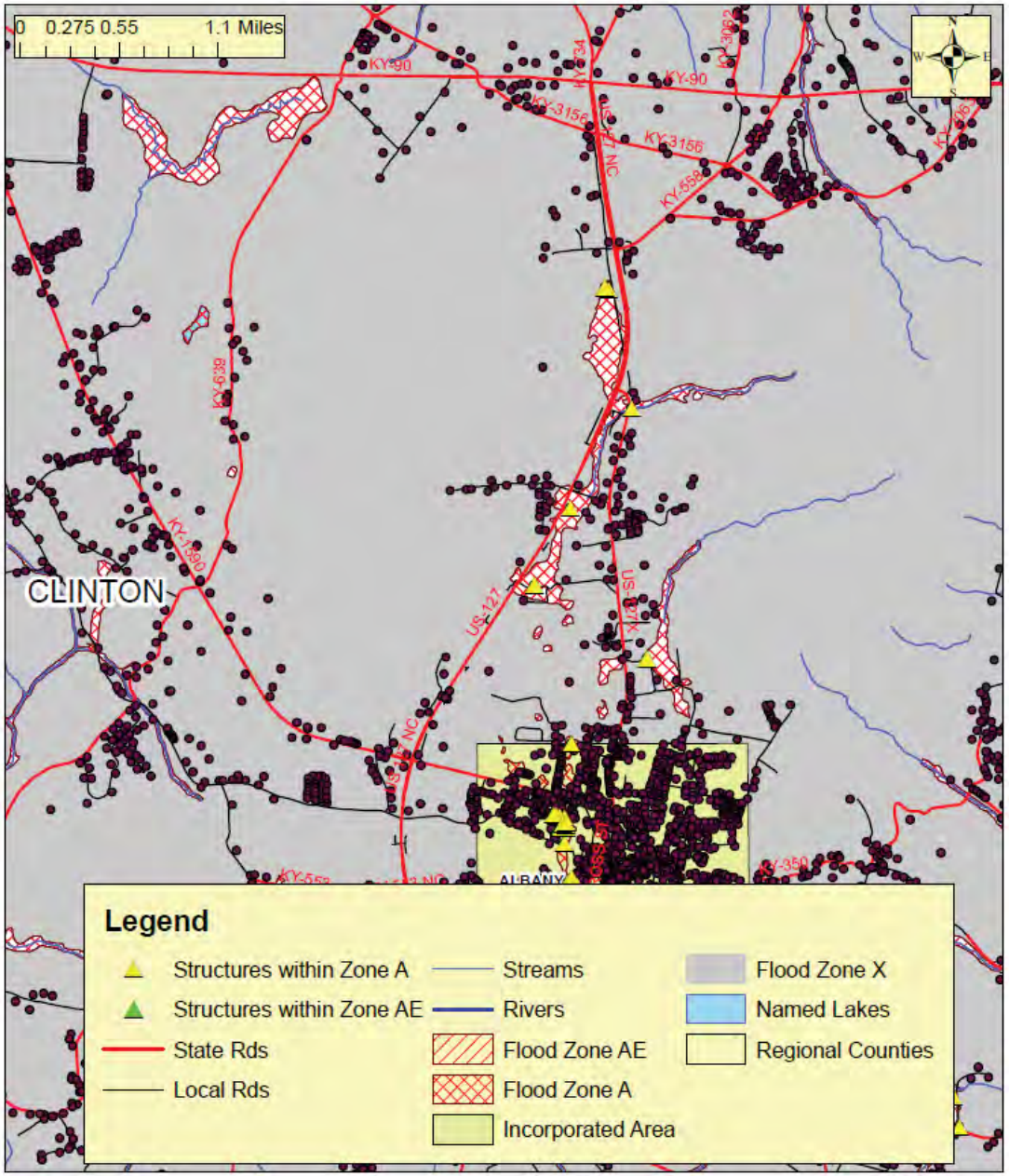
Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(5i)
LCADD Region
Clinton County (SCC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016



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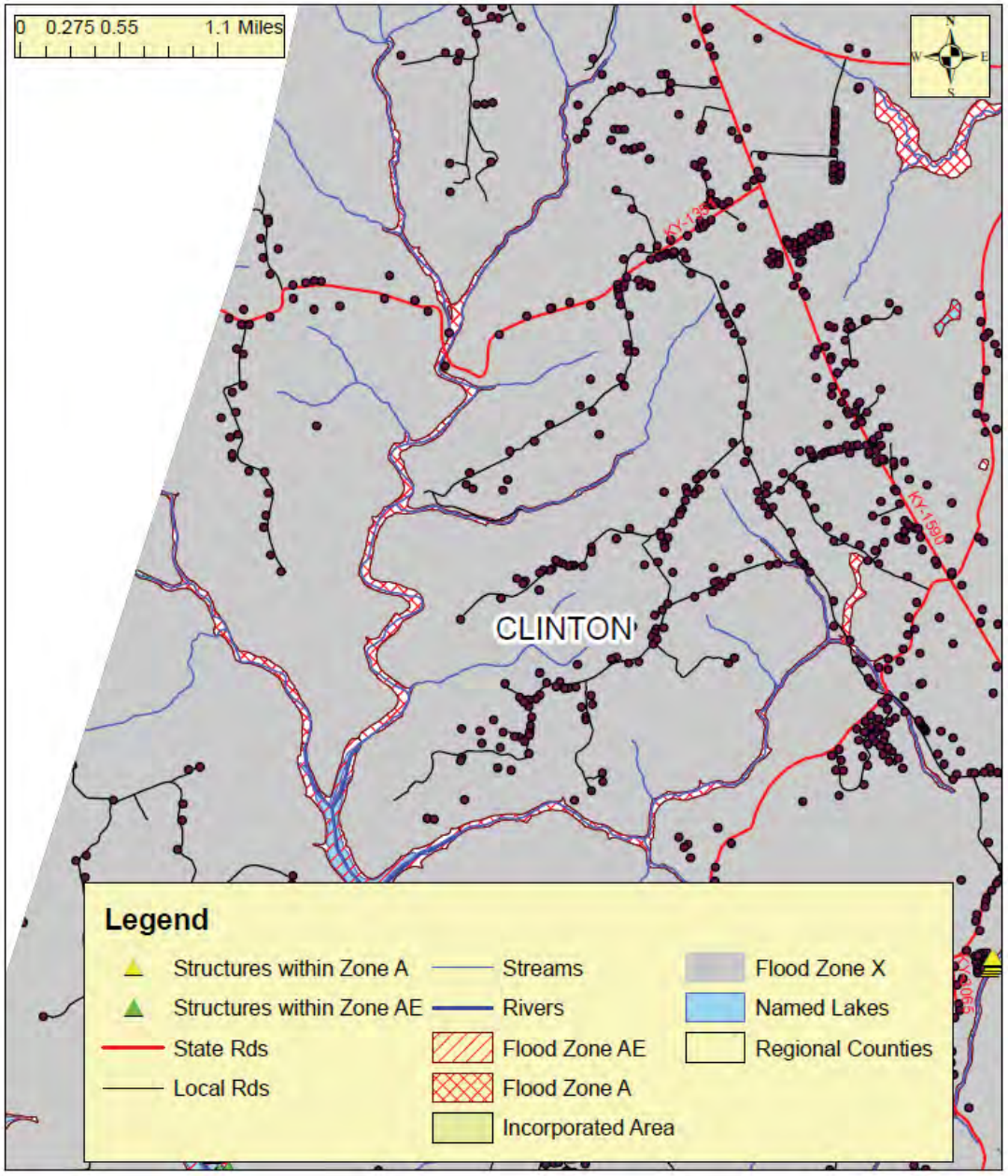
Map 4.1.1(5j)
LCADD Region
Clinton County (SWC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

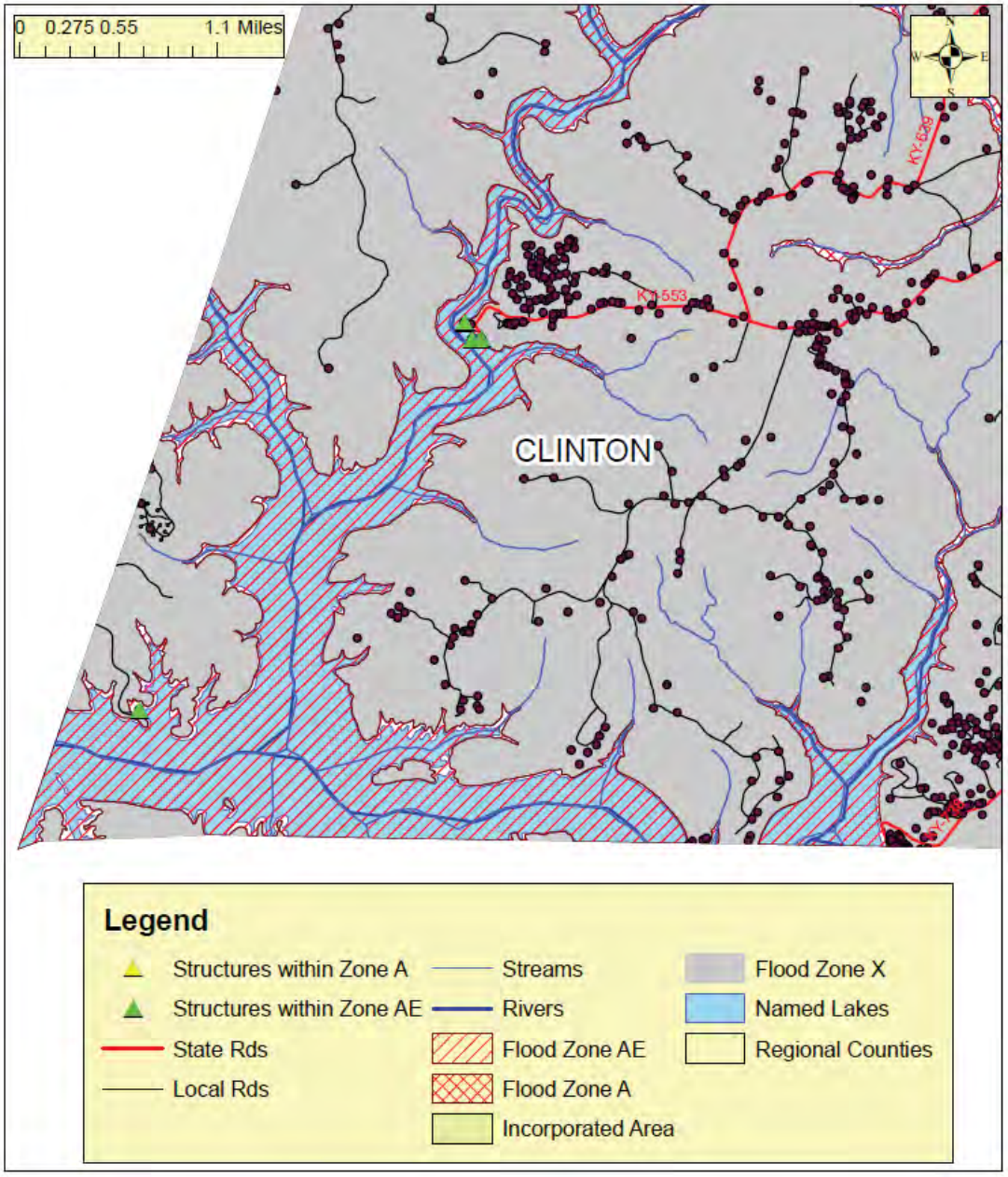
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(5k)
LCADD Region
Clinton County (SW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

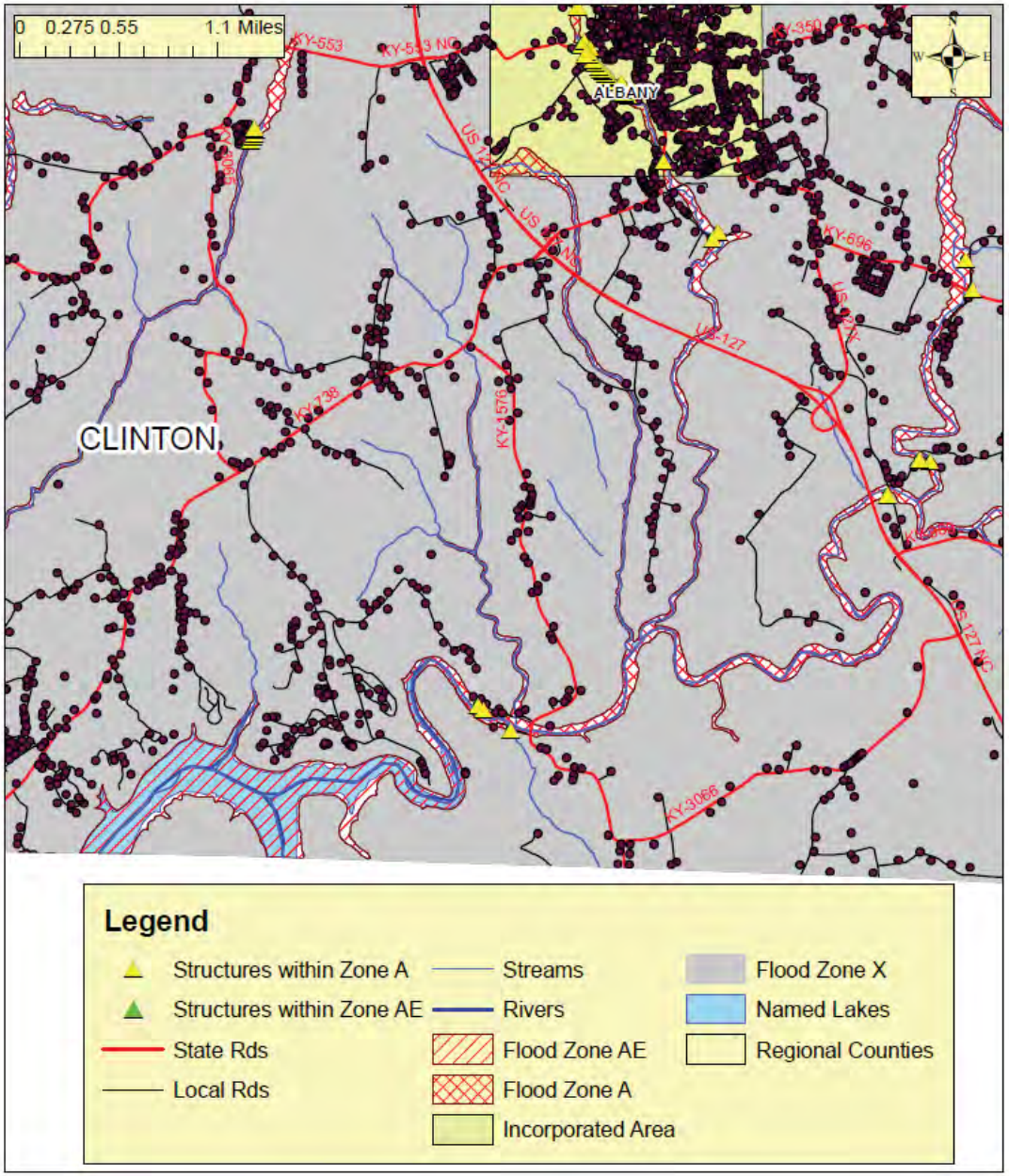
Prepared By:
Lake Cumberland Area Development District



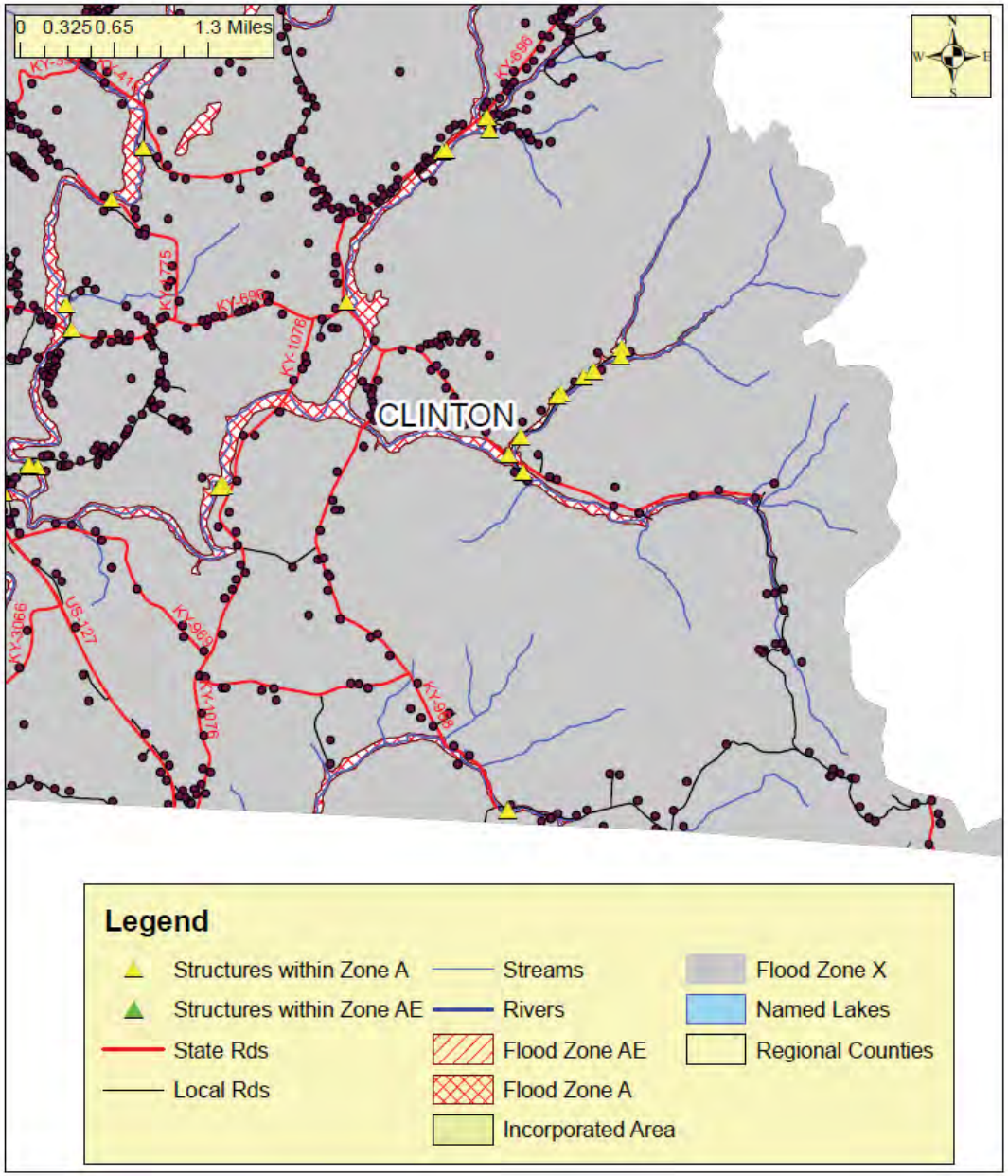
Map 4.1.1(5l)
LCADD Region
Clinton County (SC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(5m)
LCADD Region
Clinton County (SE)
Identified Flood Areas



Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

Prepared By:
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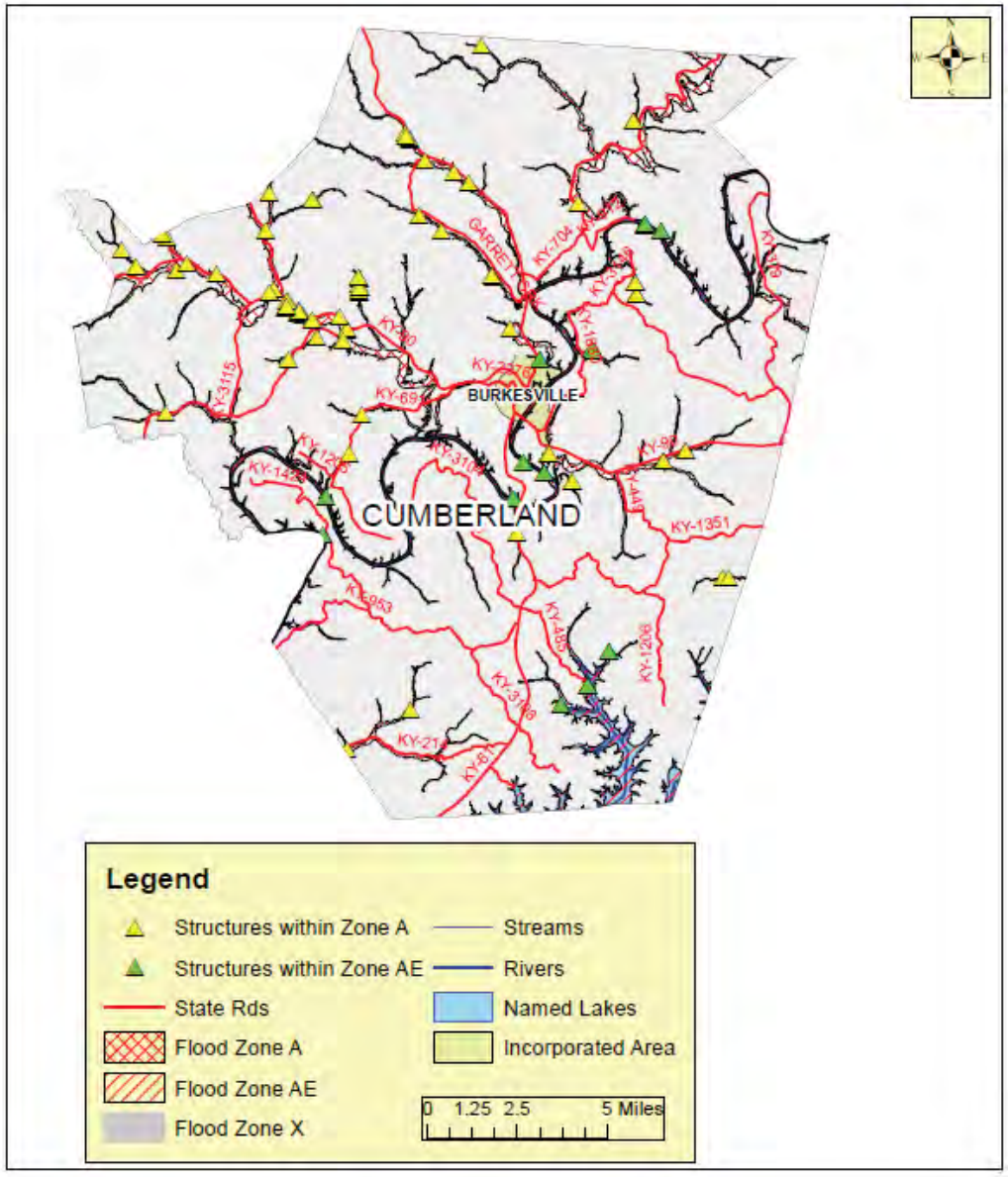
Map 4.1.1(6a)
LCADD Region
Cumberland County
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

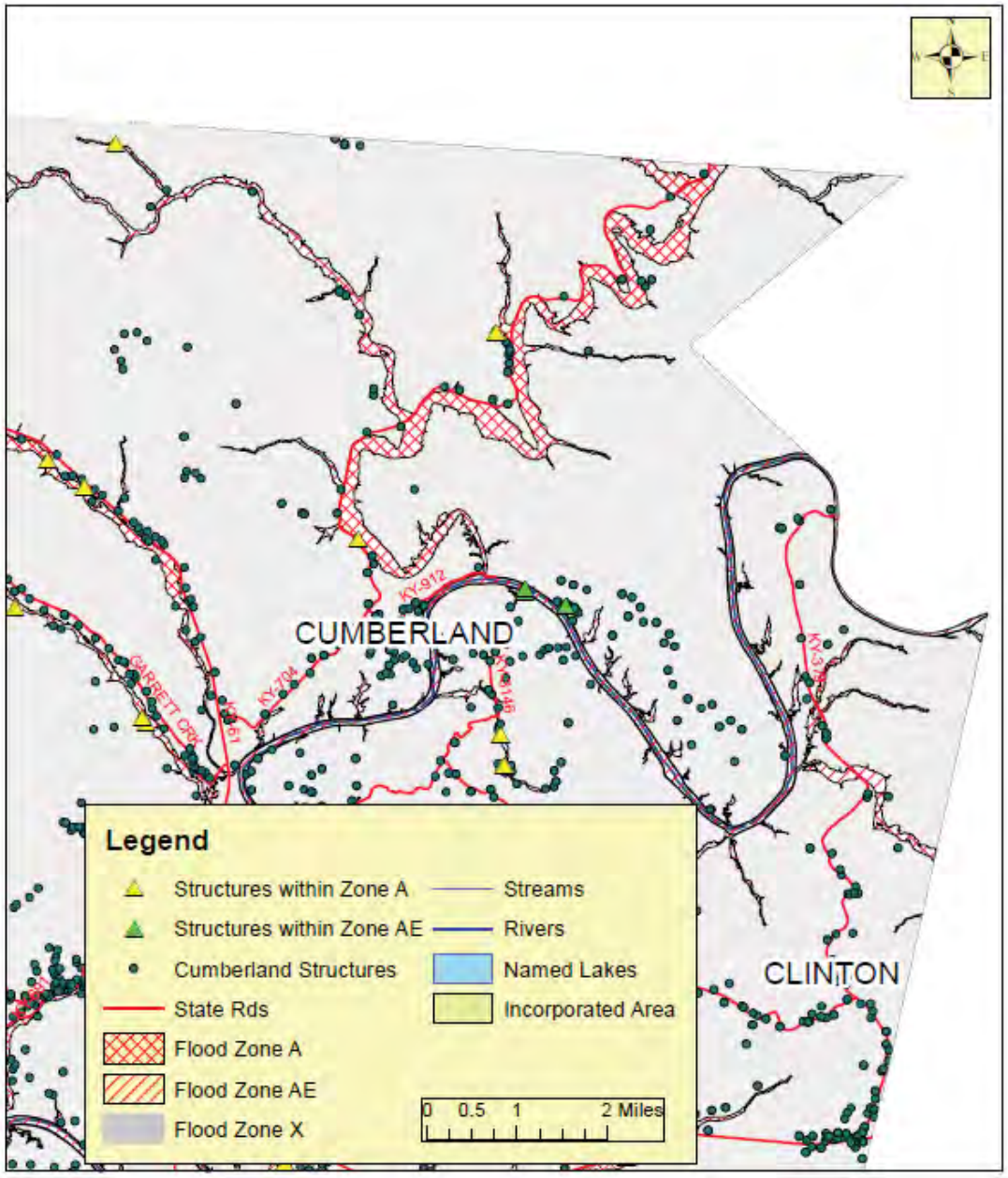
Prepared By:
Lake Cumberland Area Development District



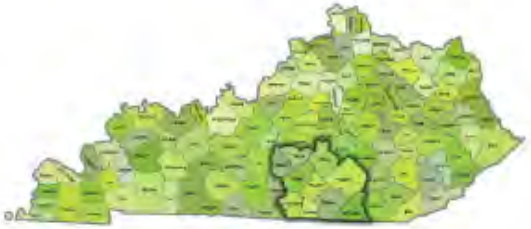
Map 4.1.1(6b)
LCADD Region
Cumberland County NE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

Prepared By:
Lake Cumberland Area Development District

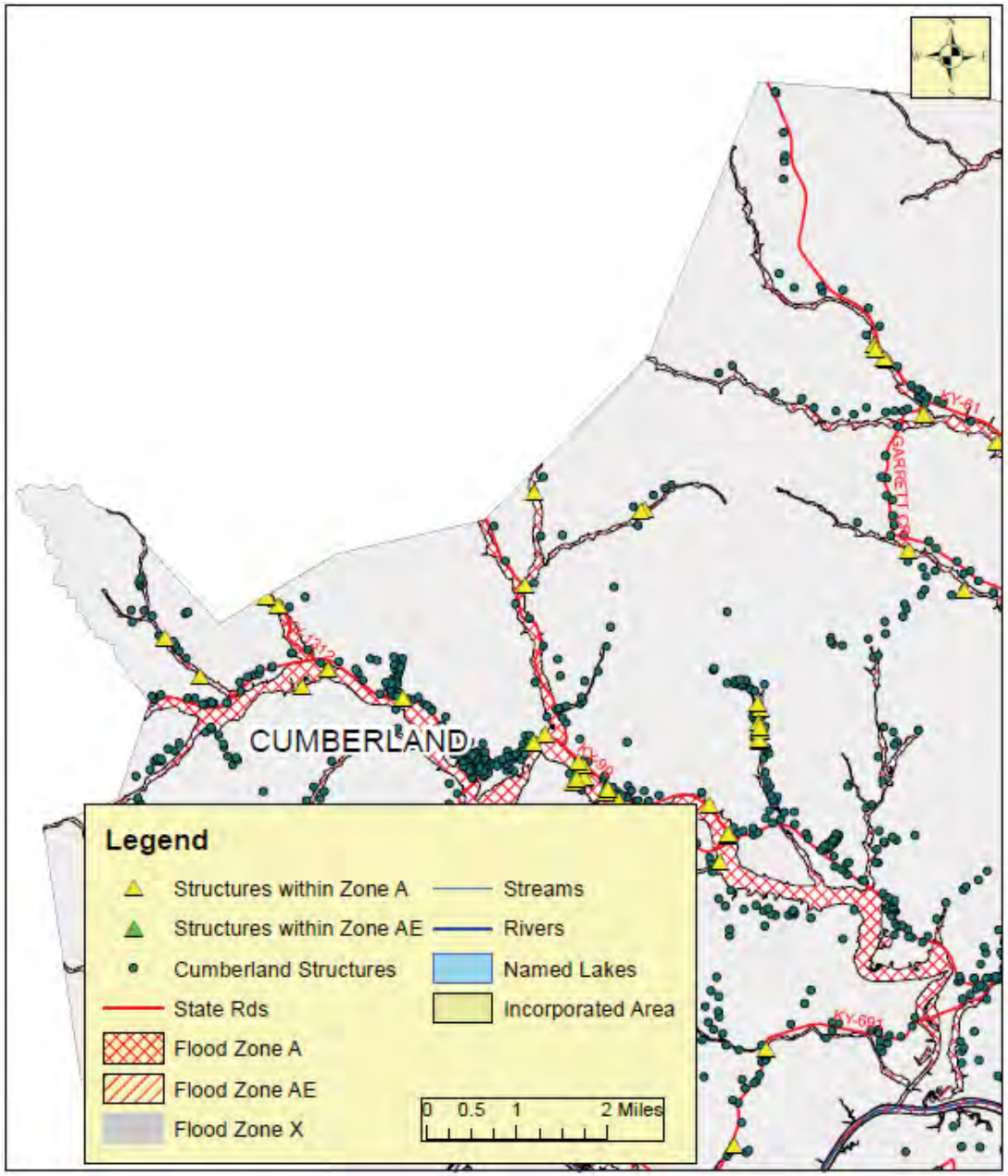


Map 4.1.1(6c)
LCADD Region
Cumberland County NW)
Identified Flood Areas



Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

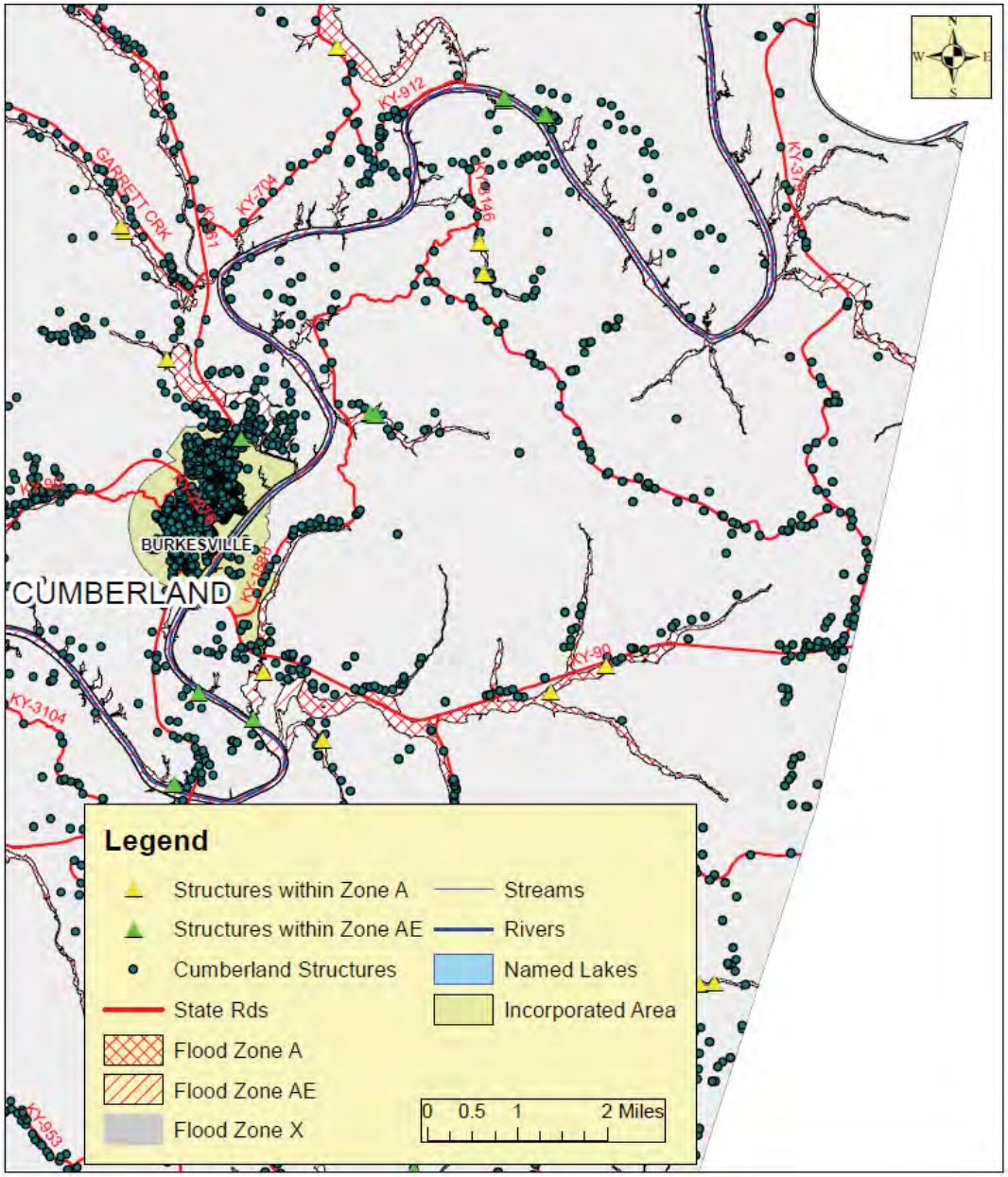
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(6d)
LCADD Region
Cumberland County CE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

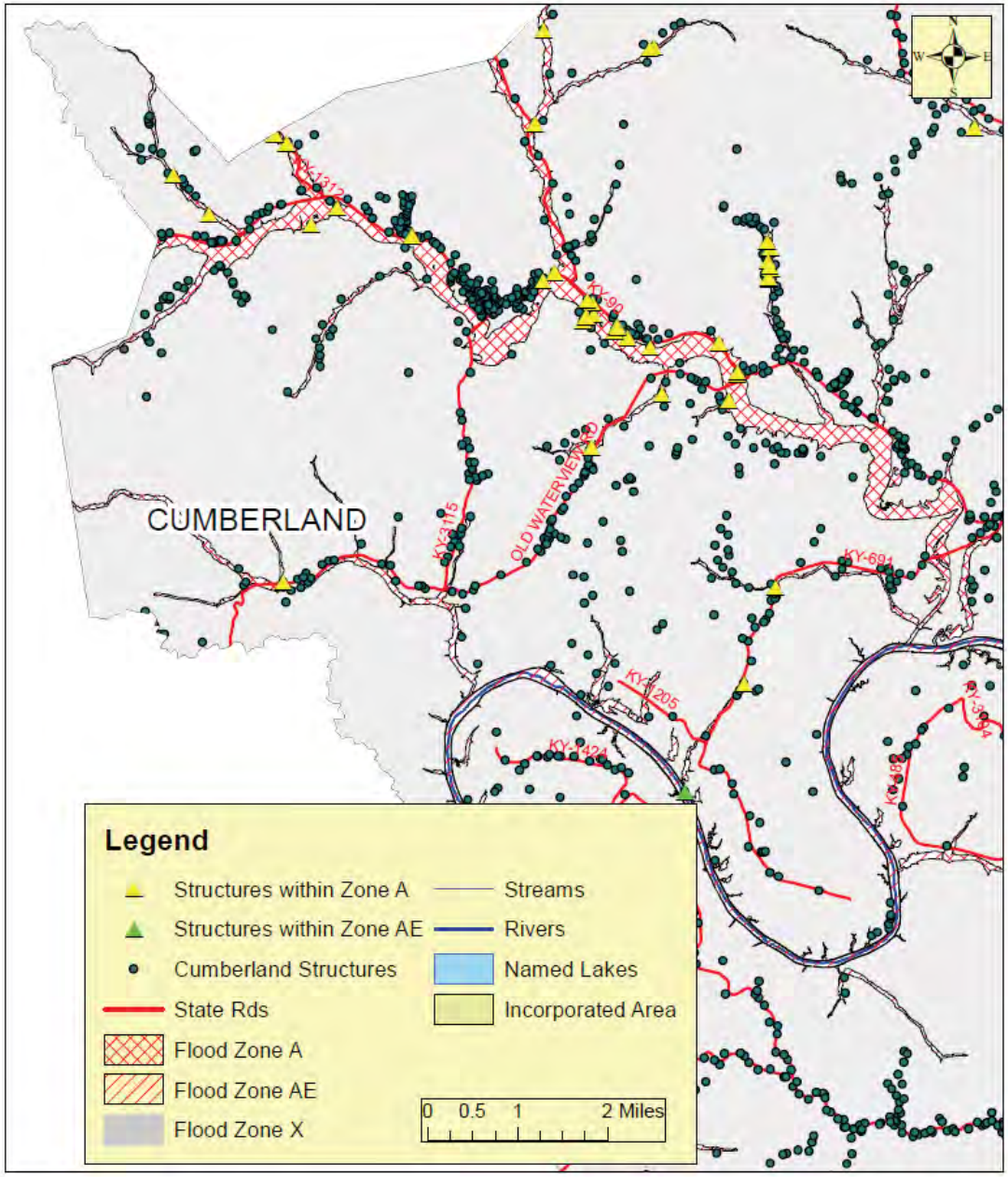
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(6e)
LCADD Region
Cumberland County CW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

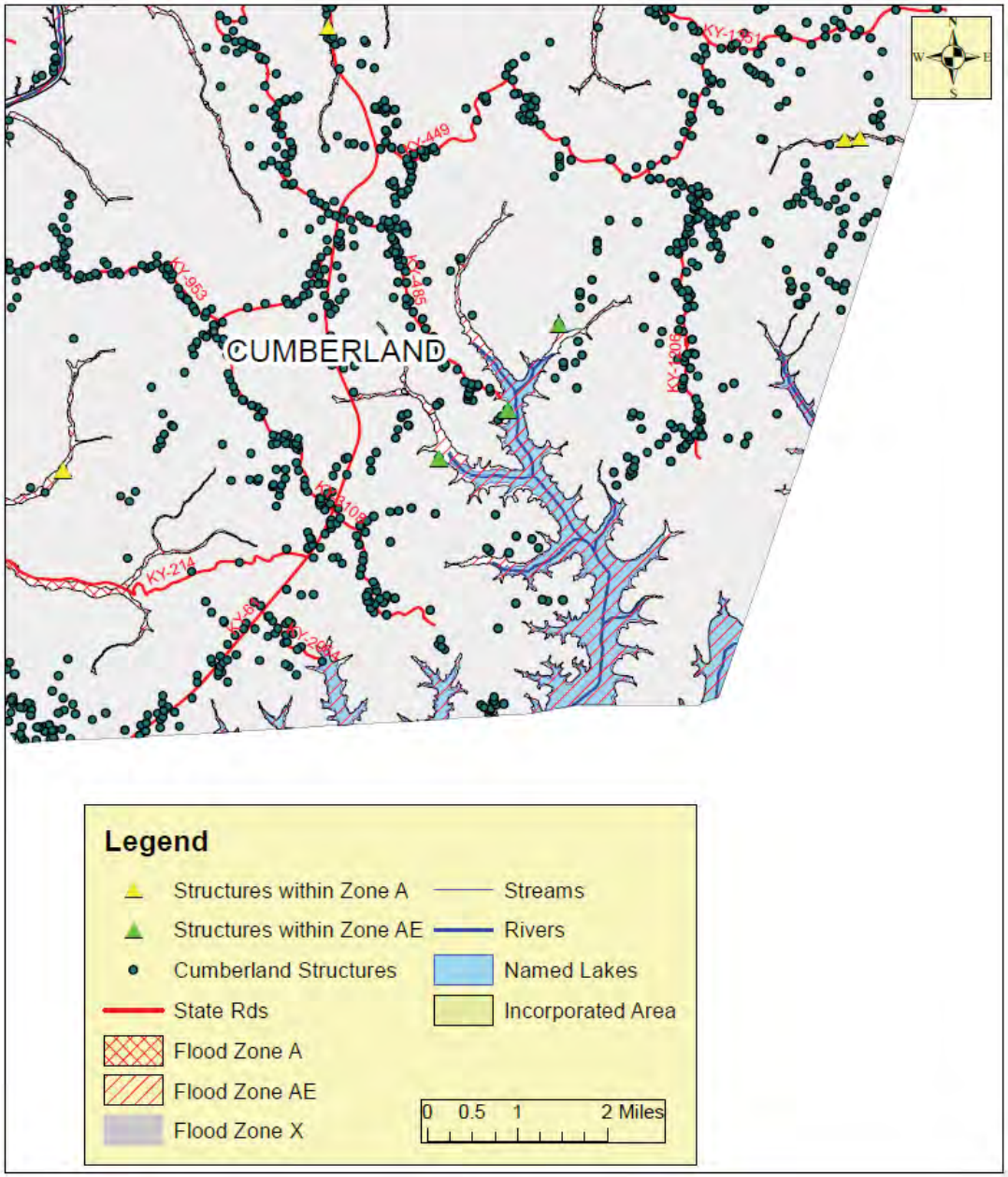
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(6f)
LCADD Region
Cumberland County (SE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

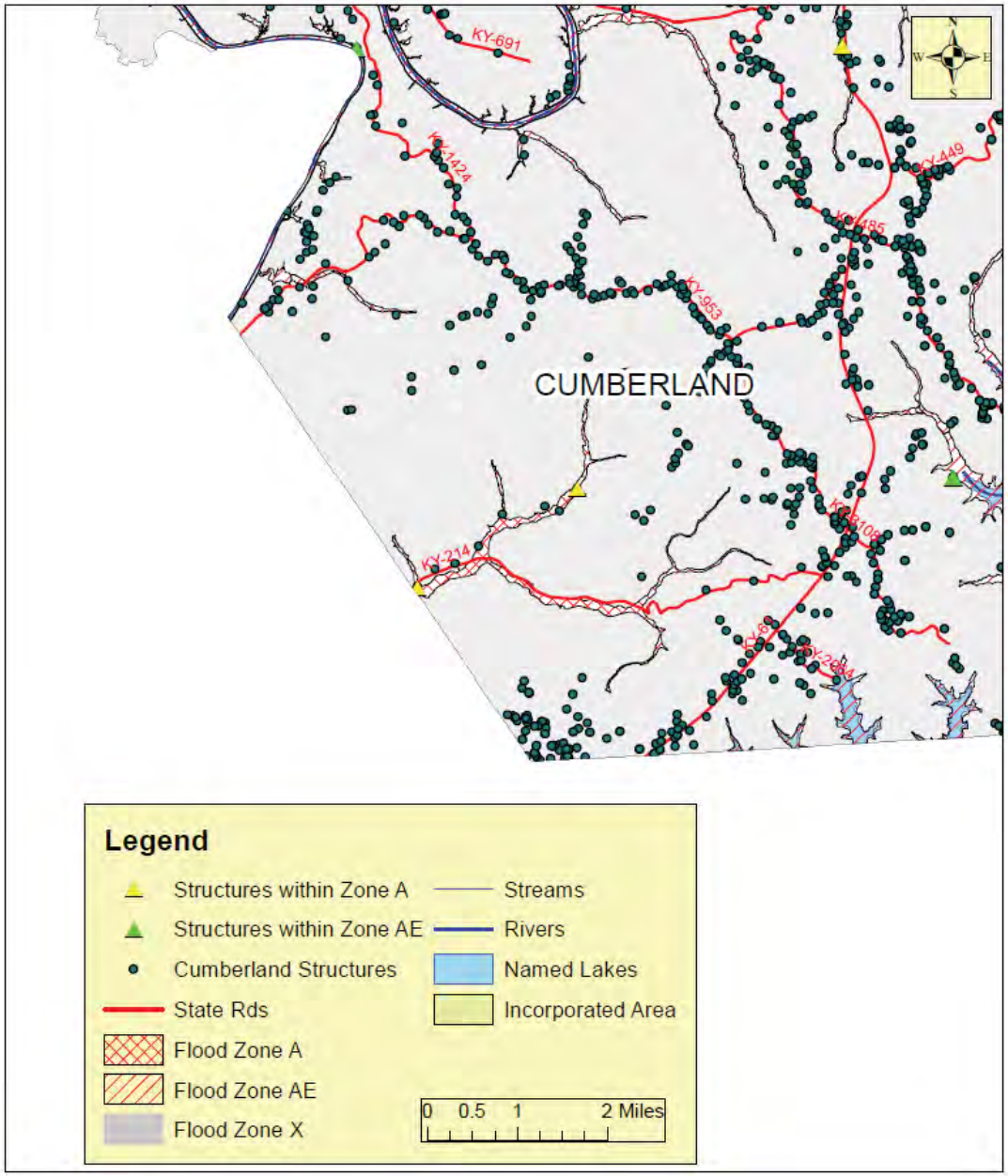
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(6g)
LCADD Region
Cumberland County (SW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

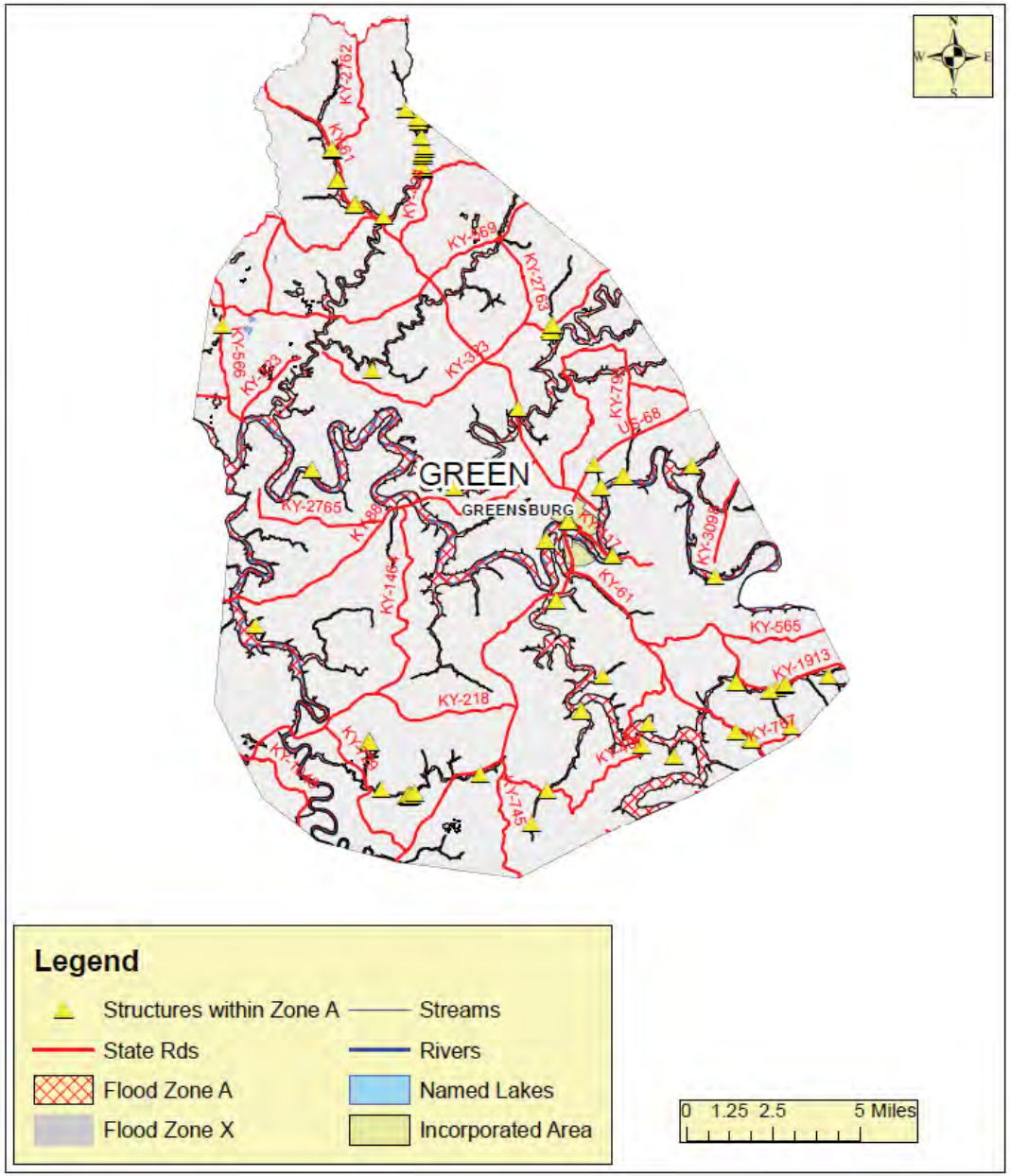
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(7a)
LCADD Region
Green County
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

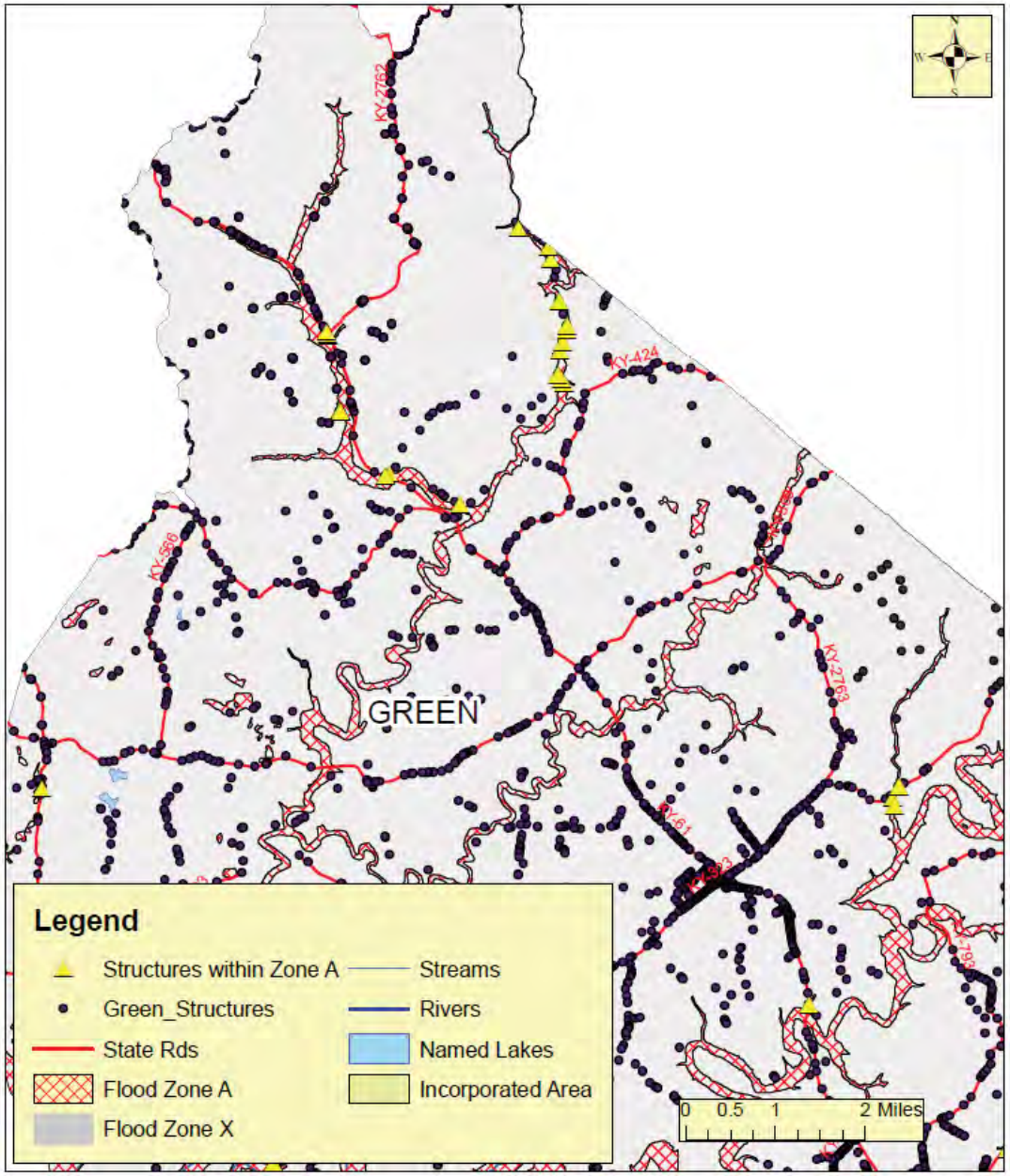
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(7b)
LCADD Region
Green County (North)
Identified Flood Areas

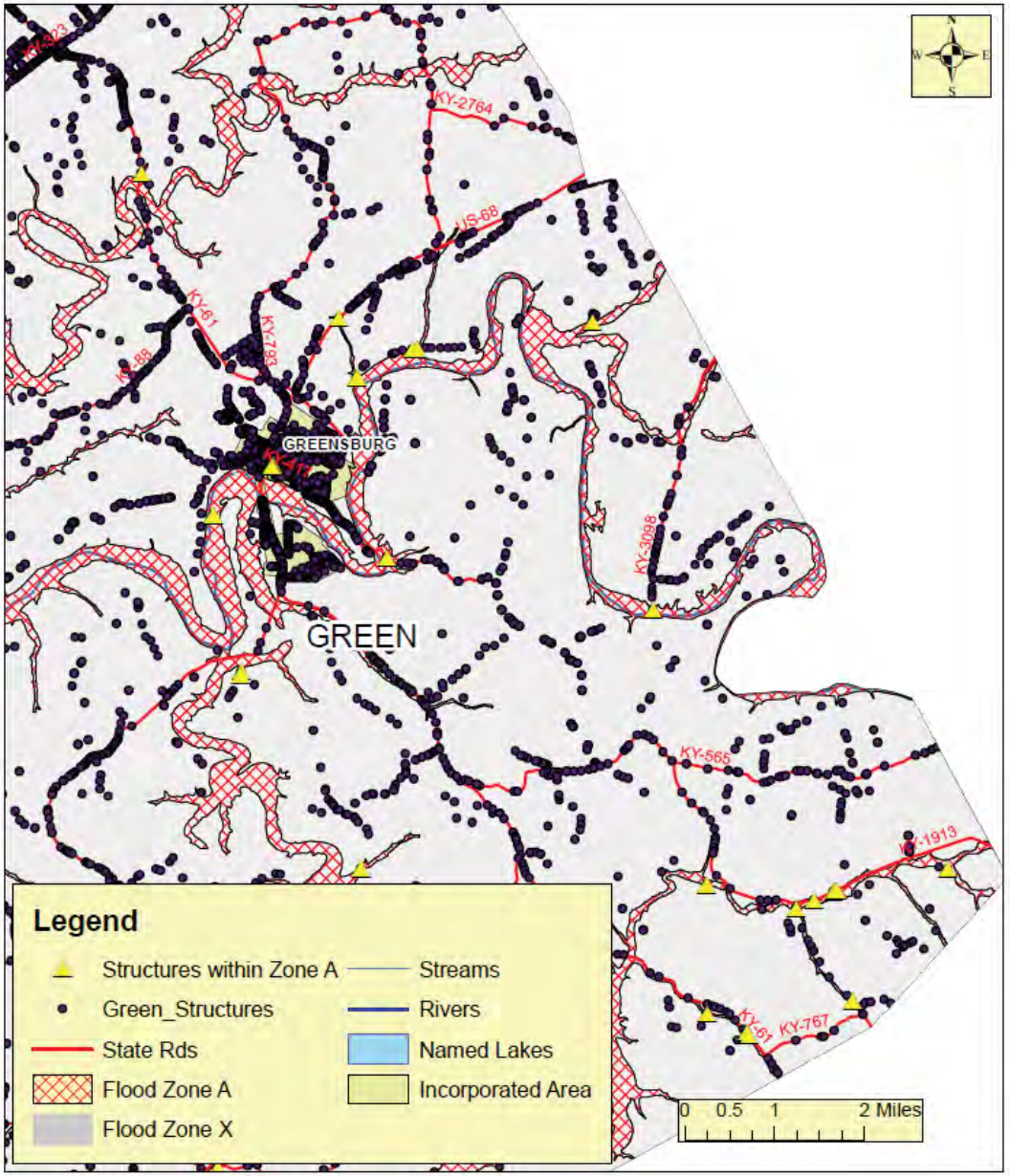
Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(7c)
LCADD Region
Green County (CE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

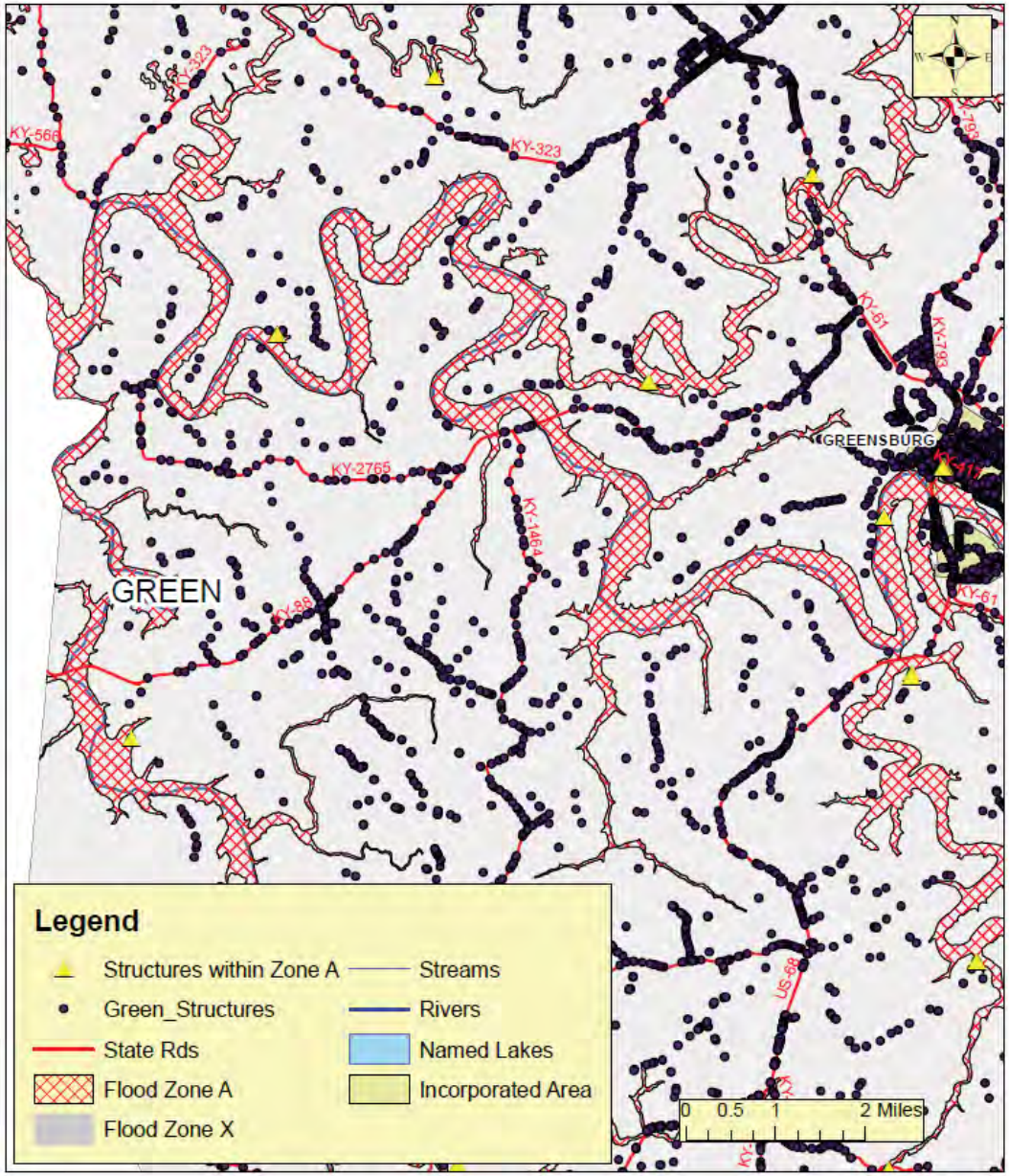


Prepared By:
Lake Cumberland Area Development District

Map 4.1.1(7d)
LCADD Region
Green County (CW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

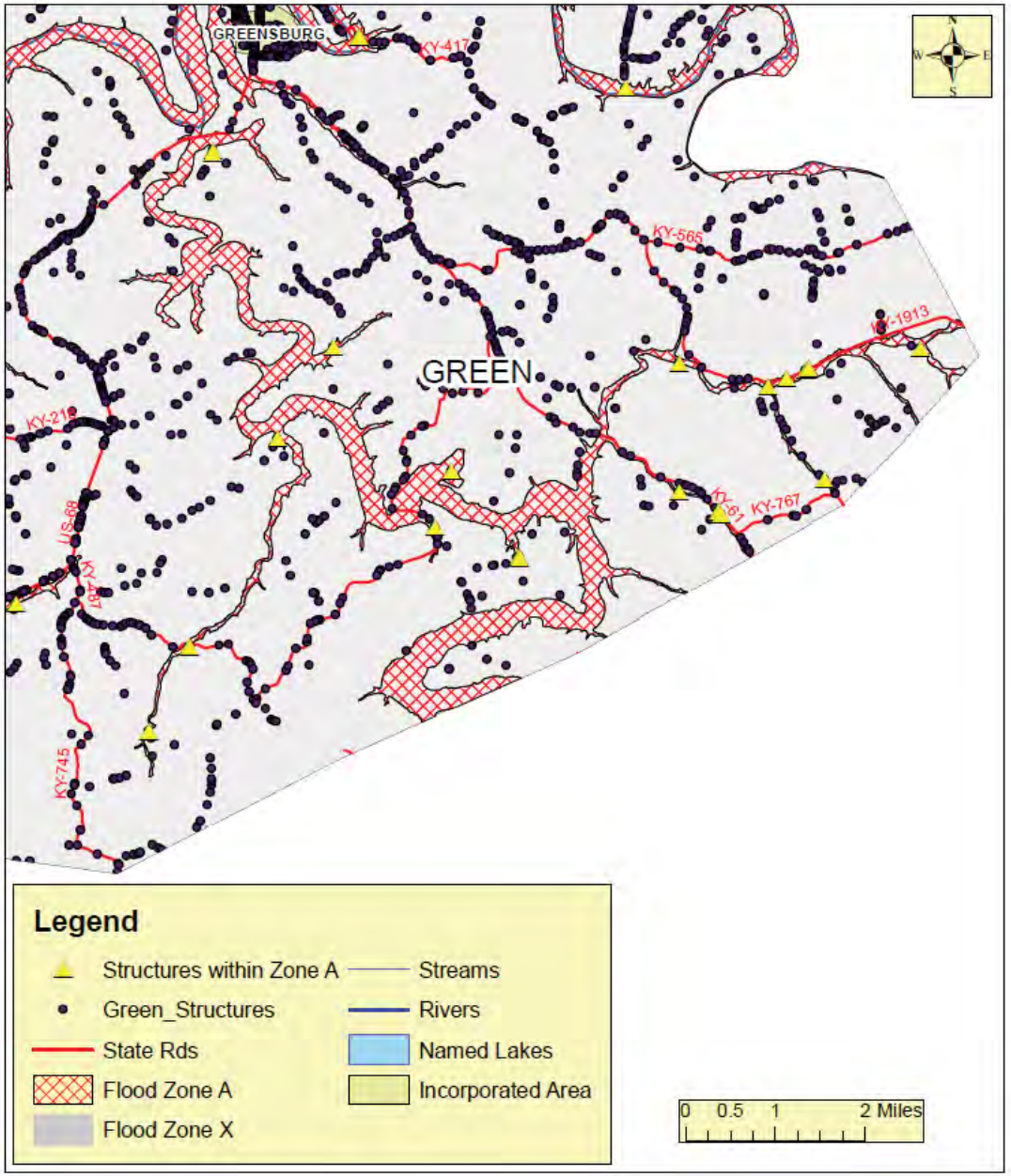
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(7e)
LCADD Region
Green County (SE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

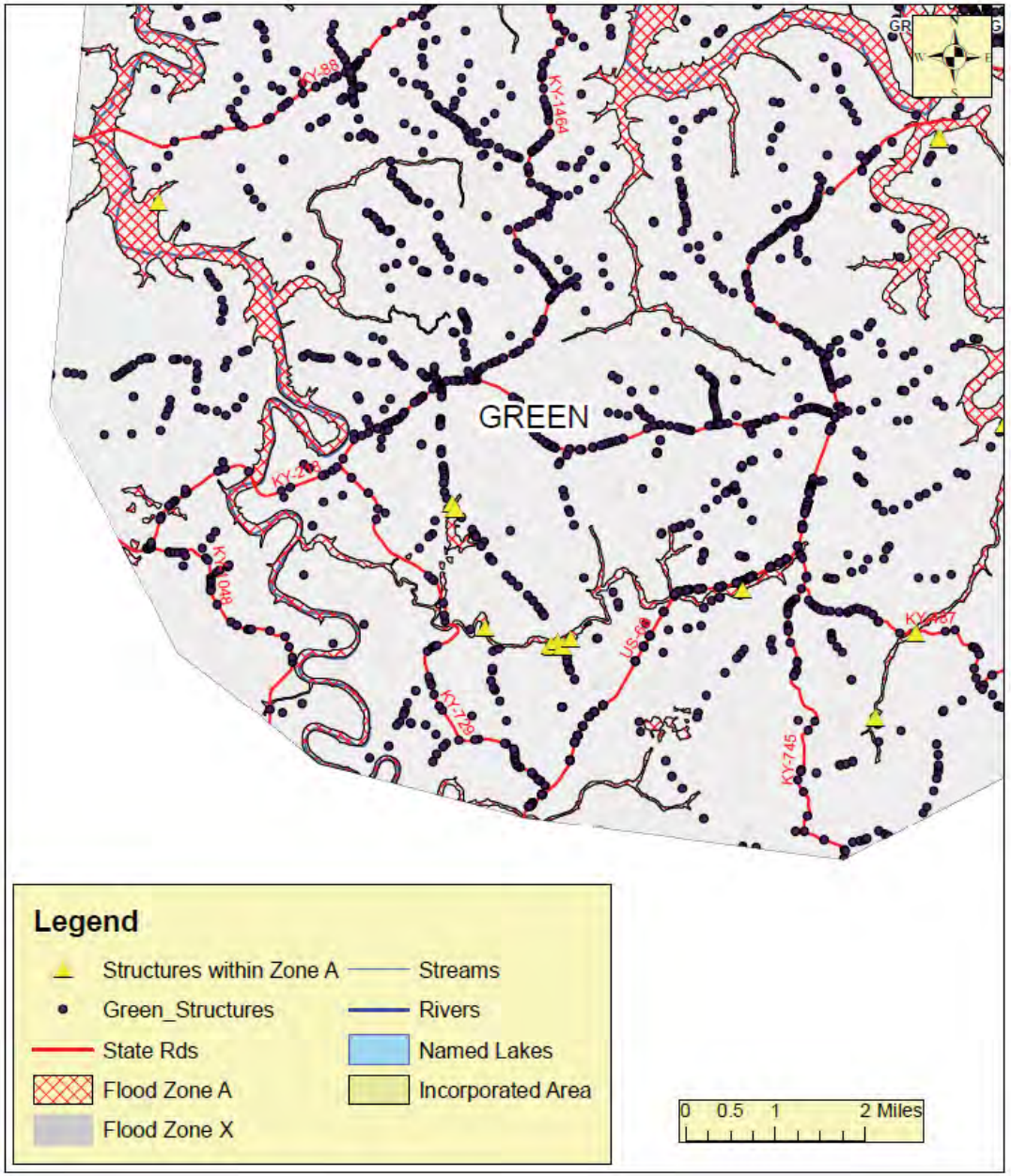
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(7f)
LCADD Region
Green County (SW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

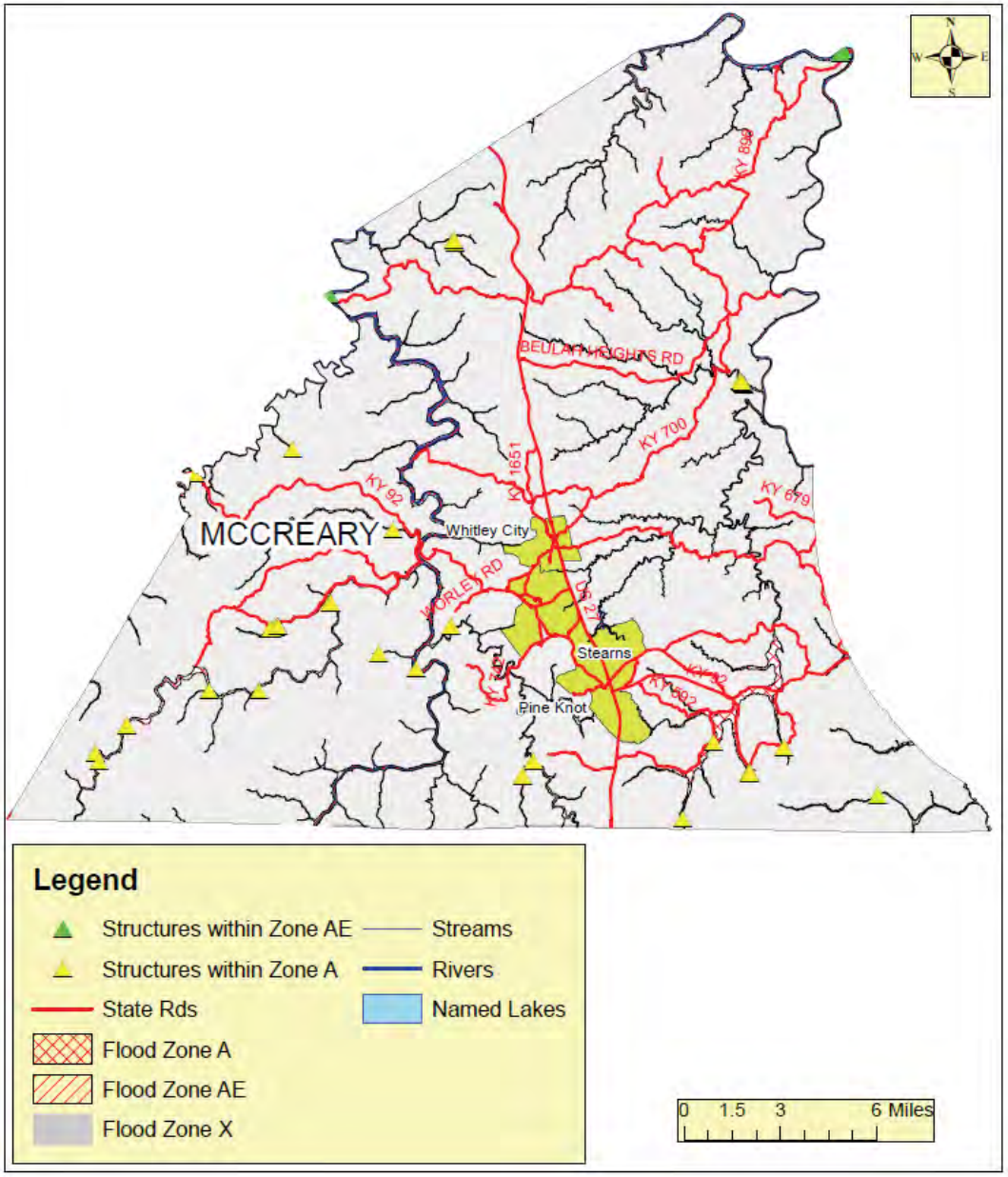
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(8a)
LCADD Region
McCreary County
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

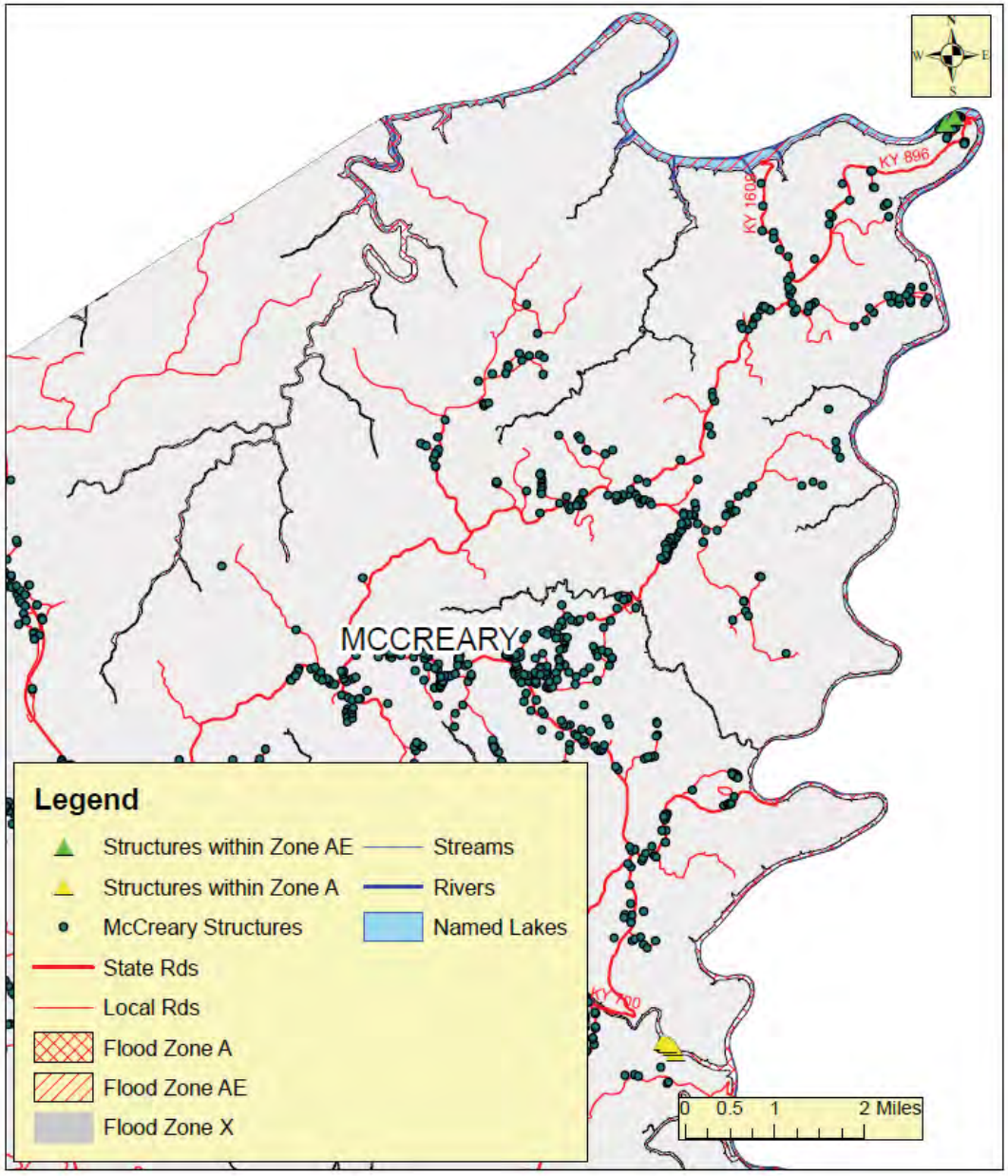
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(8b)
LCADD Region
McCreary County (NE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

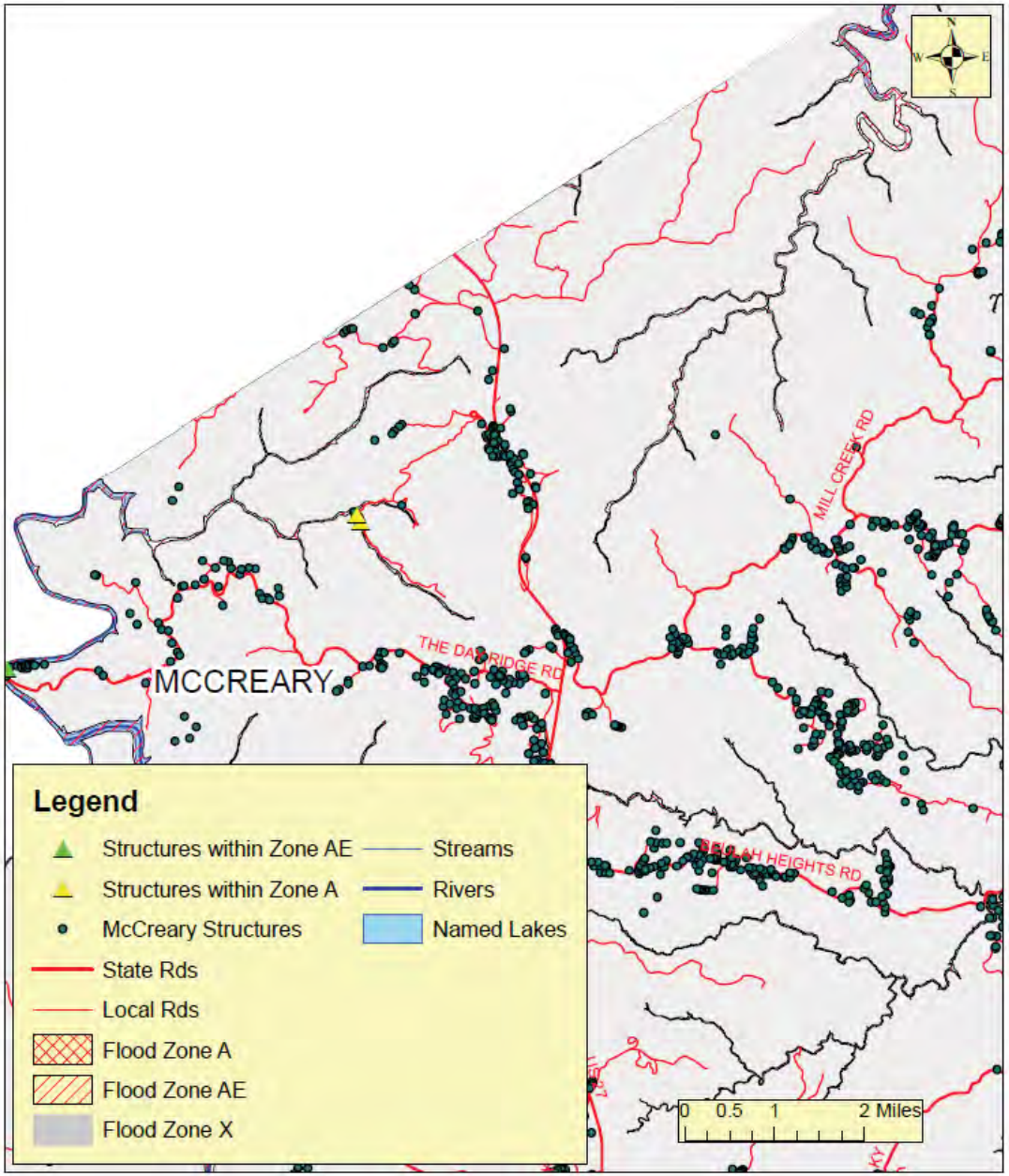
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(8c)
LCADD Region
McCreary County (NW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

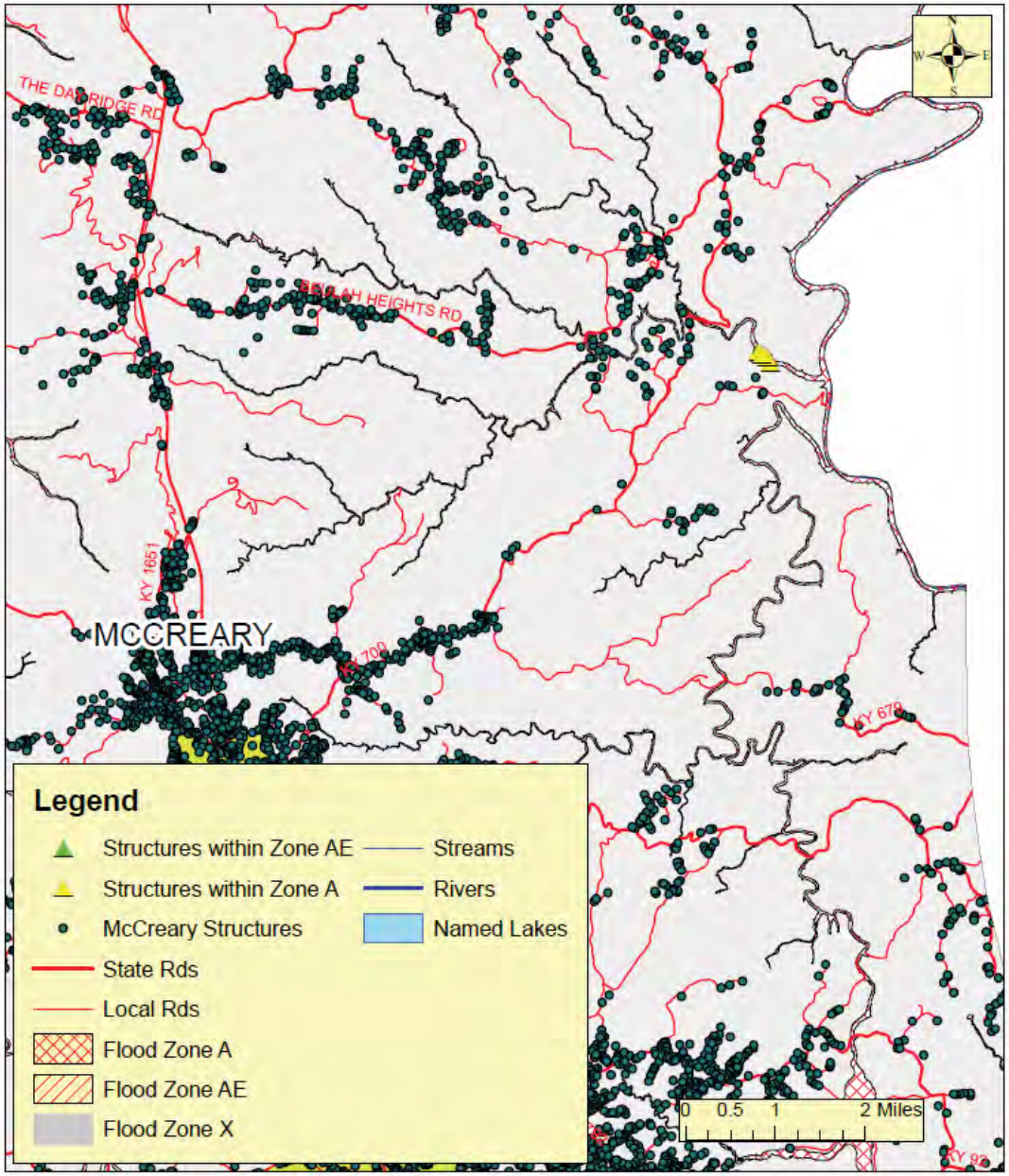
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(8d)
LCADD Region
McCreary County (CE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

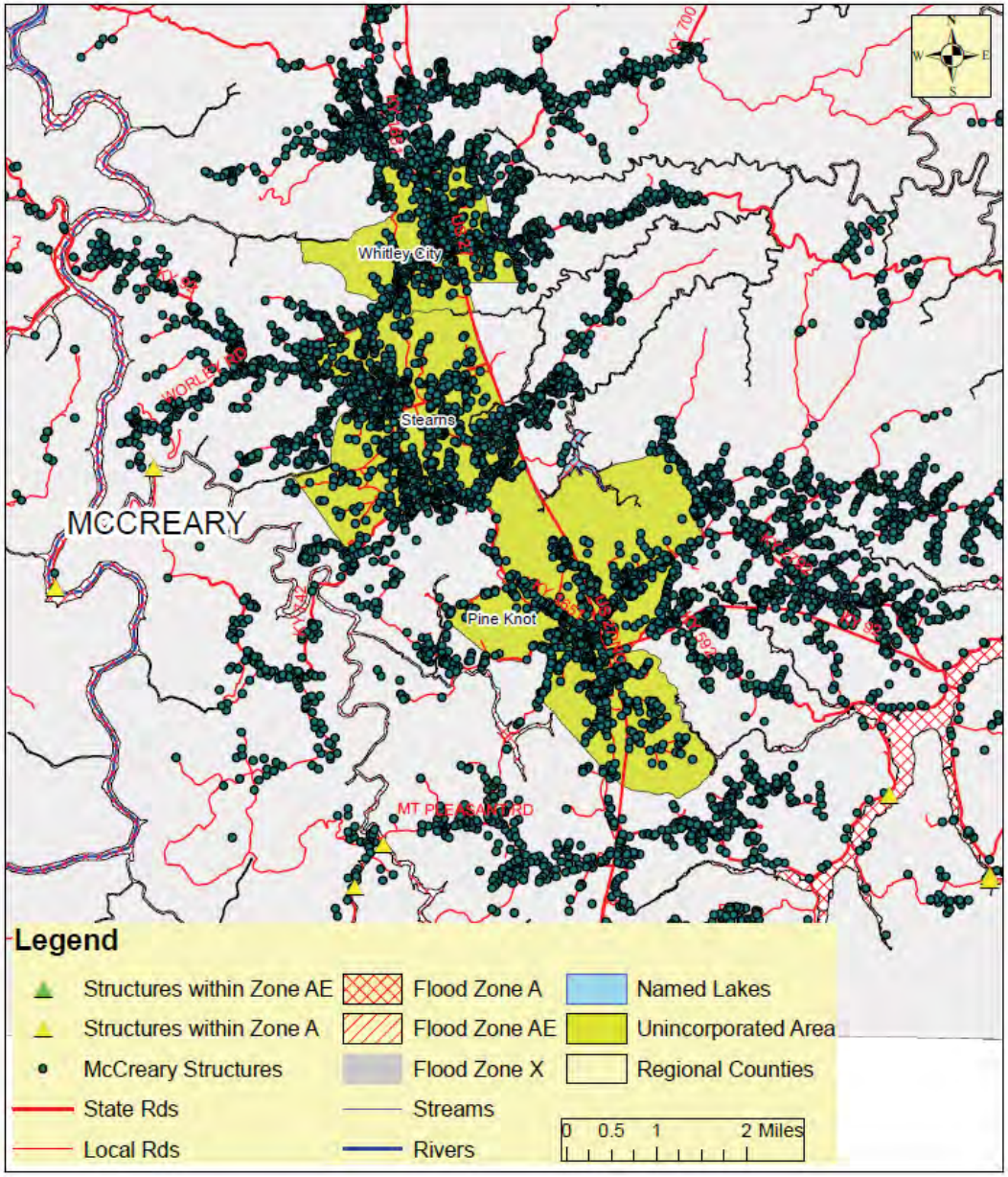
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(8f)
LCADD Region
McCreary County (CC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

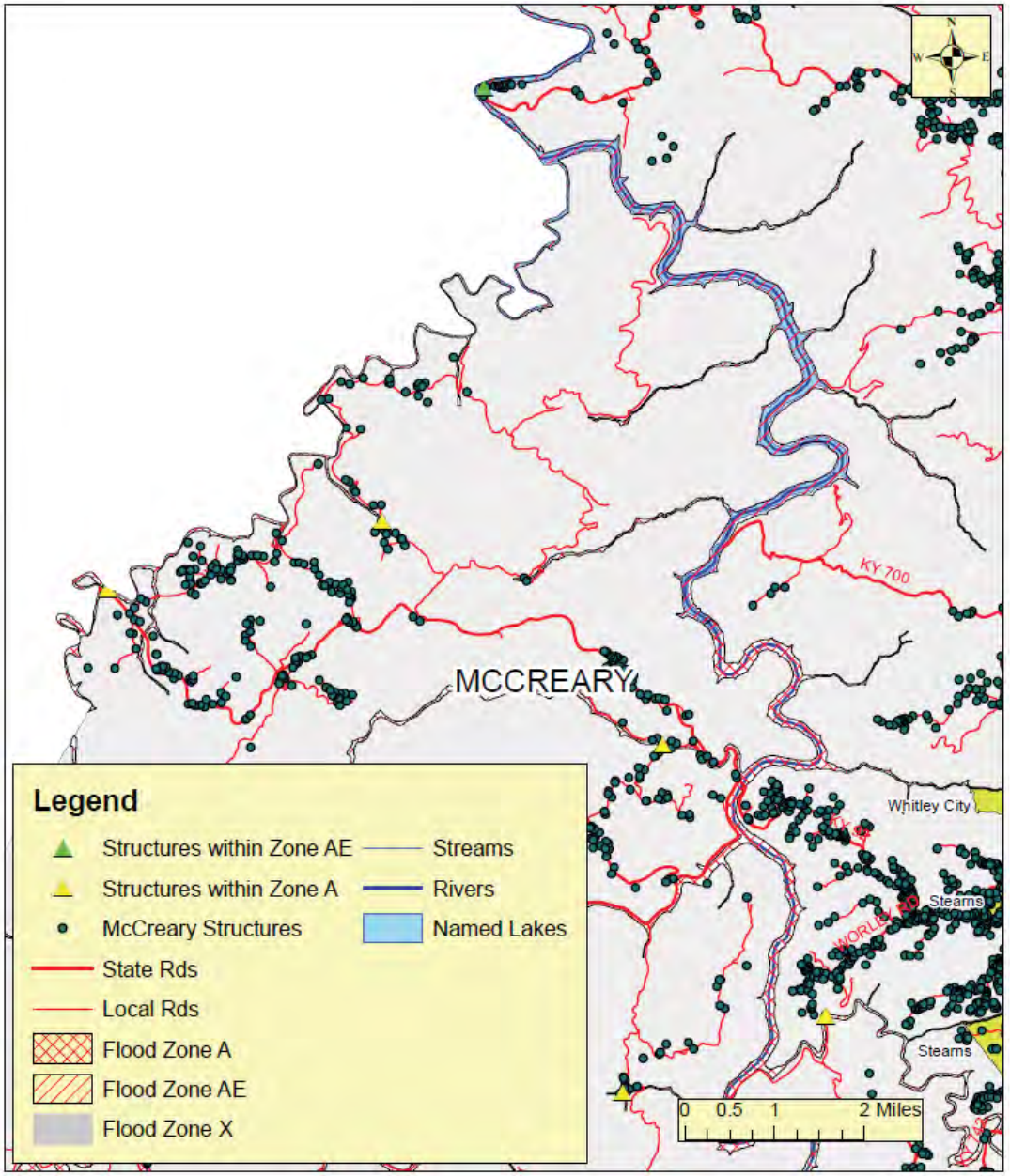
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(8e)
LCADD Region
McCreary County (CW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

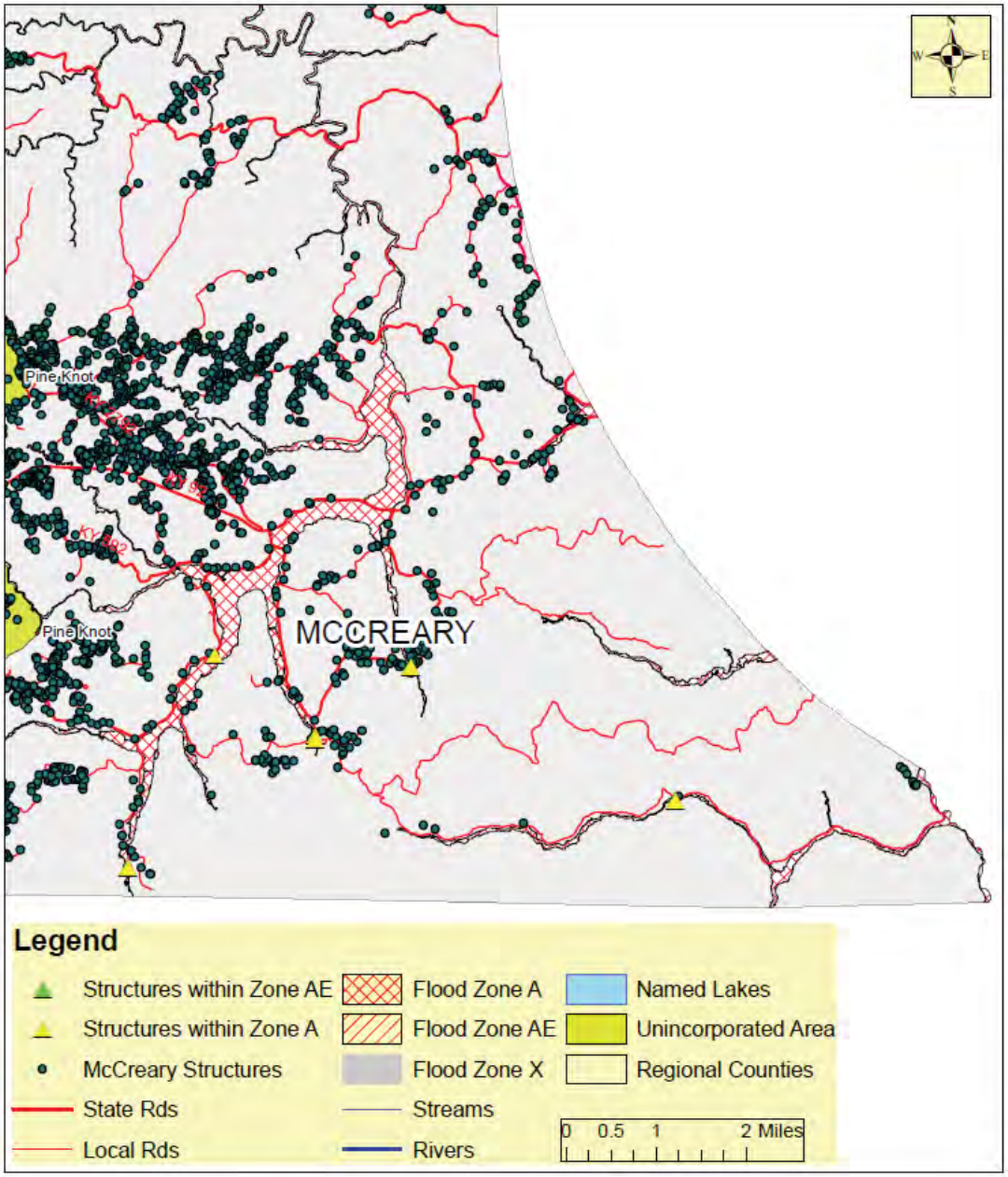
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(8g)
LCADD Region
McCreary County (SE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

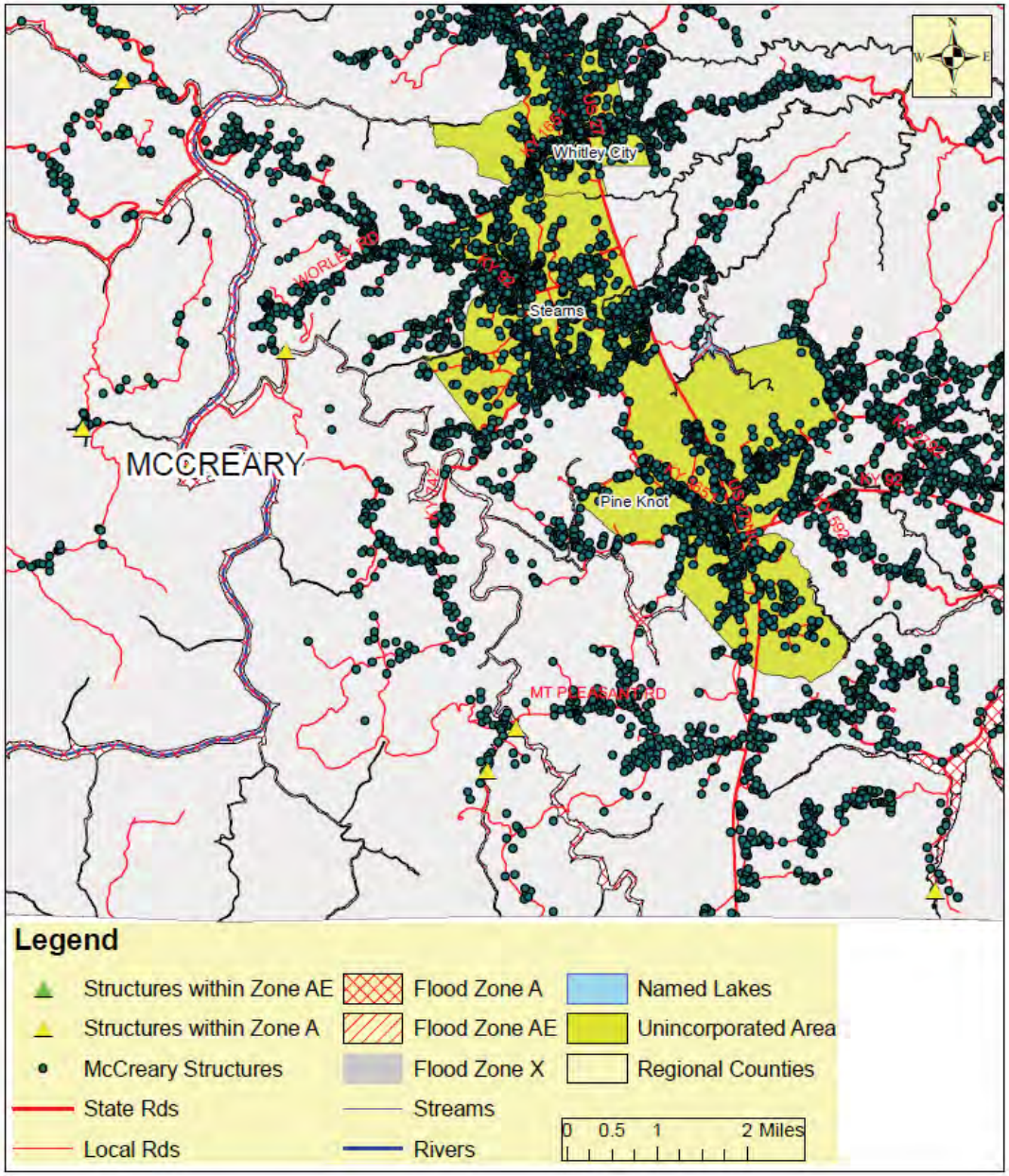
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(8h)
LCADD Region
McCreary County (SC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

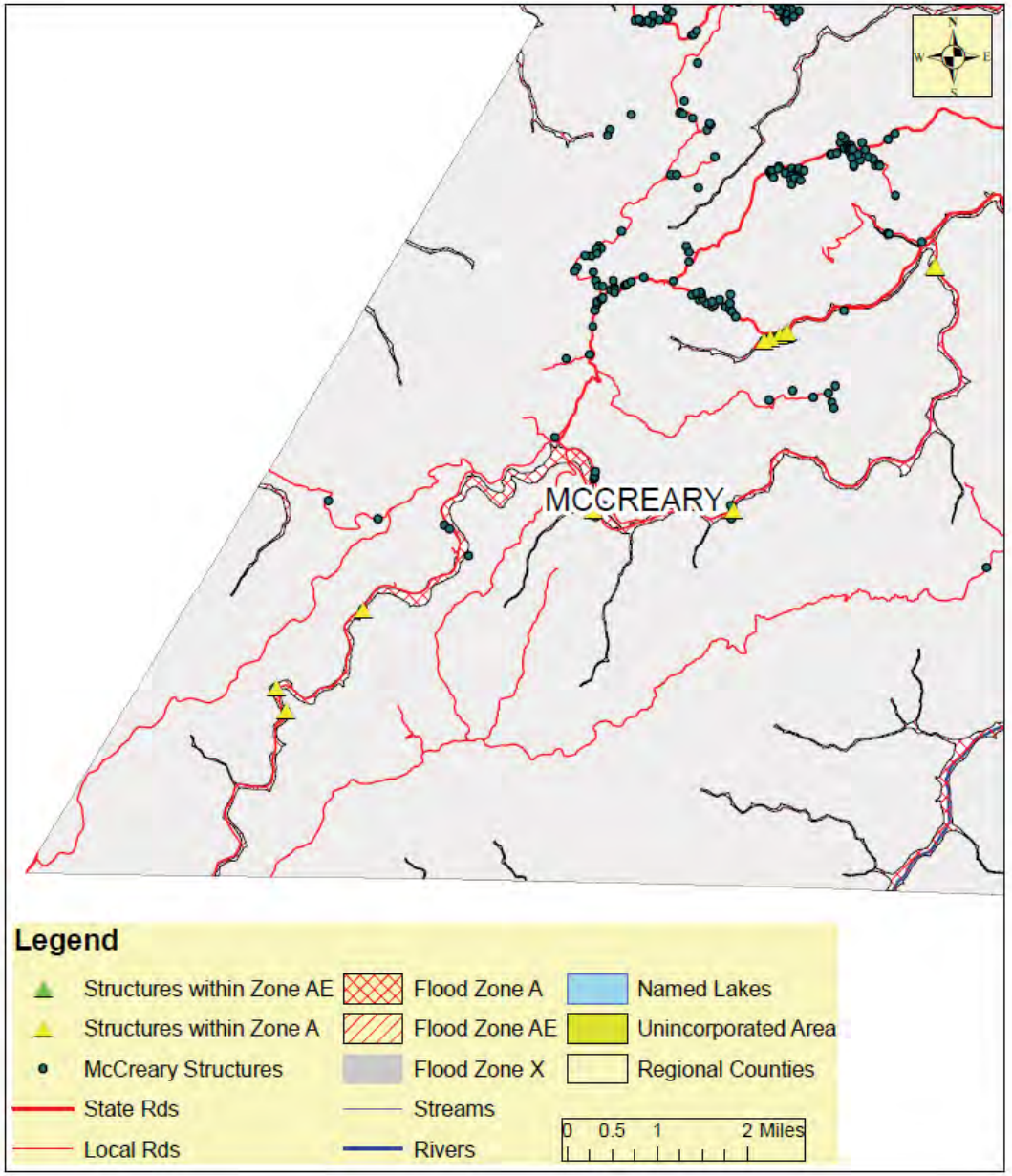
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(8i)
LCADD Region
McCreary County (SW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

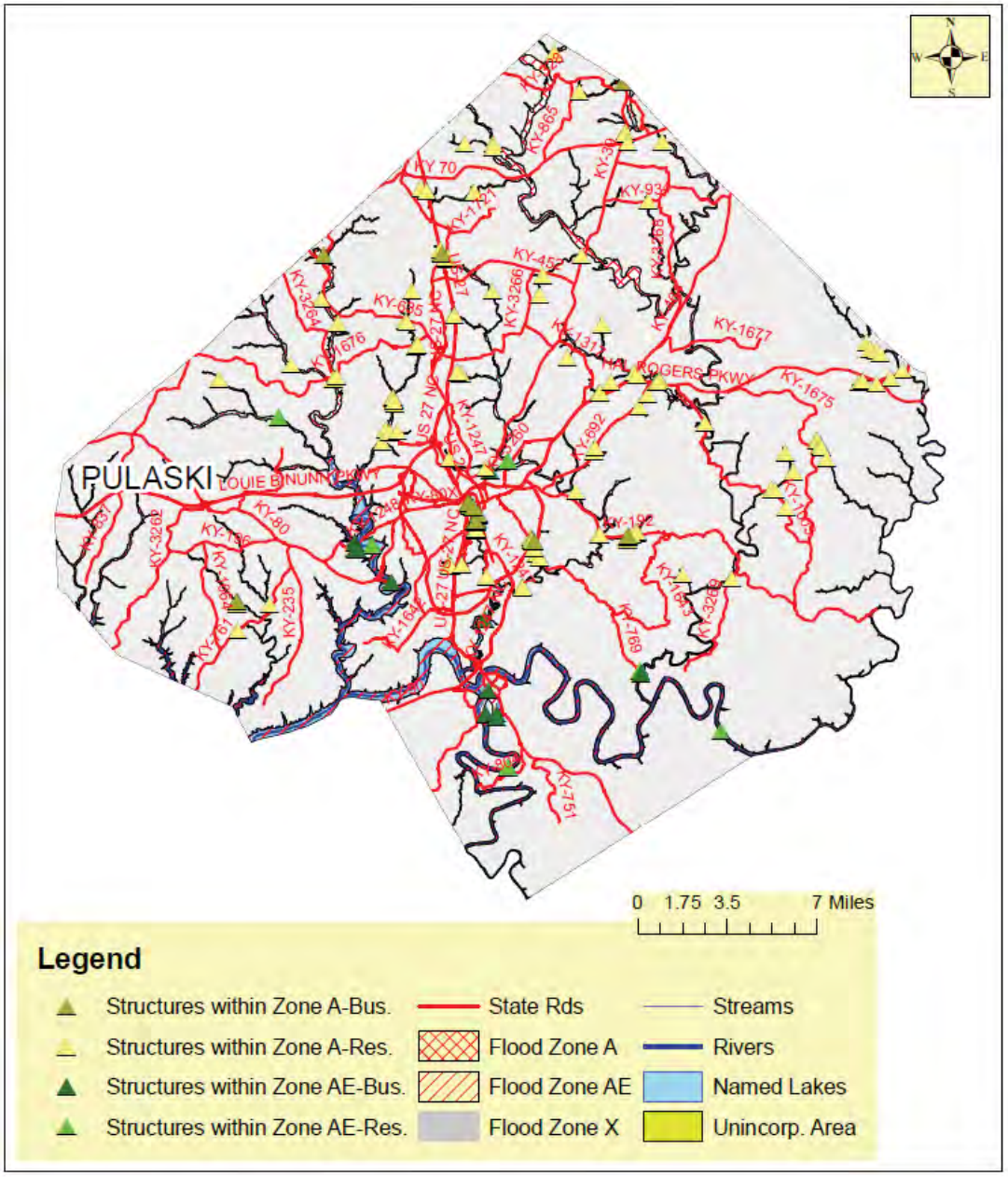
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(9a)
LCADD Region
Pulaski County
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

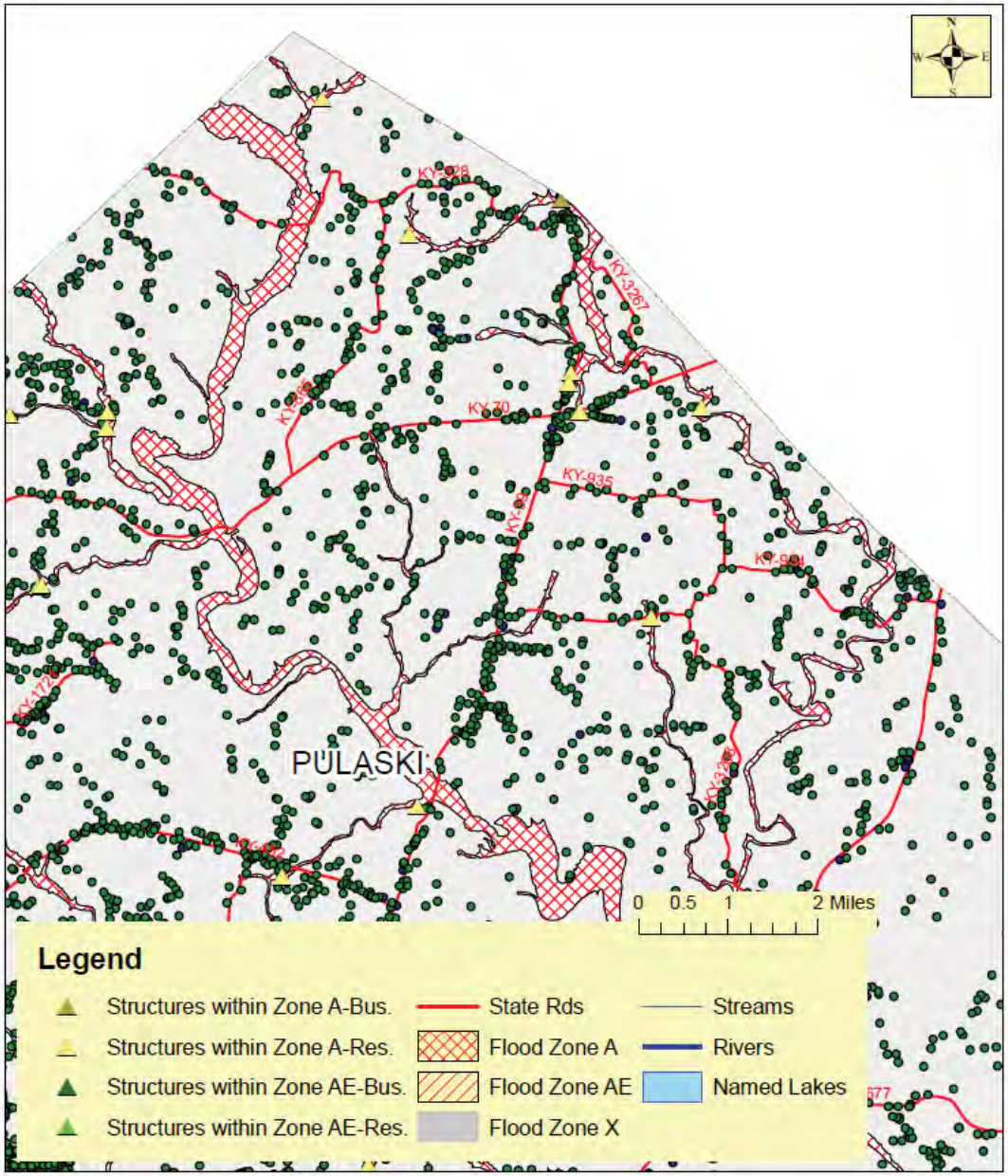
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(9b)
LCADD Region
Pulaski County (NE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

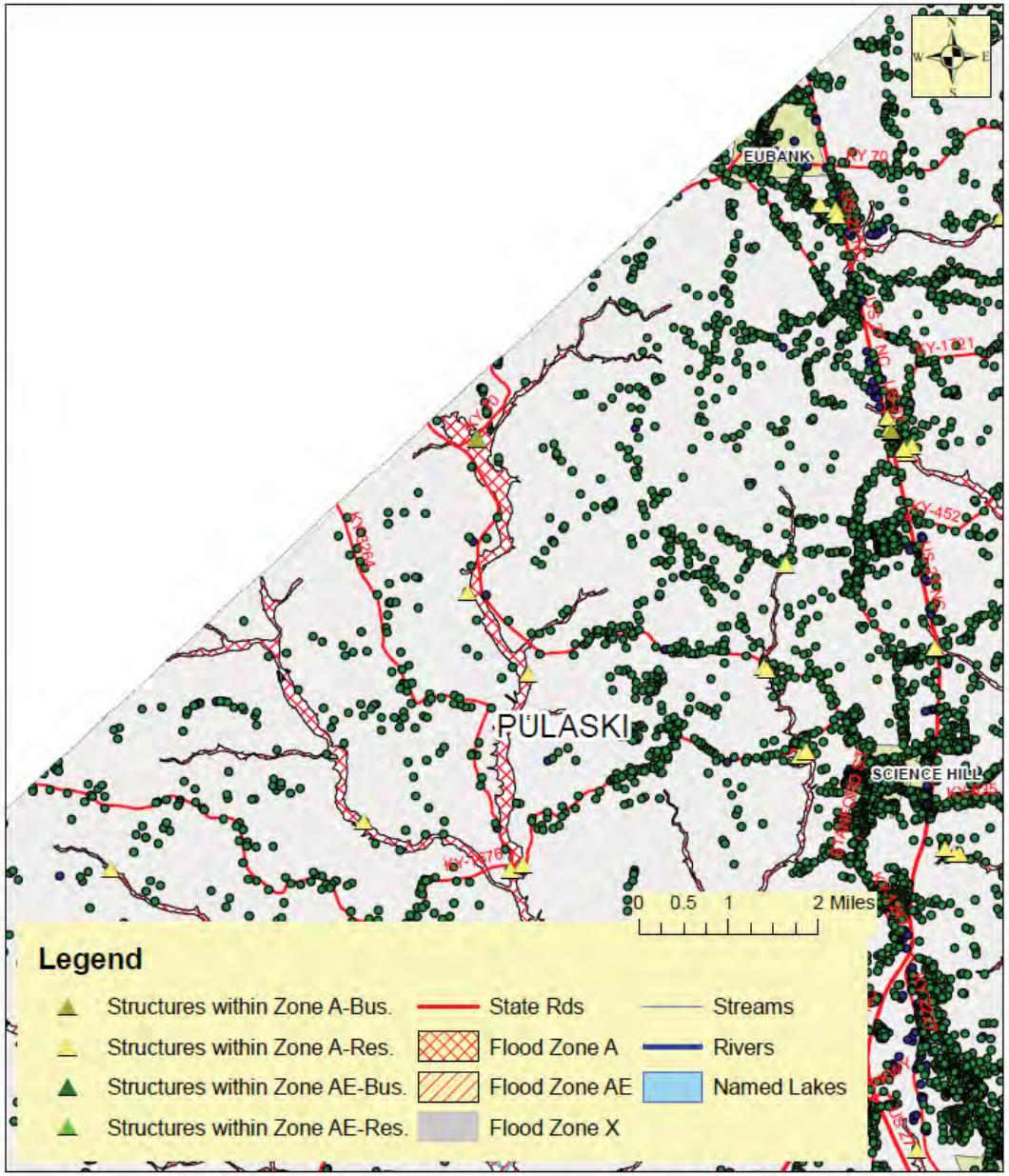
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(9c)
LCADD Region
Pulaski County (NW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

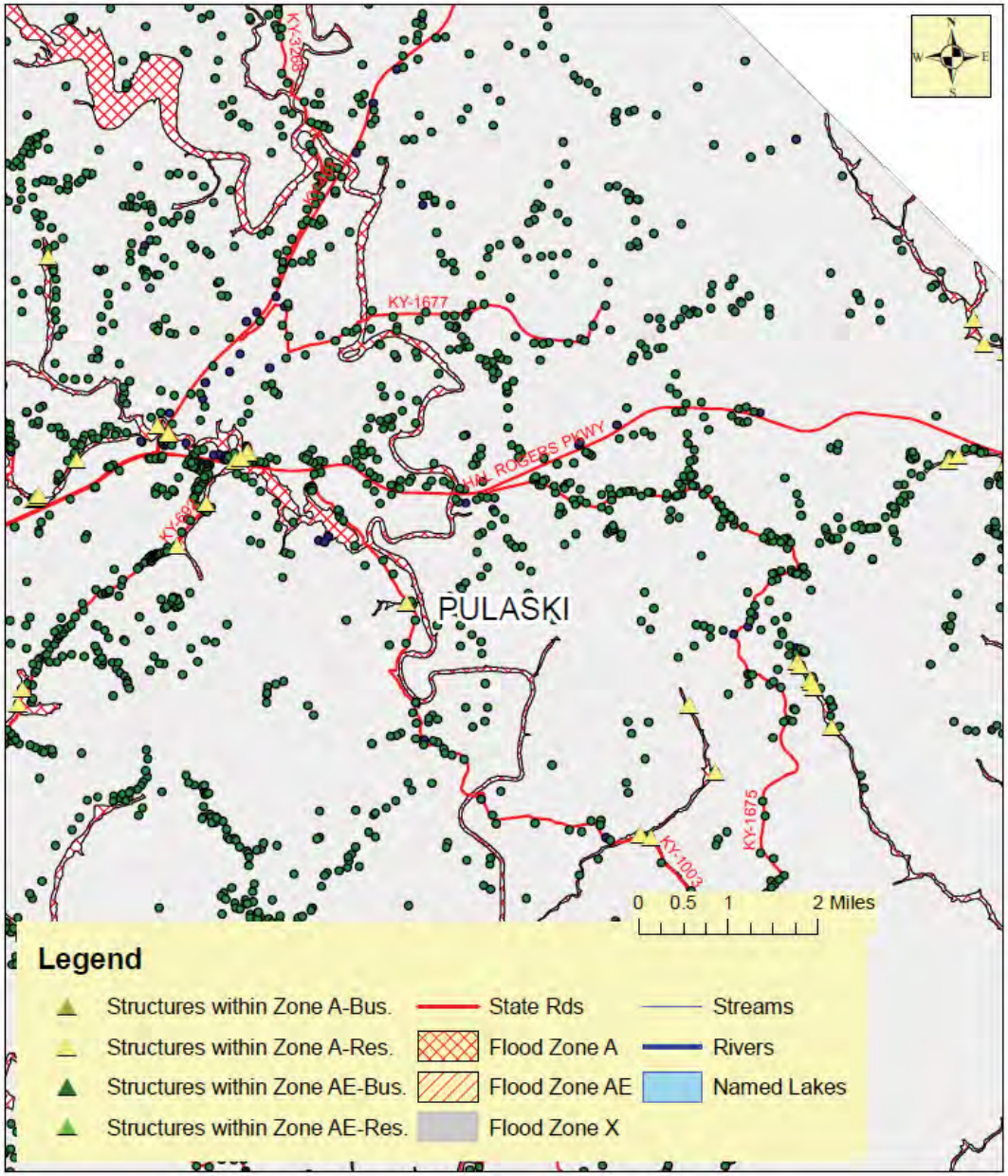
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(9d)
LCADD Region
Pulaski County (CE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

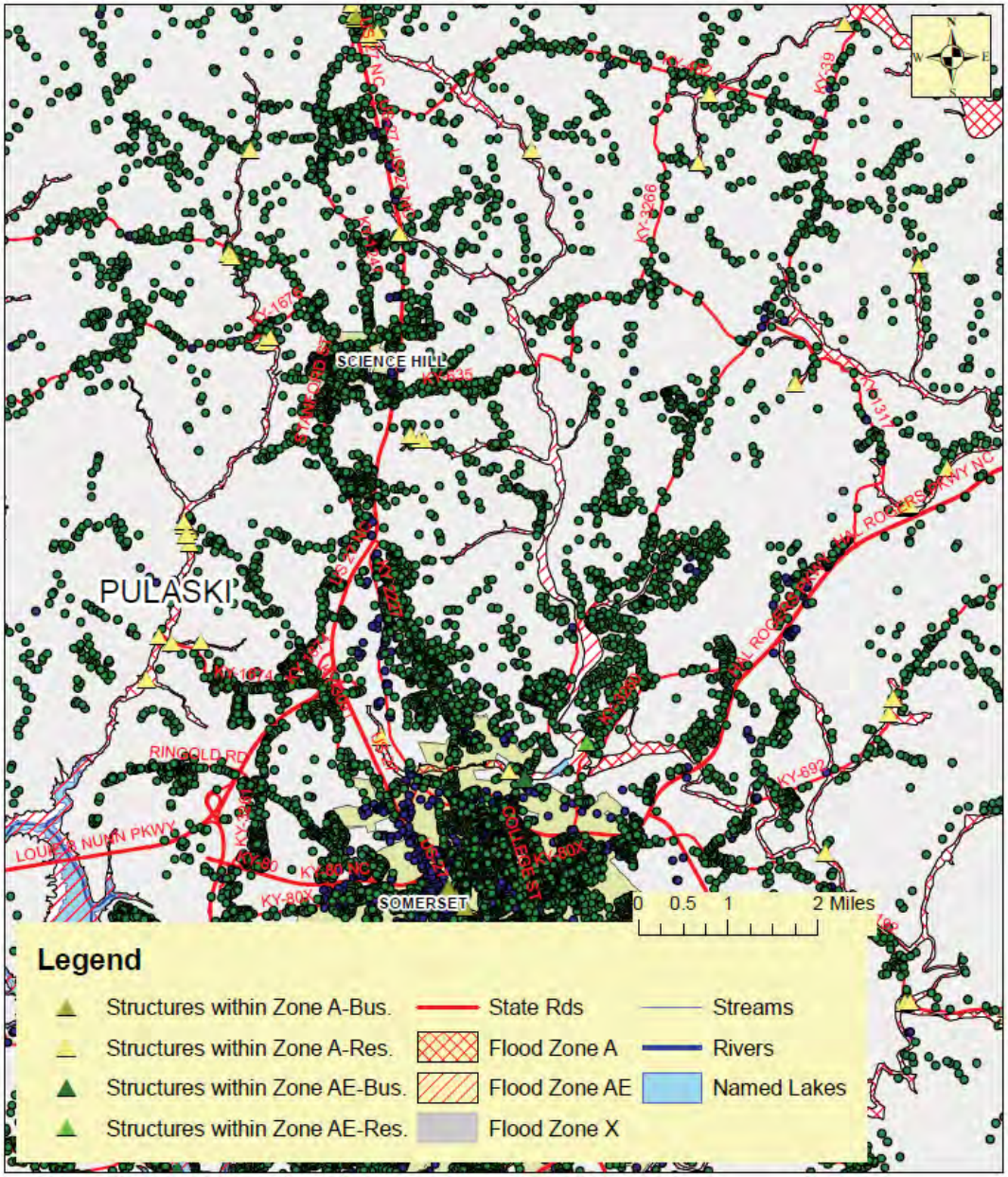
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(9d)
LCADD Region
Pulaski County (CC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

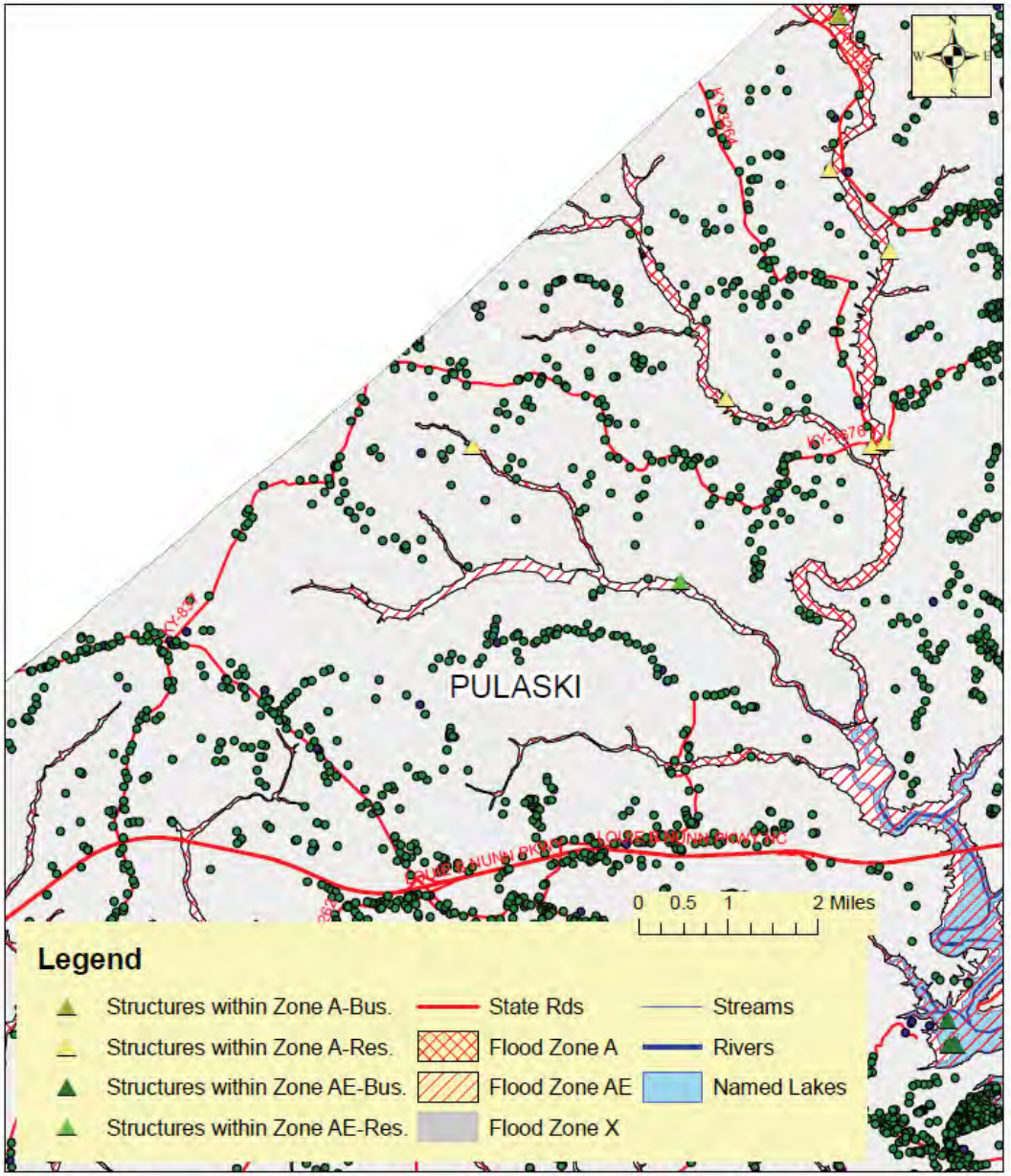
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(9f)
LCADD Region
Pulaski County (CW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

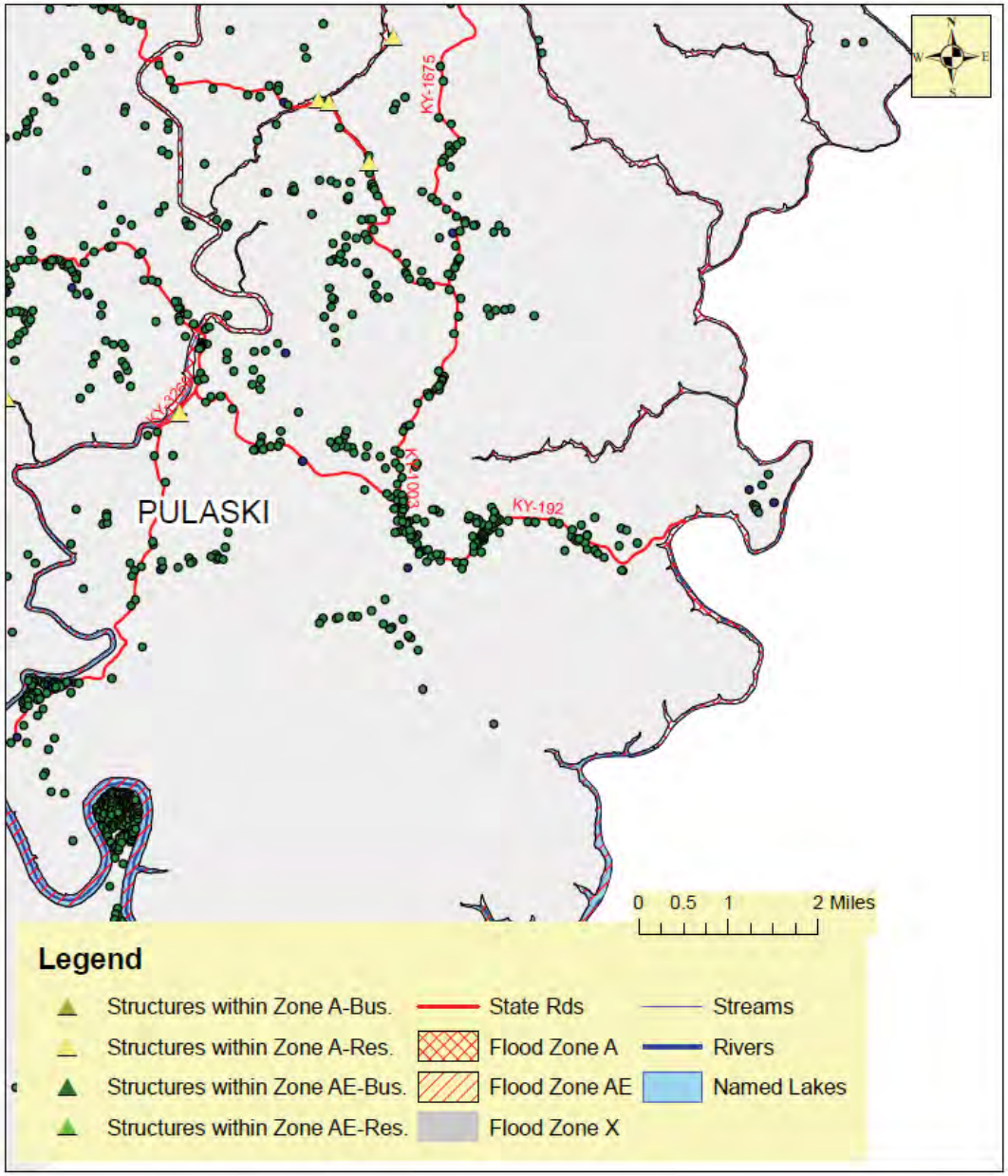
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(9g)
LCADD Region
Pulaski County (SE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

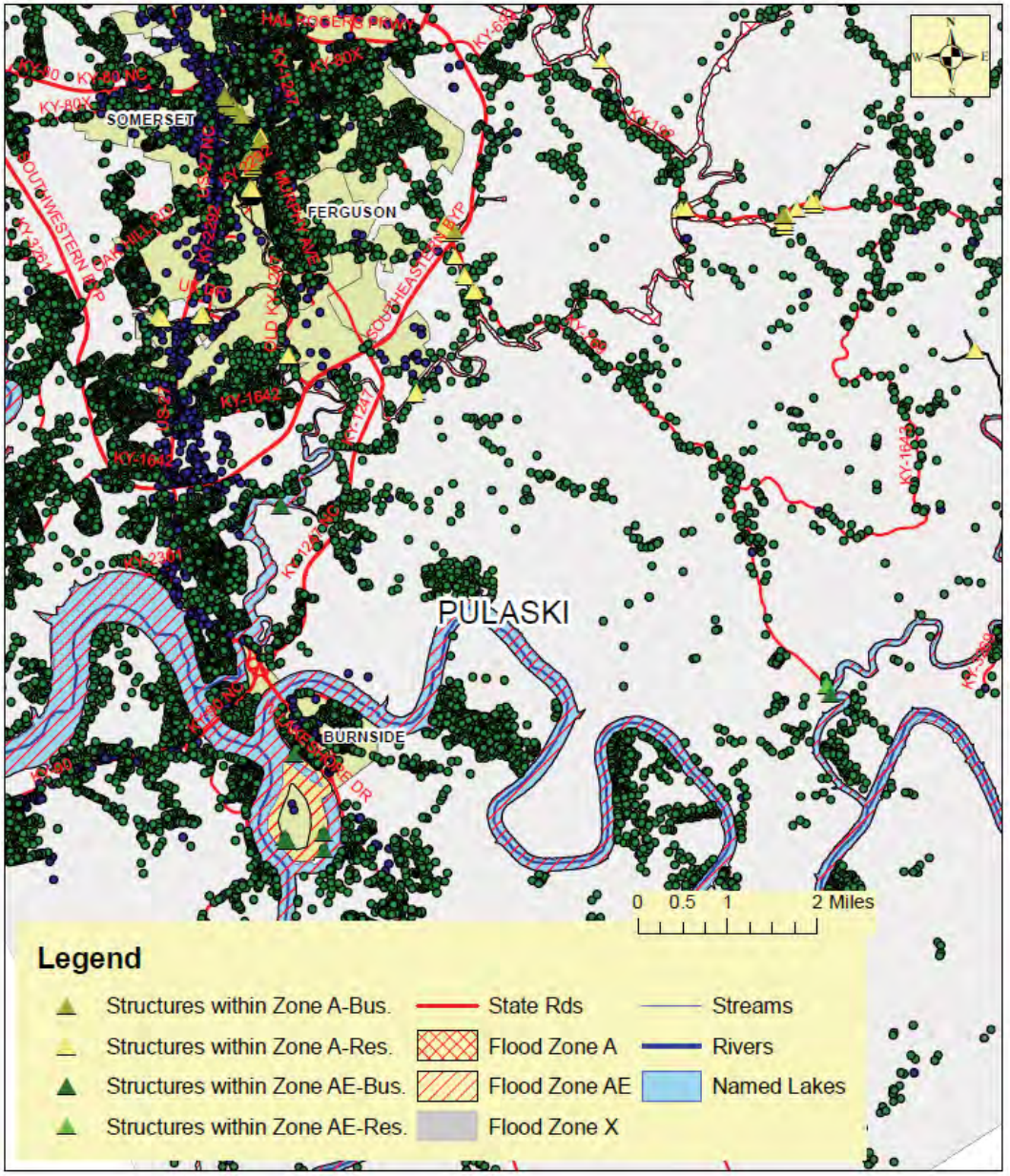
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(9h)
LCADD Region
Pulaski County (SC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

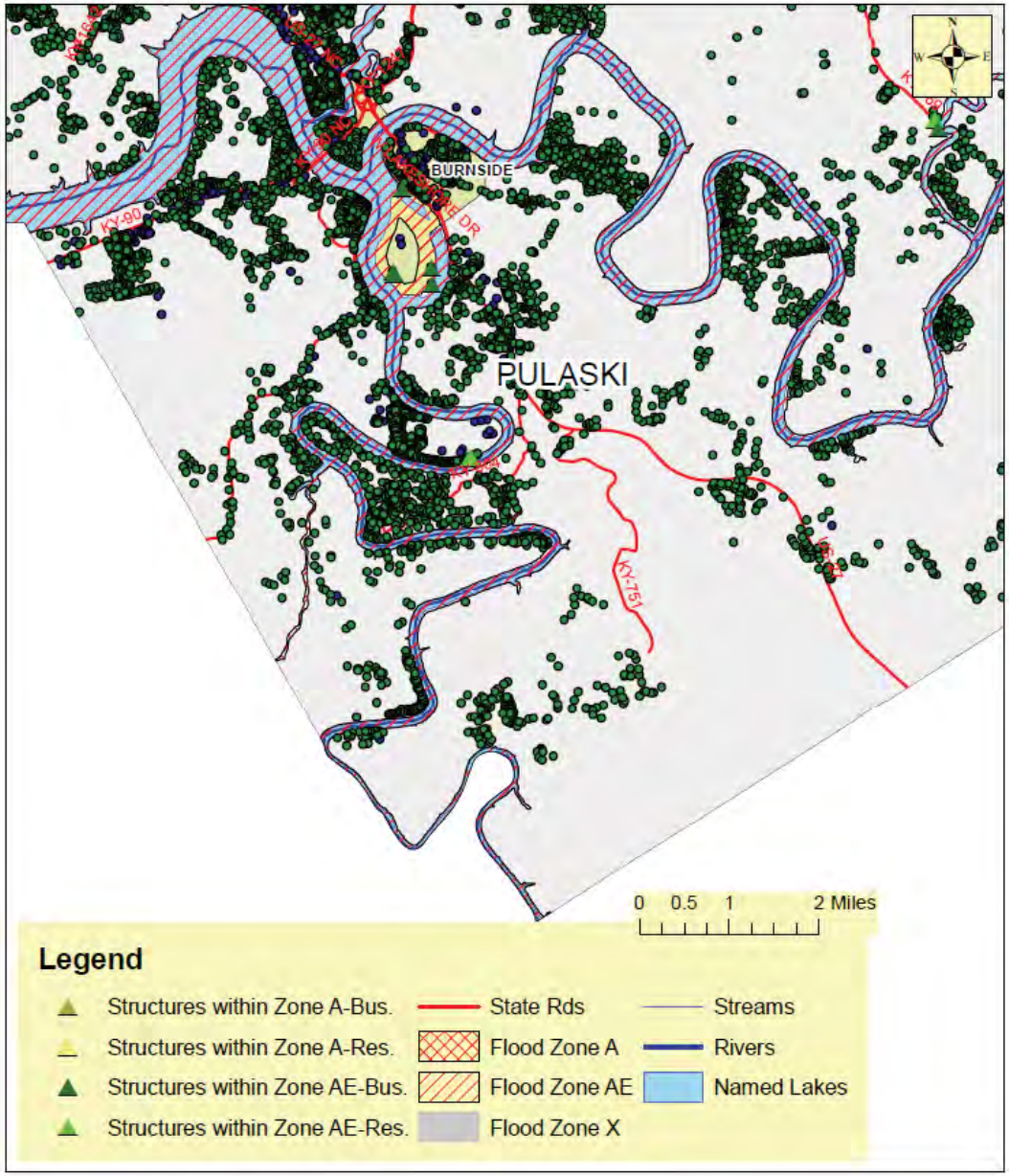
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(9i)
LCADD Region
Pulaski County (SC-lower)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

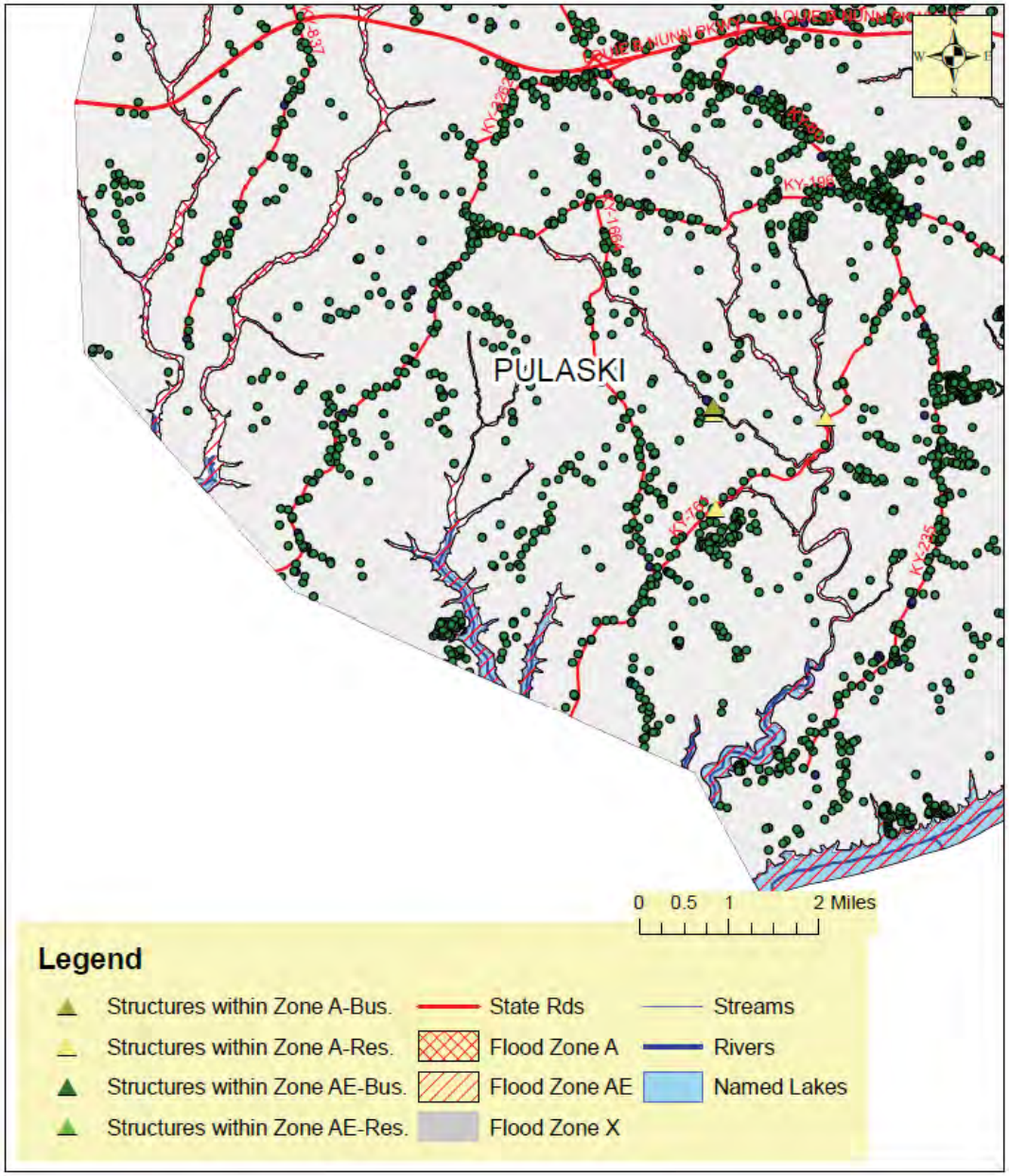
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(9k)
LCADD Region
Pulaski County (SW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

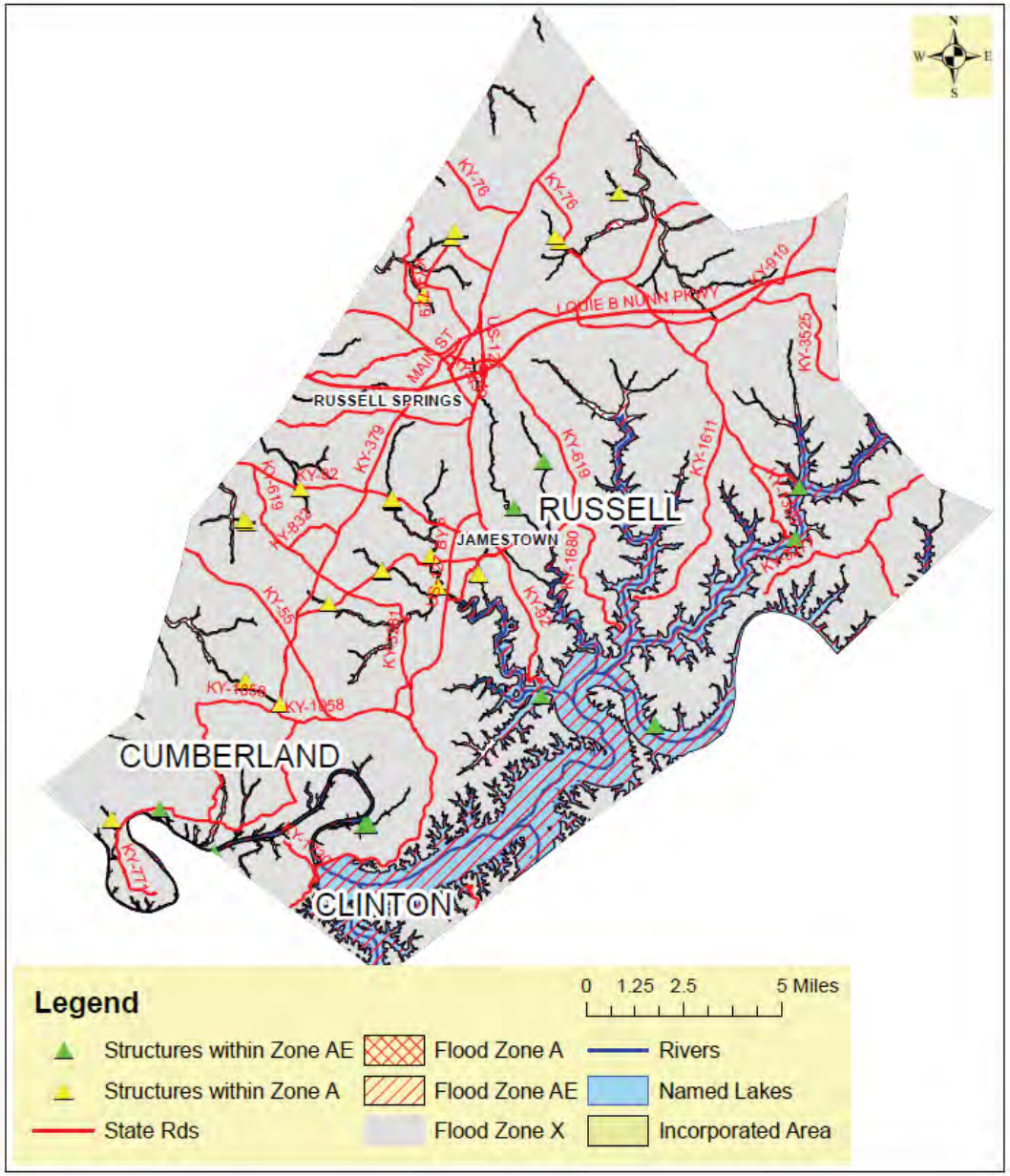
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(10a)
LCADD Region
Russell County
Identified Flood Areas

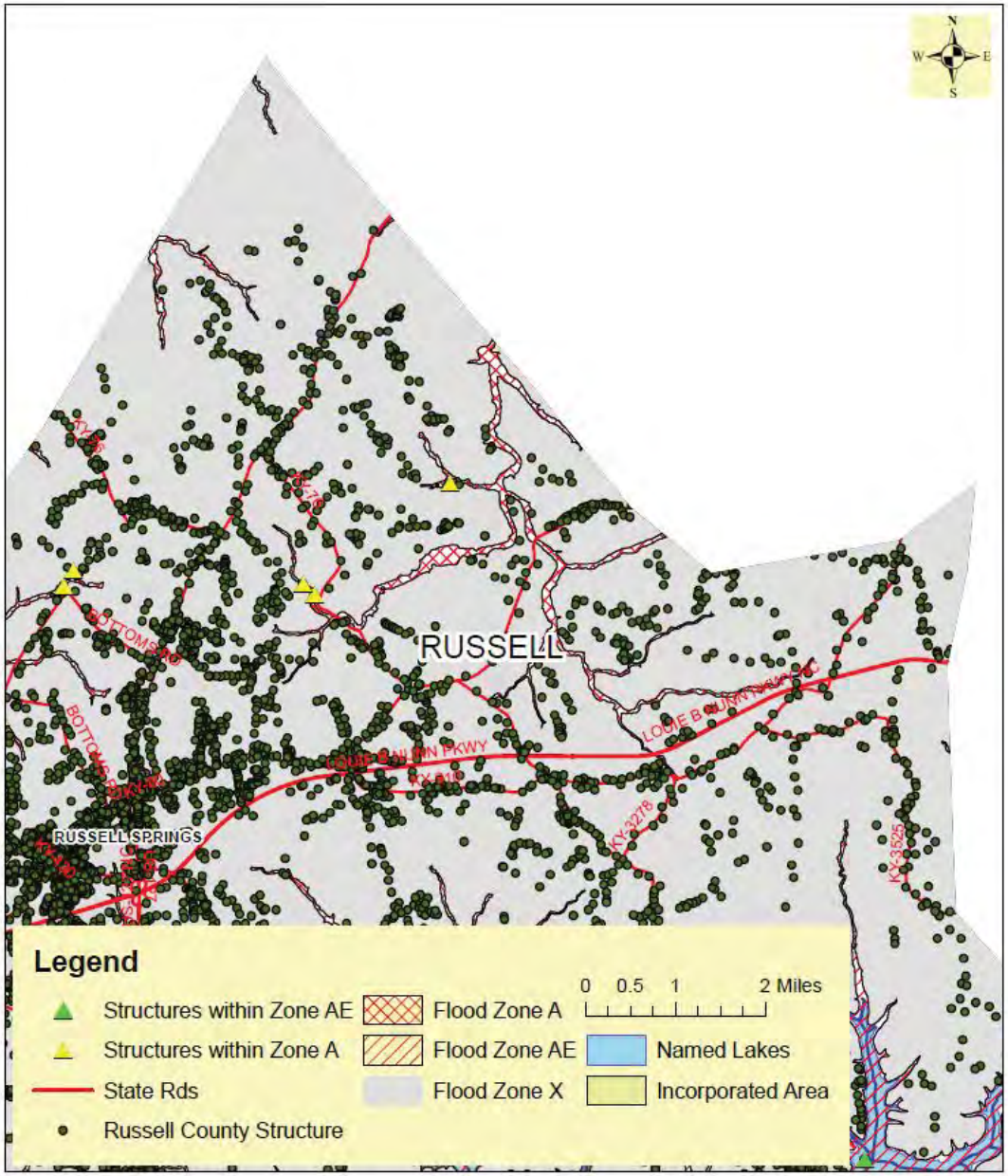
Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(10b)
LCADD Region
Russell County (NE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

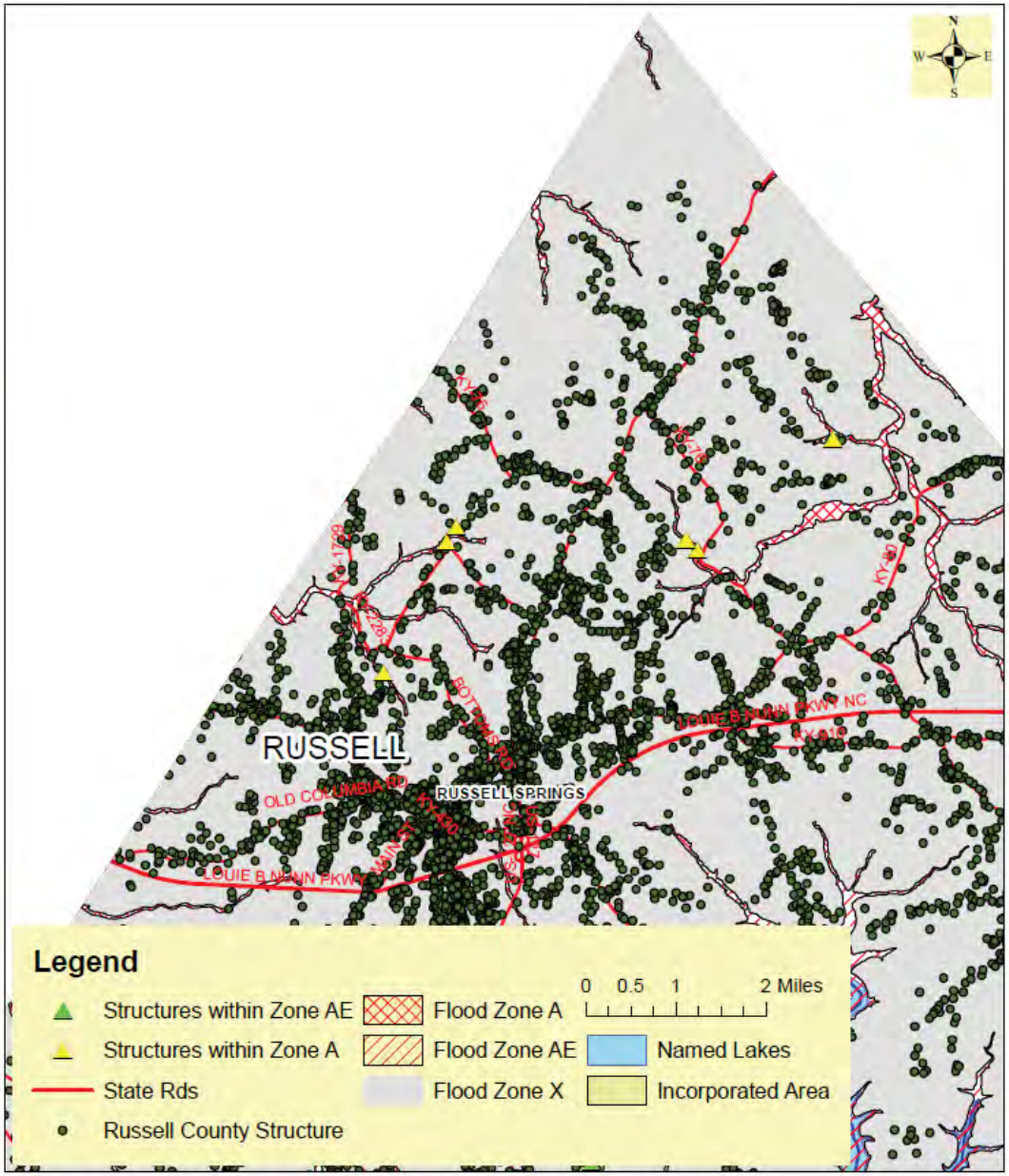


Prepared By:
Lake Cumberland Area Development District

Map 4.1.1(10c)
LCADD Region
Russell County (NW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

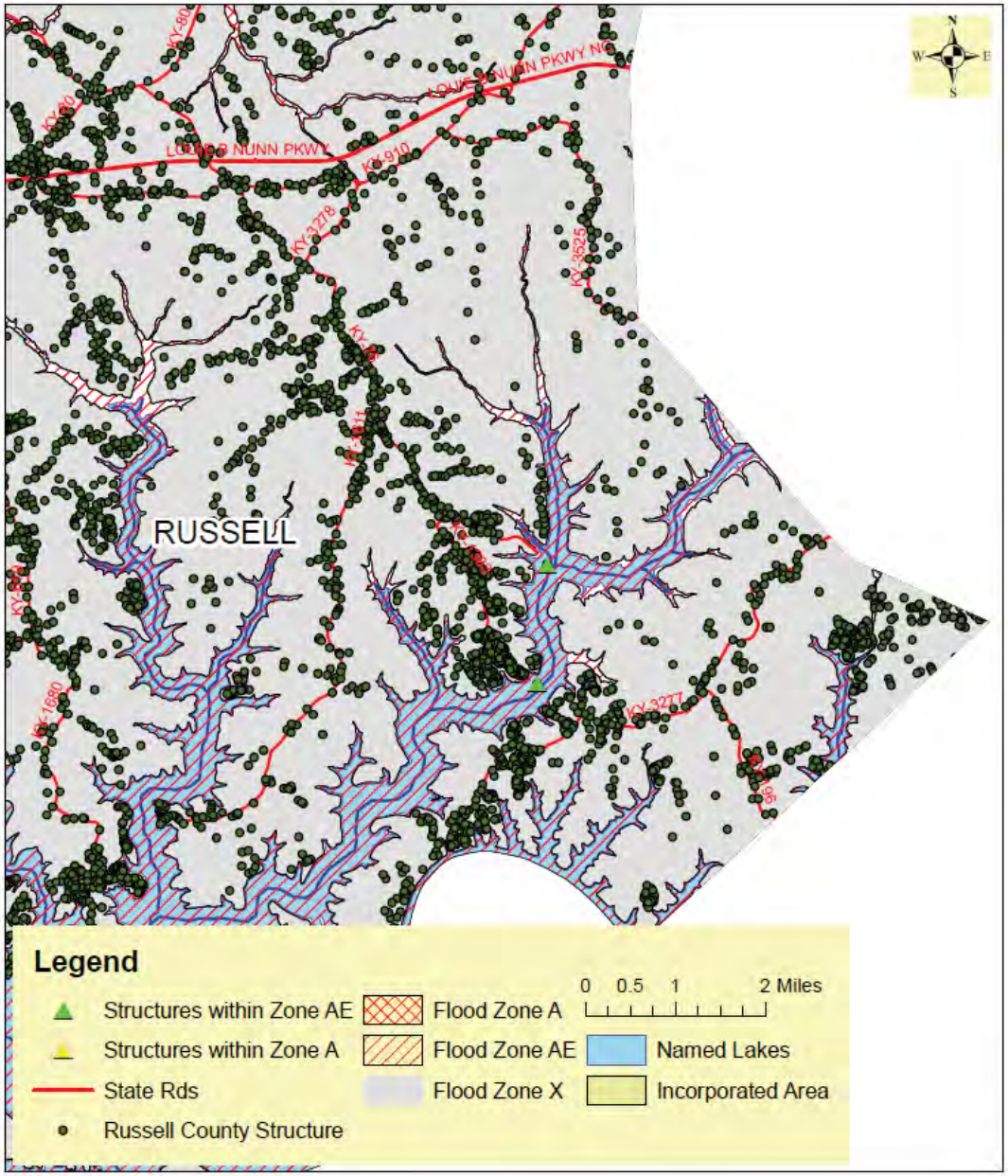
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(10d)
LCADD Region
Russell County (CE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

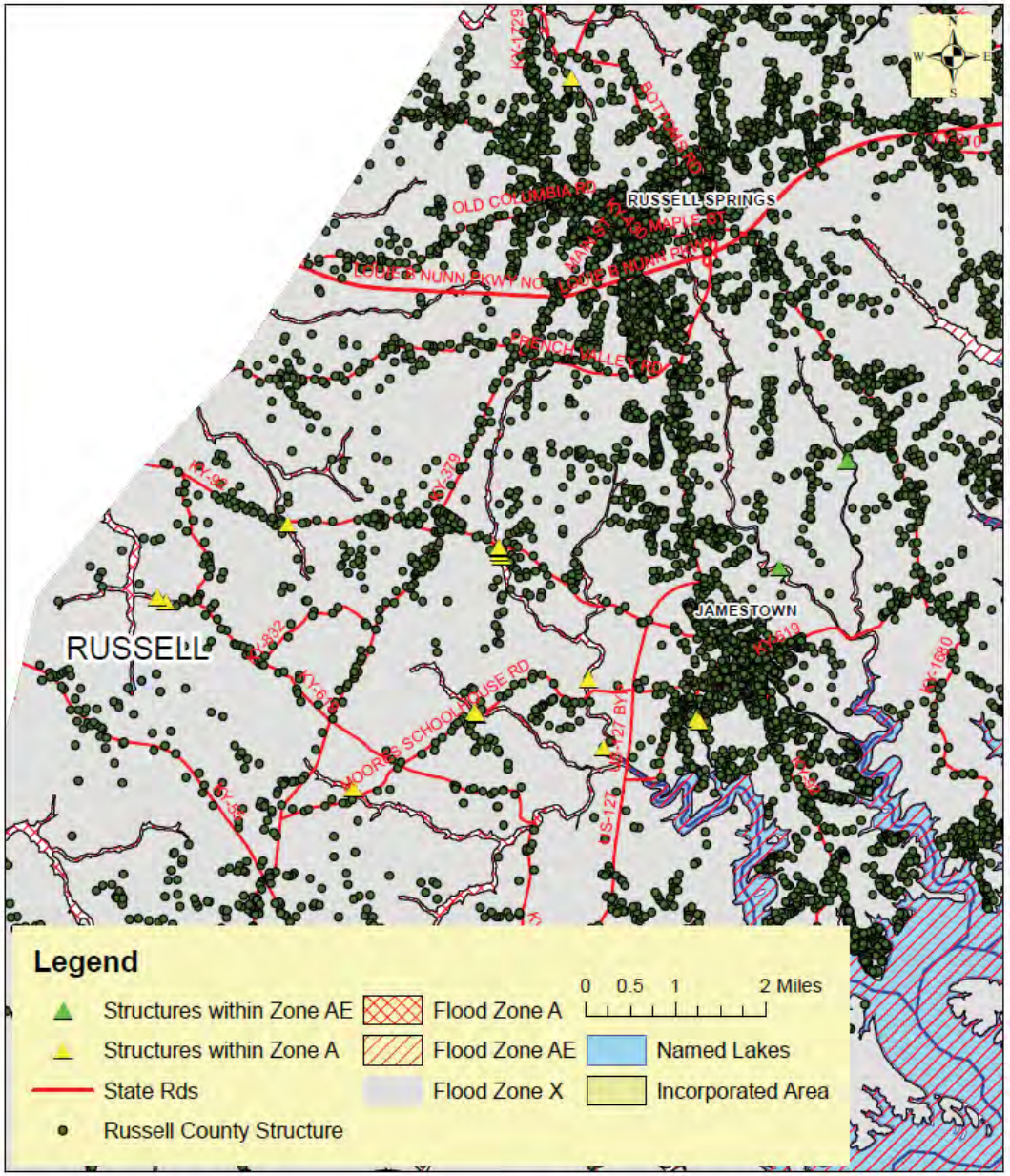
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(10e)
LCADD Region
Russell County (CW)
Identified Flood Areas

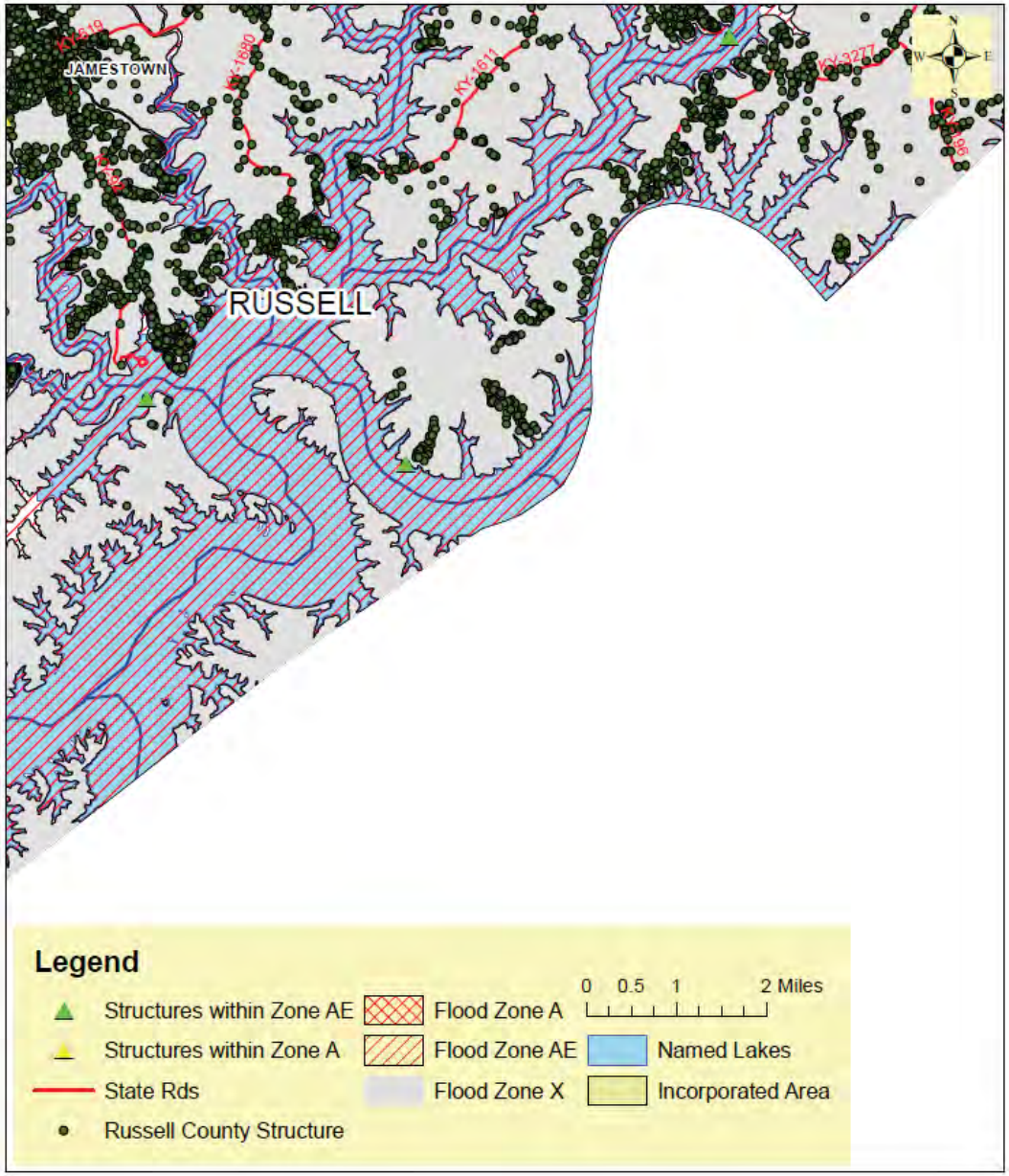
Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(10f)
LCADD Region
Russell County (SE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

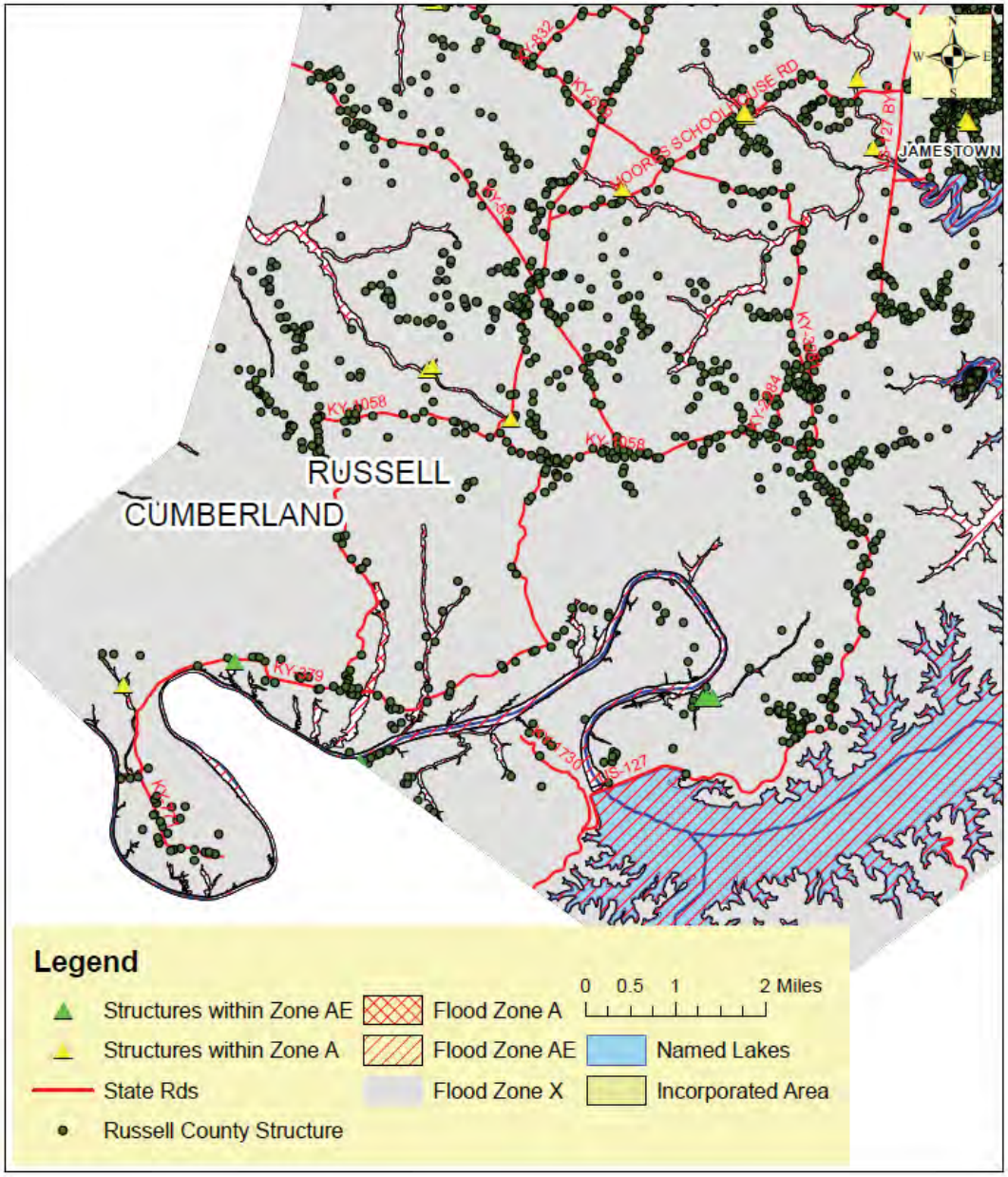


Prepared By:
Lake Cumberland Area Development District

Map 4.1.1(10g)
LCADD Region
Russell County (SW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

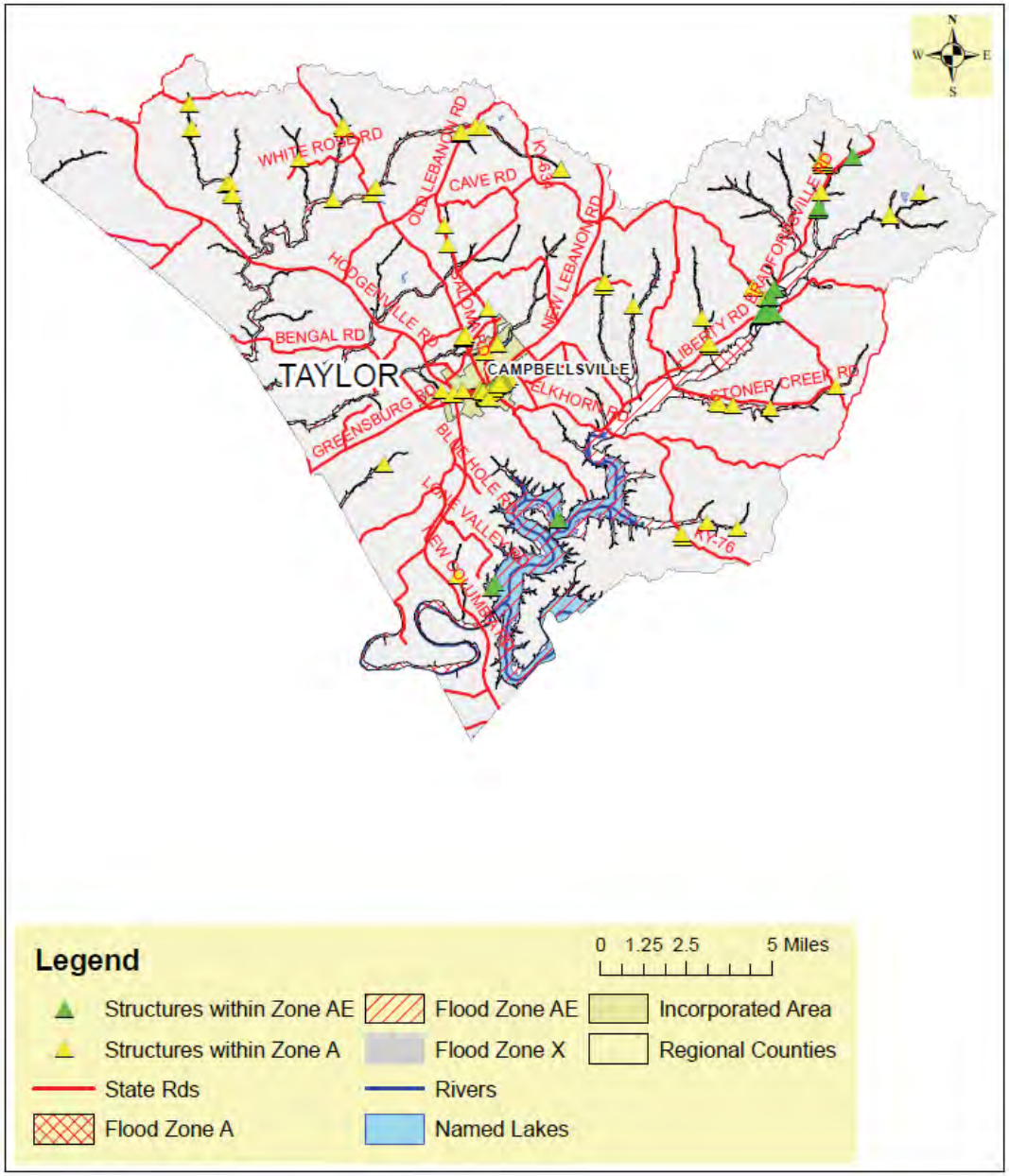
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(11a)
LCADD Region
Taylor County
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

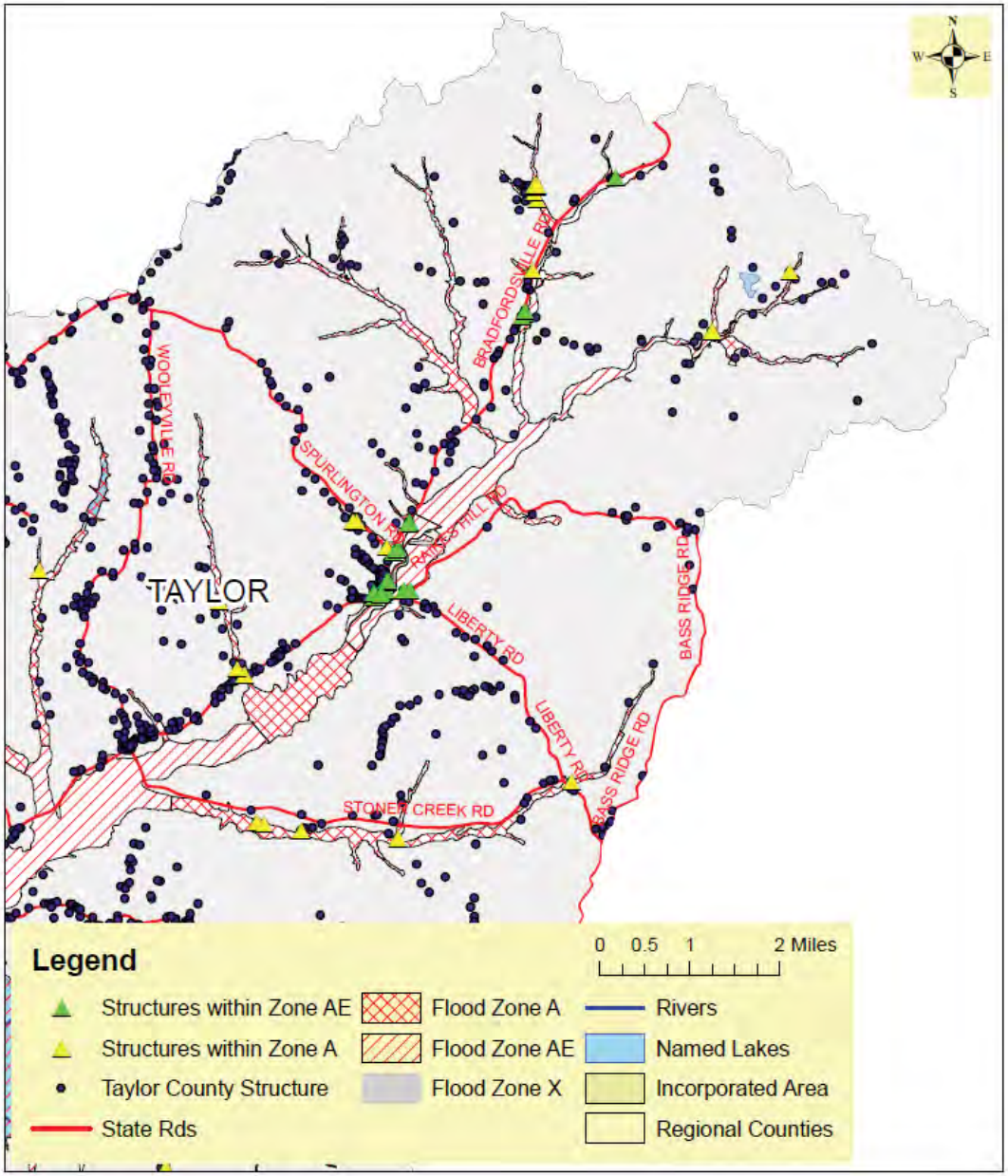
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(11b)
LCADD Region
Taylor County (NE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

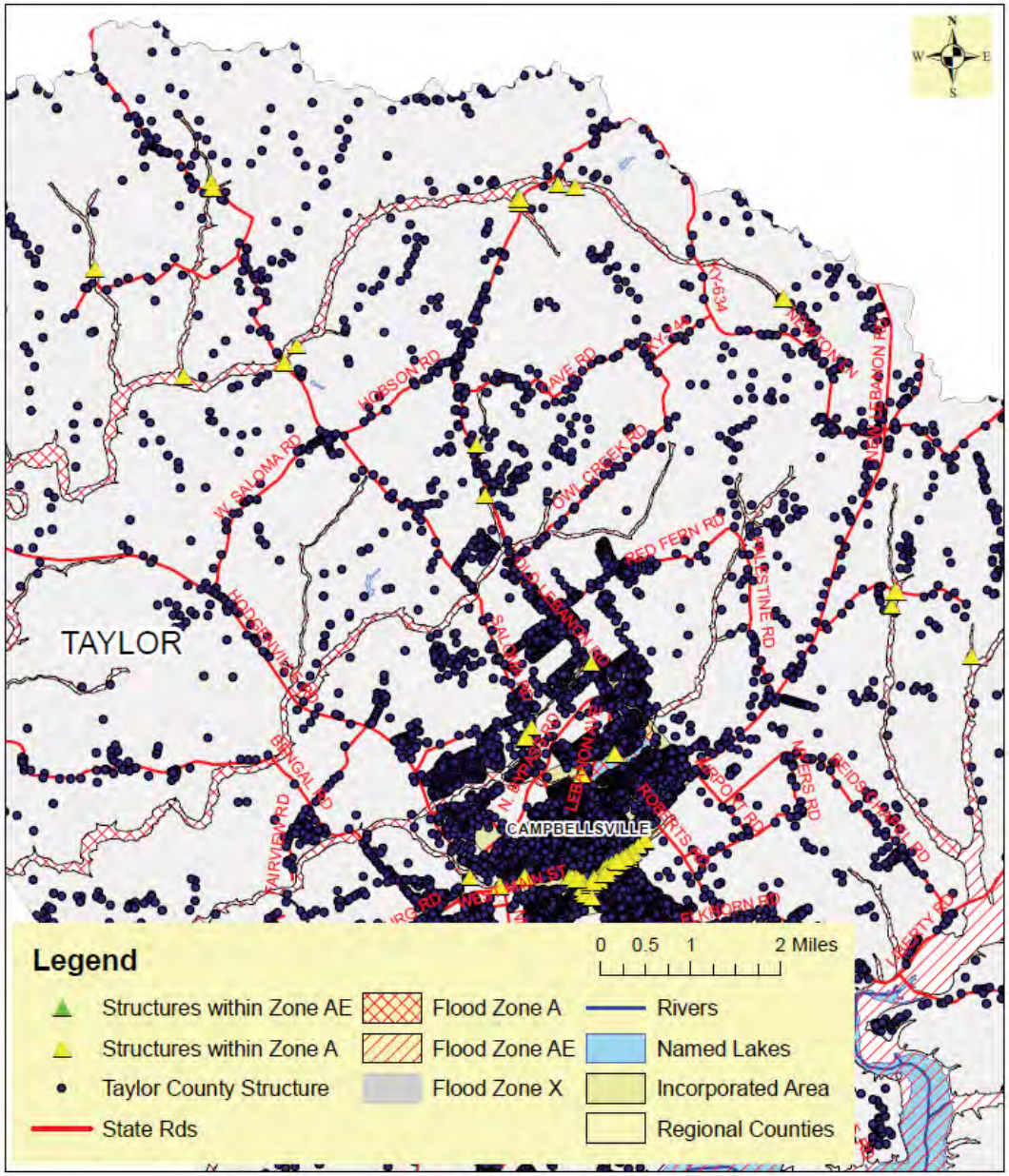
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(11c)
LCADD Region
Taylor County (NC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

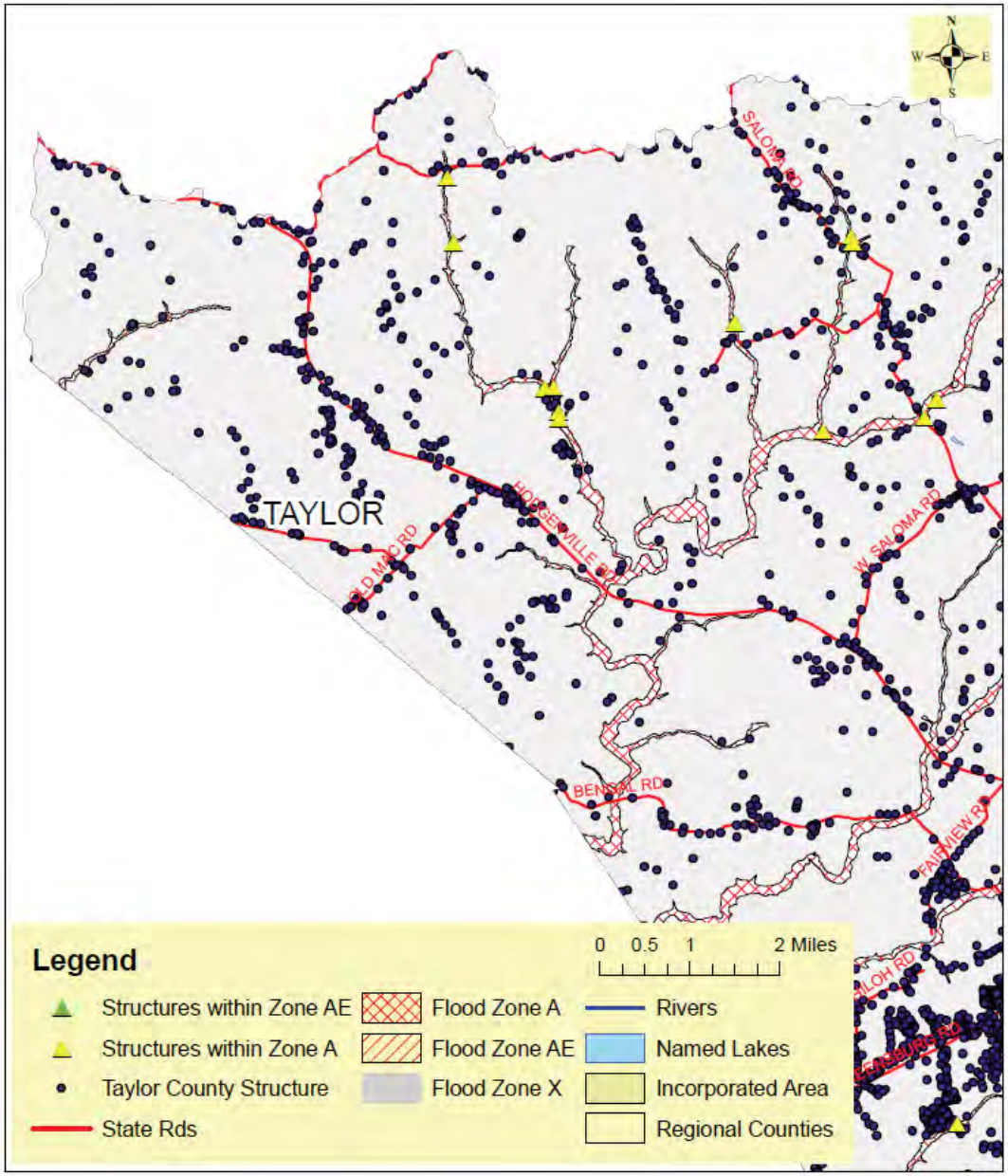
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(11d)
LCADD Region
Taylor County (NW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

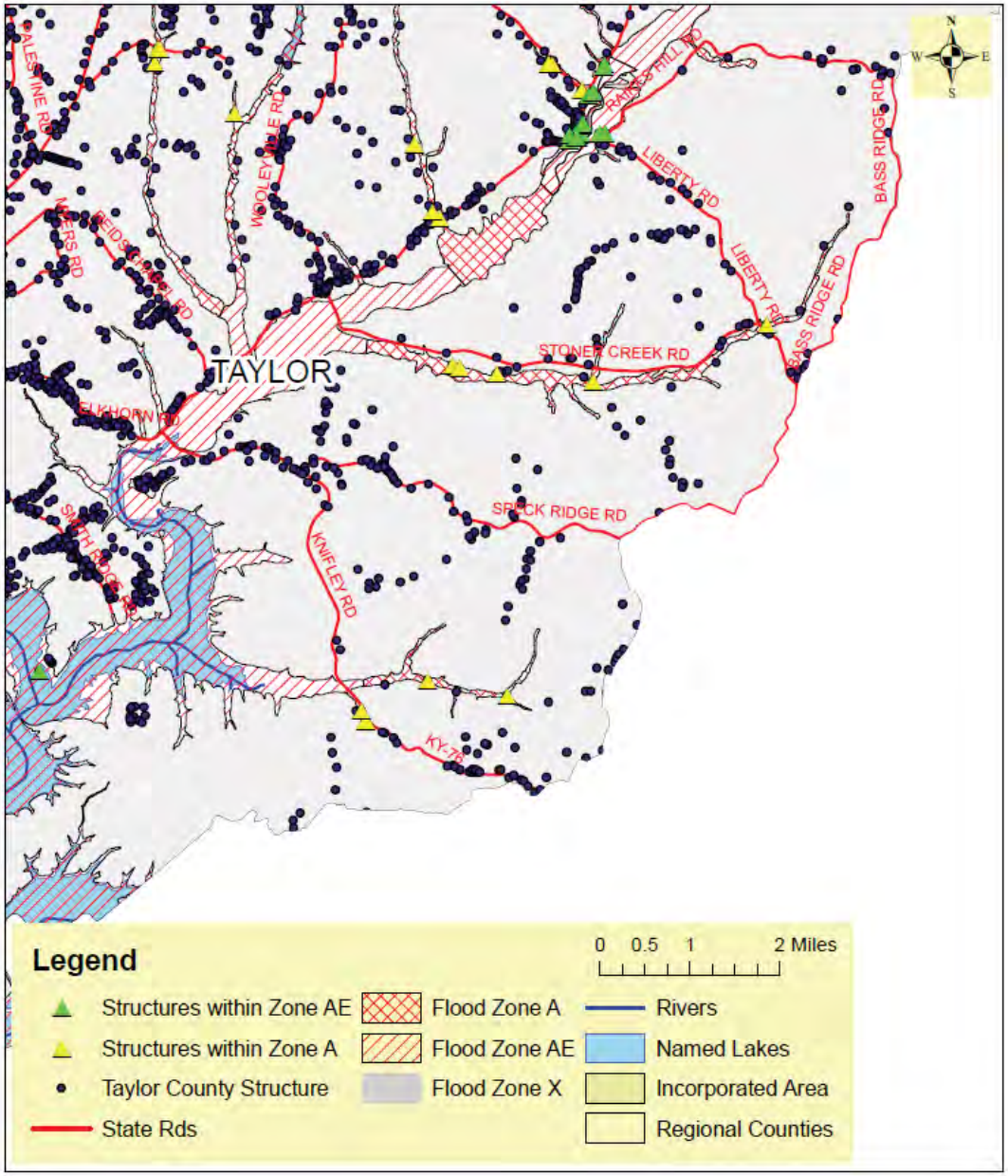
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(11e)
LCADD Region
Taylor County (CE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

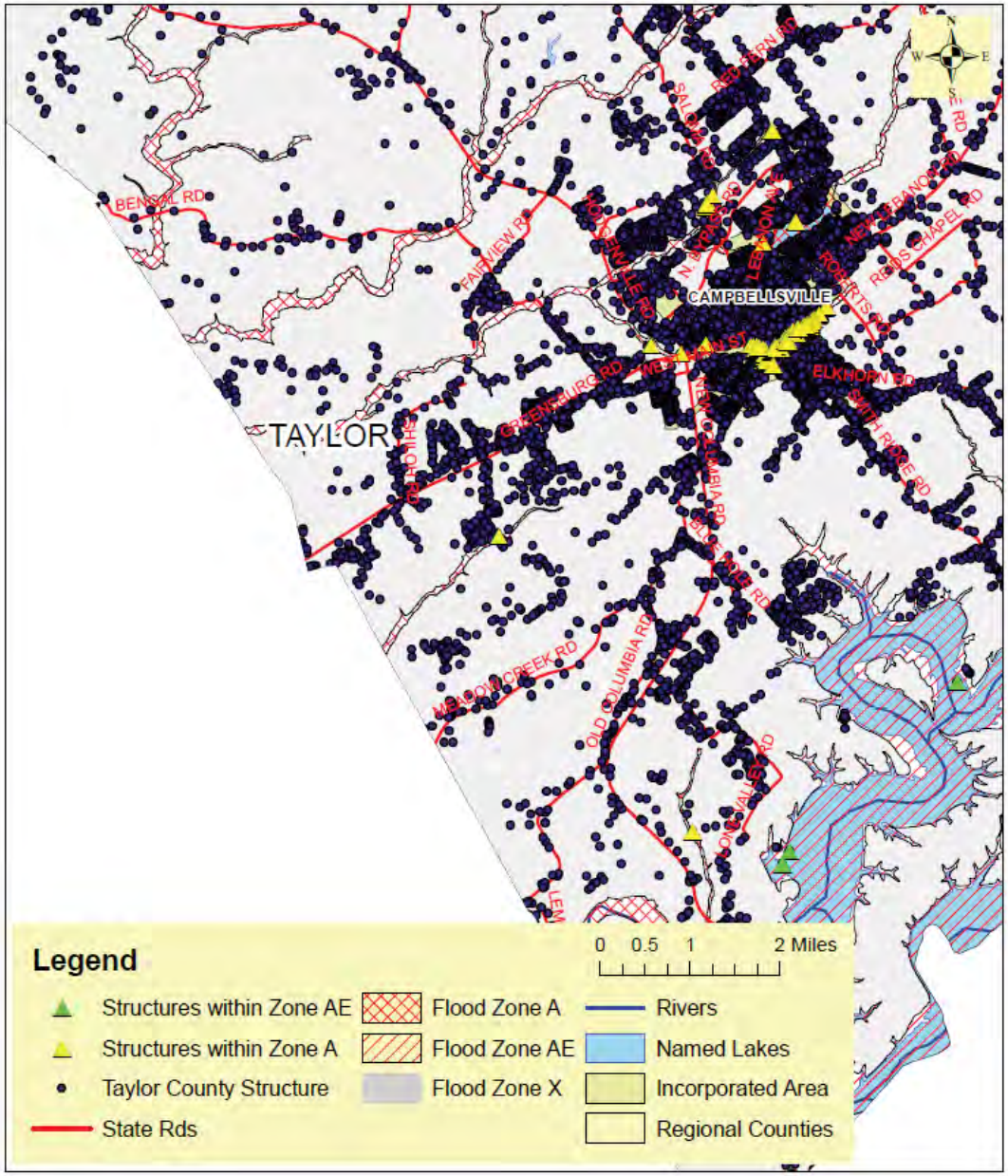
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(11f)
LCADD Region
Taylor County (CW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

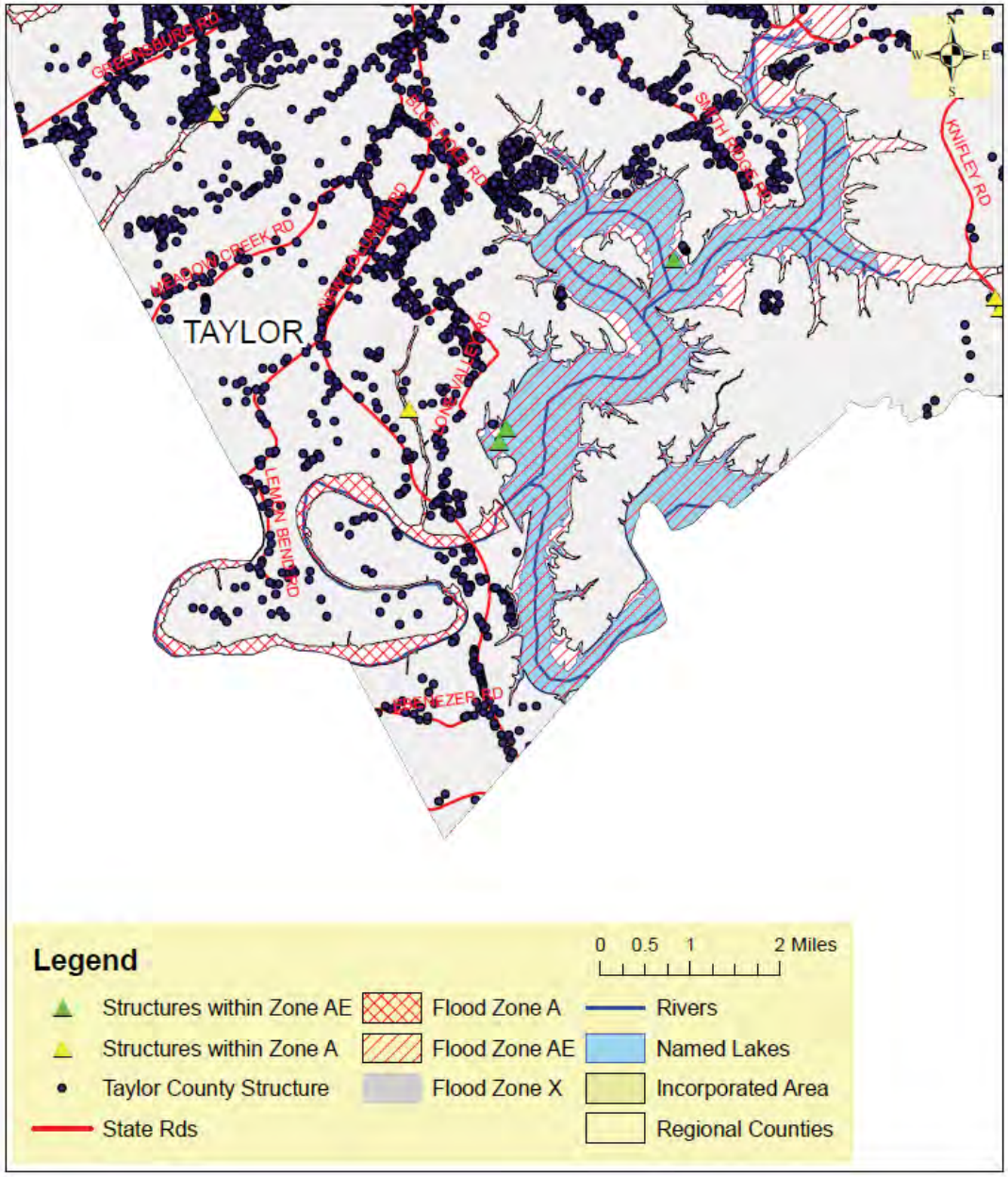
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(11g)
LCADD Region
Taylor County (SC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

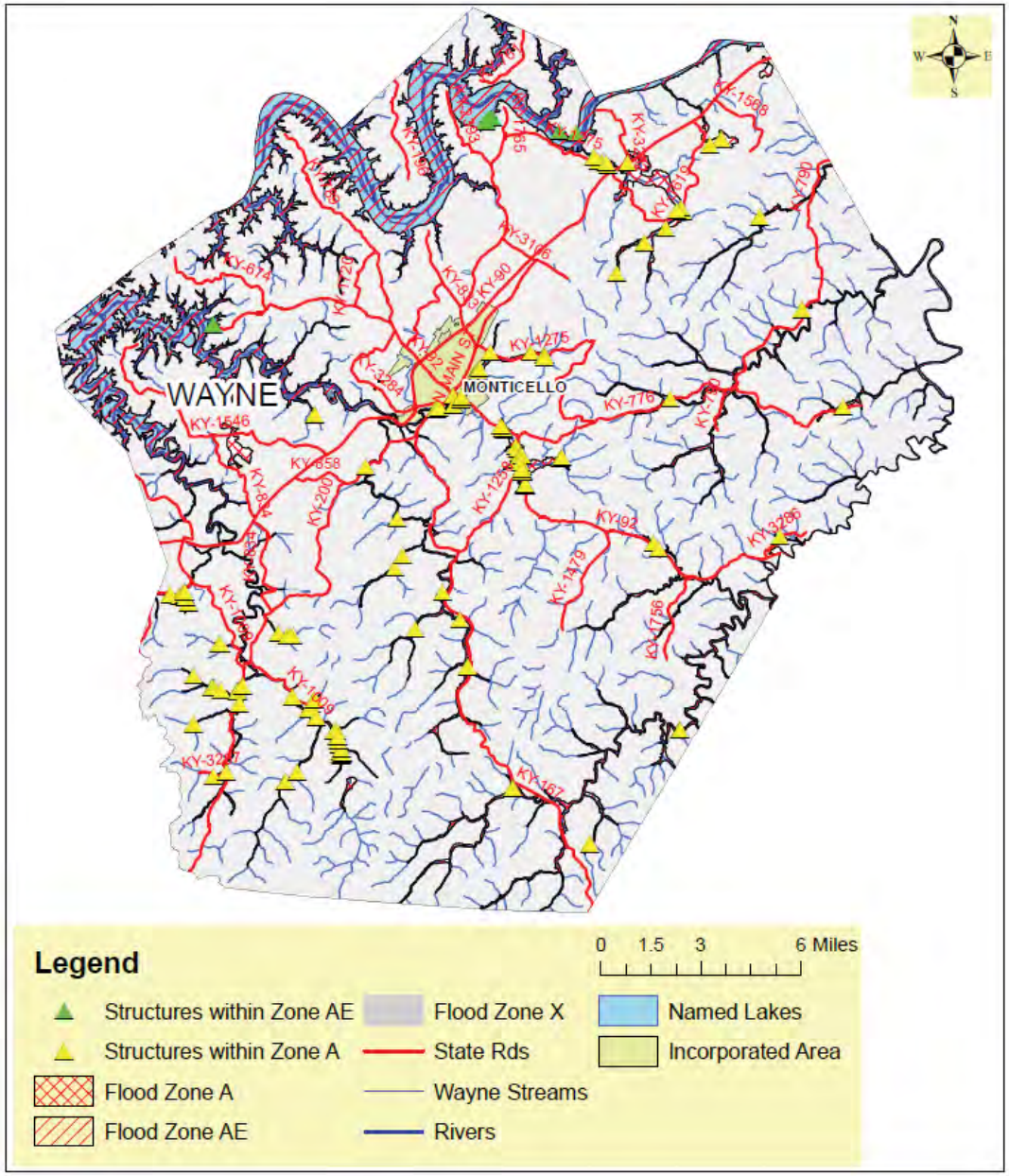
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(12a)
LCADD Region
Wayne County
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

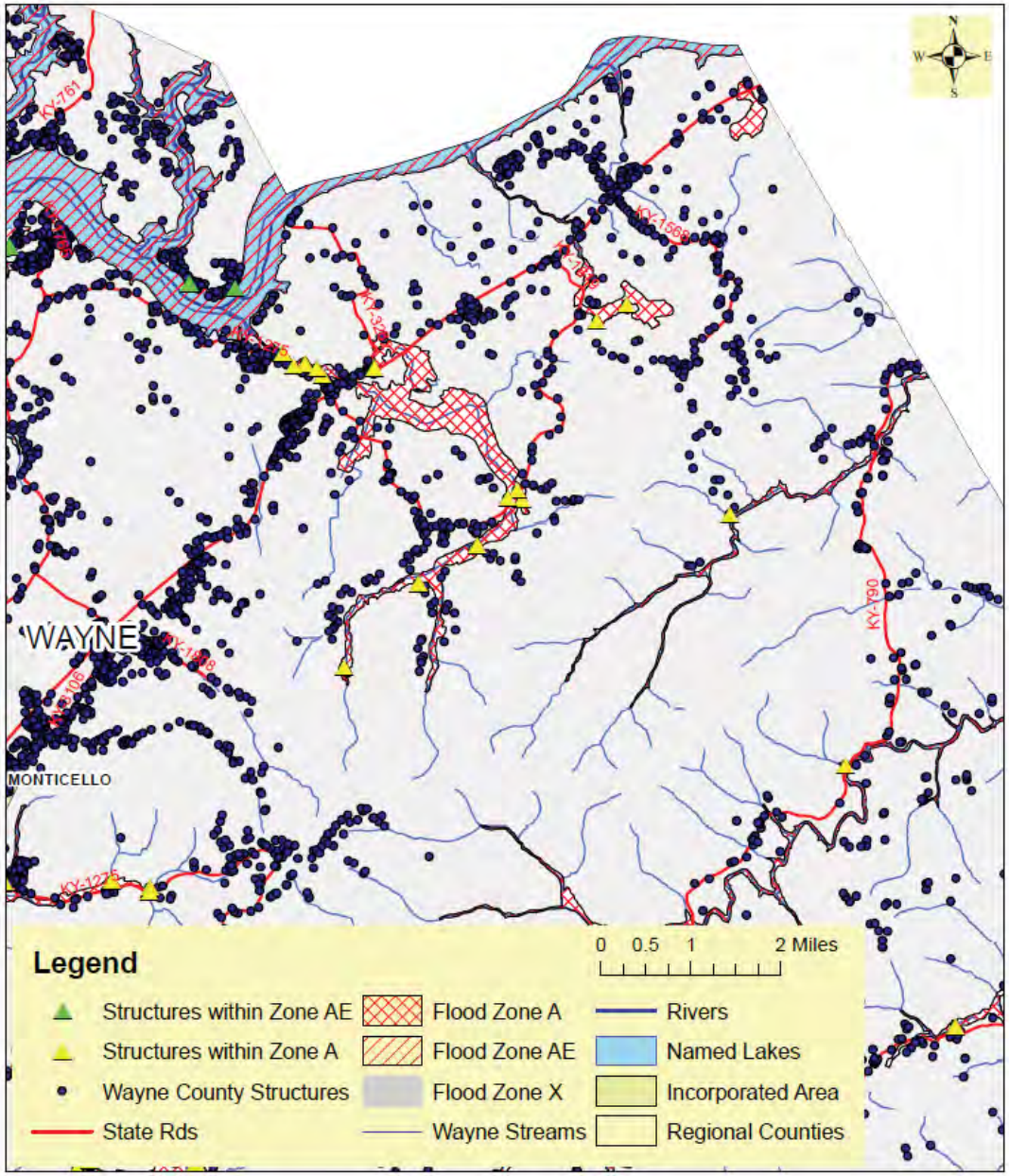
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(12b)
LCADD Region
Wayne County (NE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

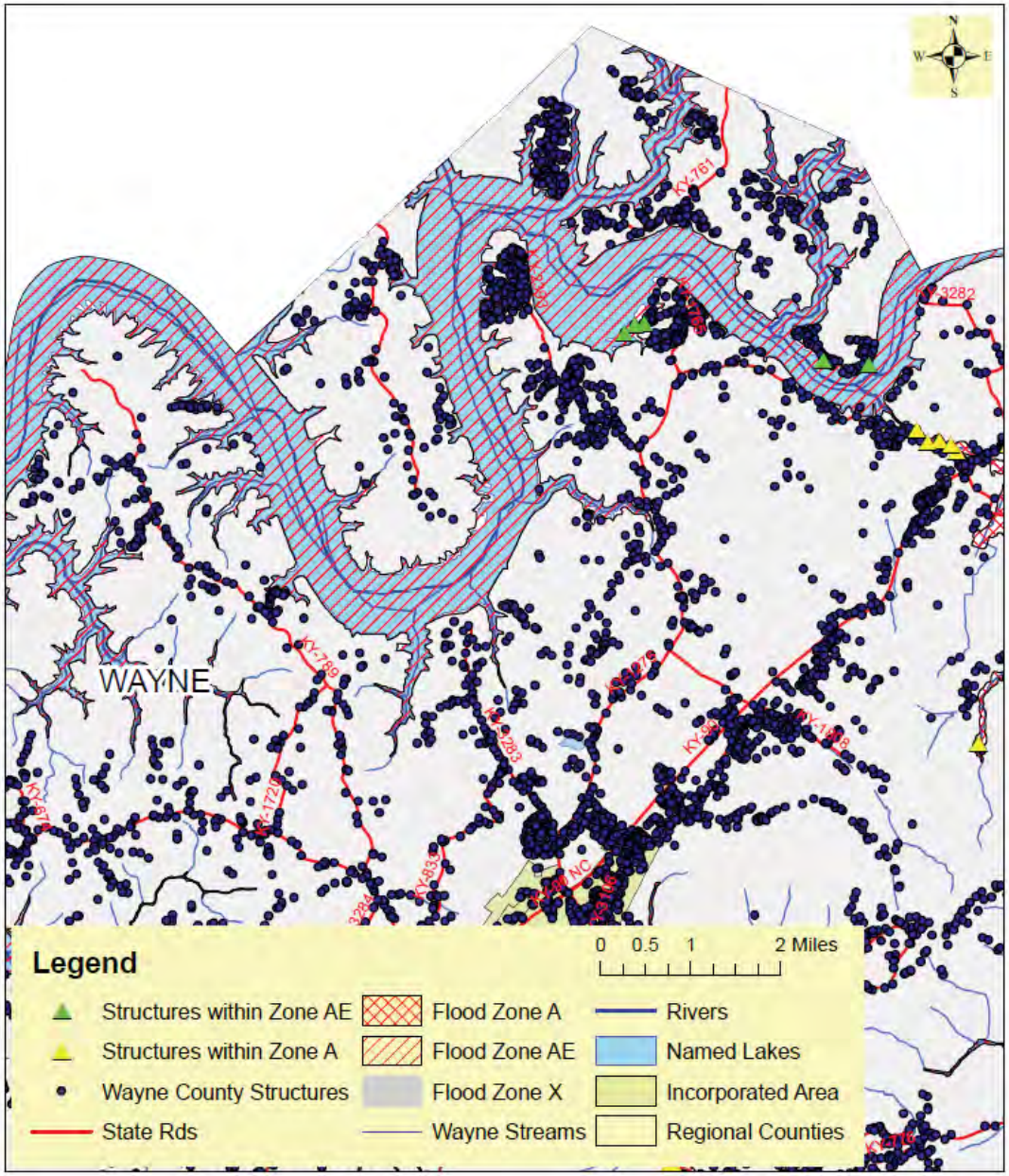
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(12c)
LCADD Region
Wayne County (NC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

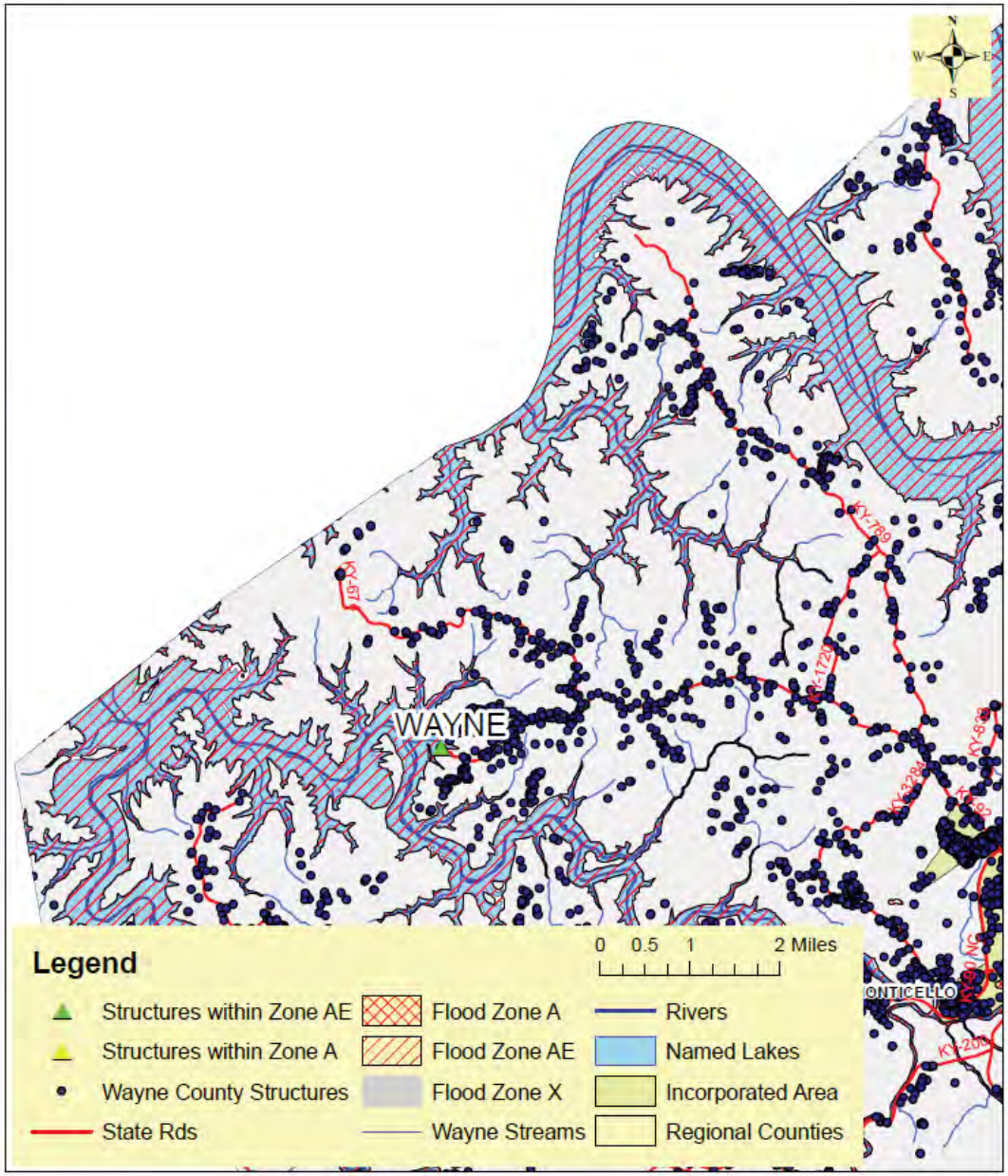
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(12d)
LCADD Region
Wayne County (NW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

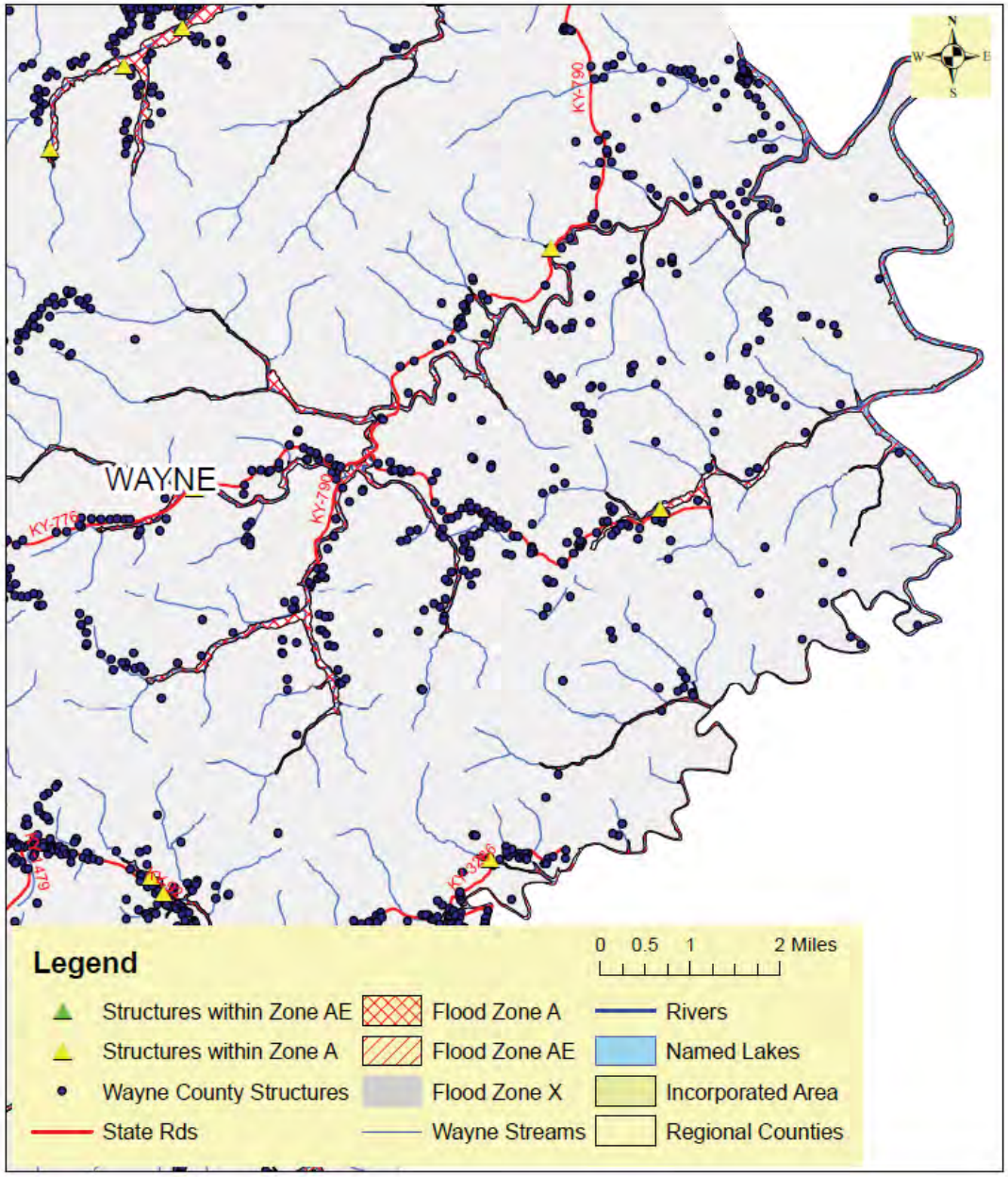
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(12e)
LCADD Region
Wayne County (CE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

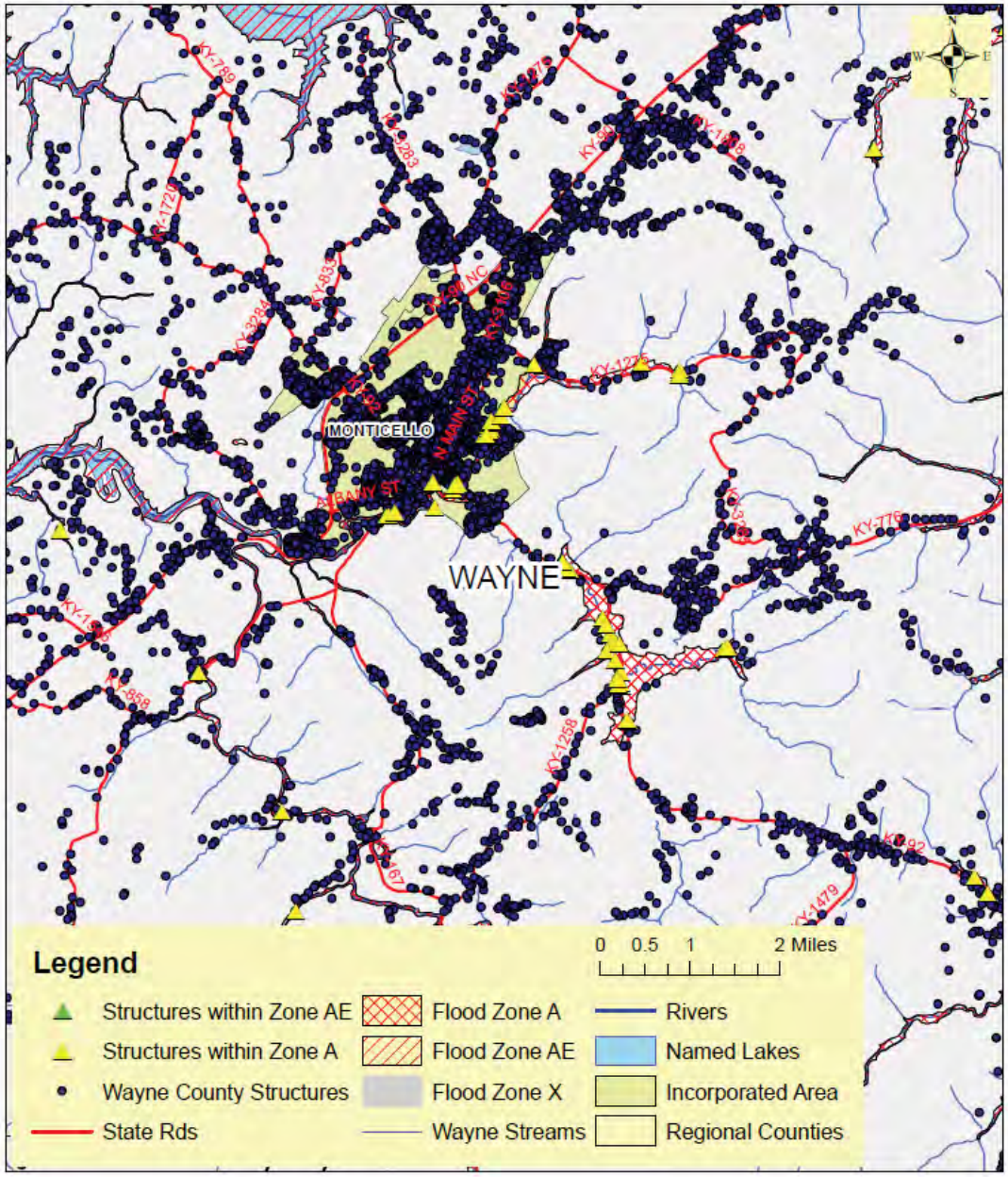
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(12f)
LCADD Region
Wayne County (CC)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

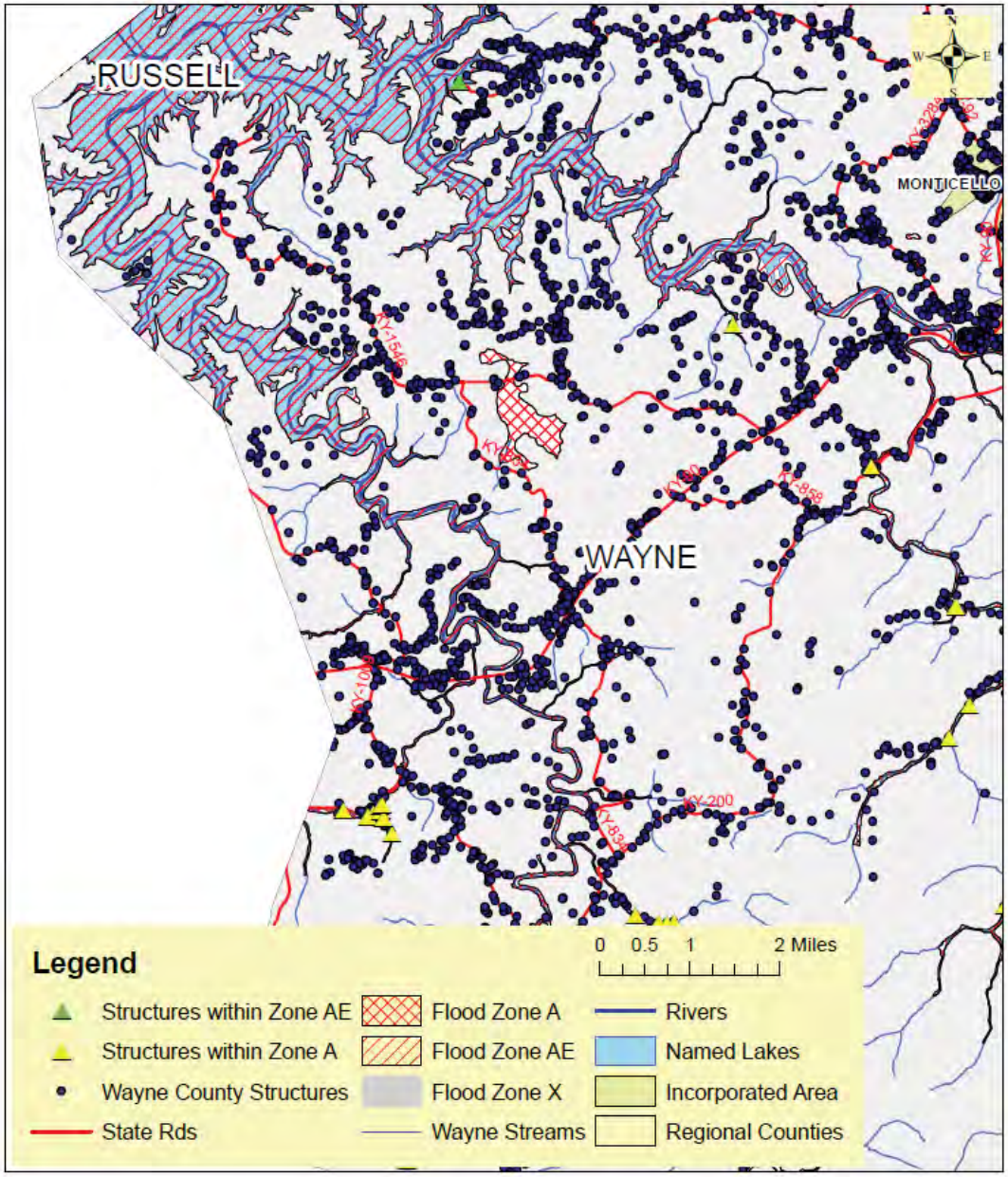
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(12g)
LCADD Region
Wayne County (CW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

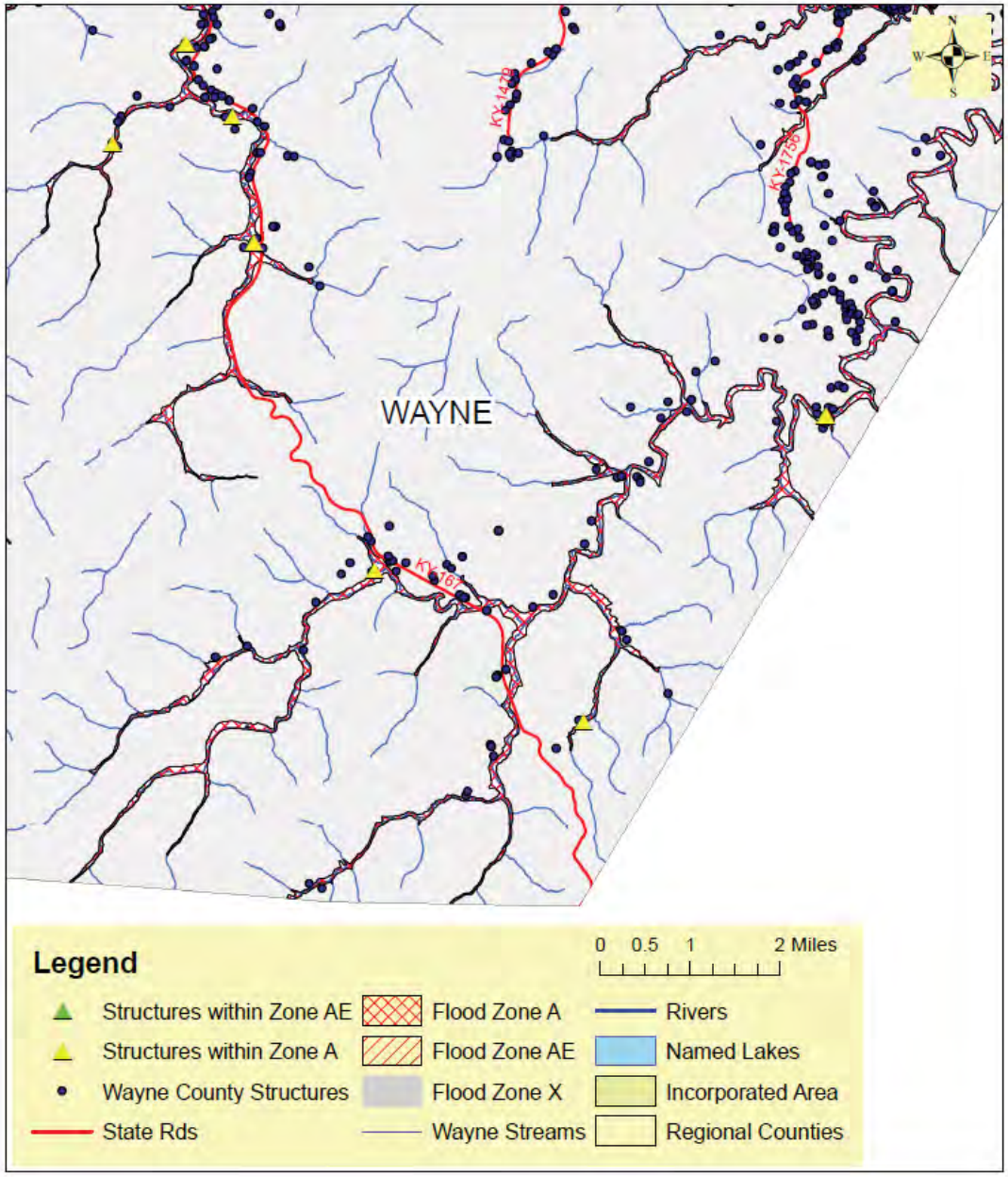
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(12h)
LCADD Region
Wayne County (SE)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

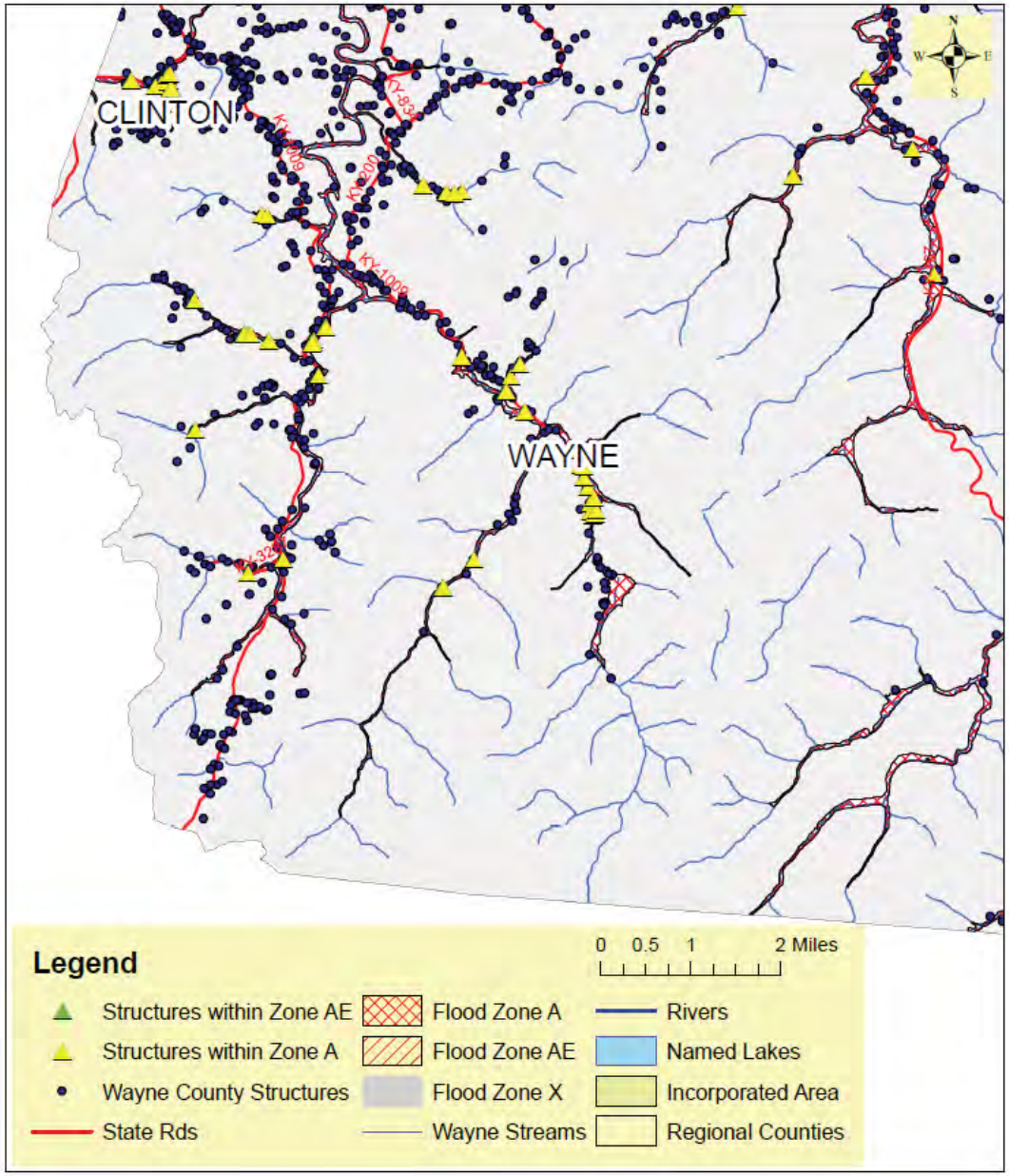
Prepared By:
Lake Cumberland Area Development District



Map 4.1.1(12i)
LCADD Region
Wayne County (SW)
Identified Flood Areas

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

Prepared By:
Lake Cumberland Area Development District



The historical events summary below provides previous occurrences and is based on the data available from National Climatic Data Center (NCDC) website was used for the data summarized below. (Detailed previous events were presented in the section on Flood History of Lake Cumberland Region.) The Center has long served the Nation as a national resource for climate information. NCDC's data is used to address issues that span the cost of various hazards in the LCADD Hazard Mitigation Plan. The reader should keep in mind the limits of the best available data. A search was made of all available years starting January 1, 1950, through the date of the data retrieval. Data was generally available for a much shorter time frame. The actual time frame of the data is noted in the tables that summarize each data type. Most hazard records contained limited data or incomplete data for both property damage and crop damage. Damage amounts that could not be specifically attributed to a county or city or was multi-jurisdictional in nature were not used in determining loss or vulnerability calculations. Loss calculations in the tables below are based on number of years of available data, starting with the first year of data and ending with the last year of data for each county. Loss calculations for all vulnerability assessments were based on countywide averages unless otherwise noted.

Location/Extent/Previous Occurrences/Probability of Future Hazard Events Table Headings and Risk Methodology Definations for the following tables:

≠ Jurisdiction - County or Incorporated City
≠ Number of Events - NCDC Storm Events Database events between the first year of a documented event, through the last year of a documented event.
≠ Data Reporting Years - The first year of a documented event, through the last year of a documented event using whole years.
≠ County Loss/City Loss - Losses identified by NCDC to county/city. All losses identified for unincorporated cities or communities were assigned to their respective county.
≠ Countywide Loss Totals - All losses within a specific county.
≠ Yearly Average Events Per County - Total number of events divided by number of years from Data Reporting Years.
≠ Average County or City Loss Per Event - Total reported losses divided by total number of events by city or county.
≠ Countywide Average Loss Per Event - Total reported losses divided by total number of events in each county.
≠ Countywide Average Loss Per Year - Countywide Average Loss Per Event multiplied by Yearly Average Events Per County.
≠ Lake Cumberland Regional Averages - The last line in each table gives an average for the Lake Cumberland Region as a whole. The averages are based on the ten counties and their countywide averages or totals.

The following table gives the summary of events in the Lake Cumberland Region.

Table 4.1(5) Lake Cumberland Region Flood Data From the NCDC Storm Events Database/ Loss Totals From Flood

Jurisdiction	Number of Events	Data Reporting Years	Number Reporting Years	County/City Property Losses	County/City Crop Losses	Countywide Totals	Average Number Events Per Year (Countywide)	Average Loss Per Year (Countywide)
Adair Co.*	12	1997 - 2015	18	10,000		**$110,000**	1.17	$6,111.11
Columbia	9		18	$100,000				$0.00
Casey Co*.	12	1996 - 2013	17	$580,000	$3,000,000	**$3,580,000**	0.88	$210,588.24
Liberty	3		17					$0.00
Clinton Co.*	6	1997 - 2010	13	100,000		**$100,000**	0.69	$7,692.31
Albany	3		13					$0.00
Cumberland Co. *	10	1997 - 2010	13	40,000		**$140,000**	0.85	$10,769.23
Burkesville	1		13	100,000				$0.00
Green Co. *	9	1997 - 2013	16			**$0**	0.81	$0.00
Greensburg	4		16					$0.00
McCreary*	33	1996 - 2015	19	$49,000	$8,000	**$57,000**	1.74	$3,000.00
Pulaski Co*.	40	1996 - 2015	19	$130,000		**$215,000**	3.11	$11,315.79
Burnside	0		19					$0.00
Eubank	1		19					$0.00
Ferguson	0		19					$0.00
Science Hill	3		19					$0.00

Jurisdiction	Number of Events	Data Reporting Years	Number Reporting Years	County/City Property Losses	County/City Crop Losses	Countywide Totals	Average Number Events Per Year (Countywide)	Average Loss Per Year (Countywide)
Somerset	15		19	$85,000				$0.00
Russell Co. *	14	1997 - 2011	14	100,000		**$125,000**	1.36	$8,928.57
Jamestown	2		14					$0.00
Russell Springs	3		14	$25,000				$0.00
Taylor Co. *	33	1996 - 2016	20	$725,000	$500,000	**$1,345,000**	1.90	$67,250.00
Campbellsville	5		20	120,000				$0.00
Wayne Co*.	27	1997 - 2015	18	$8,000		**$40,000**	2.28	$2,222.22
Monticello	14		18	$32,000				$0.00
Lake Cumberland Region Total	259			$1,734,000	$3,508,000	$5,712,000		

24

[24] NCDC Storm Events Database/ Loss Totals From Flood; 8/11/16 from http://www.ncdc.noaa.gov/stormevents/

Table 4.1(6) Summary of Structures Located in Flood Zone A & AE

Jurisdictions Affected		Zone A Structures	Zone AE Structures	Total Structures	Percent of Structures in Flood Zone A & AE
Adair Co.	Yes	226	18	11149	2.19%
Columbia	Yes				
Casey Co.	Yes	621	109	11053	6.60%
Liberty	Yes				
Clinton Co.	Yes	86	16	6816	1.50%
Albany	Yes				
Cumberland Co.	Yes	72	24	5019	1.91%
Burkesville	Yes				
Green Co.	Yes	98	0	6996	1.40%
Greensburg	Yes				
McCreary	Yes	36	3	8527	0.46%
Pine Knot	Yes				
Stearns	Yes				
Whitley City	Yes				
Pulaski Co.	Yes	174	21	30550	0.64%
Burnside	Yes				
Eubank	Yes				
Ferguson	Yes				
Science Hill	Ye				

	s				
Somerset	Yes				
Russell Co.	Yes	25	12	10491	0.35%
Jamestown	Yes				
Russell Springs	Yes				
Taylor Co.	Yes	124	24	10661	1.39%
Campbellsville	Yes				
Wayne Co.	Yes	129	6	10914	1.24%
Monticello	Yes				
Lake Cumberland Region Total	**Yes**	1591	233	112176	1.63%

Note: Query run for countywide structures and include structures located in cities within each county.[25]

The probability of future Flood Hazard Events is high for the Region. Eleven of the twenty-five Federally Assisted Disasters from 1970-2010, in the Lake Cumberland Region did not have flood involvement. The Region has averaged a Federally-Assisted Disaster Declaration every two years.

Table 4.1(7) Federally-Assisted Disasters 1970-2015

DR #	DR Date	Disaster Type	Total Declared Counties	LCADD Counties	Public and Individual Assistance	DR #	DR Date
288	6/5/1970	Severe Storms, Flooding	13	Casey	Yes-All	288	6/5/1970
305	5/10/1971	Tornado	8	Adair, Green, Pulaski, Russell	Yes-All	305	5/10/1971
332	5/15/1972	Heavy Rains, Flooding	10	Wayne	Yes-All	332	5/15/1972
420	4/4/1974	Tornadoes	34	Clinton, Cumberland, Green, McCreary, Pulaski, Taylor, Wayne	Yes-All	420	4/4/1974

[25] Structure Data from County 911 Centers, Committee Members and FEMA Flood GIS Mapping Data.

461	3/29/1975	Severe Storms, Flooding	17	Pulaski	Yes-All	461	3/29/1975
568	12/12/1978	Severe Storms, Flooding	37	Casey	Yes-All	568	12/12/1978
705	5/15/1984	High Winds, Tornadoes, Flooding	28	Adair, Casey, Green, Pulaski, Taylor, Wayne	22--Unable to locate data identifying counties.	705	5/15/1984
821	2/24/1989	Severe Storms, Flooding	67	Casey	Yes-All	821	2/24/1989
893	1/29/1991	Severe Storms, Flooding	19	Casey, Wayne	Yes-All	893	1/29/1991
1018	3/16/1994	Severe Weather, Freezing Rain, Sleet, Snow	68	Adair, Casey, Green, McCreary, Pulaski, Russell, Taylor, Wayne	0	1018	3/16/1994
1055	6/13/1995	Tornadoes, Winds, Hail, Rain	32	Adair, Casey, Green, Pulaski, Russell, Taylor	10-- Counties	1055	6/13/1995
1089	1/13/1996	Blizzard	120	Adair, Casey, Green, McCreary, Pulaski, Russell, Taylor, Wayne,	0	1089	1/13/1996
1163	3/4/1997	Flooding	101	Adair, Casey, Green, , Russell, Taylor	87—Counties Adair, Casey, Green, Taylor	1163	3/4/1997
1216	4/29/1998	Severe Storms, Tornadoes, Flooding	21	Adair, Casey	12—Counties Adair	1216	4/29/1998
1407	4/4/2002	Flooding, Severe Storm	37	McCreary, Wayne,	20—Counties McCreary,	1407	4/4/2002
1414	5/7/2002	Flooding, Severe Storm, Tornado	39	Casey, Green, McCreary, Pulaski, Taylor,	10--Counties	1414	5/7/2002
1454	3/14/2003	Severe Winter Ice and Snow, Heavy Rain, Flooding, Tornadoes	52	Casey, Green	15--Counties	1454	3/14/2003
1523	6/10/2004	Severe Storm, Tornadoes, Flooding, Mudslides	72	Casey, Pulaski	17	1523	6/10/2004

1537	8/6/2004	Severe Storms and Flooding	27	Adair, Clinton, Cumberland, Green, Russell, Taylor, Wayne	0	1537	8/6/2004
3231	9/10/2005	Hurricane Katrina Evacuation	120	Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell, Taylor, Wayne	0	3231	9/10/2005
1746	2/21/2008	Severe Storms, Tornadoes, Flooding, Mudslides, Landslides	23	Adair, Casey	8	1746	2/21/2008
3302	1/28/2009	Severe Winter Storms	68	Casey, Taylor	0	3302	1/28/2009
1818	2/5/2009	Severe Winter Storms and Flooding	101	Green, Casey, Taylor	0	1818	2/5/2009
1841	5/29/2009	Severe Storms, Tornadoes, Flooding, Mudslides	22	Russell	5	1841	5/29/2009
1912	5/11/2010	Severe Storms, Flooding, Mudslides, Tornadoes	83	Adair, Casey, Clinton, Cumberland, Green, Russell Taylor, Pulaski, Wayne	55 – Adair, Casey, Clinton, Cumberland, Green, Russell, Taylor, Pulaski, Wayne	1912	5/11/2010
1976	5/4/2011	Severe Storms, Tornadoes, and Flooding	26	Green	Public Assistance Only	1976	5/4/2011
4057	3/6/2012	Severe Storms, Tornadoes, Straight-line Winds, and Flooding	40	Adair and Russell	Individual Assistance in 7 counties	4057	3/6/2012
4216	4/30/2015	Winter Storms, Snowstorms, Flooding, Landslides, and Mudslides	26	Adair, Taylor, Wayne,Taylor	Public Assistance Only	4216	4/30/2015

4218	5/12/2015	Winter Storm, Snowstorm, Flooding, Landslides, and Mudslides	57	Casey	Public Assistance Only	4218	5/12/2015
4239	8/12/2015	Severe Storms, Tornadoes, Straight-line Winds, Flooding, Landslides, and Mudslides	35	Cumberland	Individual Assistance in 4 counties	4239	8/12/2015
DR #	DR Date	Disaster Type	Total Declared Counties	LCADD Counties	Public and Individual Assistance	DR #	DR Date
288	6/5/1970	Severe Storms, Flooding	13	Casey	Yes-All	288	6/5/1970
305	5/10/1971	Tornado	8	Adair, Green, Pulaski, Russell	Yes-All	305	5/10/1971
332	5/15/1972	Heavy Rains, Flooding	10	Wayne	Yes-All	332	5/15/1972
420	4/4/1974	Tornadoes	34	Clinton, Cumberland, Green, McCreary, Pulaski, Taylor, Wayne	Yes-All	420	4/4/1974
461	3/29/1975	Severe Storms, Flooding	17	Pulaski	Yes-All	461	3/29/1975
568	12/12/1978	Severe Storms, Flooding	37	Casey	Yes-All	568	12/12/1978
705	5/15/1984	High Winds, Tornadoes, Flooding	28	Adair, Casey, Green, Pulaski, Taylor, Wayne	22--Unable to locate data identifying counties.	705	5/15/1984
821	2/24/1989	Severe Storms, Flooding	67	Casey	Yes-All	821	2/24/1989
893	1/29/1991	Severe Storms, Flooding	19	Casey, Wayne	Yes-All	893	1/29/1991
1018	3/16/1994	Severe Weather, Freezing Rain, Sleet, Snow	68	Adair, Casey, Green, McCreary, Pulaski, Russell, Taylor, Wayne	0	1018	3/16/1994
1055	6/13/1995	Tornadoes, Winds, Hail, Rain	32	Adair, Casey, Green, Pulaski, Russell, Taylor	10-- Counties	1055	6/13/1995

1089	1/13/1996	Blizzard	120	Adair, Casey, Green, McCreary, Pulaski, Russell, Taylor, Wayne,	0	1089	1/13/1996
1163	3/4/1997	Flooding	101	Adair, Casey, Green, , Russell, Taylor	87—Counties Adair, Casey, Green, Taylor	1163	3/4/1997
1216	4/29/1998	Severe Storms, Tornadoes, Flooding	21	Adair, Casey	12—Counties Adair	1216	4/29/1998
1407	4/4/2002	Flooding, Severe Storm	37	McCreary, Wayne,	20—Counties McCreary,	1407	4/4/2002
1414	5/7/2002	Flooding, Severe Storm, Tornado	39	Casey, Green, McCreary, Pulaski, Taylor,	10--Counties	1414	5/7/2002
1454	3/14/2003	Severe Winter Ice and Snow, Heavy Rain, Flooding, Tornadoes	52	Casey, Green	15--Counties	1454	3/14/2003
1523	6/10/2004	Severe Storm, Tornadoes, Flooding, Mudslides	72	Casey, Pulaski	17	1523	6/10/2004
1537	8/6/2004	Severe Storms and Flooding	27	Adair, Clinton, Cumberland, Green, Russell, Taylor, Wayne	0	1537	8/6/2004

[26]

The following table gives the Probability of Future Floods based on the past history of flood events in the Region. Loss projections are suspect due to the lack of accurate property damage data.

Table 4.1(8)

Event Probability Basis				Probable Future Events		
Jurisdiction	**Number of Events**	**Total # of Events**	**Total # Data Reporting Years**	**Yearly Average Events Per County**	**Countywide Ave. Loss Per Event**	**Countywide Ave. Loss Per Year**

[26] FEMA Disaster Declarations; Provided March 2016, http://www.fema.gov/disasters

Adair County*	12	21	18	1.17	$5,223.17	$6,111.11
City of Columbia*	9		18			$0.00
Casey County*	12	15	17	0.88	$239,304.82	$210,588.24
City of Liberty	3		17			$0.00
Clinton County*	6	9	13	0.69	$11,148.28	$7,692.31
City of Albany	3		13			$0.00
Cumberland County*	10	11	13	0.85	$12,669.68	$10,769.23
City of Burkesville	1		13			$0.00
Green County*	9	13	16	0.81	$0.00	$0.00
City of Greensburg	4		16			$0.00
McCreary County*	33	33	19	1.74	$1,724.14	$3,000.00
Pulaski County*	40	59	19	3.11	$3,638.52	$11,315.79
City of Burnside*	0		19			$0.00
City of Eubank*	1		19			$0.00
City of Ferguson*	0		19			$0.00
City of Science Hill*	3		19			$0.00
City of Somerset	15		19			$0.00
Russell County*	14	19	14	1.36	$6,565.13	$8,928.57
City of Jamestown	2		14			$0.00
City of Russell Springs*	3		14			$0.00
Taylor County*	33	38	20	1.9	$35,394.74	$67,250.00
City of Campbellsville	5		20			$0.00
Wayne County*	27	41	18	2.28	$974.66	$2,222.22
City of Monticello	14		18			$0.00

Lake Cumberland Regional Averages	259					**$148,885.71**

Summary

Hazard Location:

- ≠ Flash Flooding/Riverine (Inland) Flooding:
  - o General flooding occurring along rivers and streams
  - o Generally small, Regionalized areas depending on rainfall received
- ≠ Flooding from Storm Runoff:
  - o Occurs at vulnerable locations such as those with roadway undersized culvert pipes/bridges
  - o Generally small, Regionalized areas depending on rainfall received
- ≠ Erosion:
  - o Occurs in the same vicinity as the flood event

Potential Damage (All Hazards):

- ≠ Flooded basements, buildings, parking lots, roadways, and other infrastructure
- ≠ Impassible or washed out roads

Scale / Extent:

- ≠ Flash Flooding/Riverine (Inland) Flooding:
  - o Flooding caused by 24 hour rainfall typically ranging from 2 inches up to 7 inches (100 year storm)
  - o Potentially caused by rainfall up to and in excess of 12 inches
- ≠ Flooding from Storm Runoff:
  - o Flooding caused by 24 hour rainfall typically ranging from 2 inches up to 7 inches (100 year storm)
  - o Potentially caused by rainfall up to and in excess of 12 inches
- ≠ Erosion:
  - o Severity of erosion due to inland flooding and/or storm water runoff increases proportional to the flood event magnitude

Previous Occurrences:

- ≠ Flash Flooding/Riverine (Inland) Flooding:
  - o Minor inland flooding occurs yearly, typically associated with strong summer thunderstorms or snowmelt
  - o Major inland flooding occurs every few years, typically associated with heavy rainfall events in excess of 2 inches. Major inland flooding may also be associated with strong thunderstorms and minor to major storm systems moving inland from coastal areas
- ≠ Flooding from Storm Runoff:
  - o Minor flooding from storm runoff occurs almost yearly, typically associated with strong summer thunderstorms
  - o Major flooding from storm runoff occurs every few years, typically associated with heavy rainfall events in excess of 2 inches, typically associated with strong thunderstorms and minor to major storm systems
- ≠ Erosion:
  - o Minor erosion occurs approximately yearly from storms associated with rainfall events
  - o Major inland events have been listed above

Likelihood of Future Occurrences (All Hazards):

- ≠ Limited flood events occur nearly every year, typically during warmer months
- ≠ Major events occur less frequently, with moderate events occurring every several years and severe events once a decade

Scale/Extent (through Previous Occurrences):

Casey County

- ≠ April 15, 2015[1]: In April of 2015, the City of Liberty in Casey County experienced a 100-year flood event only five years after its last 100-year (1%) flood event. Further, the flooding struck the same area in 2015 as it had in 2010: US-127 By-Pass. In 2010, the Village Restaurant in Liberty had been inundated with five feet of water from the Green River. In 2015, this same Village Restaurant experienced two feet of water.

Pulaski County

- ≠ Weekend preceding April 27, 2017: Pulaski County Park recorded over 5 inches of rain in one weekend that submerged its camping area: "More than five inches of rain in parts of the Cumberland River Basin…pushed the Cumberland River out of its banks, and the flooding river and its drainage overflowed Lake Cumberland into recreational areas along its more than 1,200 miles of shoreline." Due to the rain, on April 26, 2017, Lake Cumberland was measured at 726.98 feet above sea level and about 4 feet above the park's tree line. At the time of the measurement, the lake was still rising.[2]
- ≠ May 27, 2017: In a flash flood, floodwaters submerged Highways 635 and 39 by two (2) to three (3) feet.[3]

Russell County

- ≠ September 4 – 6, 2016: Intense flooding occurred. It flooded multiple roads that lead to twelve (12) trapped campers and the destruction of several vehicles. The Saline River generally floods at approximately 18 feet. The flooding from this event rose the Saline River to 22.35 feet.[4]

Taylor County

- ≠ May 28, 2017: Flash-flooding due to rainfall at 4.2 inches per hour inundated many roads, making them impassable. As a result of the flash-flooding, 9,000 Taylor County citizens went without water because the flooding broke an 18" mainline.[5]

See Also: Appendix E

[1] http://www.wkyt.com/home/headlines/Casey-Co-residents-cleaning-up-after-flooding-299968521.html
[2] http://www.somerset-kentucky.com/news/weekend-rains-flood-new-pulaski-county-park-beach/article_6c23cc20-2acf-11e7-b02d-db4555c021e0.html
[3] http://www.wkyt.com/content/news/Heavy-flooding-causes-road-closures-in-Pulaski-County-424870254.html
[4] http://krsl.com/local-news/6858-major-flooding-reported-in-russell-county
[5] http://www.lex18.com/story/35536404/state-of-emergency-declared-in-taylor-county\

4.2 WINTER STORM EVENTS

Snowstorms and Blizzards

Snow storms and blizzards are a common winter event in South Central Kentucky. These storms bring the added dangers associated with high winds and sustained heavy snowfall, typically over a prolonged period of 12 hours to 3 days. Limited travel is expected, as well as potential disruptions to utilities and other services. High winds (>35 mph) associated with blizzard conditions may also make travel difficult, if not impossible, due to limited visibility and drifting snow.

Winter storms originate as mid-latitude depressions or cyclonic weather systems, sometimes following the path of the jet stream. A winter storm or blizzard, combines heavy snowfall, high winds, extreme cold and ice storms. Many winter depressions give rise to exceptionally heavy rain and widespread flooding and conditions worsen if the precipitation falls in the form of snow. The winter storm season varies widely, depending on latitude, altitude and proximity to moderating influences.

The occurrence of large snowstorms, ice storms and severe blizzards can have a substantial impact on communities, utilities and transportation systems, often resulting in the loss of life due to accidents of hypothermia. Heavily populated areas are at high risk because the severe weather can cause communication and power lines to go down. High levels of snow can accumulate, building faster than it can be cleared and heavy icing can impact utility systems and transportation routes. Damage to buildings often occurs in areas where the normally anticipated snowfall depths are not considered in building codes. Roof collapses damage residential, commercial and industrial structures.

The degree of exposure to severe winter storms depends on the normal severity of the region's winter weather. Nearly the entire United States, with the exception of the extreme southern states, Hawaii and the U.S, territories can be affected by severe winter storms. Alaska, the Upper Midwestern and Northeastern states tend to be more susceptible than others, but generally these regions are better prepared for severe winter weather. The regions where extreme winter weather is less common tend to experience more damage and disruption when the storms hit.

In addition to the hazards posed by all natural disasters, winter storms have the added hazards associated with cold weather for prolonged periods of time. Unlike disasters typically occurring during the summer months such as hurricanes, tornadoes and forest fires, power outages may result in extended periods of no heat. The resulting prolonged contact with low temperatures can cause causing pipes to freeze and burst, thereby damaging homes and businesses. Icy or snow covered roadways may also lead to added traffic accidents and resultant injuries. Winter storms may also pose added health problems, particularly to members of the community most susceptible to the added strain of contact with freezing temperatures such as the very young or elderly. Heart attacks while shoveling snow may also occur in susceptible individuals.

Winters with heavy snowfalls may also lead to spring flooding events as a result of snowmelt runoff, particularly if unseasonably warm conditions occur when substantial snow remains on the ground. This can lead to rapidly melting snow, potentially causing Regionalized flooding.

Ice Storms

Ice storms occur when rain falling on tree branches and the ground freezes on contact, leading to ice buildups. These events are somewhat less common, but also have the ability to cripple access to utilities on elevated poles such as electric and telecommunications, and limit transportation as a result of downed trees and icy roadways. According to the National Climatic Data Center (NCDC), Bristol County has experienced 8 ice storms from 1971 through 200926, occurring most frequently in late December and early January.

Ice Jams

Ice jams can also cause hazards, either by a downstream portion of the river freezing and backing up flowing water to the north, or by the breaking up of an ice jam, causing large pieces of ice to flow downriver and possibly damage property and infrastructure. Although ice jams are possible, the United States Army Corps of Engineers Ice Jam Database does not indicate a single occurrence in Lake Cumberland Region over the past 100 years. Due to the relatively small rivers flowing through the Region and its relatively mild winters, ice jams are not expected to occur.[27]

Lake Cumberland Region History – Severe Winter Snow/Ice Storm

NOAA's National Centers for Environmental Information is now producing the Regional Snowfall Index (RSI) for significant snowstorms that impact the eastern two thirds of the U.S. The RSI ranks snowstorm impacts on a scale from 1 to 5, similar to the Fujita scale for tornadoes or the Saffir-Simpson scale for hurricanes.

Table 4.2(1) – Regional Snowfall Index (RSI)

Category	RSI Value	Description
1	1–3	Notable
2	3–6	Significant
3	6–10	Major
4	10–18	Crippling

[27] U.S. Army Corps of Engineers; Ice Jam Database Ice Jam Map; http://rsgisias.crrel.usace.army.mil/apex/f?p=524:9:0::NO

5	18.0+	Extreme

[28]

No data was rated with the RSI Index that we could locate.

Average Annual Snowfall in South Central Kentucky

The tables below give yearly averages for snowfall at cities, towns and parks in Kentucky. The numbers are for the total amount of snow and for how many days it snows at least 0.1 inches (0.25 centimeters). The snowfall totals are annual averages based on weather data collected from 1981 to 2010 for the NOAA National Climatic Data Center.

Table 4.2(2) 1981-2010 Average Total Snowfall For A Year

Days	Place	Inches	Centimeters
4.3	Barren River Lake	6.4	16.3
6.0	Bowling Green	8.9	22.6
2.8	Mammoth Cave	5.5	14.0
13.3	Monticello (Lake Cumberland Region)	14.8	37.6
4.2	Nolin River Lake	4.2	10.7
4.5	Stearns (Lake Cumberland Region)	9.2	23.4

[29]

On average, Lake Cumberland Region receives approximately 12.0 inches of snow per year.

The Great Ice Storm of 1951

Leading up to January 31, 1951 an unusually strong high-pressure system began pulling cold, polar air into the region. Meanwhile, as a strong low-pressure system moved along a cold front that stretched from the Gulf of Mexico toward the Northeast, sleet and freezing rain spread over much of the South beginning on the 31st. A rawinsonde reading from Nashville, Tennessee at 21:00 CST on the 30th indicated that temperatures at the surface were well below freezing: about -8°C, with a northeast wind. However, at just 5,000 feet above the surface, winds were from the southwest and the temperature was well above freezing: closer to 9°C. This set up a perfect environment for freezing rain to develop.

On January 31, nearly three inches of snow and sleet had covered Bowling Green, KY. Traffic was brought to a standstill. By noon, the snow had turned to rain as warm air aloft had moved over the region. But with the surface temperature standing at 28°F the rain froze upon impact. Bulldozers were used in an effort to scrape off the ice, but they proved to be of little use. Nashville recorded 3.83 inches of precipitation with five inches of snowfall. By the afternoon

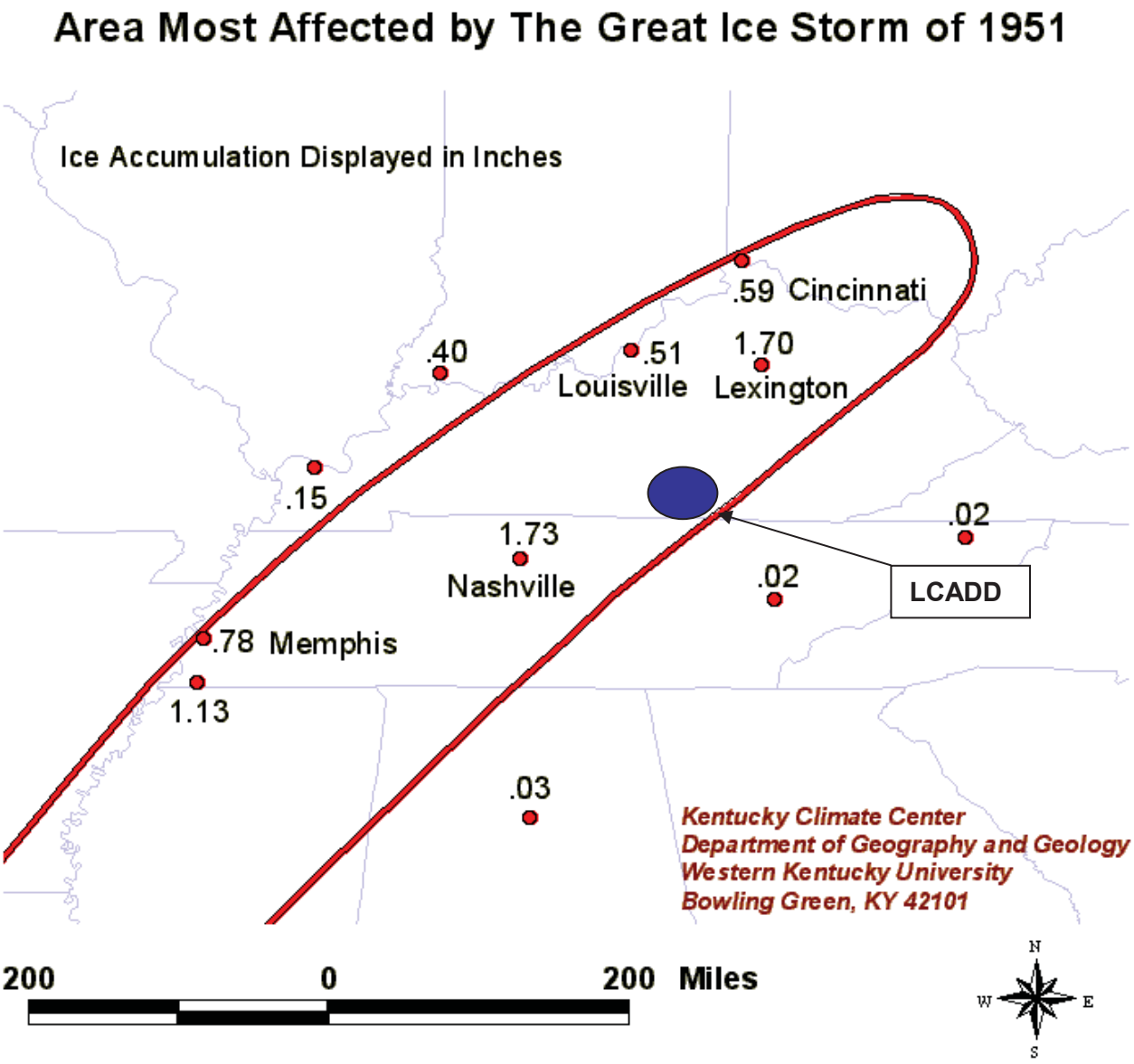
[28] NOAA's National Centers for Environmental Information; https://www.ncdc.noaa.gov/snow-and-ice/rsi/?nesis
[29] Current Results Weather And Science Facts; https://www.currentresults.com/Weather/Kentucky/annual-snowfall.php

the temperature warmed just enough to turn some of the ice to slush, a sign that the situation might be improving.

Instead, as the next morning ushered in February, conditions worsened. The temperature started to plummet, reaching -1°F before day's end. In southern Kentucky, seven inches of new snow fell. By now, travel had become virtually impossible. Eastern Air Lines cancelled flights for three days. Only two of 28 scheduled Greyhound buses arrived in Bowling Green the day after the storm hit. Trains of the Louisville & Nashville Railroad were as much as two days behind schedule. Tree limbs cracked and fell on power lines strained by the weight of accumulated ice resulting in the loss of electricity throughout the region. Fortunately, most homes in 1951 were not as reliant on electricity as they are today, and many people were able to at least restore heat to their homes.

Conditions had changed by February 2, but not necessarily for the better. While the storm had abated, record cold gripped Kentucky and Tennessee. At 4:45 a.m., Bowling Green recorded a temperature of -20°F, the coldest official temperature ever recorded up to that time. It was -13°F in Nashville. Meanwhile, the storm left nine inches of snow and sleet on the ground in southern Kentucky and eight inches in middle Tennessee. Crews had already worked for 48 straight hours trying to restore power and phone lines. Transportation was still halted. Water pipes leading to residents' houses burst due to the excessive cold. One man reported that after standing in front of a heater for a few minutes, he walked outside and the buttons on his overcoat shattered instantly. The Western Kentucky Gas Company reported that it expected record consumption of gas. Some trains were running two days late. Ten days later the area still had not recovered from the ice and snow.

The Great Ice Storm of '51 covered the south in a linear path of ice from Louisiana to Ohio. The heaviest accumulations fell in a line from Memphis, Tennessee to Nashville and northeastward to Lexington. At that time it was the costliest winter storm on record, causing an estimated $100 million in damage. The impact on forest, livestock, crops, and fruit trees was responsible for over $64 million of that total. An estimated 25 people lost their lives across the storm-affected area, and 500 were injured.



Fortunately, ice storms of this magnitude are not common. Until 1951, the only recorded storm of similar magnitude had occurred in February 1899, some 52 years prior. According to a report published by the U.S. Army Corps of Engineers, the region can expect a storm producing ¾ inch of ice load with a concurrent three second gust wind speed of 30 miles per hour about once every 50 years. Since 1949, 50 ice storms with ½ inch of ice or more have hit somewhere in the Southeast with seven of these storms affecting Bowling Green and four affecting Nashville.

The Winter of 1977-1978

The winter of 1977-1978 was very different from previous winters in Kentucky. There have been colder temperatures and more snowfall in other years. Nevertheless, this one featured incessantly cold temperature and memorably persistent snow cover. The table below summarizes the mean snowfall for Kentucky's four climatological divisions.

Table 4.2(3) Mean Snowfall

The Mean Snowfall By Climatological Regions In Kentucky For The 1977-1978 Winter				
	Western	Central	Bluegrass	Central
November 1977	3.1"	4.5"	4.5"	4.6"
December 1977	0.3"	1.7"	3.2"	3.1"
January 1978	22.0"	23.5"	22.6"	22.8"
February 1978	10.7"	10.0"	7.1"	11.4"
March 1978	4.0"	4.4"	8.8"	5.1"

Measurable snowfall was recorded somewhere in Kentucky on 19 of January's 31 days. Like the cold temperature, the snowfall persisted. Snow fell each day at Berea College from 12 through 22 January. At La Grange in Oldham County, 18 inches of fresh snow fell on top of seven inches already on the ground on 17 January with another five arriving on 20 January. That accumulation to a depth of 31 inches is the greatest on record for Kentucky. Blizzard conditions on 25-26 January caused the Kentucky State Police to close all roads except for extreme southeastern counties. The National Guard, called out on 16-20 January, was used again. Schools across the Commonwealth were closed for most of the month.

There was snow cover over Kentucky for all of February and the cold temperatures remained; snow fell somewhere in Kentucky for 12 days. Daily temperatures that dipped below freezing were reported on all 28 days at 63 stations, on 27 days at 14 stations, and 26 days at one station. The snow persisted too. La Grange had 14 days with snow depth of 18 inches or more and, by the end of the month, ten inches remained.

The total winter snowfall varied from 31.4 inches at Scottsville to 84 inches in La Grange. Days with an inch or more snow on the ground varied from 43 in Glasgow to a record setting 74 in Williamstown in Grant County.

Blizzard of 1993

In Mid-March of 1993, a major blizzard struck the Eastern U.S., including parts of Kentucky.

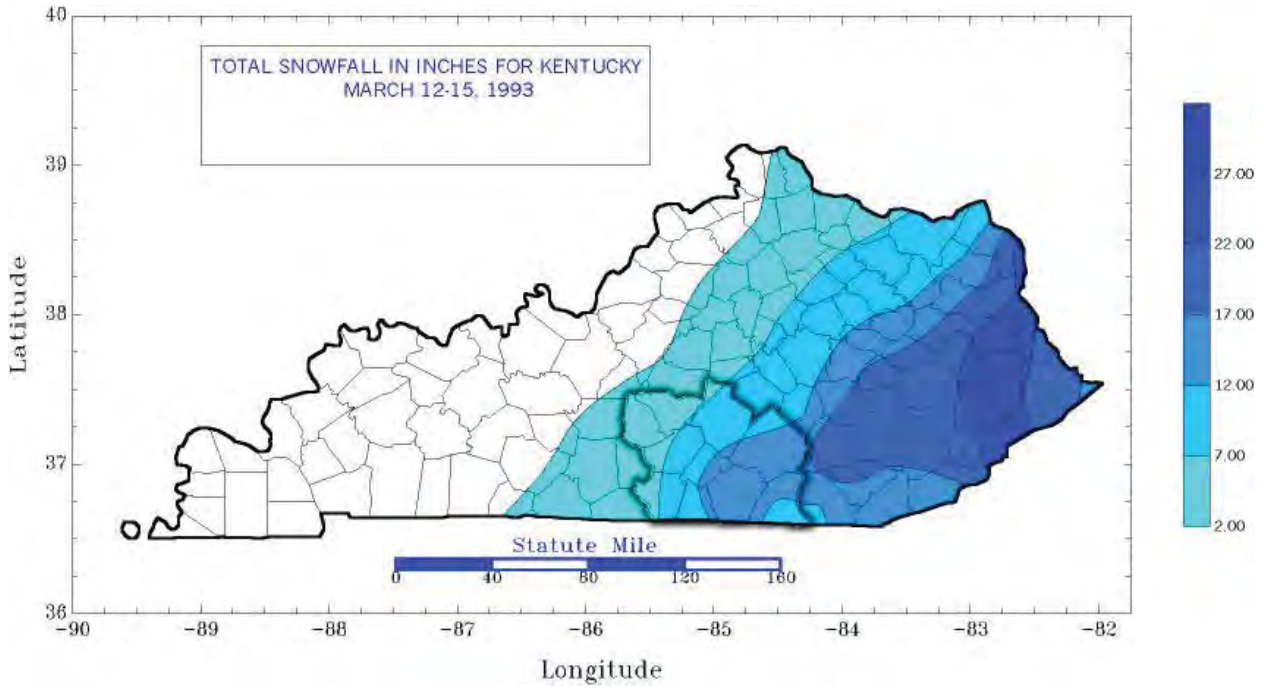
From March 12th to the 15th, 1993, what some call the "storm of the century" ravaged the eastern United States. The National Weather Service's sophisticated computer models indicated that a severe winter storm was forming in the Gulf of Mexico. Later in that same week, the NWS computer models showed that the storm was growing significantly. The storm actually formed from the combination of three different atmospheric disturbances. A major cluster of thunderstorms in the Gulf of Mexico, a band of snow and rain from the Pacific, and gusty winds with light snow from the Arctic Circle all joined over the southeast to create this historic storm (1). By Thursday, March 12th, the storm was barreling up Florida's west coast with high winds, tornadoes, and a storm surge twelve feet above normal. The next day, the storm was carving a destructive path up the southeastern states, leaving Eastern Kentucky paralyzed.

The blizzard of March 1993 was one of the largest winter storms in terms of snowfall and size in Kentucky history. Until that day, the record for a single day's snowfall had been 18 inches.

This snowfall record was broken at more than one station in Eastern parts of the state (5). Most of Eastern and Southeastern Kentucky was covered with up to 30 inches of snow. London, Kentucky measured a depth of 22 inches, while Jackson and Closplint both had 20 inches of snow on the ground. The most snow fell in Perry County, where 30 inches was recorded. Snow was not the only damaging factor in the storm. Brutal winds crossed most of Kentucky, making the cleanup effort extremely difficult. Winds up to 43 miles per hour were recorded in Pike Co., and a 30-mph clip blew over much of the state (1). The heavy snows, coupled with high winds created large snow drifts (8-10 feet in many places such as Pikeville and London) over roads and highways. I-75 from Lexington to the Tennessee border was shut down for two days, as was I-64 from Lexington eastward. All state and federal highways south of I-64 and east of I-75 were also closed. Most travel was stopped, leaving over 4,000 motorists stranded (3). Emergency shelters were established over much of Eastern Kentucky. Many found themselves sleeping in high school gyms or other public facilities. The National Guard had to be brought in to aid in rescue efforts, to clear roads, and to open twenty armories as additional shelters for motorists (3).

During the storm, 30 counties were forced to close schools and government offices. Of Kentucky's 120 counties, 73 were designated as eligible for reimbursement for the cost of emergency snow removal (3). The massive March 1993 blizzard is responsible for five deaths in Kentucky and over 270 deaths nationwide (4). The maximum snow depth recorded from the blizzard was 56 inches on Mt. Leconte in Tennessee. In Kentucky, the greatest recorded snow depth was thirty inches in Perry County (3). Record low temperatures were set stretching from the Gulf Coast all the way to Maine. For the first time, every major airport along the east coast was closed at some point due to the storm. With damage costs exceeding 1.6 billion dollars, the blizzard of 1993 is the fourth costliest storm in U.S. history. Though it was not the most severe blizzard on record, it was the largest in terms of the area it affected (4). More than half of the country's population in twenty-six different states was affected by the blizzard of 1993. In mid-March of 1993, a major blizzard struck the Eastern U.S., including parts of Kentucky.

From March 12th to the 15th, 1993, what some call the "storm of the century" ravaged the eastern United States. The National Weather Service's sophisticated computer models indicated that a severe winter storm was forming in the Gulf of Mexico. Later in that same week, the NWS computer models showed that the storm was growing significantly. The storm actually formed from the combination of three different atmospheric disturbances. A major cluster of thunderstorms in the Gulf of Mexico, a band of snow and rain from the Pacific, and gusty winds with light snow from the Arctic Circle all joined over the southeast to create this historic storm (1). By Thursday, March 12th, the storm was barreling up Florida's west coast with high winds, tornadoes, and a storm surge twelve feet above normal. The next day, the storm was carving a destructive path up the southeastern states, leaving Eastern Kentucky paralyzed.



The blizzard of March 1993 was one of the largest winter storms in terms of snowfall and size in Kentucky history. Until that day, the record for a single day's snowfall had been 18 inches. This snowfall record was broken at more than one station in Eastern parts of the state (5). Most of Eastern and Southeastern Kentucky was covered with up to 30 inches of snow. London, Kentucky measured a depth of 22 inches, while Jackson and Closplint both had 20 inches of snow on the ground. The most snow fell in Perry County, where 30 inches was recorded. Snow was not the only damaging factor in the storm. Brutal winds crossed most of Kentucky, making the cleanup effort extremely difficult. Winds up to 43 miles per hour were recorded in Pike Co., and a 30-mph clip blew over much of the state (1). The heavy snows, coupled with high winds created large snow drifts (8-10 feet in many places such as Pikeville and London) over roads and highways. I-75 from Lexington to the Tennessee border was shut down for two days, as was I-64 from Lexington eastward. All state and federal highways south of I-64 and east of I-75 were also closed. Most travel was stopped, leaving over 4,000 motorists stranded (3). Emergency shelters were established over much of Eastern Kentucky. Many found themselves sleeping in high school gyms or other public facilities. The National Guard had to be brought in to aid in rescue efforts, to clear roads, and to open twenty armories as additional shelters for motorists (3).

During the storm, 30 counties were forced to close schools and government offices. Of Kentucky's 120 counties, 73 were designated as eligible for reimbursement for the cost of emergency snow removal (3). The massive March 1993 blizzard is responsible for five deaths in Kentucky and over 270 deaths nationwide (4). The maximum snow depth recorded from the blizzard was 56 inches on Mt. Leconte in Tennessee. In Kentucky, the greatest recorded snow depth was thirty inches in Perry County (3). Record low temperatures were set stretching from the Gulf Coast all the way to Maine. For the first time, every major airport along the east coast was closed at some point due to the storm. With damage costs exceeding 1.6 billion dollars, the blizzard of 1993 is the fourth costliest storm in U.S. history. Though it was not the most severe

blizzard on record, it was the largest in terms of the area it affected (4). More than half of the country's population in twenty-six different states was affected by the blizzard of 1993.[30]

February Ice Storm (February 9-13, 1994)

The ice storm which struck the Southeast in February 1994 resulted from a typical icing scenario: a quasi-stationary front with overrunning moisture producing freezing precipitation in colder air near the surface to the north of the front. However, this storm was very unusual in 2 respects: 1) its real extent was much greater than usually found in ice storms, and 2) The precipitation amounts were much higher than usually found in ice storm situations, with some amounts exceeding 5 inches for the event.

Overall, the storm produced over $3 billion in damages and cleanup costs, and at least 9 deaths were attributed (directly or indirectly) to the storm. Also, well over 2 million customers were without electricity at some time, and 1/2 million were still without power 3 days after the storm. There were even some instances of residents without power for 1 month after the storm. Falling trees and limbs damaged many homes, businesses, and vehicles. Following is an account of the destruction, for Kentucky.

The south-central and southeast sections of the state were hardest hit. Ice accumulated to over 3 inches in some locations. Over 190,000 customers were without electricity at some point, with power not restored for over a week in some locations. KY also reported 150 injuries for the event--the only state to officially report a significant number of injuries. Damage estimates were placed at over $50 million for the state.[31]

Table 4.2(4) NOAA Storm Events Database

Search Results for Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell, Taylor and Wayne Counties, Kentucky						
Event Types: Blizzard, Heavy Snow, Ice Storm, Winter Storm						
167 events were reported between 01/01/1996 and 07/31/2016 (24319 days)						
*Click on **Location** below to display details.*						
Location	**State**	**Date**	**Type**	**Death/Injury**	**Property Damage**	**Crop Damage**
CASEY (ZONE)	KY	1/6/1996	Heavy Snow	0	0.00K	0.00K
PULASKI (ZONE)	KY	1/6/1996	Heavy Snow	0	0.00K	0.00K
TAYLOR (ZONE)	KY	1/6/1996	Heavy Snow	0	0.00K	0.00K
GREEN (ZONE)	KY	1/6/1996	Heavy Snow	0	0.00K	0.00K
RUSSELL (ZONE)	KY	1/6/1996	Heavy Snow	0	0.00K	0.00K
ADAIR (ZONE)	KY	1/6/1996	Heavy Snow	0	0.00K	0.00K

[30] ***(Kentucky Climate Center: Climate – Snow/Ice.*** **Accessed on May 3, 2004, at** *http://kyclim.wku.edu/climate/)*

[31] ***(NOAA-NNDC, 1994 Weather in the Southeast: February Ice Storm.*** **Accessed on May 3, 2004, at** *http://ols.nndc.noaa.gov/plolstore/plsql/olstore.prodspecific?prodnum=C00490-PUB-A0001#FEBRUARY)*

MCCREARY (ZONE)	KY	1/6/1996	Heavy Snow	0	0.00K	0.00K
CLINTON (ZONE)	KY	1/6/1996	Heavy Snow	0	0.00K	0.00K
CUMBERLAND (ZONE)	KY	1/6/1996	Heavy Snow	0	0.00K	0.00K
WAYNE (ZONE)	KY	1/6/1996	Heavy Snow	0	0.00K	0.00K
WAYNE (ZONE)	KY	2/2/1996	Heavy Snow	0	0.00K	0.00K
PULASKI (ZONE)	KY	2/2/1996	Heavy Snow	0	0.00K	0.00K
CUMBERLAND (ZONE)	KY	2/2/1996	Heavy Snow	0	0.00K	0.00K
MCCREARY (ZONE)	KY	2/3/1998	Heavy Snow	1 (d)	0.00K	0.00K
WAYNE (ZONE)	KY	2/3/1998	Heavy Snow	0	0.00K	0.00K
CUMBERLAND (ZONE)	KY	2/3/1998	Heavy Snow	0	0.00K	0.00K
CLINTON (ZONE)	KY	2/3/1998	Heavy Snow	0	0.00K	0.00K
PULASKI (ZONE)	KY	2/3/1998	Heavy Snow	0	0.00K	0.00K
TAYLOR (ZONE)	KY	2/3/1998	Heavy Snow	0	0.00K	0.00K
ADAIR (ZONE)	KY	2/3/1998	Heavy Snow	0	0.00K	0.00K
CASEY (ZONE)	KY	2/3/1998	Heavy Snow	0	0.00K	0.00K
RUSSELL (ZONE)	KY	2/3/1998	Heavy Snow	0	0.00K	0.00K
GREEN (ZONE)	KY	2/3/1998	Heavy Snow	0	0.00K	0.00K
TAYLOR (ZONE)	KY	12/23/1998	Winter Storm	0	0.00K	0.00K
ADAIR (ZONE)	KY	12/23/1998	Winter Storm	0	0.00K	0.00K
CLINTON (ZONE)	KY	12/23/1998	Winter Storm	0	0.00K	0.00K
CUMBERLAND (ZONE)	KY	12/23/1998	Winter Storm	0	0.00K	0.00K
PULASKI (ZONE)	KY	12/23/1998	Winter Storm	0	0.00K	0.00K
WAYNE (ZONE)	KY	12/23/1998	Winter Storm	0	0.00K	0.00K
MCCREARY (ZONE)	KY	12/23/1998	Winter Storm	0	0.00K	0.00K
WAYNE (ZONE)	KY	1/22/2000	Winter Storm	0	0.00K	0.00K
MCCREARY (ZONE)	KY	1/29/2000	Winter Storm	0	0.00K	0.00K
PULASKI (ZONE)	KY	12/2/2000	Heavy Snow	0	0.00K	0.00K
WAYNE (ZONE)	KY	12/2/2000	Heavy Snow	0	0.00K	0.00K
MCCREARY (ZONE)	KY	12/2/2000	Heavy Snow	0	0.00K	0.00K

MCCREARY (ZONE)	KY	1/6/2002	Heavy Snow	0	0.00K	0.00K
MCCREARY (ZONE)	KY	1/19/2002	Winter Storm	0	0.00K	0.00K
WAYNE (ZONE)	KY	1/19/2002	Winter Storm	0	0.00K	0.00K
PULASKI (ZONE)	KY	1/19/2002	Winter Storm	0	0.00K	0.00K
WAYNE (ZONE)	KY	12/4/2002	Heavy Snow	0	0.00K	0.00K
WAYNE (ZONE)	KY	12/4/2002	Heavy Snow	0	0.00K	0.00K
MCCREARY (ZONE)	KY	12/4/2002	Winter Storm	0	10.00K	0.00K
MCCREARY (ZONE)	KY	12/4/2002	Winter Storm	0	10.00K	0.00K
PULASKI (ZONE)	KY	12/4/2002	Heavy Snow	0	0.00K	0.00K
PULASKI (ZONE)	KY	12/4/2002	Heavy Snow	0	0.00K	0.00K
MCCREARY (ZONE)	KY	1/16/2003	Heavy Snow	0	0.00K	0.00K
WAYNE (ZONE)	KY	1/16/2003	Heavy Snow	0	0.00K	0.00K
PULASKI (ZONE)	KY	1/16/2003	Heavy Snow	0	0.00K	0.00K
MCCREARY (ZONE)	KY	1/23/2003	Heavy Snow	0	0.00K	0.00K
WAYNE (ZONE)	KY	1/25/2004	Ice Storm	0	0.00K	0.00K
PULASKI (ZONE)	KY	1/25/2004	Ice Storm	0	0.00K	0.00K
MCCREARY (ZONE)	KY	1/25/2004	Ice Storm	0	0.00K	0.00K
PULASKI (ZONE)	KY	2/5/2004	Ice Storm	0	0.00K	0.00K
MCCREARY (ZONE)	KY	2/5/2004	Winter Storm	0	0.00K	0.00K
PULASKI (ZONE)	KY	2/11/2006	Heavy Snow	0	0.00K	0.00K
TAYLOR (ZONE)	KY	3/7/2008	Heavy Snow	0	0.00K	0.00K
GREEN (ZONE)	KY	3/7/2008	Heavy Snow	0	0.00K	0.00K
MCCREARY (ZONE)	KY	3/7/2008	Ice Storm	0	0.00K	0.00K
CASEY (ZONE)	KY	3/8/2008	Heavy Snow	0	0.00K	0.00K
ADAIR (ZONE)	KY	3/8/2008	Heavy Snow	0	0.00K	0.00K
CLINTON (ZONE)	KY	3/8/2008	Heavy Snow	0	0.00K	0.00K
CUMBERLAND (ZONE)	KY	3/8/2008	Heavy Snow	0	0.00K	0.00K
TAYLOR (ZONE)	KY	1/27/2009	Winter Storm	0	0.00K	0.00K
GREEN (ZONE)	KY	1/27/2009	Winter Storm	0	0.00K	0.00K
ADAIR (ZONE)	KY	1/27/2009	Winter Storm	0	0.00K	0.00K
CASEY (ZONE)	KY	1/27/2009	Winter Storm	0	0.00K	0.00K
RUSSELL (ZONE)	KY	1/27/2009	Winter Storm	0	0.00K	0.00K
PULASKI (ZONE)	KY	1/27/2009	Ice Storm	0	0.00K	0.00K

MCCREARY (ZONE)	KY	12/18/2009	Winter Storm	0	250.00K	0.00K
PULASKI (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
PULASKI (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
PULASKI (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
WAYNE (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
WAYNE (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
WAYNE (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
MCCREARY (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
ADAIR (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
CASEY (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
TAYLOR (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
GREEN (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
CLINTON (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
CUMBERLAND (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
RUSSELL (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
ADAIR (ZONE)	KY	1/29/2010	Heavy Snow	0	0.00K	0.00K
CLINTON (ZONE)	KY	12/12/2010	Heavy Snow	0	0.00K	0.00K
TAYLOR (ZONE)	KY	12/12/2010	Heavy Snow	0	0.00K	0.00K
ADAIR (ZONE)	KY	12/12/2010	Heavy Snow	0	0.00K	0.00K
CASEY (ZONE)	KY	12/12/2010	Heavy Snow	0	0.00K	0.00K
CUMBERLAND (ZONE)	KY	12/12/2010	Heavy Snow	0	0.00K	0.00K
RUSSELL (ZONE)	KY	12/12/2010	Heavy Snow	0	0.00K	0.00K
MCCREARY (ZONE)	KY	12/12/2010	Heavy Snow	0	0.00K	0.00K
MCCREARY (ZONE)	KY	12/12/2010	Heavy Snow	0	0.00K	0.00K
PULASKI (ZONE)	KY	12/12/2010	Heavy Snow	0	0.00K	0.00K
PULASKI (ZONE)	KY	12/15/2010	Winter Storm	0	0.00K	0.00K
WAYNE (ZONE)	KY	12/15/2010	Winter Storm	0	0.00K	0.00K
MCCREARY (ZONE)	KY	12/15/2010	Winter Storm	0	0.00K	0.00K

CLINTON (ZONE)	KY	12/24/2010	Heavy Snow	0	0.00K	0.00K
CASEY (ZONE)	KY	1/20/2011	Heavy Snow	0	0.00K	0.00K
ADAIR (ZONE)	KY	1/25/2011	Heavy Snow	0	0.00K	0.00K
WAYNE (ZONE)	KY	2/9/2011	Winter Storm	0	0.00K	0.00K
MCCREARY (ZONE)	KY	2/19/2012	Heavy Snow	0	0.00K	0.00K
WAYNE (ZONE)	KY	2/19/2012	Heavy Snow	0	0.00K	0.00K
CUMBERLAND (ZONE)	KY	1/25/2013	Ice Storm	0	0.00K	0.00K
CLINTON (ZONE)	KY	1/25/2013	Ice Storm	0	0.00K	0.00K
WAYNE (ZONE)	KY	1/25/2013	Ice Storm	0	0.00K	0.00K
PULASKI (ZONE)	KY	1/25/2013	Ice Storm	0	0.00K	0.00K
MCCREARY (ZONE)	KY	1/25/2013	Ice Storm	0	0.00K	0.00K
TAYLOR (ZONE)	KY	3/2/2014	Winter Storm	0	0.00K	0.00K
GREEN (ZONE)	KY	3/2/2014	Winter Storm	0	0.00K	0.00K
RUSSELL (ZONE)	KY	3/2/2014	Winter Storm	0	0.00K	0.00K
ADAIR (ZONE)	KY	3/2/2014	Winter Storm	0	0.00K	0.00K
CLINTON (ZONE)	KY	3/2/2014	Winter Storm	0	0.00K	0.00K
CUMBERLAND (ZONE)	KY	3/2/2014	Winter Storm	0	0.00K	0.00K
CASEY (ZONE)	KY	3/2/2014	Winter Storm	0	0.00K	0.00K
PULASKI (ZONE)	KY	3/2/2014	Winter Storm	0	0.00K	0.00K
WAYNE (ZONE)	KY	3/2/2014	Ice Storm	0	0.00K	0.00K
MCCREARY (ZONE)	KY	3/2/2014	Winter Storm	0	0.00K	0.00K
RUSSELL (ZONE)	KY	2/16/2015	Heavy Snow	0	0.00K	0.00K
ADAIR (ZONE)	KY	2/16/2015	Heavy Snow	0	0.00K	0.00K
CASEY (ZONE)	KY	2/16/2015	Heavy Snow	0	0.00K	0.00K
GREEN (ZONE)	KY	2/16/2015	Heavy Snow	0	0.00K	0.00K
TAYLOR (ZONE)	KY	2/16/2015	Heavy Snow	0	0.00K	0.00K
CUMBERLAND (ZONE)	KY	2/16/2015	Heavy Snow	0	0.00K	0.00K
CLINTON (ZONE)	KY	2/16/2015	Heavy Snow	0	0.00K	0.00K
WAYNE (ZONE)	KY	2/16/2015	Winter Storm	0	0.00K	0.00K
PULASKI (ZONE)	KY	2/16/2015	Winter Storm	0	0.00K	0.00K
MCCREARY (ZONE)	KY	2/16/2015	Winter Storm	0	0.00K	0.00K
PULASKI (ZONE)	KY	2/20/2015	Winter Storm	0	0.00K	0.00K
MCCREARY (ZONE)	KY	2/20/2015	Ice Storm	0	0.00K	0.00K
WAYNE (ZONE)	KY	2/20/2015	Ice Storm	0	0.00K	0.00K
GREEN (ZONE)	KY	3/4/2015	Heavy Snow	0	0.00K	0.00K

TAYLOR (ZONE)	KY	3/4/2015	Heavy Snow	0	0.00K	0.00K
PULASKI (ZONE)	KY	3/4/2015	Winter Storm	0	0.00K	0.00K
CASEY (ZONE)	KY	3/5/2015	Heavy Snow	0	0.00K	0.00K
ADAIR (ZONE)	KY	3/5/2015	Heavy Snow	0	0.00K	0.00K
WAYNE (ZONE)	KY	3/5/2015	Winter Storm	0	0.00K	0.00K
CUMBERLAND (ZONE)	KY	3/5/2015	Heavy Snow	0	0.00K	0.00K
RUSSELL (ZONE)	KY	3/5/2015	Heavy Snow	0	0.00K	0.00K
CLINTON (ZONE)	KY	3/5/2015	Heavy Snow	0	0.00K	0.00K
MCCREARY (ZONE)	KY	3/5/2015	Winter Storm	0	0.00K	0.00K
MCCREARY (ZONE)	KY	1/20/2016	Heavy Snow	0	0.00K	0.00K
ADAIR (ZONE)	KY	1/20/2016	Heavy Snow	0	0.00K	0.00K
GREEN (ZONE)	KY	1/20/2016	Heavy Snow	0	0.00K	0.00K
CUMBERLAND (ZONE)	KY	1/20/2016	Heavy Snow	0	0.00K	0.00K
CLINTON (ZONE)	KY	1/20/2016	Heavy Snow	0	0.00K	0.00K
RUSSELL (ZONE)	KY	1/20/2016	Heavy Snow	0	0.00K	0.00K
MCCREARY (ZONE)	KY	1/22/2016	Winter Storm	0	0.00K	0.00K
WAYNE (ZONE)	KY	1/22/2016	Winter Storm	0	0.00K	0.00K
PULASKI (ZONE)	KY	1/22/2016	Winter Storm	0	0.00K	0.00K
TAYLOR (ZONE)	KY	1/22/2016	Heavy Snow	0	0.00K	0.00K
TAYLOR (ZONE)	KY	1/22/2016	Heavy Snow	0	0.00K	0.00K
CLINTON (ZONE)	KY	1/22/2016	Winter Storm	0	0.00K	0.00K
CUMBERLAND (ZONE)	KY	1/22/2016	Winter Storm	0	0.00K	0.00K
RUSSELL (ZONE)	KY	1/22/2016	Heavy Snow	0	0.00K	0.00K
ADAIR (ZONE)	KY	1/22/2016	Heavy Snow	0	0.00K	0.00K
GREEN (ZONE)	KY	1/22/2016	Heavy Snow	0	0.00K	0.00K
CASEY (ZONE)	KY	1/22/2016	Heavy Snow	0	0.00K	0.00K
ADAIR (ZONE)	KY	2/14/2016	Heavy Snow	0	0.00K	0.00K
RUSSELL (ZONE)	KY	2/14/2016	Heavy Snow	0	0.00K	0.00K
TAYLOR (ZONE)	KY	2/14/2016	Heavy Snow	0	0.00K	0.00K
CASEY (ZONE)	KY	2/14/2016	Heavy Snow	0	0.00K	0.00K
CLINTON (ZONE)	KY	2/14/2016	Heavy Snow	0	0.00K	0.00K
CUMBERLAND (ZONE)	KY	2/14/2016	Heavy Snow	0	0.00K	0.00K
GREEN (ZONE)	KY	2/14/2016	Heavy Snow	0	0.00K	0.00K
WAYNE (ZONE)	KY	2/14/2016	Heavy Snow	0	0.00K	0.00K
MCCREARY (ZONE)	KY	2/14/2016	Heavy Snow	0	0.00K	0.00K
PULASKI (ZONE)	KY	2/14/2016	Heavy Snow	0	0.00K	0.00K

Totals:				1 (d)	270.00K	0.00K

Storm Events Database Search Results for Adair, Casey, Clinton, Cumberland, Green, Mccreary, Pulaski, Russell, Taylor and Wayne Counties, Kentucky
Event Types (Blizzard, Heavy Snow, Ice Storm, Winter Storm) are listed below by date:

Major Snow Storm (January 6-7, 1996)
A major snow storm hit Kentucky on January 6-7, 1996. The snow began around noon est and effected all of the counties in the Louisville CWA before it stopped Sunday afternoon. The heavy snow began around 1500 est on the 6th and ended around 6 am est on the 7th. A strong double-barreled low pressure system moved from the Gulf states on the 6th to Georgia and then the South Carolina coast by the afternoon of the 7th. Totals were from 7 to 16 inches across south central Kentucky.

Heavy Snow (February 2, 1996)
Between 3 to 6 total inches of snow fell across the Lake Cumberland area from around 3 pm est on February 2, 1996 to shortly after midnight on February 3. Low pressure drew in moisture to South Central Kentucky as it moved across the Gulf of Mexico.

Heavy Snow (February 3, 1998)
Because of the extremely wet nature of the snow, damage from this storm was extensive. The most widespread damage occurred in a swath of the Daniel Boone National Forest from Whitley City to Frenchburg. Power outages were widespread as falling trees brought down power lines and poles. Power outages affected 100% of the electric customers in many counties. As many as 9000 customers were still without power on February 9, and some areas were without power for 2 weeks. Numerous roads were blocked by trees, and bulldozers had to be used to reach people who were stranded. There were numerous buildings which collapsed under the weight of the snow, including trailer homes, houses, barns, and commercial buildings. One industrial building near Monticello sustained $1.5 million in damage when the roof collapsed, and machinery and stock were damaged.

Many people remained in unheated homes during the extended power outages. A woman in McCreary County died in her home as a result of a hypothermia induced heart attack, and a man in McCreary County was injured when a carport collapsed on him. Some snow depths (in Lake Cumberland Region) reported on February 6: Stearns - 23 inches, Monticello - 14 inches; Somerset - 12 inches.

Winter Storm (December 23, 1998)
Low pressure moving across the Tennesee Valley combined with cold air at the surface across southern Kentucky brought a mixture of freezing rain and sleet to much of southern and eastern Kentucky. Roads quickly became slick and hazardous during the morning and caused multiple automobile accidents across the area.

Heavy Snow (December 2, 2000)
The seasons first snowstorm produced one of the heaviest early season snowfalls in the past 20 years across Eastern Kentucky. A general 3 to 6 inches of snow fell in the counties bordering Tennessee and along the I-75 corridor. A band of 6 inch snows fell south of the Mountain Parkway to near Pikeville. Locally up to 8 inches of snow also fell from Lee county south to McCreary county.

Heavy Snow (January 6, 2002)
A strengthening area of low pressure tracked from the Gulf Coast states northeastward along the Appalachian Mountains. This initially produced rain, freezing rain, and sleet over eastern Kentucky during the early morning hours, but shortly before dawn, turned to snow. Western parts of the area were generally affected first as snow moved east during the morning hours. Snowfall rates of 1 inch per hour were common during the mid morning to early afternoon hours. Generally, southeastern portions of eastern Kentucky received the most snowfall with 6 to 10 inches commonly reported from Bell, Harlan, Letcher, Knox, Clay, Leslie, Perry, Breathitt, Magoffin, Floyd, Estill, and Fleming Counties. Elsewhere amounts were in the 4 to 6

inch range. Although most of the significant accumulating snow ended by mid afternoon, light snow continued to fall into the early evening hours before ending.

Winter Storm (January 19, 2002)
A significant winter storm occurred during the morning and early afternoon of January 19th as an area of low pressure moved northeast from northern Alabama into eastern Tennessee, and eventually into central Virginia. The combination of the surface low, along with abundant Gulf moisture, and a strong upper level disturbance produced a large swath of wintry precipitation across eastern Kentucky.

Areas in the southern CWA received a wintry mix of snow, sleet, and freezing rain. This area includes Wayne, Pulaski, McCreary, Laurel, Whitley, Knox, Clay, Bell, Leslie, Perry, Harlan, Letcher, and Pike Counties. Reports of 1/2 to 1 inch of sleet were received in Whitley, Knox, and Wayne Counties with a thin topping of ice in many areas from freezing rain.

Heavy Snow (December 4, 2002)
This winter storm occurring on December 4th and December 5th was the first of the season for eastern Kentucky. This storm system tracked across the southern United States, spreading precipitation as far north as the Ohio Valley. Snow began on the morning of December 4th, dumping 3 to 5 inches of snow southwest of a line from Mount Vernon to Harlan. Up to three quarters of an inch of ice was reported in McCreary County among other locations receiving between 1/4 and 1/2 of an inch.

Heavy Snow (January 16, 2003)
A winter storm slammed into eastern Kentucky during the afternoon of Thursday, January 17, 2003 and dumped heavy amounts of snow over the region. The culprit for the snow was a low pressure system which blazed a trail across the Tennessee Valley and moved to the Mid-Atlantic Coast by midnight.

The hardest hit areas were the south central and southeastern parts of Kentucky. Generally speaking, 4 to 8 inches were received south of a line from Somerset to Jackson to Pikeville, with 1 to 4 inches received north of this line. Snowfall rates of about 1 inch per hour were reported in many areas of southeastern Kentucky.

Heavy Snow (January 23, 2003)
Heavy snow fell over portions of southeastern Kentucky due to an upper level disturbance. Much of this heavy snow occurred in higher elevations. A maximum of 4 inches of snow were received from a cooperative observer in Stearns.

Ice Strom (January 25, 2004)
A storm system moved out of the plains and into the southern Ohio Valley. Before the storm arrived, arctic air flooded into eastern Kentucky. As the storm system approached, warm air rose up and over the cold air. A brief period of snow and sleet started the event for some, but the overwhelming bulk of precipitation was freezing rain. Ice accumulations of one quarter to one half inch occurred for most areas, with Pike, Floyd, Martin, Knott, and Rowan Counties

receiving up to an inch of ice accumulation. Electric companies across the area reported that about 17, 850 people were without power, but for only a short period of time.

Ice Strom/Winter Storm (February 5, 2004)
A small area of sleet, freezing rain, and snow fell in pockets of southeastern Kentucky. All precipitation types changed to rain by late morning. One quarter inch of ice was reported in Somerset.

Heavy Snow (February 11, 2004)
Five inches of snow fell 10 miles east of Somerset. 4 inches also fell at another location near Somerset.

Heavy Snow (March 7&8, 2008)
snowstorm developed during the early morning hours Friday March 7th. Snow and some sleet fell intermittently over the next 28 hours. Snowfall totals were highest along the Ohio River, where accumulations varied from 10 to 12 inches. Farther south...snow started later in the day and accumulations were lower. Across south central Kentucky, snowfall ranged from over 8 inches north of Bowling green to just under 4 inches along the Kentucky-Tennessee border.

Winter Storm (January 27, 2009)
A prolonged ice and snow storm began around just after midnight Tuesday January 27 and continued through 11 am Wednesday January 28. The mixed freezing rain and snow that fell over central Kentucky was just one aspect of a widespread overrunning event that brought destructive winter weather from Texas, through the Ohio Valley, into New England. Arctic air centered across the Upper Midwest supplied low level cold air. Several disturbances moved east across a nearly stationary front stalled across the Tennessee Valley. Along the Tennessee border, ice on elevated surfaces averaged one quarter of an inch.

Winter Storm (December 18, 2009)
A large and intense area of low pressure moved across the Tennessee valley and eventually up the east coast on December 18th and 19th. The initial precipitation began as a heavy wet snow on Friday afternoon December 18th. Accumulations around eastern Kentucky ranged between 1 and 4 inches. The McCreary county emergency manager reported that 37,000 customers state wide were without power as of 2pm on the 19th. The southern Kentucky RECC reported that 3500 customers in McCreary county alone were without power.

Heavy Snow (January 29, 2010)
A powerful area of low pressure moved across the Tennessee valley and then through the mid Atlantic region on January 29th and 30th. The snow first began falling across eastern Kentucky during the late afternoon and evening hours of January 29th as the storm moved across central Tennessee. The snow finally came to an end late in the day on January 30th as the area of low pressure moved up the east coast. Snowfall amounts of 4-8 inches were quite common around the area, with accumulations as high as 11 inches reported on Black Mountain.

Heavy Snow (December 12, 2010)
A deepening low pressure center moved over southern Michigan on the afternoon of December 12th. A sharp cold front crossed from west to east across central Kentucky during the early morning hours. Rain changed to snow for a short time just after frontal passage across north central Kentucky east of Interstate 65 and over the Bluegrass Region. Around one half an inch fell before snow changed to flurries after dawn. Snow redeveloped by mid-afternoon across south central Kentucky as wrap around moisture associated with the back edge of the cyclone arrived. Occasional light snow spread north and east across all of central Kentucky by late afternoon. Snowfall totals ranged from 3 to just over 4 inches near Bowling Green and other portions of Kentucky adjacent to Tennessee. Two to 4 inches fell to the south of the Ohio River and across the northern Bluegrass. Although snow diminished to flurries just after midnight on the 13th across most areas, light snow lingered through dawn across portions of the southern Bluegrass and Lake Cumberland areas. These areas received from 4 to 6 inches of snow. An arctic front arrived by late evening on the 12th. This brought widespread blowing snow and travel problems as northwest winds increased to 20 to 25 mph with some gusts up to 40 mph.

Winter Storm (December 15, 2010)
On December 16th, a low pressure system developed in the plains and then tracked east across the Tennessee Valley. The warm front moved just south of the forecast area. Wintry precipitation fell as freezing rain from the Tennessee border and north up to the Mountain Parkway. The ice accumulated a quarter of an inch in Pulaski, McCreary, and Wayne Counties.

Heavy Snow (December 24, 2010)
An upper air trough dropping southward from the Great Lakes combined with a weak surface low across lower Mississippi Valley to spread an area of light to moderate snow across much of the Lower Ohio Valley. Snow began by late afternoon on Christmas Eve and continued into the very early morning hours the 25th. Widespread snow accumulations of 2 to 4 inches developed over much of western and south central Kentucky, with lesser amounts of up to 2 inches across southern Indiana and the Bluegrass Region. Four to 5 inches of snow fell across a small area between Butler and Clinton Counties near the Tennessee border. Four inches of snow fell near Albany.

Heavy Snow (January 20, 2011)
Warm air advection, combined with lift associated with an approaching trough, spread occasionally heavy snow across north central Kentucky. Snow developed during the late morning hours along the Ohio River and moved southeast and covered the entire central portion of the Commonwealth by mid-afternoon. Snow ended by late afternoon west of Interstate 65 and by early evening farther east across the Bluegrass Region. Across an area north of a line from Louisville to just east of Lexington, snowfall became heavy for a time, with total accumulations from 3 to 5 inches. Snowfall totals diminished farther south, lowering to around 2 inches along the Tennessee border. Four inches of snow accumulation was measured at Liberty.

Heavy Snow (January 25, 2011)
During the overnight hours on the 25th and the 26th of January, a strengthening closed low moved across Tennessee. North of this upper air system, a surface trough moved east across the Commonwealth, changing rain to snow. Snow, heavy at times, developed by late evening across west central Kentucky. A broad area of 3 to 5 inches of snow accumulated during the early morning hours across an area generally just west of Interstate 65. Snow amounts

diminished east of Interstate 65 as precipitation remained rain well into the early morning hours. Snow continued until dawn within an arc from Bowling Green through southern Louisville through Frankfort as the back edge of an area of wrap-around snow moved east across the state.

Winter Storm (February 9, 2011)

On February the 9th, a low pressure system developed in the lower Mississippi valley and moved northeast. Snow tracked from central Kentucky and Tennessee into eastern Kentucky and began to fall in eastern Kentucky by 2 PM. Most locations received 1 to 3 inches with locally higher amounts along the counties bordering Tennessee. The snow was heavy at times with the southern counties receiving the higher amounts.

Heavy Snow (February 19, 2012)

A large portion of eastern Kentucky experienced widespread accumulating snow from the early afternoon hours of February 19th into the late morning hours of February 20th. The snow was heavy and wet and came down heavy at times. Snowfall amounts averaged between 2 and 5 inches for most locations, with isolated amounts of 6-12 on the higher ridges around the area. Five and a quarter inches of snow fell in Whitley City.

Ice Strom (January 25, 2013)

Low pressure quickly developed and moved across southern Kentucky during the morning hours of January 25th, sending a wintry mix into southern Kentucky. The majority of the precipitation fell as freezing rain with up to 1/2 ice accumulation observed in Perry, Bell, Rockcastle, Clay and Harlan Counties. Ice amounts ranged from 1/10 in Monticello up to 1/4 on the east end of the county near the McCreary County line.

Winter Storm (March 2, 2014)

Arctic air, coupled with a slowly sagging cold front, helped produce a prolonged winter storm over Kentucky from the afternoon of March 2nd through noon on March 3rd. Initially, a nearly stationary front was located near the Ohio River during the late morning hours on the 2nd. Southwesterly flow aloft along and north of this boundary produced mixed precipitation across extreme northern Kentucky by late afternoon. This front slowly moved south, and by mid-evening lay along the Tennessee Border. Several waves moved along this boundary, bringing widespread mixed precipitation to central Kentucky before low pressure moved east during the late morning of the 3rd. Precipitation changed from rain to freezing rain, sleet and then snow at each location as cold air became progressively deeper. Along a line stretching roughly from Bowling Green through the southern Bluegrass, prodigious amounts of sleet fell, with sleet accumulations of over 2 inches across many counties. During the early morning on the 3rd, a deformation band then set up across the same location, producing an additional 3 to 5 inches of snow. Farther north, along the Ohio River and the northern Bluegrass, lighter amounts of mixed precipitation fell, with sleet and snow accumulations of 2 to 4 inches. Warm air along the Tennessee border at the beginning of this event reduced sleet and snow accumulations to 1 to 3 inches.

Heavy Snow/Winter Storm (February 16, 2015)

Arctic air invaded the Lower Ohio Valley on the 14th of February, setting the stage for heavy snow that developed during the early morning hours on the 16th. Low pressure moved across Arkansas and Tennessee from the 15th to the 16th of February. A large swath of heavy snow spread from southern Missouri into central Kentucky during the early morning hours on the 16th, ending across central Kentucky late in the afternoon. During the late morning hours, snow

fell at a rate of over one inch per hour, reducing visibility to less than one quarter of a mile for several consecutive hours. This storm produced more snow across Central and southern Kentucky than any other in at least a decade. A strip of heavy snow, of near one foot, extended right across central Kentucky from Ohio through Madison Counties. Sleet mixed in with snow along the Tennessee Border, reducing snow totals to around 8 inches. At least two indirect fatalities - from heart attacks occurring while shoveling snow or trying to push out a stuck vehicle - were attributed to the snow. Sleet briefly mixed in with heavy snow across Lake Cumberland Region. Even so, 8 to 9 inches of snow fell region wide.

Winter Storm/Ice Storm (February 20, 2015)

Another major winter storm wreaked havoc across eastern Kentucky February 20th and 21st. This storm caused significant ice and snow accumulations across the area, along with flooding in several counties around the area. The bulk of the snow was confined to the counties along the Virginia border, where more than a foot of heavy wet snow fell in places. The heavy snow caused extensive damage as it caused the roofs of a number of homes and other structures to collapse. The ice lead to a number of car accidents and made driving quite treacherous at times. A total of 10 eastern Kentucky counties experienced flooding due to heavy rain and ice jams. Pulaski county experienced both freezing rain and snow during this event. The Somerset area picked up about three quarters of an inch of snow early in the event. By late morning on the 21st, Shopville had picked up around a quarter of inch of ice due to freezing rain. The 911 dispatch office received numerous reports of buildings suffering roof collapses and other types of damage due to the weight of heavy wet snow that had accumulated on the various structures around the county.

Heavy Snow/Winter Storm (March 4, 2015)

An intense storm system brought flooding rains to central Kentucky, followed quickly by exceptionally heavy snow. This amount of rain, followed by such heavy snow, is practically unprecedented. The upper level pattern featured a positively tilted upper trough across the desert southwest on the 3nd of March. A tight baroclinic zone stretched northeastward through southern Indiana. Strong southwesterly flow at lower levels brought rich moisture along this nearly stationary boundary. Initially, during the evening hours on the 3nd, rain developed along this boundary and gradually overspread all of southern Indiana and central Kentucky. Steady rain continued through the late afternoon on the 4th. Two to almost 3 inches of rain fell across north central and central Kentucky before precipitation changed into snow during the late afternoon hours on the 4th. Minor areal flooding developed with several roads and low water crossings closed.

Rain changed into heavy snow near the Ohio River around 5pm, with precipitation changeover slowly moving farther south during the evening, Rain finally changed over to snow near the Tennessee Border during the early morning hours. Intense frontogenesis and lift associated with the right rear quadrant of a powerful jet led to the development of several intense snow bands where snow fell at a rate of 2 inches per hour. One band developed from near Breckenridge County and stretched through Bullitt County and across the northern Bluegrass. Under this nearly stationary band, snow totals ranged from 15 to locally over 20 inches. One reliable snow report from near Radcliff, Kentucky measured 25 inches, which is one inch short of the all time Kentucky storm total snowfall record. Snow diminished from west to east during the mid-

morning hours on the 5th. Snow totals across south central Kentucky, adjacent to Tennessee, ranged from 5 to 8 inches.

Heavy Snow/Winter Storm (March 5, 2015)

An intense storm system brought flooding rains to central Kentucky, followed quickly by exceptionally heavy snow. This amount of rain, followed by such heavy snow, is practically unprecedented. The upper level pattern featured a positively tilted upper trough across the desert southwest on the 3nd of March. A tight baroclinic zone stretched northeastward through southern Indiana. Strong southwesterly flow at lower levels brought rich moisture along this nearly stationary boundary. Initially, during the evening hours on the 3nd, rain developed along this boundary and gradually overspread all of southern Indiana and central Kentucky. Steady rain continued through the late afternoon on the 4th. Two to almost 3 inches of rain fell across north central and central Kentucky before precipitation changed into snow during the late afternoon hours on the 4th. Minor areal flooding developed with several roads and low water crossings closed.

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Heavy Snow (January 20, 2016)

A weather system originating out of the central Plains brought several inches of snow to portions of central and southern Kentucky. A swath of 3 to 4 inches, locally 5 in spots, fell across western to south-central Kentucky. The timing during the morning commute impacted many people and many schools and businesses were closed for the day. An Arctic air mass ahead of this system resulted in very cold road temperatures, so the snow quickly accumulated once it began to fall. This resulted in hazardous and difficult driving conditions.

Winter Storm (January 22, 2016)

A paralyzing winter storm dumped up to 20 inches of snow across parts of eastern Kentucky from the early morning hours of Friday January 22nd through the day on Saturday January 23rd. The snowfall produced by the storm was the heaviest to fall across eastern Kentucky since the Blizzard of March 1993.

The storm system responsible for the east Kentucky snow originated over Texas, tracked across the Deep South and Carolinas, and finally up the East Coast. Precipitation overspread east Kentucky during the early morning hours of Friday January 22nd. The precipitation fell as a mix of freezing rain, sleet and snow over southeast Kentucky through the morning and into the midday hours on Friday, before changing to snow Friday afternoon. The precipitation fell as mostly snow for the remainder of the area throughout the event. The snow fell very heavy at times during the morning and early afternoon hours on Friday, with snowfall rates of 2 or more common as a heavy snow band set up across the heart of eastern Kentucky.

The Automated Surface Observing System located at the Jackson, KY National Weather Service office reported 11 hours of continuous moderate to heavy snow with a visibility of 1/2 mile or less. Snowfall rates were 1 to 2 inches per hour during this time.
Power was also knocked out for thousands of customers during the peak of the storm with the hardest hit areas lying close to the Tennessee border, which experienced up to a quarter inch of ice accumulation before the changeover to snow occurred. The weight of the snow and ice also caused some roof collapses including boat docks on Lake Cumberland and Paintsville Lake. Storm total snowfall across the Lake Cumberland Region ranged from 8 to 16 inches. The highest snowfall amount of 16 inches was reported 9W Monticello. Up to a quarter inch of freezing rain also occurred.

Heavy Snow (February 14, 2016)

A band of snow moved into central Kentucky during the afternoon and evening hours Sunday, February 14. Totals ranged from 4 to locally 7 inches across parts of central and south central Kentucky.[32]

Table 4.2(5) NOAA Storm Events Database Probability Estimates (Event Types: Blizzard, Heavy Snow, Ice Storm, Winter Storm [no data for cities])

Event Probability Basis			Probable Future Events		
Jurisdiction	**Total # of Events**	**Total # Data Reporting Years**	**Yearly Average Events Per County**	**Countywide Ave. Loss Per Event**	**Countywide Ave. Loss Per Year**
Adair County*	15	20	.75	$0.00	$0.00
Casey County*	12	20	0.60	$0.00	$0.00
Clinton County*	14	20	.70	$0.00	$0.00
Cumberland County*	14	20	.70	$0.00	$0.00
Green County*	11	20	.55	$0.00	$0.00
McCreary County*	28	20	1.40	$270,000.00	$0.00
Pulaski County*	25	20	1.25	$0.00	$0.00
Russell County*	11	20	.55	$0.00	$0.00
Taylor County*	13	20	.65	$0.00	$0.00
Wayne County*	24	20	1.20	$0.00	$0.00
Lake Cumberland Regional Totals	**167**	**20**			**$270,000.00**

[32] NOAA Storm Events Database; http://www.ncdc.noaa.gov/stormevents/listevents.jsp?eventType=%28Z%29+Blizzard&eventType=%28Z%29+Heavy+Snow&eventType=%28Z%29+Ice+Storm&eventType=%28Z%29+Winter+Storm&beginDate_mm=01&beginDate_dd=01&beginDate_yyyy=1950&endDate_mm=07&endDate_dd=31&endDate_yyyy=2016&county=ADAIR%3A1&county=CASEY%3A45&county=CLINTON%3A53&county=CUMBERLAND%3A57&county=GREEN%3A87&county=MCCREARY%3A147&county=PULASKI%3A199&county=RUSSELL%3A207&county=TAYLOR%3A217&county=WAYNE%3A231&hailfilter=0.00&tornfilter=0&windfilter=000&sort=DT&submitbutton=Search&statefips=21%2CKENTUCKY

Summary

Hazard Location:

- ≠ Snowstorms, Heavy Snow, and Blizzards:
  - o Heavy snowfall across inland areas of Region and surrounding regions
  - o High winds
  - o Regionalized flooding/flash flooding along rivers and streams
- ≠ Ice Storm:
  - o Widespread, capable of affecting the entire Region and surrounding regions
- ≠ Ice Jam:
  - o Ice buildup in inland rivers – no reported data

Potential Damage (All Hazards):

- ≠ Damage to infrastructure and trees associated with heavy snow and ice loads
- ≠ Power outages, limited access to communications and utilities
- ≠ Limited travel or impassible roads due to snowfall, ice, downed power lines and trees
- ≠ Prolonged cold weather, possibly causing frozen pipes and other damage
- ≠ Health hazards associated with exertion (snow shoveling) and exposure to cold

Scale / Extent:

- ≠ Snowstorms, Heavy Snow, and Blizzards:
  - o Snowfall anywhere from a few inches to a few feet depending on the storm
  - o Typically storms drop less than a 6 inches of snow
  - o Severe storms and blizzards may drop up to and in excess of 1-2 feet of snow
- ≠ Ice Storm:
  - o Can be up to 1 inch of ice covering the entire Region, including electrical and telephone wires, tree branches, structures, roadways, etc.
  - o Typical ice buildup of less than ¼ inch are generally not problematic
- ≠ Ice Jam:
  - o Large pieces of ice potentially the width of the affected stream. As streams in Lake Cumberland Region are typically small and temperatures not conducive to formation, ice jams are not likely to occur.

Previous Occurrences:

- ≠ Snowstorms, Heavy Snow, and Blizzards:
  - Regular snowfall events occur regularly, typically around 2-3 times per year
  - Minor winter storms expected to occur 1-2 per year
  - Major snow storms/blizzards expected to occur less frequently, likely every 5-10 years as per historical data
- ≠ Ice Storm:
  - Minor occurrences happen every several years
  - Major events happen every several decades
- ≠ Ice Jam:
  - No occurrences in Lake Cumberland Region[33]

Likelihood of Future Occurrences:

- ≠ Snowstorms and Blizzards:
  - Likely to experience slightly fewer than 2-3 snowstorms each year of varying size
  - 20% chance each year of having at least 1 snow event larger than 12 inches
- ≠ Ice Storm:
  - Expected minor occurrences every several years
  - Expected major event every several decades
- ≠ Ice Jam:
  - Not likely to occur in Lake Cumberland Region, perhaps once every 50 to 100 years

[33] U.S. Army Corps of Engineers Ice Jam Database; http://rsgisias.crrel.usace.army.mil/cm2ij/cm2.cm2ij.map?map=ICEJAM&p_MapExt=-89.176819,35.770117,-82.304871,38.639595&p_layers=icejam,icejam_congress_dist&p_basemap=GEC

4.3 Tornadoes and Thunderstorms/Windstorm/Hailstorm

Tornadoes
Tornadoes are a vortex of rapidly rotating air moving along the ground. Tornadoes typically occur during the spring, summer and fall months, usually during the afternoon. Tornadoes may occur in unusually severe thunderstorms, bringing hazards such as very high wind speeds (typically anywhere from 100 to 300 miles per hour) along a Regionalized area, Regionalized heavy rainfall and flooding, frequent lightning and damaging hail.

Tornadoes may be anywhere from less than 250 feet to over two miles in diameter. Typically, tornadoes dissipate after no more than a couple miles on the ground; however have been known to stay on the ground for dozens of miles, causing substantial damage along the way. Although not routinely occurring, tornadoes have occurred in all areas of Kentucky and can occur wherever conditions are right.

Fujita Scale
Table 4.3(1) defines the Fujita scale, used for rating tornado intensity based on the damage tornadoes inflict.

Table 4.3(1) – Fujita Scale

Scale	Wind Spee	Damag e Path	Typical Damage
F0	40-72 mph	50-165 ft	Light damage. Some damage to chimneys, branches broken off trees, shallow-rooted trees pushed over, sign boards damaged
F1	73-112 mph	100-500 ft	Moderate damage. Peels surface off roofs, mobile homes pushed off foundations, attached garages may be
F2	113-157 mph	360-820 ft	Significant damage. Roofs torn off houses, mobile homes demolished, large trees snapped or uprooted
F3	158-206 mph	0.1-0.3 mi	Severe damage. Roofs and some walls torn off well-constructed houses, most trees in forest uprooted
F4	207-260 mph	0.3-0.6 mi	Devastating damage. Well-constructed houses leveled, structures with weak foundations blown away
F5	261-318 mph	0.7+ mi	Incredible damage. Strong frame houses lifted off foundations, steel reinforced structures badly damaged.

According to NOAA, the Lake Cumberland Region is located in an area of low probability of occurrence, with less than 1.63 tornados expected to occur every year.
Enhanced Fujita Scale
As most measurement equipment in use today would likely not survive the destructive force inside an F3 tornado, the EF Scale was developed. The EF Scale, or Enhanced Fujita Scale, is based on estimates of the maximum wind speeds in the various categories. An EF5 tornado

signifies total destruction for most structures in its path.

Enhanced Fujita Scale

FUJITA SCALE**			DERIVED EF SCALE		OPERATIONAL EF SCALE	
F Number	Fastest 1/4-mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)	**EF Number**	**3 Second Gust (mph)**
0	40-72	45-78	0	65-85	**0**	**65-85**
1	73-112	79-117	1	86-109	**1**	**86-110**
2	113-157	118-161	2	110-137	**2**	**111-135**
3	158-207	162-209	3	138-167	**3**	**136-165**
4	208-260	210-261	4	168-199	**4**	**166-200**
5	261-318	262-317	5	200-234	**5**	**Over 200**

***NOTE: The Enhanced Fujita Scale still is a set of wind estimates (not measurements) based on damage. Its uses three-second gusts estimated at the point of damage based on a judgment of eight levels of damage. These estimates vary with height and exposure. Important: The three-second gust is not the same wind as in standard surface observations. Standard measurements are taken by weather stations in open exposures using a directly measured, or "one-minute mile," speed.*

EF-Scale Number	3-Second Gust Speed (mph)	Damage Descriptions Based on the Typical Construction of One- and Two-Family Residences
EF0	65-85	Beginning of visible damage; loss of roof covering material, gutters, and/or awning; loss of vinyl or metal siding.
EF1	86-110	Broken glass in doors and windows; uplift of roof deck and loss of significant roof covering material; collapse of chimney; garage doors collapse inward; failure of porch or carport.
EF2	111-135	Entire house shifts off foundation; large sections of roof structure removed; most walls remain standing, however top floor exterior walls collapse.
EF3	136-165	Most interior walls of top story collapsed; most walls collapsed in bottom floor, except small interior rooms.
EF4	166-200	Total destruction of entire building.
EF5	>200	

[34] NOAA's Storm Prediction Center; http://www.spc.noaa.gov/efscale/

Table 4.3(2) below shows the following NOAA Storm Events Database – Tornados information:

- ≠ Search Results for Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell, Taylor and Wayne Counties, Kentucky
- ≠ Event Type Tornado - 106 events were reported between 01/01/1950 and 07/31/2016 (24319 days)
- ≠ Number of County/Zone areas affected: 12
- ≠ Number of Days with Event: 61
- ≠ Number of Days with Event and Death: 4
- ≠ Number of Days with Event and Death or Injury: 12
- ≠ Number of Days with Event and Property Damage: 53
- ≠ Number of Days with Event and Crop Damage: 3
- ≠ Number of Event Types reported: 1

Table 4.3(2) NOAA Storm Events Database - Tornados

Click on Location below to display details and event map.

Location	County/Zone	Date	Time	Type	Mag	Death	Injury	Property Damage	Crop Damage
Totals:						29	423	57.008M	504.00K
TAYLOR CO.	TAYLOR CO.	08/02/1954	15:00	Tornado	F2	0	0	25.00K	0.00K
ADAIR CO.	ADAIR CO.	06/09/1961	13:00	Tornado	F2	0	0	25.00K	0.00K
PULASKI CO.	PULASKI CO.	04/19/1963	13:40	Tornado	F1	0	0	250.00K	0.00K
TAYLOR CO.	TAYLOR CO.	06/08/1963	13:00	Tornado	F1	0	0	250.00K	0.00K
ADAIR CO.	ADAIR CO.	06/15/1964	16:30	Tornado	F2	0	0	25.00K	0.00K
PULASKI CO.	PULASKI CO.	04/25/1965	16:35	Tornado	F2	0	0	25.00K	0.00K
MCCREARY CO.	MCCREARY CO.	03/12/1967	04:20	Tornado	F3	0	0	250.00K	0.00K
MCCREARY CO.	MCCREARY CO.	03/12/1967	20:20	Tornado	F2	0	0	25.00K	0.00K
PULASKI CO.	PULASKI CO.	05/30/1967	05:10	Tornado	F2	0	0	25.00K	0.00K
GREEN CO.	GREEN CO.	04/27/1971	20:30	Tornado	F4	0	0	0.03K	0.00K
ADAIR CO.	ADAIR CO.	04/27/1971	20:35	Tornado	F4	6	58	2.500M	0.00K
RUSSELL CO.	RUSSELL CO.	04/27/1971	21:53	Tornado	F4	2	70	2.500M	0.00K
PULASKI CO.	PULASKI CO.	04/27/1971	22:10	Tornado	F4	0	2	0.00K	0.00K

GREEN CO.	GREEN CO.	04/11/1972	23:45	Tornado	F2	0	0	250.00K	0.00K
MCCREARY CO.	MCCREARY CO.	05/10/1973	12:00	Tornado	F2	0	5	25.00K	0.00K
RUSSELL CO.	RUSSELL CO.	03/29/1974	21:00	Tornado	F2	0	1	25.00K	0.00K
GREEN CO.	GREEN CO.	04/03/1974	16:40	Tornado	F4	0	3	2.500M	0.00K
TAYLOR CO.	TAYLOR CO.	04/03/1974	16:45	Tornado	F4	0	53	0.00K	0.00K
CASEY CO.	CASEY CO.	04/03/1974	17:35	Tornado	F3	0	0	2.500M	0.00K
CUMBERLAND CO.	CUMBERLAND CO.	04/03/1974	17:40	Tornado	F4	0	33	25.00K	0.00K
CLINTON CO.	CLINTON CO.	04/03/1974	17:50	Tornado	F4	8	63	0.00K	0.00K
WAYNE CO.	WAYNE CO.	04/03/1974	18:05	Tornado	F3	0	0	25.000M	0.00K
WAYNE CO.	WAYNE CO.	04/03/1974	18:05	Tornado	F4	2	17	0.00K	0.00K
PULASKI CO.	PULASKI CO.	04/03/1974	18:12	Tornado	F3	0	5	0.00K	0.00K
PULASKI CO.	PULASKI CO.	04/03/1974	18:55	Tornado	F3	6	30	2.500M	0.00K
MCCREARY CO.	MCCREARY CO.	04/03/1974	19:20	Tornado	F2	0	11	25.00K	0.00K
WAYNE CO.	WAYNE CO.	04/03/1974	19:50	Tornado	F4	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	04/03/1974	19:50	Tornado	F3	2	40	2.500M	0.00K
PULASKI CO.	PULASKI CO.	04/03/1974	20:00	Tornado	F3	0	5	2.500M	0.00K
WAYNE CO.	WAYNE CO.	04/03/1974	21:00	Tornado	F4	0	0	0.00K	0.00K
MCCREARY CO.	MCCREARY CO.	04/03/1974	21:15	Tornado	F4	0	0	0.00K	0.00K
MCCREARY CO.	MCCREARY CO.	04/03/1974	21:30	Tornado	F2	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	04/03/1974	22:30	Tornado	F3	0	0	0.00K	0.00K
MCCREARY CO.	MCCREARY CO.	04/08/1980	14:10	Tornado	F2	2	9	250.00K	0.00K
TAYLOR CO.	TAYLOR CO.	08/05/1981	21:00	Tornado	F2	0	1	25.00K	0.00K
CLINTON CO.	CLINTON CO.	04/16/1982	19:00	Tornado	F1	0	0	25.00K	0.00K
RUSSELL CO.	RUSSELL CO.	04/02/1983	09:35	Tornado	F1	0	1	25.00K	0.00K
PULASKI CO.	PULASKI CO.	05/21/1983	16:00	Tornado	F0	0	0	0.25K	0.00K
RUSSELL CO.	RUSSELL CO.	05/06/1984	01:00	Tornado	F1	0	0	250.00K	0.00K

CUMBERLAND CO.	CUMBERLAND CO.	04/20/1986	16:45	Tornado	F3	0	2	250.00K	0.00K
CUMBERLAND CO.	CUMBERLAND CO.	04/20/1986	17:10	Tornado	F1	0	0	25.00K	0.00K
PULASKI CO.	PULASKI CO.	07/13/1987	13:45	Tornado	F0	0	0	2.50K	0.00K
CLINTON CO.	CLINTON CO.	08/09/1987	19:23	Tornado	F0	0	0	0.03K	0.00K
TAYLOR CO.	TAYLOR CO.	04/06/1988	06:10	Tornado	F0	0	0	25.00K	0.00K
GREENUP CO.	GREENUP CO.	08/31/1993	17:15	Tornado	F0	0	0	50.00K	0.00K
PULASKI CO.	PULASKI CO.	06/26/1994	18:15	Tornado	F1	0	0	500.00K	0.00K
Near Science Hill	PULASKI CO.	05/10/1995	19:00	Tornado	F1	0	0	50.00K	0.00K
CASEY SE CO.	CASEY SE CO.	05/10/1995	20:05	Tornado		0	0	0.00K	0.00K
Donansberg	GREEN CO.	05/15/1995	00:15	Tornado	F1	0	0	50.00K	0.00K
PULASKI CO.	PULASKI CO.	05/18/1995	20:00	Tornado	F1	0	0	0.00K	0.00K
PIERCE	GREEN CO.	04/20/1996	03:45	Tornado	F0	0	0	20.00K	0.00K
BEE LICK	PULASKI CO.	04/20/1996	04:29	Tornado	F1	0	0	20.00K	0.00K
SHIPLEY	CLINTON CO.	06/03/1996	21:10	Tornado	F0	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	01/04/1997	23:55	Tornado	F1	1	2	50.00K	0.00K
CREAL	GREEN CO.	03/28/1997	19:25	Tornado	F2	0	0	20.00K	0.00K
CANE VLY	ADAIR CO.	03/28/1997	20:15	Tornado	F3	0	7	3.000M	0.00K
DUNNVILLE	CASEY CO.	03/28/1997	20:40	Tornado	F1	0	0	200.00K	0.00K
BREEDING	ADAIR CO.	03/28/1997	20:45	Tornado	F2	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	03/28/1997	20:50	Tornado	F0	0	0	1.000M	0.00K
REVELO	MCCREARY CO.	06/13/1997	17:15	Tornado	F0	0	0	5.00K	0.00K
DABNEY	PULASKI CO.	07/23/1997	20:00	Tornado	F0	0	0	2.00K	2.00K
PORTLAND	ADAIR CO.	04/16/1998	17:15	Tornado	F3	0	0	3.000M	0.00K
MT PISGAH	WAYNE CO.	04/16/1998	18:05	Tornado	F2	0	0	15.00K	0.00K
BELL FARM	MCCREARY CO.	04/16/1998	18:11	Tornado	F2	0	0	30.00K	0.00K
PELLYTON	ADAIR CO.	05/31/1998	20:35	Tornado	F2	0	0	300.00K	0.00K
ALBANY	CLINTON CO.	04/20/2000	19:00	Tornado	F0	0	0	1.50K	0.00K

BURDICK	TAYLOR CO.	05/23/2000	16:20	Tornado	F0	0	0	5.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	11/09/2000	14:40	Tornado	F1	0	0	150.00K	0.00K
SOMERSET	PULASKI CO.	07/04/2001	13:11	Tornado	F1	0	0	350.00K	0.00K
JACKTOWN	CASEY CO.	11/10/2002	20:30	Tornado	F0	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	05/05/2003	16:00	Tornado	F1	0	0	500.00K	0.00K
SOMERSET	PULASKI CO.	05/27/2004	01:00	Tornado	F1	0	4	300.00K	0.00K
COLUMBIA	ADAIR CO.	01/02/2006	15:22	Tornado	F2	0	0	150.00K	0.00K
PELLYTON	ADAIR CO.	01/02/2006	15:57	Tornado	F1	0	0	75.00K	0.00K
SPURLINGTON	TAYLOR CO.	04/03/2007	19:01	Tornado	EF0	0	0	50.00K	0.00K
LIBERTY DILLON ARPK	CASEY CO.	04/03/2007	19:23	Tornado	EF1	0	0	50.00K	2.00K
MANGUM	PULASKI CO.	04/03/2007	19:39	Tornado	EF1	0	0	35.00K	0.00K
HOGUE	PULASKI CO.	04/03/2007	19:40	Tornado	EF1	0	0	15.00K	0.00K
MUD CAMP	CUMBERLAND CO.	02/05/2008	22:50	Tornado	EF3	0	0	1.00K	0.00K
BROWNS XRDS	CLINTON CO.	04/11/2008	11:39	Tornado	EF1	0	0	50.00K	0.00K
SNOW	CLINTON CO.	04/11/2008	11:41	Tornado	EF1	0	0	2.00K	0.00K
CARTWRIGHT	CLINTON CO.	04/11/2008	11:44	Tornado	EF2	0	0	75.00K	0.00K
NARVEL	CLINTON CO.	04/11/2008	11:46	Tornado	EF2	0	0	200.00K	0.00K
WAIT	WAYNE CO.	04/11/2008	12:50	Tornado	EF2	0	1	1.000M	500.00K
EUBANK	PULASKI CO.	04/10/2009	13:58	Tornado	EF0	0	0	40.00K	0.00K
EUBANK	PULASKI CO.	04/10/2009	14:18	Tornado	EF0	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	10/09/2009	13:36	Tornado	EF2	0	0	0.00K	0.00K
BETSEY	WAYNE CO.	05/02/2010	15:25	Tornado	EF2	0	0	50.00K	0.00K
BLISS	ADAIR CO.	06/09/2010	17:10	Tornado	EF0	0	0	0.00K	0.00K
ALBANY ARPT	CLINTON CO.	04/04/2011	14:14	Tornado	EF1	0	0	0.00K	0.00K
SEVENTY SIX	CLINTON CO.	04/04/2011	14:16	Tornado	EF0	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	04/27/2011	05:32	Tornado	EF1	0	0	0.00K	0.00K
BLACKS FERRY	CUMBERLAND CO.	04/27/2011	06:04	Tornado	EF1	0	0	0.00K	0.00K
HUMBLE	RUSSELL CO.	02/29/2012	13:22	Tornado	EF2	0	0	200.00K	0.00K

PUMPKIN CHAPEL	CASEY CO.	02/29/2012	14:26	Tornado	EF2	0	0	10.00K	0.00K
SCIENCE HILL	PULASKI CO.	02/29/2012	14:53	Tornado	EF1	0	0	50.00K	0.00K
FERGUSON	PULASKI CO.	01/30/2013	06:30	Tornado	EF0	0	0	5.00K	0.00K
FERGUSON	PULASKI CO.	03/24/2013	16:40	Tornado	EF1	0	0	100.00K	0.00K
WRIGHTS	TAYLOR CO.	12/21/2013	23:07	Tornado	EF1	0	0	200.00K	0.00K
GRIDER	CUMBERLAND CO.	10/06/2014	17:02	Tornado	EF1	0	0	0.00K	0.00K
DESDA	CLINTON CO.	10/06/2014	17:13	Tornado	EF1	0	0	3.00K	0.00K
GLENS FORK	ADAIR CO.	04/25/2015	19:29	Tornado	EF1	0	0	150.00K	0.00K
BURNETTA	PULASKI CO.	07/01/2015	15:00	Tornado	EF0	0	0	0.00K	0.00K
GRESHAM	GREEN CO.	07/13/2015	16:20	Tornado	EF1	0	0	200.00K	0.00K
BREEDING	ADAIR CO.	07/13/2015	16:58	Tornado	EF0	0	0	1.00K	0.00K
ASHLOCK	CUMBERLAND CO.	07/13/2015	17:13	Tornado	EF0	0	0	50.00K	0.00K
Totals:						29	423	57.008M	504.00K

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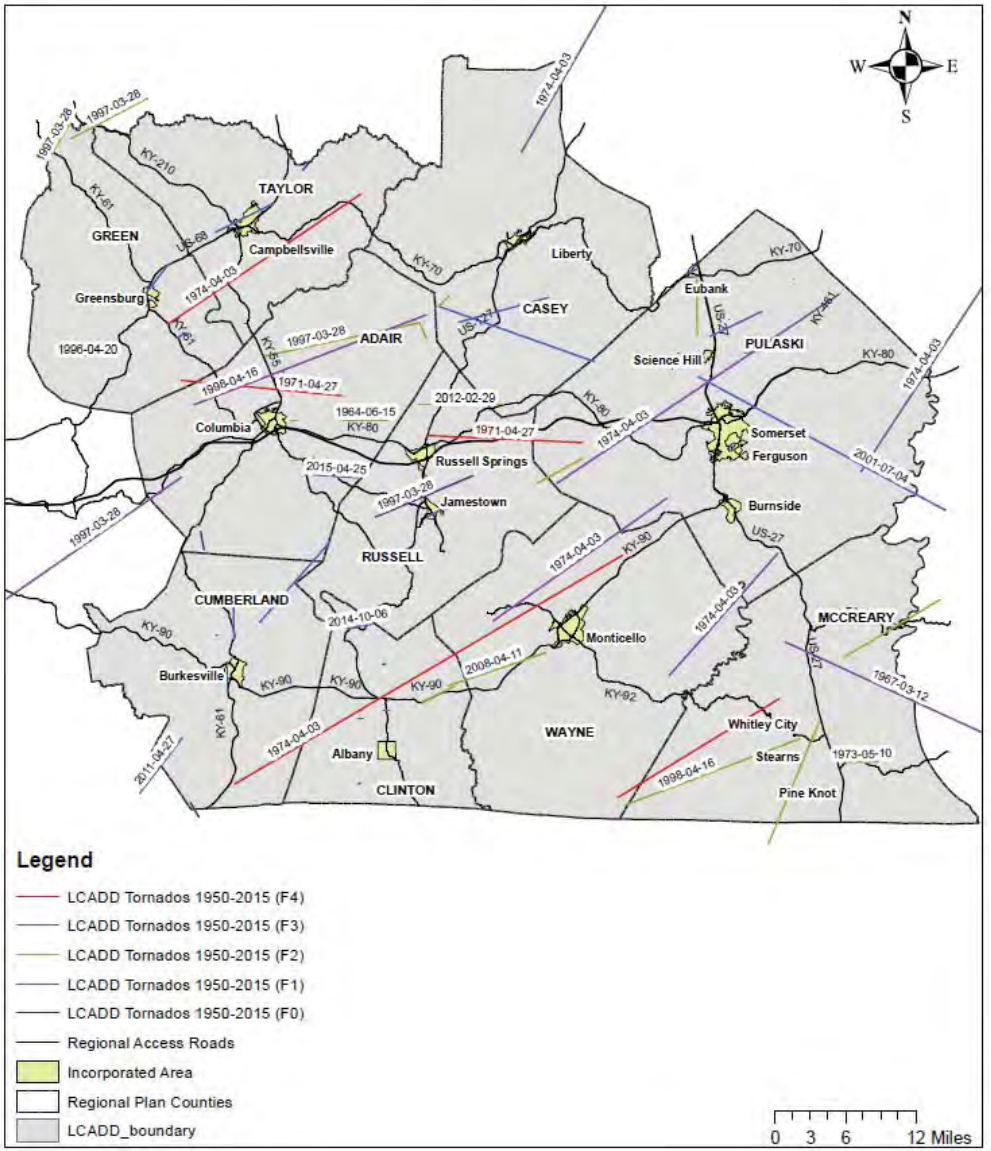
[35] NOAA Storm Events Database; http://www.ncdc.noaa.gov/stormevents/

Map 4.3(1)
LCADD Region Tornados
1950-2015



Data Source: National Weather Service Storm Prediction Center
http://www.spc.noaa.gov/gis/svrgis/
LCADD GIS Databases
Online Linkage: http://www.spc.noaa.gov/gis/svrgis/
Download Date: August 2016

Prepared By:
Lake Cumberland Area Development District

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NOAA SVRGIS Data (Updated: 14 March 2016), Tornadoes (1950-2015), http://www.spc.noaa.gov/gis/svrgis/

Table 4.3(3) NOAA Storm Events Database Probability Estimates (Event Types: Tornado [no data for cities])

Event Probability Basis				Probable Future Events		
Jurisdiction & Scale	**Total # of Events**	**Total # Data Reporting Years**	**Total Losses Per County (Reporting Years)**	**Yearly Average Events Per County**	**Average Loss Per Actual Event**	**Average Loss Per Year**
Adair County*	12	66	$9,226,000.00	0.19	$768,833.34	$139,787.88
EF0/F0	2					
EF1/F1	2					
EF2/F2	5					
EF3/F3	2					
EF4/F4	1					
EF5/F5	0					
Casey County*	7	66	$2,762,000.00	.11	$394,571.43	$41,848.48
EF0/F0	2					
EF1/F1	2					
EF2/F2	2					
EF3/F3	1					
EF4/F4	0					
EF5/F5	0					
Clinton County*	13	66	$406,800.00	0.20	$31,292.31	$6,163.64
EF0/F0	4					
EF1/F1	6					
EF2/F2	2					
EF3/F3	0					
EF4/F4	1					
EF5/F5	0					
Cumberland County*	8	66	$501,000.00	0.13	$62,625.00	$7,590.91
EF0/F0	1					
EF1/F1	4					
EF2/F2	0					
EF3/F3	2					
EF4/F4	1					
EF5/F5	0					

Event Probability Basis				Probable Future Events		
Jurisdiction & Scale	**Total # of Events**	**Total # Data Reporting Years**	**Total Losses Per County (Reporting Years)**	**Yearly Average Events Per County**	**Average Loss Per Actual Event**	**Average Loss Per Year**
Green County*	8	66	$3,040,300.00	0.13	$380,037.50	$46,065.15
EF0/F0	1					
EF1/F1	3					
EF2/F2	2					
EF3/F3	0					
EF4/F4	2					
EF5/F5	0					
McCreary County*	9	66	$610,000.00	.14	$67,777.78	$9,242.42
EF0/F0	1					
EF1/F1	0					
EF2/F2	6					
EF3/F3	1					
EF4/F4	1					
EF5/F5	0					
Pulaski County*	25	66	$7,271,750.00	.38	$290,870.00	$110,178.03
EF0/F0	7					
EF1/F1	12					
EF2/F2	2					
EF3/F3	3					
EF4/F4	1					
EF5/F5	0					
Russell County*	7	66	$4,000,000.00	0.11	$571,428.57	$60,606.06
EF0/F0	1					
EF1/F1	2					
EF2/F2	2					
EF3/F3	1					
EF4/F4	1					
EF5/F5	0					

Event Probability Basis				Probable Future Events		
Jurisdiction & Scale	**Total # of Events**	**Total # Data Reporting Years**	**Total Losses Per County (Reporting Years)**	**Yearly Average Events Per County**	**Average Loss Per Actual Event**	**Average Loss Per Year**
Taylor County*	8	66	$580,000.00	0.13	$72,500.00	$8,787.88
EF0/F0	3					
EF1/F1	2					
EF2/F2	2					
EF3/F3	0					
EF4/F4	1					
EF5/F5	0					
Wayne County*	8	66	$29,065,000.00	0.13	$3,633,125.00	$440,378.79
EF0/F0	0					
EF1/F1	0					
EF2/F2	3					
EF3/F3	2					
EF4/F4	3					
EF5/F5	0					
Lake Cumberland Region	105	66	$57,462,850.00	1.59	$547,265.24	$870,649.24
EF0/F0	22					
EF1/F1	33					
EF2/F2	26					
EF3/F3	12					
EF4/F4	12					
EF5/F5	0					

According to NOAA, the Lake Cumberland Region is located in an area of low probability of occurrence, with less than 2.0 tornados expected to occur every year. Unlike large scale disasters such as winter storms, hurricanes and earthquakes, tornadoes typically produce damage on a very limited, albeit intense scale. Although tornadoes have the capability to develop to over a mile wide and decimate an entire Region, damage paths are typically limited to several hundred feet wide, causing somewhat limited destruction. However, it is not uncommon for structures suffering a direct hit to be completely destroyed.

A tornado capable of significant damage (over $1M) has occurred in Lake Cumberland Region nine times, based upon available records since 1950. The data on tornadoes indicate that this type of hazard event causes the most deaths and injuries in the Lake Cumberland Region. The committee looked into mitigation actions in Prevention, Property Protection, Public Education and Outreach, Emergency Services, and Structural Projects. The building of hazard resistant structures with safe rooms was considered the most effective, even though community support is questionable, for increased building regulations and the additional cost to new construction or renovating existing structures. The Lake Cumberland Hazard Mitigation Regional Planning Committee (LCHMRPC) considered it worthwhile to investigate community support as a mitigation action. The second area considered most effective was public education and early warning of hazard events.

Thunderstorms/Windstorm/Hailstorm

A thunderstorm is a storm which produces lightning, typically accompanied by heavy, regionalized rainfall, strong winds, and occasionally hail (hailstorms). They typically occur during the spring, summer and fall months, usually during the afternoon. Thunderstorms typically form in a line or front, typically moving west-to-east ahead of a cold front. Unusually severe thunderstorms may rotate, known as supercells, and have the potential to spawn tornadoes.

Thunderstorms have both an updraft of rising air and a downdraft of sinking air. Extremely strong downdrafts, known as downbursts, have the potential to cause extreme straight-line wind damage, similar to that of a tornado. A small (<2.5 mile path) downburst is known as a "microburst" while a larger downburst is known as a "macro-burst."

An average thunderstorm is 15 miles in diameter and lasts an average of 30 minutes. Severe thunderstorms can be much larger and last much longer. A thunderstorm is classified as "severe" when it contains one or more of the following: hail one inch or greater, winds gusting in excess of 50 knots (57.5 mph), or a tornado.

Many hazardous weather events are associated with thunderstorms. Under the right conditions, rainfall from thunderstorms causes flash flooding, killing more people each year than hurricanes, tornadoes or lightning. Lightning is responsible for many fires around the world each year, and causes fatalities. Hail up to the size of softballs damages cars and windows, and kills livestock caught out in the open. Strong (up to more than 120 mph) straight-line winds associated with thunderstorms knock down trees, power lines and mobile homes. Tornadoes (with winds up to about 300 mph) can destroy all but the best-built man-made structures.

The greatest severe weather threat in the U.S. extends from Texas to southern Minnesota. But, no place in the United States is completely safe from the threat of severe weather.[37]

Table 4.3(4) below shows the following NOAA Storm Events Database – Hail, High Wind, Lightning, Strong Wind, Thunderstorm Wind information:

≠ Search Results for Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell, Taylor and Wayne Counties, Kentucky
≠ Event Types Hail, High Wind, Lightning, Strong Wind, Thunderstorm - 1793 events were reported between 01/01/1950 and 05/6/2016
≠ Number of County/Zone areas affected: 18
≠ Number of Days with Event: 527
≠ Number of Days with Event and Death: 1
≠ Number of Days with Event and Death or Injury: 16
≠ Number of Days with Event and Property Damage: 199
≠ Number of Days with Event and Crop Damage: 6
≠ Number of Event Types reported: 5

Table 4.3(4) NOAA Storm Events Database - Hail, High Wind, Lightning, Strong Wind, Thunderstorm
Click on Location below to display details and event map.

Location	County/Zone	Date	Time	Type	Mag	Death	Injury	Property Damage	Crop Damage
Totals: (3/1/1955-5/26/2016)						**1**	**47**	**23.46 M**	**520.005K**
CASEY CO.	CASEY CO.	3/1/1955	2:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0
PULASKI CO.	PULASKI CO.	5/22/1957	2:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	6/11/1957	19:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

[37] The National Severe Storms Laboratory Severe Weather 101- Thunderstorms; http://www.nssl.noaa.gov/education/svrwx101/thunderstorms/

PULASKI CO.	PULASKI CO.	5/24/1960	17:00	Hail	1.25 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	6/9/1961	14:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/23/1962	15:00	Hail	2.00 in.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	6/8/1963	12:35	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	3/4/1964	9:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	5/18/1965	20:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	6/21/1967	16:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CUMBERLAND CO.	CUMBERLAND CO.	4/23/1968	13:00	Hail	2.25 in.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	4/23/1968	13:00	Hail	1.75 in.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	4/23/1968	14:00	Hail	2.75 in.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	4/23/1968	14:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CLINTON CO.	CLINTON CO.	4/23/1968	15:00	Hail	0.75 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/29/1968	14:00	Hail	1.00 in.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	9/9/1968	14:15	Hail	1.75 in.	0	0	0.00K	0.00K

TAYLOR CO.	TAYLOR CO.	9/9/1968	16:45	Hail	1.50 in.	0	0	0.00K	0.00K
MCCREARY CO.	MCCREARY CO.	4/18/1969	16:30	Hail	2.50 in.	0	0	0.00K	0.00K
MCCREARY CO.	MCCREARY CO.	4/18/1969	16:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	6/12/1969	17:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	7/7/1969	14:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	8/17/1969	16:30	Hail	1.00 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	8/17/1969	16:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	8/17/1969	18:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	3/26/1970	1:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CUMBERLAND CO.	CUMBERLAND CO.	4/13/1970	13:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	4/19/1970	21:35	Thunderstorm Wind	56 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	4/19/1970	22:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	4/24/1970	4:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	8/3/1970	16:10	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

WAYNE CO.	WAYNE CO.	8/3/1970	16:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	9/8/1970	15:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	11/20/1970	0:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	4/27/1971	20:30	Hail	2.75 in.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	4/27/1971	20:40	Hail	1.75 in.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	5/6/1971	14:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CLINTON CO.	CLINTON CO.	5/8/1971	19:00	Hail	1.00 in.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	6/19/1971	14:50	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	7/18/1971	16:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	7/18/1971	16:10	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CLINTON CO.	CLINTON CO.	7/18/1971	20:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	1/24/1972	21:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	7/1/1973	17:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	11/25/1973	4:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

RUSSELL CO.	RUSSELL CO.	5/29/1974	15:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	9/11/1974	17:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	6/5/1975	12:40	Thunderstorm Wind	59 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	7/9/1975	21:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	9/11/1975	15:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	1/13/1976	16:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	3/20/1976	19:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	4/21/1976	10:20	Hail	1.75 in.	0	0	0.00K	0.00K
CUMBERLAND CO.	CUMBERLAND CO.	7/27/1976	15:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	6/5/1977	20:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	6/13/1977	14:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	6/23/1977	16:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	6/23/1977	20:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	6/30/1977	18:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

GREEN CO.	GREEN CO.	7/19/1977	18:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	12/5/1977	2:40	Hail	1.25 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	12/5/1977	10:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CLINTON CO.	CLINTON CO.	12/17/1977	19:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	4/6/1978	13:00	Hail	2.00 in.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	4/6/1978	13:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	4/6/1978	13:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CUMBERLAND CO.	CUMBERLAND CO.	5/23/1978	17:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/23/1978	18:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	6/12/1978	15:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	6/12/1978	15:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	3/4/1979	21:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	3/4/1979	21:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	3/4/1979	21:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

ADAIR CO.	ADAIR CO.	6/8/1979	14:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	6/8/1979	15:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	8/6/1979	17:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	8/6/1979	17:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	3/16/1980	23:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	5/17/1980	15:30	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	7/2/1980	19:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	7/2/1980	19:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	7/10/1980	10:10	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
MCCREARY CO.	MCCREARY CO.	8/11/1980	13:15	Thunderstorm Wind	70 kts.	0	0	0.00K	0.00K
CLINTON CO.	CLINTON CO.	4/10/1981	12:00	Hail	1.75 in.	0	0	0.00K	0.00K
CLINTON CO.	CLINTON CO.	4/10/1981	12:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	4/14/1981	14:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	5/10/1981	16:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

RUSSELL CO.	RUSSELL CO.	5/18/1981	13:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	5/18/1981	13:30	Hail	1.75 in.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	5/18/1981	14:00	Hail	1.75 in.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	5/18/1981	14:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/18/1981	14:30	Hail	1.75 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/18/1981	14:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	5/30/1981	19:33	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	7/20/1981	21:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	8/5/1981	20:50	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	3/16/1982	14:30	Hail	1.00 in.	0	0	0.00K	0.00K
CUMBERLAND CO.	CUMBERLAND CO.	4/5/1982	14:30	Hail	0.75 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/26/1982	14:55	Hail	1.00 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/26/1982	14:55	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/27/1982	15:10	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K

PULASKI CO.	PULASKI CO.	5/27/1982	18:15	Hail	1.00 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/31/1982	17:35	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/31/1982	18:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/31/1982	19:00	Hail	1.00 in.	0	0	0.00K	0.00K
CLINTON CO.	CLINTON CO.	7/3/1982	11:30	Thunderstorm Wind	61 kts.	0	0	0.00K	0.00K
CLINTON CO.	CLINTON CO.	7/3/1982	11:45	Thunderstorm Wind	61 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	3/27/1983	14:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	3/27/1983	15:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	6/3/1983	14:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	6/3/1983	14:30	Hail	0.88 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	6/3/1983	15:15	Hail	0.75 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	6/3/1983	15:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	6/3/1983	16:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	6/3/1983	19:25	Hail	1.00 in.	0	0	0.00K	0.00K

ADAIR CO.	ADAIR CO.	6/3/1983	19:25	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	6/3/1983	19:40	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	6/3/1983	19:40	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	6/3/1983	19:40	Hail	1.00 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	6/3/1983	20:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CLINTON CO.	CLINTON CO.	6/3/1983	21:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	7/3/1983	17:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	7/18/1983	19:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	8/5/1983	12:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	8/5/1983	13:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	8/5/1983	13:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	8/5/1983	14:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	8/5/1983	14:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	8/11/1983	12:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

TAYLOR CO.	TAYLOR CO.	8/11/1983	14:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	8/23/1983	9:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CUMBERLAND CO.	CUMBERLAND CO.	8/27/1983	15:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	2/24/1984	15:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	2/24/1984	15:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CLINTON CO.	CLINTON CO.	3/15/1984	22:50	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	5/6/1984	1:30	Hail	1.00 in.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	5/6/1984	1:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	5/6/1984	2:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	5/6/1984	3:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	5/6/1984	5:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	5/6/1984	6:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/6/1984	6:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
MCCREARY CO.	MCCREARY CO.	5/6/1984	7:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

CLINTON CO.	CLINTON CO.	5/6/1984	12:15	Hail	1.75 in.	0	0	0.00K	0.00K
MCCREARY CO.	MCCREARY CO.	5/7/1984	7:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	5/7/1984	15:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
MCCREARY CO.	MCCREARY CO.	5/7/1984	15:50	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	5/7/1984	16:40	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	3/4/1985	11:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	5/14/1985	23:45	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	6/2/1985	2:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	2/6/1986	16:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	2/6/1986	16:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	2/6/1986	17:25	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	5/14/1986	13:15	Hail	1.75 in.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	5/14/1986	16:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	5/14/1986	17:15	Hail	0.75 in.	0	0	0.00K	0.00K

GREEN CO.	GREEN CO.	6/1/1986	15:05	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	7/20/1986	17:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	7/26/1986	15:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	8/26/1986	16:21	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CUMBERLAND CO.	CUMBERLAND CO.	8/26/1986	17:05	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	6/1/1987	10:00	Thunderstorm Wind	0 kts.	0	1	0.00K	0.00K
GREEN CO.	GREEN CO.	6/16/1987	17:30	Thunderstorm Wind	0 kts.	0	1	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	7/5/1987	17:15	Thunderstorm Wind	61 kts.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	7/5/1987	17:30	Hail	1.75 in.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	7/5/1987	17:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	7/5/1987	18:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	7/5/1987	18:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CUMBERLAND CO.	CUMBERLAND CO.	7/5/1987	18:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CLINTON CO.	CLINTON CO.	7/5/1987	18:05	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

PULASKI CO.	PULASKI CO.	7/5/1987	18:12	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	7/6/1987	17:20	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	7/6/1987	17:40	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	7/6/1987	18:25	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	7/6/1987	18:26	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	7/6/1987	22:50	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	7/13/1987	13:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	8/3/1987	19:48	Hail	0.75 in.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	8/3/1987	20:05	Hail	0.75 in.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	8/3/1987	20:40	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	8/3/1987	21:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	8/6/1987	18:00	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	8/9/1987	15:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	8/9/1987	16:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

CASEY CO.	CASEY CO.	8/9/1987	17:39	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	8/9/1987	18:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	8/27/1987	15:45	Thunderstorm Wind	65 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	4/23/1988	13:50	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/9/1988	17:10	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	7/17/1988	17:50	Thunderstorm Wind	56 kts.	0	0	0.00K	0.00K
MCCREARY CO.	MCCREARY CO.	7/18/1988	15:30	Thunderstorm Wind	61 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	9/23/1988	15:30	Hail	0.75 in.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	1/7/1989	22:05	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	5/22/1989	19:30	Thunderstorm Wind	61 kts.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	5/22/1989	20:30	Thunderstorm Wind	65 kts.	0	0	0.00K	0.00K
CUMBERLAND CO.	CUMBERLAND CO.	5/26/1989	13:50	Hail	0.75 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	8/17/1989	17:30	Hail	1.00 in.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	11/15/1989	15:45	Hail	1.25 in.	0	0	0.00K	0.00K

TAYLOR CO.	TAYLOR CO.	11/15/1989	15:45	Hail	1.25 in.	0	0	0.00K	0.00K
CUMBERLAND CO.	CUMBERLAND CO.	11/15/1989	16:53	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	11/15/1989	17:33	Thunderstorm Wind	0 kts.	0	2	0.00K	0.00K
PULASKI CO.	PULASKI CO.	11/15/1989	17:40	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	11/15/1989	17:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
MCCREARY CO.	MCCREARY CO.	11/15/1989	18:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	11/28/1989	0:40	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	5/15/1990	16:10	Hail	1.75 in.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	5/15/1990	16:25	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	5/15/1990	17:05	Hail	1.00 in.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	5/15/1990	17:25	Hail	1.75 in.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	5/15/1990	17:58	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/15/1990	18:10	Hail	1.00 in.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	5/16/1990	22:02	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

TAYLOR CO.	TAYLOR CO.	5/16/1990	22:13	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	5/16/1990	22:25	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	5/16/1990	22:28	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/16/1990	23:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CLINTON CO.	CLINTON CO.	5/16/1990	23:35	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	6/6/1990	15:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	6/22/1990	17:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	7/10/1990	19:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	7/11/1990	16:35	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	7/11/1990	17:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	8/20/1990	23:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	9/7/1990	14:41	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	9/7/1990	14:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	9/7/1990	15:57	Hail	1.00 in.	0	0	0.00K	0.00K

GREEN CO.	GREEN CO.	3/22/1991	0:21	Hail	1.25 in.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	3/22/1991	1:12	Hail	1.00 in.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	3/23/1991	13:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	4/9/1991	13:10	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	4/9/1991	13:10	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	4/9/1991	13:15	Thunderstorm Wind	61 kts.	0	6	0.00K	0.00K
GREEN CO.	GREEN CO.	4/9/1991	13:15	Thunderstorm Wind	56 kts.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	4/9/1991	13:30	Thunderstorm Wind	0 kts.	0	2	0.00K	0.00K
WAYNE CO.	WAYNE CO.	4/9/1991	13:32	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	4/9/1991	13:42	Thunderstorm Wind	0 kts.	0	5	0.00K	0.00K
PULASKI CO.	PULASKI CO.	4/9/1991	13:42	Thunderstorm Wind	0 kts.	0	5	0.00K	0.00K
ADAIR CO.	ADAIR CO.	7/2/1991	15:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	7/10/1991	12:32	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	7/12/1991	14:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

PULASKI CO.	PULASKI CO.	7/12/1991	15:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	3/18/1992	22:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	6/18/1992	13:55	Hail	0.75 in.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	6/18/1992	15:56	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CLINTON CO.	CLINTON CO.	6/24/1992	15:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
WAYNE CO.	WAYNE CO.	7/3/1992	2:10	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	7/30/1992	16:45	Hail	1.75 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	7/30/1992	18:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	7/30/1992	18:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	8/14/1992	21:43	Hail	2.00 in.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	3/31/1993	16:20	Hail	2.50 in.	0	0	0.00K	0.00K
GREEN CO.	GREEN CO.	3/31/1993	16:22	Hail	2.50 in.	0	0	0.00K	0.00K
Campbellsville	TAYLOR CO.	3/31/1993	16:40	Hail	1.00 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	4/15/1993	17:30	Thunderstorm Wind	0 kts.	0	0	500.00K	0.00K

GREENUP CO.	GREENUP CO.	5/12/1993	13:05	Thunderstorm Wind	0 kts.	0	0	5.00K	0.00K
CLINTON CO.	CLINTON CO.	5/14/1994	20:00	Thunderstorm Wind	0 kts.	0	0	50.00K	0.00K
PULASKI CO.	PULASKI CO.	6/20/1994	21:00	Thunderstorm Wind	0 kts.	0	0	0.50K	0.00K
PULASKI CO.	PULASKI CO.	6/21/1994	16:40	Thunderstorm Wind	0 kts.	0	0	0.50K	0.00K
GREENUP CO.	GREENUP CO.	6/22/1994	17:40	Thunderstorm Wind	0 kts.	0	0	50.00K	0.00K
CLINTON CO.	CLINTON CO.	6/26/1994	15:30	Thunderstorm Wind	0 kts.	0	3	500.00K	0.00K
PULASKI CO.	PULASKI CO.	7/20/1994	17:30	Hail	0.00 in.	0	0	0.00K	500.00K
Finley	TAYLOR CO.	7/29/1994	11:05	Hail	0.75 in.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	5/10/1995	16:45	Hail	0.75 in.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	5/10/1995	17:21	Hail	0.75 in.	0	0	0.00K	0.00K
TAYLOR CO.	TAYLOR CO.	5/10/1995	17:21	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Near Science Hill	PULASKI CO.	5/10/1995	19:00	Hail	1.75 in.	0	0	0.50K	0.00K
CASEY SE CO.	CASEY SE CO.	5/10/1995	19:55	Hail	0.75 in.	0	0	0.00K	0.00K
CASEY SE CO.	CASEY SE CO.	5/10/1995	20:55	Hail	0.75 in.	0	0	0.00K	0.00K

Glens Fork	TAYLOR CO.	5/13/1995	10:43	Hail	1.00 in.	0	0	0.00K	0.00K
CASEY CO.	CASEY CO.	5/13/1995	12:45	Hail	0.75 in.	0	0	0.00K	0.00K
Albany	CLINTON CO.	5/13/1995	13:43	Hail	0.75 in.	0	0	0.00K	0.00K
Albany	CLINTON CO.	5/14/1995	6:05	Thunderstorm Wind	0 kts.	0	0	50.00K	0.00K
Shipley	CLINTON CO.	5/14/1995	7:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Burkesville	CUMBERLAND CO.	5/14/1995	8:40	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Donansberg	GREEN CO.	5/15/1995	0:15	Hail	1.75 in.	0	0	50.00K	0.00K
Near Thurlow	GREEN CO.	5/15/1995	0:15	Hail	1.75 in.	0	0	0.00K	0.00K
Milltown	ADAIR CO.	5/15/1995	0:25	Hail	0.75 in.	0	0	0.00K	0.00K
Campbellsville	TAYLOR CO.	5/18/1995	7:30	Thunderstorm Wind	0 kts.	0	0	0.50K	0.00K
Campbellsville	TAYLOR CO.	5/18/1995	14:30	Thunderstorm Wind	0 kts.	0	0	50.00K	0.00K
Mansville	TAYLOR CO.	5/18/1995	14:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	5/18/1995	15:05	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Near Allendale	GREEN CO.	5/18/1995	18:15	Hail	1.00 in.	0	0	0.00K	0.00K

GREEN CO.	GREEN CO.	5/18/1995	18:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Columbia	ADAIR CO.	5/18/1995	18:30	Hail	1.75 in.	0	0	0.00K	0.00K
Breeding	ADAIR CO.	5/18/1995	18:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Antioch Hill	CASEY CO.	5/18/1995	18:55	Hail	0.75 in.	0	0	0.00K	0.00K
Russell Springs	RUSSELL CO.	5/18/1995	19:25	Hail	1.75 in.	0	0	0.00K	0.00K
Russell Springs	RUSSELL CO.	5/18/1995	19:25	Thunderstorm Wind	0 kts.	0	2	50.00K	0.00K
Campbellsville	TAYLOR CO.	5/18/1995	19:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Etna	PULASKI CO.	5/18/1995	19:45	Hail	1.75 in.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	5/18/1995	20:00	Thunderstorm Wind	0 kts.	0	0	50.00K	0.00K
RUSSELL CO.	RUSSELL CO.	5/18/1995	20:30	Hail	1.75 in.	0	0	0.00K	0.00K
RUSSELL CO.	RUSSELL CO.	5/18/1995	20:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Greenup	GREENUP CO.	6/8/1995	16:20	Thunderstorm Wind	0 kts.	0	0	5.00K	0.00K
Greensburg	GREEN CO.	6/8/1995	23:50	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Columbia	ADAIR CO.	6/9/1995	0:09	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

Near Somerset	PULASKI CO.	6/9/1995	0:35	Thunderstorm Wind	0 kts.	0	0	5.00K	0.00K
Greenup	GREENUP CO.	6/10/1995	13:00	Thunderstorm Wind	0 kts.	0	0	15.00K	0.00K
Russell	GREENUP CO.	6/10/1995	13:10	Thunderstorm Wind	0 kts.	0	0	10.00K	0.00K
Burkesville	CUMBERLAND CO.	7/31/1995	17:50	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
ADAIR CO.	ADAIR CO.	7/31/1995	18:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
PULASKI CO.	PULASKI CO.	8/1/1995	16:10	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Somerset	PULASKI CO.	9/1/1995	9:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
TAYLOR (ZONE)	TAYLOR (ZONE)	1/18/1996	13:15	High Wind	45 kts.	0	0	0.00K	0.00K
ADAIR (ZONE)	ADAIR (ZONE)	1/18/1996	16:30	High Wind	40 kts.	0	0	10.00K	0.00K
ADAIR (ZONE)	ADAIR (ZONE)	3/6/1996	20:00	High Wind	45 kts.	0	0	0.00K	0.00K
RUSSELL (ZONE)	RUSSELL (ZONE)	3/6/1996	20:15	High Wind	45 kts.	0	0	10.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	3/6/1996	21:50	High Wind	45 kts.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	4/20/1996	3:30	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	4/20/1996	3:50	Hail	1.00 in.	0	0	0.00K	0.00K

COLUMBIA	ADAIR CO.	4/20/1996	3:55	Thunderstorm Wind	52 kts.	0	0	2.00K	0.00K
COLUMBIA	ADAIR CO.	4/20/1996	3:57	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	4/20/1996	4:00	Thunderstorm Wind	60 kts.	0	1	15.00K	0.00K
SCIENCE HILL	PULASKI CO.	4/20/1996	4:30	Lightning		0	0	10.00K	0.00K
EUBANK	PULASKI CO.	4/20/1996	4:30	Thunderstorm Wind	55 kts.	0	0	15.00K	0.00K
GREENSBURG	GREEN CO.	4/29/1996	16:00	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	4/29/1996	16:20	Hail	1.75 in.	0	0	0.00K	0.00K
BARNETT SPGS	ADAIR CO.	4/29/1996	17:50	Hail	1.00 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/24/1996	22:10	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/24/1996	22:27	Hail	1.75 in.	0	0	0.00K	0.00K
COUNTYWIDE	TAYLOR CO.	5/27/1996	12:00	Thunderstorm Wind	50 kts.	0	0	20.00K	0.00K
COUNTYWIDE	CASEY CO.	5/27/1996	12:00	Thunderstorm Wind	50 kts.	0	0	5.00K	0.00K
SHIPLEY	CLINTON CO.	5/27/1996	13:20	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/27/1996	13:25	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	5/28/1996	20:20	Hail	1.00 in.	0	0	0.00K	0.00K

BURKESVILLE	CUMBERLAND CO.	5/28/1996	20:20	Thunderstorm Wind	1 kts.	0	0	10.00K	0.00K
SOMERSET	PULASKI CO.	5/28/1996	22:20	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	6/3/1996	17:45	Hail	1.75 in.	0	0	0.00K	0.00K
YOSEMITE	CASEY CO.	6/7/1996	13:50	Thunderstorm Wind	52 kts.	0	0	5.00K	0.00K
MURL	WAYNE CO.	7/2/1996	15:06	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	7/2/1996	21:30	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	7/21/1996	17:00	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	8/16/1996	17:10	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	9/7/1996	15:15	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	9/12/1996	14:25	Thunderstorm Wind	175 kts.	0	0	0.00K	0.00K
NORTHEASTERN PART	TAYLOR CO.	11/7/1996	15:40	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	1/5/1997	0:16	Thunderstorm Wind		0	0	10.00K	0.00K
SOMERSET	PULASKI CO.	1/5/1997	0:30	Thunderstorm Wind		0	0	5.00K	0.00K
EUBANK	PULASKI CO.	1/5/1997	0:30	Thunderstorm Wind		0	0	10.00K	0.00K

WHITLEY CITY	MCCREARY CO.	1/5/1997	0:45	Thunderstorm Wind		0	0	15.00K	0.00K
SUMMERSVILLE	GREEN CO.	1/24/1997	17:50	Hail	1.75 in.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	1/24/1997	18:30	Thunderstorm Wind	60 kts.	0	0	20.00K	0.00K
ALLENDALE	GREEN CO.	1/24/1997	18:40	Hail	1.75 in.	0	0	0.00K	0.00K
COUNTYWIDE	ADAIR CO.	1/24/1997	19:30	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	2/21/1997	11:00	Thunderstorm Wind		0	0	60.00K	0.00K
PIERCE	GREEN CO.	3/2/1997	0:10	Hail	0.75 in.	0	0	0.00K	0.00K
WESTERN PARTS	ADAIR CO.	3/2/1997	0:25	Thunderstorm Wind	60 kts.	0	0	10.00K	0.00K
SOMERSET	PULASKI CO.	3/2/1997	0:30	Thunderstorm Wind		0	0	0.00K	0.00K
LIBERTY	CASEY CO.	3/2/1997	0:39	Thunderstorm Wind	60 kts.	0	0	10.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	3/2/1997	0:55	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
HIBERNIA	TAYLOR CO.	3/28/1997	19:30	Thunderstorm Wind	60 kts.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	3/28/1997	20:00	Thunderstorm Wind	60 kts.	0	0	10.00K	0.00K
YUMA	TAYLOR CO.	3/28/1997	20:25	Thunderstorm Wind	60 kts.	0	0	10.00K	0.00K

FAUBUSH	PULASKI CO.	3/28/1997	21:07	Thunderstorm Wind		0	0	3.00K	0.00K
EUBANK	PULASKI CO.	3/28/1997	21:10	Thunderstorm Wind		0	0	3.00K	0.00K
CREAL	GREEN CO.	4/25/1997	21:00	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
BENGAL	TAYLOR CO.	4/28/1997	18:33	Hail	1.00 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/1/1997	0:35	Thunderstorm Wind		0	0	3.00K	0.00K
MILL SPGS	WAYNE CO.	5/1/1997	0:35	Thunderstorm Wind		0	0	10.00K	0.00K
JAMESTOWN	RUSSELL CO.	6/13/1997	16:30	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
COUNTYWIDE	CASEY CO.	6/13/1997	16:45	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	6/13/1997	16:50	Thunderstorm Wind		0	0	3.00K	0.00K
MONTICELLO	WAYNE CO.	6/13/1997	16:50	Thunderstorm Wind		0	0	0.00K	0.00K
BURNSIDE	PULASKI CO.	6/13/1997	17:00	Thunderstorm Wind		0	0	10.00K	0.00K
BLUE HERON	MCCREARY CO.	6/13/1997	17:10	Thunderstorm Wind		0	0	3.00K	0.00K
COUNTYWIDE	ADAIR CO.	6/13/1997	20:20	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
COUNTYWIDE	CUMBERLAND CO.	6/13/1997	20:30	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K

MODOC	CUMBERLAND CO.	7/28/1997	13:00	Hail	0.75 in.	0	0	0.00K	0.00K
COUNTYWIDE	CLINTON CO.	7/28/1997	13:05	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	7/28/1997	14:45	Thunderstorm Wind		0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	7/28/1997	14:45	Thunderstorm Wind		0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	7/28/1997	15:45	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	4/8/1998	4:09	Hail	0.75 in.	0	0	0.00K	0.00K
FINLEY	TAYLOR CO.	4/15/1998	11:15	Hail	1.00 in.	0	0	0.00K	0.00K
DUNNVILLE	CASEY CO.	4/16/1998	17:45	Thunderstorm Wind	80 kts.	0	0	5.000M	0.00K
WINDY	WAYNE CO.	4/16/1998	17:55	Thunderstorm Wind		0	0	5.00K	0.00K
WHITLEY CITY	MCCREARY CO.	4/16/1998	19:30	Hail	1.25 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/7/1998	5:50	Hail	0.88 in.	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	5/20/1998	16:25	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/20/1998	16:30	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	5/20/1998	16:55	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K

SCIENCE HILL	PULASKI CO.	5/20/1998	17:18	Thunderstorm Wind		0	0	3.00K	0.00K
GREENSBURG	GREEN CO.	5/25/1998	9:54	Thunderstorm Wind	50 kts.	0	0	20.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/25/1998	10:12	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
YUMA	TAYLOR CO.	5/25/1998	10:13	Thunderstorm Wind	50 kts.	0	0	10.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/25/1998	10:25	Thunderstorm Wind	50 kts.	0	1	10.00K	0.00K
MONTICELLO	WAYNE CO.	5/25/1998	10:35	Hail	0.75 in.	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	5/25/1998	10:36	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
ELI	RUSSELL CO.	5/25/1998	10:49	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/25/1998	10:54	Thunderstorm Wind		0	0	0.00K	0.00K
CHRISTINE	ADAIR CO.	5/25/1998	19:00	Hail	0.75 in.	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	5/25/1998	19:35	Hail	1.75 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/25/1998	19:45	Hail	0.75 in.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/31/1998	18:59	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/31/1998	18:59	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K

LIBERTY	CASEY CO.	5/31/1998	19:20	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/31/1998	19:20	Thunderstorm Wind	60 kts.	0	0	100.00K	0.00K
JAMESTOWN	RUSSELL CO.	5/31/1998	19:48	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	5/31/1998	20:07	Thunderstorm Wind		0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/31/1998	20:07	Hail	1.75 in.	0	0	0.00K	0.00K
FINLEY	TAYLOR CO.	5/31/1998	20:15	Hail	1.75 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/31/1998	20:50	Thunderstorm Wind		0	0	5.00K	0.00K
BURNSIDE	PULASKI CO.	5/31/1998	20:50	Thunderstorm Wind		0	0	2.00K	0.00K
WHITLEY CITY	MCCREARY CO.	5/31/1998	20:55	Thunderstorm Wind		0	0	5.00K	0.00K
HUDGINS	GREEN CO.	5/31/1998	21:00	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	5/31/1998	21:00	Thunderstorm Wind		0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	5/31/1998	21:10	Hail	0.75 in.	0	0	0.00K	0.00K
STEARNS	MCCREARY CO.	6/3/1998	3:30	Hail	0.75 in.	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	6/13/1998	0:55	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K

CAMPBELLSVILLE	TAYLOR CO.	6/14/1998	21:45	Thunderstorm Wind	60 kts.	0	0	20.00K	0.00K
ALLENDALE	GREEN CO.	6/14/1998	21:50	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	6/19/1998	4:45	Thunderstorm Wind	60 kts.	0	0	50.00K	0.00K
SHOPVILLE	PULASKI CO.	6/19/1998	5:30	Thunderstorm Wind		0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	6/19/1998	5:35	Thunderstorm Wind		0	0	10.00K	0.00K
SCIENCE HILL	PULASKI CO.	6/22/1998	17:13	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	6/22/1998	17:28	Hail	1.00 in.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	6/22/1998	17:30	Thunderstorm Wind	52 kts.	0	0	20.00K	0.00K
SOMERSET	PULASKI CO.	6/22/1998	17:41	Thunderstorm Wind		0	0	10.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	6/22/1998	17:43	Thunderstorm Wind	52 kts.	0	0	10.00K	0.00K
SOMERSET	PULASKI CO.	9/29/1998	16:30	Thunderstorm Wind		0	0	3.00K	0.00K
NANCY	PULASKI CO.	12/21/1998	23:25	Thunderstorm Wind		0	0	5.00K	0.00K
COLUMBIA	ADAIR CO.	1/17/1999	22:15	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	1/17/1999	22:15	Thunderstorm Wind		0	0	5.00K	0.00K

PARNELL	WAYNE CO.	1/17/1999	22:25	Thunderstorm Wind		0	0	10.00K	0.00K
MONTICELLO	WAYNE CO.	1/17/1999	22:29	Thunderstorm Wind		0	0	3.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	1/17/1999	22:35	Thunderstorm Wind		0	0	8.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	1/17/1999	22:45	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	1/17/1999	22:50	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	1/17/1999	22:58	Thunderstorm Wind		0	0	25.00K	0.00K
SOMERSET	PULASKI CO.	1/17/1999	23:10	Thunderstorm Wind		0	0	1.000M	0.00K
WHITLEY CITY	MCCREARY CO.	1/18/1999	0:00	Thunderstorm Wind		0	0	0.00K	0.00K
GREENWOOD	MCCREARY CO.	1/18/1999	0:00	Thunderstorm Wind		0	0	1.00K	0.00K
MONTICELLO	WAYNE CO.	4/9/1999	4:30	Thunderstorm Wind		0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	4/9/1999	4:30	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
AARON	CLINTON CO.	4/9/1999	4:35	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
BENT	PULASKI CO.	4/28/1999	18:45	Hail	0.75 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	4/28/1999	18:45	Hail	0.75 in.	0	0	0.00K	0.00K

NANCY	PULASKI CO.	4/28/1999	19:25	Hail	0.75 in.	0	0	0.00K	0.00K
PINEY GROVE	PULASKI CO.	4/28/1999	19:30	Hail	0.88 in.	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	5/5/1999	23:25	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	5/5/1999	23:40	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/6/1999	0:00	Thunderstorm Wind		0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/6/1999	0:36	Thunderstorm Wind		0	0	10.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	6/10/1999	18:15	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
MT VICTORY	PULASKI CO.	6/10/1999	18:50	Thunderstorm Wind		0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	7/20/1999	20:15	Thunderstorm Wind	60 kts.	0	0	100.00K	0.00K
COLUMBIA	ADAIR CO.	7/20/1999	20:40	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	7/24/1999	12:20	Thunderstorm Wind		0	0	0.00K	0.00K
STEARNS	MCCREARY CO.	7/27/1999	15:15	Thunderstorm Wind		0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	8/19/1999	16:49	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	8/19/1999	17:16	Thunderstorm Wind		0	0	10.00K	0.00K

CRESTON	CASEY CO.	8/19/1999	17:55	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
CRESTON	CASEY CO.	8/19/1999	17:55	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
GILPIN	CASEY CO.	8/19/1999	18:05	Hail	0.75 in.	0	0	0.00K	0.00K
GILPIN	CASEY CO.	8/19/1999	18:10	Hail	0.75 in.	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	8/19/1999	18:20	Thunderstorm Wind		0	0	3.00K	0.00K
CLEMENTSVILLE	CASEY CO.	8/24/1999	16:35	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
BREEDING	ADAIR CO.	8/24/1999	17:40	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	8/24/1999	19:40	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
COUNTYWIDE	TAYLOR CO.	1/3/2000	22:35	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
COUNTYWIDE	GREEN CO.	1/3/2000	22:45	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	1/3/2000	23:30	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	1/3/2000	23:30	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	4/20/2000	18:45	Thunderstorm Wind	70 kts. E	0	0	25.00K	0.00K

KETTLE	CUMBERLAND CO.	4/20/2000	18:48	Thunderstorm Wind	50 kts. E	0	0	15.00K	0.00K
COUNTYWIDE	CLINTON CO.	4/20/2000	19:00	Thunderstorm Wind	70 kts. E	0	0	35.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	4/20/2000	19:05	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	4/20/2000	19:20	Thunderstorm Wind		0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	4/20/2000	19:20	Hail	0.75 in.	0	0	0.00K	0.00K
CLEMENTSVILLE	CASEY CO.	5/3/2000	18:45	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
SHIPLEY	CLINTON CO.	5/23/2000	13:05	Thunderstorm Wind	65 kts. E	0	0	15.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	5/23/2000	13:15	Hail	1.00 in.	0	0	0.00K	0.00K
SHIPLEY	CLINTON CO.	5/23/2000	13:30	Hail	1.75 in.	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	5/23/2000	13:55	Hail	1.75 in.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/23/2000	16:15	Thunderstorm Wind	70 kts. E	0	0	35.00K	0.00K
MONTICELLO	WAYNE CO.	5/23/2000	16:16	Hail	0.75 in.	0	0	0.00K	0.00K

BURDICK	TAYLOR CO.	5/23/2000	16:20	Hail	1.75 in.	0	0	5.00K	0.00K
GREENSBURG	GREEN CO.	5/23/2000	16:20	Hail	1.00 in.	0	0	0.00K	0.00K
COBURG	ADAIR CO.	5/23/2000	16:25	Hail	1.75 in.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	5/23/2000	16:40	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	5/23/2000	17:00	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
FAIRPLAY	ADAIR CO.	5/23/2000	18:01	Hail	1.00 in.	0	0	0.00K	0.00K
OLGA	RUSSELL CO.	5/23/2000	20:30	Hail	0.75 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	5/27/2000	17:30	Thunderstorm Wind		0	0	0.00K	0.00K
COUNTYWIDE	CLINTON CO.	5/27/2000	17:40	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
PEYTONSBURG	CUMBERLAND CO.	5/27/2000	17:45	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
PINE KNOT	MCCREARY CO.	5/27/2000	18:15	Thunderstorm Wind		0	0	2.00K	0.00K
FERGUSON	PULASKI CO.	6/14/2000	14:10	Thunderstorm Wind		0	0	0.00K	0.00K
MANNSVILLE	TAYLOR CO.	6/26/2000	16:52	Thunderstorm Wind	70 kts. E	0	0	2.00K	0.00K

CAMPBELLSVILLE	TAYLOR CO.	6/26/2000	17:40	Thunderstorm Wind	50 kts. E	0	0	7.00K	0.00K
MILLTOWN	ADAIR CO.	6/26/2000	19:25	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	6/26/2000	19:55	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
STEUBENVILLE	WAYNE CO.	7/11/2000	15:45	Thunderstorm Wind		0	0	10.00K	0.00K
NANCY	PULASKI CO.	7/11/2000	16:15	Thunderstorm Wind		0	0	0.00K	0.00K
NANCY	PULASKI CO.	7/11/2000	16:15	Thunderstorm Wind		0	0	2.00K	0.00K
SOMERSET	PULASKI CO.	7/11/2000	16:35	Thunderstorm Wind		0	0	3.00K	0.00K
GLENS FORK	ADAIR CO.	7/11/2000	17:50	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	7/11/2000	18:50	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
COUNTYWIDE	CUMBERLAND CO.	7/27/2000	23:00	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	7/29/2000	15:27	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	7/29/2000	15:30	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K

JAMESTOWN	RUSSELL CO.	7/29/2000	15:40	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
BREEDING	ADAIR CO.	7/29/2000	15:50	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
YOSEMITE	CASEY CO.	7/29/2000	15:55	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	7/29/2000	16:00	Hail	0.75 in.	0	0	0.00K	0.00K
NANCY	PULASKI CO.	7/29/2000	16:30	Thunderstorm Wind		0	0	7.00K	0.00K
DUNNVILLE	CASEY CO.	7/30/2000	17:30	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
COUNTYWIDE	WAYNE CO.	8/3/2000	17:33	Thunderstorm Wind		0	0	1.00K	0.00K
DUNNVILLE	CASEY CO.	8/8/2000	15:45	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
CENTRAL PORTION	CLINTON CO.	8/8/2000	16:00	Lightning		0	0	80.00K	0.00K
SOMERSET	PULASKI CO.	8/9/2000	23:35	Thunderstorm Wind		0	0	0.00K	0.00K
CEDAR GROVE	PULASKI CO.	8/10/2000	0:00	Thunderstorm Wind		0	0	0.00K	0.00K
COUNTYWIDE	CASEY CO.	9/20/2000	21:20	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K

COUNTYWIDE	TAYLOR CO.	11/9/2000	14:45	Thunderstorm Wind	70 kts. E	0	0	0.00K	0.00K
COUNTYWIDE	GREEN CO.	11/9/2000	14:50	Thunderstorm Wind	70 kts. E	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	11/9/2000	15:00	Thunderstorm Wind	70 kts. E	0	0	10.00K	0.00K
COUNTYWIDE	ADAIR CO.	11/9/2000	15:07	Thunderstorm Wind	70 kts. E	0	0	30.00K	0.00K
COUNTYWIDE	CLINTON CO.	11/9/2000	15:10	Thunderstorm Wind	70 kts. E	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	11/9/2000	15:20	Thunderstorm Wind	80 kts. E	0	0	35.00K	0.00K
NANCY	PULASKI CO.	11/9/2000	15:20	Thunderstorm Wind		0	0	10.00K	0.00K
MONTICELLO	WAYNE CO.	11/9/2000	15:25	Thunderstorm Wind		0	0	0.00K	0.00K
COUNTYWIDE	MCCREARY CO.	11/9/2000	15:30	Thunderstorm Wind		0	0	0.00K	0.00K
PEYTONSBURG	CUMBERLAND CO.	3/13/2001	3:30	Hail	0.75 in.	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	3/13/2001	3:35	Hail	1.00 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	3/13/2001	3:40	Hail	0.75 in.	0	0	0.00K	0.00K

SOMERSET	PULASKI CO.	5/6/2001	15:00	Thunderstorm Wind		0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/11/2001	14:05	Thunderstorm Wind		0	0	0.00K	0.00K
BARNESBURG	PULASKI CO.	5/11/2001	14:13	Thunderstorm Wind		0	0	0.00K	0.00K
SINKING VLY	PULASKI CO.	6/2/2001	17:15	Thunderstorm Wind		0	0	0.00K	0.00K
SALOMA	TAYLOR CO.	6/4/2001	15:00	Hail	0.75 in.	0	0	0.00K	0.00K
SALOMA	TAYLOR CO.	6/4/2001	15:00	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	6/4/2001	15:32	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	6/4/2001	15:40	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
CLEMENTSVILLE	CASEY CO.	6/4/2001	15:45	Hail	1.75 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	6/4/2001	16:02	Thunderstorm Wind		0	0	0.00K	0.00K
COUNTYWIDE	RUSSELL CO.	6/4/2001	16:10	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
COUNTYWIDE	ADAIR CO.	6/4/2001	16:10	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	6/4/2001	16:27	Hail	0.75 in.	0	0	0.00K	0.00K

SHOPVILLE	PULASKI CO.	6/4/2001	16:38	Thunderstorm Wind	58 kts. E	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	6/6/2001	16:40	Thunderstorm Wind	60 kts. E	0	1	25.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	6/6/2001	16:50	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	6/6/2001	17:35	Hail	1.00 in.	0	0	0.00K	0.00K
NANCY	PULASKI CO.	6/14/2001	13:20	Hail	0.88 in.	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	6/14/2001	16:30	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	6/21/2001	17:45	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/21/2001	18:00	Hail	0.75 in.	0	0	0.00K	0.00K
SALEM	RUSSELL CO.	6/26/2001	14:45	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
WAIT	WAYNE CO.	6/26/2001	14:55	Hail	0.75 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	6/26/2001	17:50	Hail	0.75 in.	0	0	0.00K	0.00K
CEDAR GROVE	PULASKI CO.	6/29/2001	14:58	Thunderstorm Wind		0	0	0.00K	0.00K

BRONSTON	PULASKI CO.	6/29/2001	15:01	Thunderstorm Wind		0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	7/4/2001	12:20	Hail	2.75 in.	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	7/4/2001	12:20	Hail	1.75 in.	0	0	0.00K	0.00K
MANNSVILLE	TAYLOR CO.	7/4/2001	12:40	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	7/4/2001	13:00	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	7/4/2001	13:00	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	7/4/2001	13:10	Hail	1.75 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	7/4/2001	13:20	Hail	1.75 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	7/4/2001	13:25	Lightning		0	1	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	7/4/2001	13:26	Hail	2.75 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	7/4/2001	13:27	Thunderstorm Wind		0	0	0.00K	0.00K
MODOC	CUMBERLAND CO.	7/4/2001	13:35	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
COUNTYWIDE	RUSSELL CO.	7/4/2001	13:40	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K

STEARNS	MCCREARY CO.	7/4/2001	14:10	Thunderstorm Wind		0	0	2.00K	0.00K
BRYAN	RUSSELL CO.	7/5/2001	16:45	Thunderstorm Wind	70 kts. E	0	0	10.00K	0.00K
ALBANY	CLINTON CO.	7/5/2001	17:50	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	7/8/2001	21:45	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	7/8/2001	21:50	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	7/8/2001	22:08	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
MT VICTORY	PULASKI CO.	7/8/2001	22:10	Thunderstorm Wind		0	0	0.00K	0.00K
LIBERTY	CASEY CO.	7/8/2001	22:15	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
MANNSVILLE	TAYLOR CO.	7/8/2001	22:18	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	7/8/2001	22:35	Thunderstorm Wind		0	0	0.00K	0.00K
CLOYDS LNDG	CUMBERLAND CO.	8/23/2001	15:30	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
NANCY	PULASKI CO.	8/23/2001	15:55	Thunderstorm Wind		0	0	0.00K	0.00K

NANCY	PULASKI CO.	8/23/2001	16:00	Thunderstorm Wind		0	0	25.00K	0.00K
COUNTYWIDE	TAYLOR CO.	10/5/2001	17:20	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	10/5/2001	17:40	Thunderstorm Wind	50 kts. E	0	0	5.00K	0.00K
KNIFLEY	ADAIR CO.	10/5/2001	17:45	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	10/5/2001	18:15	Thunderstorm Wind		0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	10/5/2001	18:30	Thunderstorm Wind		0	0	0.00K	0.00K
EXIE	GREEN CO.	10/24/2001	19:55	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
COUNTYWIDE	TAYLOR CO.	10/24/2001	20:00	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	10/24/2001	20:19	Hail	1.00 in.	0	0	0.00K	0.00K
COUNTYWIDE	CASEY CO.	10/24/2001	20:21	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	10/24/2001	20:35	Thunderstorm Wind	65 kts. E	0	0	10.00K	0.00K
JAMESTOWN	RUSSELL CO.	10/24/2001	20:45	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K

SOMERSET	PULASKI CO.	10/24/2001	20:55	Thunderstorm Wind		0	0	0.00K	0.00K
COUNTYWIDE	CLINTON CO.	10/24/2001	21:00	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
COUNTYWIDE	WAYNE CO.	10/24/2001	21:05	Thunderstorm Wind		0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	10/24/2001	21:15	Thunderstorm Wind		0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	10/24/2001	21:45	Hail	0.75 in.	0	0	0.00K	0.00K
COUNTYWIDE	MCCREARY CO.	10/24/2001	21:45	Thunderstorm Wind		0	0	0.00K	0.00K
TAYLOR (ZONE)	TAYLOR (ZONE)	12/14/2001	10:45	High Wind	70 kts. E	0	0	5.00K	0.00K
LIBERTY	CASEY CO.	1/24/2002	4:30	Thunderstorm Wind	70 kts. E	0	0	20.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	3/29/2002	20:15	Hail	0.88 in.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	3/29/2002	20:55	Thunderstorm Wind	65 kts. E	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	4/17/2002	17:30	Hail	0.75 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	4/24/2002	21:35	Hail	0.75 in.	0	0	0.00K	0.00K
SUMMERSVILLE	GREEN CO.	4/28/2002	5:10	Thunderstorm Wind	100 kts. E	0	0	1.200M	0.00K

CAMPBELLSVILLE	TAYLOR CO.	4/28/2002	5:15	Thunderstorm Wind	80 kts. E	0	0	50.00K	0.00K
COUNTYWIDE	CASEY CO.	4/28/2002	5:45	Thunderstorm Wind	80 kts. E	0	0	100.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	4/28/2002	5:45	Thunderstorm Wind	70 kts. E	0	0	50.00K	0.00K
COUNTYWIDE	ADAIR CO.	4/28/2002	5:50	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	4/28/2002	5:50	Thunderstorm Wind	70 kts. E	0	0	10.00K	0.00K
SOMERSET	PULASKI CO.	4/28/2002	12:28	Hail	1.75 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	4/28/2002	12:34	Hail	2.75 in.	0	1	0.50K	0.00K
BRONSTON	PULASKI CO.	4/28/2002	12:52	Thunderstorm Wind		0	0	40.00K	0.00K
SOMERSET	PULASKI CO.	4/28/2002	13:00	Hail	0.88 in.	0	0	0.00K	0.00K
REVELO	MCCREARY CO.	4/28/2002	14:54	Hail	1.00 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	4/28/2002	21:40	Hail	0.75 in.	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	5/1/2002	18:54	Hail	2.75 in.	0	0	0.00K	0.00K
YOSEMITE	CASEY CO.	5/1/2002	18:55	Hail	2.00 in.	0	0	10.00K	0.00K

COUNTYWIDE	PULASKI CO.	5/1/2002	19:13	Hail	4.50 in.	0	0	5.000M	1.000M
JAMESTOWN	RUSSELL CO.	5/2/2002	12:20	Thunderstorm Wind	70 kts. E	0	0	5.00K	0.00K
SEWELLTON	RUSSELL CO.	5/2/2002	12:20	Hail	1.25 in.	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	5/2/2002	12:20	Hail	0.75 in.	0	0	0.00K	0.00K
EADSVILLE	WAYNE CO.	5/2/2002	12:35	Hail	0.75 in.	0	0	0.00K	0.00K
BRONSTON	PULASKI CO.	5/2/2002	12:50	Hail	0.88 in.	0	0	0.00K	0.00K
TATEVILLE	PULASKI CO.	5/2/2002	12:55	Hail	2.00 in.	0	0	15.00K	0.00K
GREENWOOD	MCCREARY CO.	5/2/2002	13:00	Hail	1.00 in.	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	5/2/2002	14:25	Hail	2.00 in.	0	0	0.00K	0.00K
SHIPLEY	CLINTON CO.	5/17/2002	14:40	Thunderstorm Wind	80 kts. E	0	0	50.00K	0.00K
COUNTYWIDE	CLINTON CO.	5/17/2002	14:45	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	5/17/2002	17:20	Thunderstorm Wind		0	0	2.00K	0.00K
MONTICELLO	WAYNE CO.	6/2/2002	19:10	Thunderstorm Wind		0	0	0.00K	0.00K

SQUIB	PULASKI CO.	7/2/2002	13:10	Hail	1.75 in.	0	0	0.00K	0.00K
COUNTYWIDE	CLINTON CO.	7/10/2002	13:30	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
COUNTYWIDE	MCCREARY CO.	7/23/2002	18:25	Thunderstorm Wind		0	0	0.00K	0.00K
MODOC	CUMBERLAND CO.	8/23/2002	18:40	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
STRUNK	MCCREARY CO.	8/25/2002	17:02	Thunderstorm Wind		0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	8/26/2002	7:28	Hail	0.75 in.	0	0	0.00K	0.00K
MILLTOWN	ADAIR CO.	8/27/2002	17:20	Hail	0.75 in.	0	0	0.00K	0.00K
SUNNYBROOK	WAYNE CO.	11/10/2002	1:30	Thunderstorm Wind		0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	11/10/2002	3:45	Hail	0.75 in.	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	11/10/2002	17:00	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	11/10/2002	17:15	Thunderstorm Wind		0	0	0.00K	0.00K
CREELSBORO	RUSSELL CO.	11/10/2002	17:30	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
COUNTYWIDE	PULASKI CO.	11/10/2002	17:40	Thunderstorm Wind		0	0	0.00K	0.00K

RUSSELL SPGS	RUSSELL CO.	11/10/2002	18:20	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	11/10/2002	18:47	Hail	0.75 in.	0	0	0.00K	0.00K
PINE KNOT	MCCREARY CO.	11/10/2002	18:49	Thunderstorm Wind		0	0	250.00K	0.00K
WOODSTOCK	PULASKI CO.	11/10/2002	19:20	Thunderstorm Wind		0	0	0.00K	0.00K
CREAL	GREEN CO.	11/10/2002	19:55	Thunderstorm Wind	52 kts. M	0	0	0.00K	0.00K
ELK HORN	TAYLOR CO.	11/10/2002	20:20	Hail	0.75 in.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	11/10/2002	20:20	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
CANE VLY	ADAIR CO.	11/10/2002	20:30	Thunderstorm Wind	87 kts. E	0	0	0.00K	0.00K
MINTONVILLE	CASEY CO.	11/10/2002	20:45	Thunderstorm Wind	70 kts. E	0	0	20.00K	0.00K
FAUBUSH	PULASKI CO.	11/10/2002	21:13	Hail	0.88 in.	0	0	0.00K	0.00K
COUNTYWIDE	RUSSELL CO.	11/10/2002	21:15	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
NAOMI	PULASKI CO.	11/10/2002	21:20	Thunderstorm Wind		0	0	0.00K	0.00K

NANCY	PULASKI CO.	11/10/2002	21:20	Thunderstorm Wind		0	0	0.00K	0.00K
COUNTYWIDE	CLINTON CO.	3/19/2003	12:58	Hail	1.75 in.	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	3/19/2003	13:00	Thunderstorm Wind	75 kts. EG	0	0	20.00K	0.00K
SHIPLEY	CLINTON CO.	3/19/2003	13:00	Hail	2.75 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	3/19/2003	13:14	Hail	0.75 in.	0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	3/19/2003	13:53	Hail	0.75 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	3/19/2003	14:38	Hail	0.88 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	3/19/2003	14:38	Hail	0.88 in.	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	3/19/2003	15:15	Hail	0.75 in.	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	3/19/2003	15:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	3/20/2003	14:37	Hail	0.75 in.	0	0	0.00K	0.00K
CREELSBORO	RUSSELL CO.	4/5/2003	2:40	Hail	1.75 in.	0	0	0.00K	0.00K
CREELSBORO	RUSSELL CO.	4/5/2003	2:41	Thunderstorm Wind	57 kts. EG	0	0	0.00K	0.00K

SOMERSET	PULASKI CO.	4/5/2003	3:07	Hail	0.88 in.	0	0	0.00K	0.00K
PARNELL	WAYNE CO.	4/5/2003	3:10	Hail	1.75 in.	0	0	0.00K	0.00K
PARNELL	WAYNE CO.	4/5/2003	3:10	Thunderstorm Wind	70 kts. EG	0	0	4.00K	0.00K
SOMERSET	PULASKI CO.	4/5/2003	3:20	Hail	0.88 in.	0	0	0.00K	0.00K
DENNY	WAYNE CO.	4/29/2003	20:51	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
KETTLE	CUMBERLAND CO.	5/1/2003	16:55	Thunderstorm Wind	52 kts. MG	0	0	0.00K	0.00K
COUNTYWIDE	ADAIR CO.	5/1/2003	17:00	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	5/1/2003	17:02	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
COOPERSVILLE	WAYNE CO.	5/1/2003	18:25	Hail	0.75 in.	0	0	0.00K	0.00K
BENGAL	TAYLOR CO.	5/4/2003	17:43	Hail	0.75 in.	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	5/4/2003	18:17	Hail	1.00 in.	0	0	0.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	5/5/2003	5:20	High Wind	65 kts. EG	0	0	2.00K	0.00K

WAYNE (ZONE)	WAYNE (ZONE)	5/5/2003	7:25	High Wind	60 kts. EG	0	0	0.00K	0.00K
BENGAL	TAYLOR CO.	5/5/2003	14:20	Hail	1.75 in.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/5/2003	14:27	Hail	1.75 in.	0	0	0.00K	0.00K
ATTERSON	CASEY CO.	5/5/2003	15:07	Hail	0.75 in.	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	5/5/2003	15:07	Hail	1.75 in.	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	5/5/2003	15:38	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ELLISBURG	CASEY CO.	5/5/2003	15:38	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
YOSEMITE	CASEY CO.	5/5/2003	15:38	Hail	0.75 in.	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	5/8/2003	21:25	Hail	0.75 in.	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	5/11/2003	4:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/11/2003	4:34	Thunderstorm Wind	70 kts. EG	0	4	40.00K	0.00K
HOBSON	TAYLOR CO.	5/11/2003	4:35	Thunderstorm Wind	60 kts. EG	0	0	60.00K	0.00K

ALBANY	CLINTON CO.	5/11/2003	4:45	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CLEMENTSVILLE	CASEY CO.	5/11/2003	5:05	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MT PISGAH	WAYNE CO.	5/11/2003	5:05	Thunderstorm Wind	100 kts. EG	0	0	20.00K	5.00K
WHITLEY CITY	MCCREARY CO.	5/11/2003	5:20	Thunderstorm Wind	70 kts. EG	0	0	0.00K	0.00K
SALOMA	TAYLOR CO.	5/15/2003	6:10	Hail	0.75 in.	0	0	0.00K	0.00K
YOSEMITE	CASEY CO.	5/15/2003	7:17	Hail	0.75 in.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	5/15/2003	13:56	Hail	1.75 in.	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	5/15/2003	14:24	Hail	0.75 in.	0	0	0.00K	0.00K
MEECE	PULASKI CO.	5/15/2003	15:00	Hail	0.75 in.	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	5/15/2003	15:00	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	5/15/2003	15:15	Hail	1.75 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	5/15/2003	15:30	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K

COLUMBIA	ADAIR CO.	5/17/2003	14:55	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	7/9/2003	18:14	Thunderstorm Wind	65 kts. EG	0	0	0.00K	0.00K
EADSVILLE	WAYNE CO.	7/9/2003	18:15	Thunderstorm Wind	65 kts. EG	0	0	0.00K	0.00K
SLAVANS	MCCREARY CO.	7/9/2003	18:30	Thunderstorm Wind	80 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	7/10/2003	15:15	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	7/10/2003	15:46	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
STEARNS	MCCREARY CO.	7/10/2003	15:50	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	7/13/2003	13:13	Hail	1.00 in.	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	7/13/2003	13:23	Hail	0.75 in.	0	0	0.00K	0.00K
CUMBERLAND CITY	CLINTON CO.	7/13/2003	13:30	Thunderstorm Wind	60 kts. EG	0	0	20.00K	0.00K
NANCY	PULASKI CO.	7/13/2003	13:50	Hail	1.00 in.	0	0	0.00K	0.00K
TATEVILLE	PULASKI CO.	7/13/2003	13:50	Hail	0.75 in.	0	0	0.00K	0.00K

MARROWBONE	CUMBERLAND CO.	7/13/2003	13:56	Thunderstorm Wind	55 kts. EG	0	0	1.00K	0.00K
JAMESTOWN	RUSSELL CO.	7/13/2003	14:10	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	7/13/2003	14:30	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	7/13/2003	14:35	Hail	0.75 in.	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	7/13/2003	15:17	Hail	1.00 in.	0	0	0.00K	0.00K
NANCY	PULASKI CO.	7/23/2003	18:10	Hail	1.00 in.	0	0	0.00K	0.00K
GABE	GREEN CO.	7/23/2003	18:30	Hail	0.88 in.	0	0	0.00K	0.00K
GABE	GREEN CO.	7/23/2003	18:30	Thunderstorm Wind	60 kts. EG	0	0	15.00K	0.00K
KIDDS CROSSING	WAYNE CO.	7/23/2003	18:42	Hail	0.88 in.	0	0	0.00K	0.00K
BURNSIDE	PULASKI CO.	8/10/2003	15:57	Lightning		0	1	0.00K	0.00K
FAUBUSH	PULASKI CO.	8/10/2003	19:51	Lightning		0	0	20.00K	0.00K
SCIENCE HILL	PULASKI CO.	8/10/2003	19:57	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	8/11/2003	16:30	Lightning		0	3	40.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	8/11/2003	16:30	Strong Wind	45 kts. EG	0	0	5.00K	0.00K

CAMPBELLSVILLE	TAYLOR CO.	8/22/2003	16:43	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	8/22/2003	16:55	Thunderstorm Wind	60 kts. EG	0	0	30.00K	0.00K
LIBERTY	CASEY CO.	8/22/2003	17:00	Thunderstorm Wind	60 kts. EG	0	0	25.00K	0.00K
COUNTYWIDE	ADAIR CO.	8/22/2003	17:10	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	GREEN CO.	8/22/2003	17:10	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	8/22/2003	17:35	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	8/22/2003	18:00	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	8/22/2003	18:03	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	8/22/2003	18:05	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	8/22/2003	18:10	Thunderstorm Wind	65 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	TAYLOR CO.	11/12/2003	16:00	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K

PULASKI (ZONE)	PULASKI (ZONE)	11/24/2003	3:05	High Wind	60 kts. EG	0	0	10.00K	0.00K
TATEVILLE	PULASKI CO.	3/20/2004	3:15	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	3/20/2004	14:35	Thunderstorm Wind	50 kts. EG	0	0	60.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	3/20/2004	14:54	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	3/20/2004	14:54	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MILL SPGS	WAYNE CO.	3/20/2004	15:00	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	3/20/2004	15:10	Thunderstorm Wind	60 kts. EG	0	0	10.00K	0.00K
DYKES	PULASKI CO.	3/20/2004	15:25	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WIBORG	MCCREARY CO.	5/10/2004	19:05	Hail	0.75 in.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/26/2004	14:00	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	5/26/2004	14:00	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K

CAMPBELLSVILLE	TAYLOR CO.	5/26/2004	14:05	Thunderstorm Wind	70 kts. EG	0	0	10.00K	0.00K
COUNTYWIDE	ADAIR CO.	5/26/2004	14:20	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	CASEY CO.	5/26/2004	14:20	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	5/26/2004	14:30	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	PULASKI CO.	5/26/2004	14:41	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SHOPVILLE	PULASKI CO.	5/26/2004	14:45	Hail	0.75 in.	0	0	0.00K	0.00K
FLAT ROCK	MCCREARY CO.	5/26/2004	15:10	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	5/26/2004	15:20	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	5/27/2004	0:25	Thunderstorm Wind	60 kts. EG	0	0	5.00K	0.00K
GREENSBURG	GREEN CO.	5/27/2004	0:25	Thunderstorm Wind	65 kts. EG	0	0	5.00K	0.00K
COUNTYWIDE	CASEY CO.	5/27/2004	0:50	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K

COUNTYWIDE	CASEY CO.	5/27/2004	0:50	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/27/2004	0:55	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	TAYLOR CO.	5/27/2004	1:00	Thunderstorm Wind	60 kts. EG	0	0	7.00K	0.00K
GREENSBURG	GREEN CO.	5/27/2004	1:00	Thunderstorm Wind	70 kts. EG	0	0	75.00K	0.00K
COUNTYWIDE	TAYLOR CO.	5/27/2004	1:00	Thunderstorm Wind	60 kts. EG	0	0	30.00K	0.00K
GREENSBURG	GREEN CO.	5/27/2004	1:00	Thunderstorm Wind	70 kts. EG	0	0	50.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	5/27/2004	1:05	Thunderstorm Wind	65 kts. EG	0	0	5.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	5/27/2004	1:05	Thunderstorm Wind	60 kts. EG	0	0	5.00K	0.00K
GREENSBURG	GREEN CO.	5/30/2004	22:55	Thunderstorm Wind	70 kts. EG	0	0	30.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/30/2004	23:17	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	5/30/2004	23:30	Thunderstorm Wind	80 kts. EG	0	0	0.00K	0.00K

CAMPBELLSVILLE	TAYLOR CO.	5/30/2004	23:40	Thunderstorm Wind	80 kts. EG	0	0	100.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	5/30/2004	23:45	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	5/30/2004	23:48	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	5/31/2004	0:00	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	CASEY CO.	5/31/2004	0:00	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	TAYLOR CO.	5/31/2004	0:05	Thunderstorm Wind	70 kts. EG	0	0	50.00K	0.00K
JAMESTOWN	RUSSELL CO.	5/31/2004	0:05	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	PULASKI CO.	5/31/2004	0:11	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
WIBORG	MCCREARY CO.	5/31/2004	0:41	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
EXIE	GREEN CO.	6/2/2004	14:59	Hail	0.88 in.	0	0	0.00K	0.00K
ELK HORN	TAYLOR CO.	6/2/2004	15:10	Hail	1.00 in.	0	0	0.00K	0.00K

KNIFLEY	ADAIR CO.	6/2/2004	15:30	Hail	0.75 in.	0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	6/2/2004	16:15	Hail	1.00 in.	0	0	0.00K	0.00K
SHOPVILLE	PULASKI CO.	6/2/2004	16:27	Hail	1.00 in.	0	0	0.00K	0.00K
NANCY	PULASKI CO.	6/2/2004	16:27	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	6/2/2004	16:30	Hail	1.00 in.	0	0	0.00K	0.00K
OAK HILL	PULASKI CO.	6/2/2004	16:32	Hail	1.75 in.	0	0	0.00K	0.00K
NANCY	PULASKI CO.	6/2/2004	16:33	Hail	1.00 in.	0	0	0.00K	0.00K
FERGUSON	PULASKI CO.	6/2/2004	16:35	Hail	0.75 in.	0	0	0.00K	0.00K
TATEVILLE	PULASKI CO.	6/2/2004	16:37	Hail	1.75 in.	0	0	0.00K	0.00K
BURNSIDE	PULASKI CO.	6/2/2004	16:40	Hail	1.00 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	6/2/2004	16:42	Hail	0.75 in.	0	0	0.00K	0.00K
PARNELL	WAYNE CO.	6/4/2004	1:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/5/2004	16:30	Thunderstorm Wind	70 kts. EG	0	0	150.00K	0.00K

BANDY	PULASKI CO.	6/12/2004	13:20	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
BANDY	PULASKI CO.	6/12/2004	13:30	Thunderstorm Wind	65 kts. EG	0	0	25.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/12/2004	14:05	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/12/2004	14:10	Hail	0.75 in.	0	0	0.00K	0.00K
WIBORG	MCCREARY CO.	6/12/2004	14:11	Hail	1.00 in.	0	0	0.00K	0.00K
WIBORG	MCCREARY CO.	6/12/2004	14:11	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
GRIFFIN	WAYNE CO.	6/12/2004	17:00	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	GREEN CO.	7/5/2004	15:15	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	TAYLOR CO.	7/5/2004	15:29	Thunderstorm Wind	60 kts. EG	0	0	25.00K	0.00K
COUNTYWIDE	CLINTON CO.	7/5/2004	15:30	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
MARROWBONE	CUMBERLAND CO.	7/5/2004	15:32	Thunderstorm Wind	55 kts. EG	0	0	1.00K	0.00K

COUNTYWIDE	ADAIR CO.	7/5/2004	15:50	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	RUSSELL CO.	7/5/2004	16:05	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	CASEY CO.	7/5/2004	16:15	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	7/5/2004	16:15	Hail	1.75 in.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	7/6/2004	16:20	Hail	0.88 in.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	7/6/2004	16:20	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	7/6/2004	16:56	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	7/6/2004	16:56	Hail	1.00 in.	0	0	0.00K	0.00K
COUNTYWIDE	GREEN CO.	7/6/2004	17:35	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
CUMBERLAND CITY	CLINTON CO.	7/6/2004	17:50	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	7/6/2004	17:54	Thunderstorm Wind	65 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	7/6/2004	18:00	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K

					EG				
ALBANY	CLINTON CO.	7/6/2004	18:05	Hail	1.75 in.	0	0	0.00K	0.00K
GLENS FORK	ADAIR CO.	7/6/2004	18:15	Hail	1.75 in.	0	0	0.00K	0.00K
GLENS FORK	ADAIR CO.	7/6/2004	18:15	Thunderstorm Wind	55 kts. EG	0	0	1.00K	0.00K
COUNTYWIDE	TAYLOR CO.	7/13/2004	20:24	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	CUMBERLAND CO.	7/13/2004	20:52	Thunderstorm Wind	61 kts. EG	0	0	150.00K	0.00K
LIBERTY	CASEY CO.	7/13/2004	20:52	Thunderstorm Wind	60 kts. EG	0	0	30.00K	0.00K
COUNTYWIDE	RUSSELL CO.	7/13/2004	20:58	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	7/13/2004	21:05	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	7/13/2004	21:15	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
COUNTYWIDE	PULASKI CO.	7/13/2004	21:21	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
PARNELL	WAYNE CO.	7/13/2004	21:30	Thunderstorm Wind	50 kts.	0	0	5.00K	0.00K

					EG				
MONTICELLO	WAYNE CO.	7/13/2004	21:30	Thunderstorm Wind	70 kts. EG	0	0	15.00K	0.00K
PARKERS LAKE	MCCREARY CO.	7/13/2004	21:55	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
EUBANK	PULASKI CO.	7/14/2004	2:32	Hail	1.00 in.	0	0	0.00K	0.00K
SHOPVILLE	PULASKI CO.	7/14/2004	2:38	Hail	0.88 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	7/14/2004	7:00	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COOPERSVILLE	WAYNE CO.	7/14/2004	7:10	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
BLUE HERON	MCCREARY CO.	7/14/2004	7:25	Hail	0.75 in.	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	8/4/2004	16:36	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	8/4/2004	16:55	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ELI	RUSSELL CO.	8/4/2004	17:40	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SPURLINGTON	TAYLOR CO.	8/20/2004	19:05	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K

CAMPBELLSVILLE	TAYLOR CO.	8/20/2004	19:10	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	9/17/2004	1:00	Strong Wind	40 kts. EG	0	0	1.00K	0.00K
CREAL	GREEN CO.	4/12/2005	17:25	Hail	1.00 in.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	4/12/2005	17:55	Hail	0.75 in.	0	0	0.00K	0.00K
GREEN (ZONE)	GREEN (ZONE)	4/22/2005	18:38	High Wind	70 kts. EG	0	0	50.00K	0.00K
BURFIELD	WAYNE CO.	4/22/2005	18:50	Hail	1.00 in.	0	0	0.00K	0.00K
GREENWOOD	MCCREARY CO.	4/22/2005	19:23	Hail	0.75 in.	0	0	0.00K	0.00K
OAK HILL	PULASKI CO.	4/22/2005	19:54	Hail	0.88 in.	0	0	0.00K	0.00K
COUNTYWIDE	GREEN CO.	5/19/2005	14:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	5/19/2005	14:30	Hail	0.88 in.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/19/2005	14:44	Hail	0.75 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/19/2005	22:15	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
PARKERS LAKE	MCCREARY CO.	5/19/2005	23:00	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K

					EG				
TATEVILLE	PULASKI CO.	6/6/2005	18:36	Hail	0.75 in.	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	6/10/2005	18:25	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
JACKTOWN	CASEY CO.	6/14/2005	15:14	Hail	0.75 in.	0	0	0.00K	0.00K
DUNNVILLE	CASEY CO.	6/14/2005	15:30	Hail	1.75 in.	0	0	0.00K	0.00K
DUNNVILLE	CASEY CO.	6/14/2005	15:30	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
DUNNVILLE	CASEY CO.	6/14/2005	15:45	Hail	0.88 in.	0	0	0.00K	0.00K
COUNTYWIDE	PULASKI CO.	6/14/2005	16:13	Thunderstorm Wind	55 kts. EG	0	0	1.00K	0.00K
NANCY	PULASKI CO.	6/14/2005	16:13	Thunderstorm Wind	55 kts. EG	0	0	1.00K	0.00K
COLUMBIA	ADAIR CO.	7/4/2005	15:37	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	7/4/2005	17:12	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	7/4/2005	17:45	Thunderstorm Wind	55 kts. EG	0	0	1.00K	0.00K

PEYTONSBURG	CUMBERLAND CO.	7/4/2005	18:23	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
ALBANY	CLINTON CO.	7/4/2005	18:50	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	7/27/2005	13:25	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	7/27/2005	14:00	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
WOODSTOCK	PULASKI CO.	8/5/2005	15:45	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
COOPERSVILLE	WAYNE CO.	8/5/2005	16:25	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
MONTICELLO	WAYNE CO.	8/5/2005	16:30	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
BRONSTON	PULASKI CO.	8/6/2005	16:55	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	PULASKI CO.	8/13/2005	13:53	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
CREELSBORO	RUSSELL CO.	8/15/2005	15:47	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	RUSSELL CO.	8/28/2005	14:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K

BURKESVILLE	CUMBERLAND CO.	11/6/2005	6:37	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	11/15/2005	20:15	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	11/15/2005	21:15	Thunderstorm Wind	65 kts. EG	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	11/15/2005	21:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	11/15/2005	21:30	Thunderstorm Wind	62 kts. EG	0	0	30.00K	0.00K
MONTICELLO	WAYNE CO.	11/15/2005	21:40	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BURNSIDE	PULASKI CO.	11/15/2005	21:45	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	11/15/2005	21:45	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	1/2/2006	15:15	Hail	2.00 in.	0	0	0.00K	0.00K
COUNTYWIDE	GREEN CO.	1/2/2006	15:35	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	1/2/2006	15:40	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K

CLEMENTSVILLE	CASEY CO.	1/2/2006	16:15	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CLEMENTSVILLE	CASEY CO.	1/2/2006	16:15	Hail	1.00 in.	0	0	0.00K	0.00K
DESDA	CLINTON CO.	1/2/2006	16:25	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	1/2/2006	16:25	Hail	0.75 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	1/2/2006	17:00	Hail	0.75 in.	0	0	0.00K	0.00K
MILL SPGS	WAYNE CO.	1/2/2006	17:30	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	1/2/2006	17:32	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	2/17/2006	1:23	Thunderstorm Wind	59 kts. MG	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	3/9/2006	19:19	Thunderstorm Wind	57 kts. EG	0	0	1.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	3/9/2006	19:29	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
GLENS FORK	ADAIR CO.	3/9/2006	19:30	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	3/9/2006	19:40	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K

					EG				
MONTICELLO	WAYNE CO.	3/9/2006	19:40	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	3/9/2006	19:55	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	3/9/2006	19:55	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	3/9/2006	19:57	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	GREEN CO.	3/9/2006	22:50	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COUNTYWIDE	TAYLOR CO.	3/9/2006	23:04	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
VESTER	ADAIR CO.	4/2/2006	17:10	Hail	0.88 in.	0	0	0.00K	0.00K
SUNNYBROOK	WAYNE CO.	4/2/2006	17:18	Hail	0.75 in.	0	0	0.00K	0.00K
PHIL	CASEY CO.	4/2/2006	17:26	Hail	0.75 in.	0	0	0.00K	0.00K
STEARNS	MCCREARY CO.	4/2/2006	18:46	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	4/2/2006	19:03	Thunderstorm Wind	55 kts. EG	0	0	2.00K	0.00K

LIBERTY	CASEY CO.	4/2/2006	21:45	Hail	1.75 in.	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	4/2/2006	21:45	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SALOMA	TAYLOR CO.	4/2/2006	22:08	Thunderstorm Wind	52 kts. MG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	4/2/2006	22:15	Thunderstorm Wind	60 kts. EG	0	0	2.00K	0.00K
MIDDLEBURG	CASEY CO.	4/2/2006	22:30	Hail	1.75 in.	0	0	0.00K	0.00K
MIDDLEBURG	CASEY CO.	4/2/2006	22:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	4/2/2006	22:40	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	4/2/2006	22:50	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CABELL	WAYNE CO.	4/2/2006	23:43	Thunderstorm Wind	53 kts. EG	0	0	0.00K	0.00K
STEARNS	MCCREARY CO.	4/2/2006	23:54	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	4/7/2006	14:00	Thunderstorm Wind	70 kts. EG	0	0	0.00K	0.00K

PIERCE	GREEN CO.	4/7/2006	14:00	Hail	1.75 in.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	4/7/2006	14:10	Hail	1.75 in.	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	4/7/2006	14:40	Hail	1.75 in.	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	4/7/2006	15:09	Hail	0.75 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	4/7/2006	15:56	Thunderstorm Wind	55 kts. EG	0	0	2.00K	0.00K
PEYTONSBURG	CUMBERLAND CO.	4/7/2006	16:06	Hail	0.75 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	4/7/2006	16:09	Thunderstorm Wind	53 kts. EG	0	0	2.00K	0.00K
STEARNS	MCCREARY CO.	4/7/2006	17:08	Hail	1.00 in.	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	4/7/2006	17:09	Hail	0.88 in.	0	0	0.00K	0.00K
PEYTONSBURG	CUMBERLAND CO.	4/7/2006	17:54	Hail	0.75 in.	0	0	0.00K	0.00K
BURNSIDE	PULASKI CO.	4/13/2006	5:13	Hail	1.00 in.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	4/16/2006	11:59	Hail	1.75 in.	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	4/16/2006	12:15	Hail	1.00 in.	0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	4/19/2006	3:19	Hail	0.75 in.	0	0	0.00K	0.00K

MONTICELLO	WAYNE CO.	4/19/2006	6:24	Thunderstorm Wind	53 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	4/19/2006	6:24	Hail	1.00 in.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	4/20/2006	7:52	Hail	0.75 in.	0	0	0.00K	0.00K
CREAL	GREEN CO.	4/20/2006	8:50	Hail	0.88 in.	0	0	0.00K	0.00K
GAP CREEK	WAYNE CO.	4/20/2006	20:18	Hail	0.75 in.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/2/2006	5:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/11/2006	14:41	Thunderstorm Wind	65 kts. EG	0	0	100.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/11/2006	15:35	Thunderstorm Wind	65 kts. EG	0	0	10.00K	0.00K
COLUMBIA	ADAIR CO.	5/18/2006	17:01	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/18/2006	17:01	Thunderstorm Wind	65 kts. EG	0	5	100.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	5/18/2006	17:20	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/18/2006	17:28	Thunderstorm Wind	60 kts. EG	0	0	5.00K	0.00K

MONTICELLO	WAYNE CO.	5/18/2006	17:44	Thunderstorm Wind	53 kts. EG	0	0	0.00K	0.00K
STEARNS	MCCREARY CO.	5/18/2006	18:59	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	5/19/2006	23:23	Hail	0.88 in.	0	0	0.00K	0.00K
SALOMA	TAYLOR CO.	5/25/2006	21:48	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	5/25/2006	21:56	Hail	0.75 in.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	5/25/2006	22:12	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SUMMERSVILLE	GREEN CO.	5/25/2006	22:35	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
BENGAL	TAYLOR CO.	5/25/2006	22:44	Hail	1.00 in.	0	0	0.00K	0.00K
BENT	PULASKI CO.	5/25/2006	22:54	Thunderstorm Wind	63 kts. EG	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	5/25/2006	23:05	Hail	1.00 in.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	5/25/2006	23:23	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	5/25/2006	23:38	Hail	0.75 in.	0	0	0.00K	0.00K

RUSSELL SPGS	RUSSELL CO.	5/25/2006	23:38	Thunderstorm Wind	60 kts. EG	0	0	10.00K	0.00K
SALOMA	TAYLOR CO.	5/28/2006	17:31	Hail	1.00 in.	0	0	0.00K	0.00K
GREENWOOD	MCCREARY CO.	5/31/2006	14:08	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	5/31/2006	14:10	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	5/31/2006	14:13	Thunderstorm Wind	53 kts. EG	0	0	0.00K	0.00K
ALPINE	PULASKI CO.	5/31/2006	14:20	Hail	0.75 in.	0	0	0.00K	0.00K
PARKERS LAKE	MCCREARY CO.	5/31/2006	14:36	Hail	0.75 in.	0	0	0.00K	0.00K
ALPINE	PULASKI CO.	5/31/2006	14:36	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
PARKERS LAKE	MCCREARY CO.	5/31/2006	14:36	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	5/31/2006	14:38	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
PARKERS LAKE	MCCREARY CO.	5/31/2006	14:38	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	5/31/2006	15:10	Hail	0.88 in.	0	0	0.00K	0.00K

FAUBUSH	PULASKI CO.	5/31/2006	15:20	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
LIBERTY	CASEY CO.	5/31/2006	16:35	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/31/2006	17:14	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/31/2006	17:20	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	5/31/2006	17:35	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/10/2006	15:08	Hail	1.00 in.	0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	6/10/2006	15:20	Hail	0.75 in.	0	0	0.00K	0.00K
PARNELL	WAYNE CO.	6/10/2006	15:28	Hail	0.75 in.	0	0	1.00K	0.00K
MONTICELLO	WAYNE CO.	6/10/2006	15:28	Thunderstorm Wind	53 kts. EG	0	0	2.00K	0.00K
NANCY	PULASKI CO.	6/10/2006	16:03	Hail	0.75 in.	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/10/2006	16:13	Hail	0.88 in.	0	0	0.00K	0.00K
BURNSIDE	PULASKI CO.	6/10/2006	16:18	Hail	0.75 in.	0	0	0.00K	0.00K

BRONSTON	PULASKI CO.	6/10/2006	16:25	Hail	0.88 in.	0	0	0.00K	0.00K
BEULAH HGTS	MCCREARY CO.	6/10/2006	16:55	Hail	1.75 in.	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	6/11/2006	19:17	Thunderstorm Wind	53 kts. EG	0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	6/20/2006	15:43	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	6/22/2006	21:50	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	6/22/2006	22:13	Hail	0.75 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	6/22/2006	22:17	Hail	0.75 in.	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/22/2006	23:03	Hail	0.75 in.	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/22/2006	23:03	Thunderstorm Wind	65 kts. EG	0	0	15.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/22/2006	23:05	Thunderstorm Wind	65 kts. EG	0	0	8.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/22/2006	23:06	Hail	1.00 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	6/22/2006	23:13	Thunderstorm Wind	60 kts. EG	0	0	5.00K	0.00K

GREGORY	WAYNE CO.	6/22/2006	23:18	Hail	0.88 in.	0	0	0.00K	0.00K
PIERCE	GREEN CO.	7/21/2006	16:57	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	7/21/2006	17:18	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
PARKERS LAKE	MCCREARY CO.	8/6/2006	16:08	Hail	0.75 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	8/8/2006	13:13	Thunderstorm Wind	53 kts. EG	0	0	0.00K	0.00K
ALLENDALE	GREEN CO.	8/10/2006	16:51	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	8/29/2006	16:37	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	9/8/2006	17:22	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
EXIE	GREEN CO.	9/8/2006	17:26	Hail	0.75 in.	0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	9/23/2006	15:53	Hail	1.00 in.	0	0	0.00K	0.00K
WINDSOR	CASEY CO.	10/11/2006	15:53	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
INGLE	PULASKI CO.	10/11/2006	15:57	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K

WHITLEY CITY	MCCREARY CO.	10/11/2006	17:00	Thunderstorm Wind	53 kts. EG	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	11/16/2006	1:00	Thunderstorm Wind	65 kts. EG	0	0	25.00K	0.00K
TAYLOR (ZONE)	TAYLOR (ZONE)	12/1/2006	5:00	High Wind	55 kts. EG	0	0	3.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	12/1/2006	5:43	High Wind	53 kts. EG	0	0	0.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	12/1/2006	5:43	High Wind	53 kts. EG	0	0	0.00K	0.00K
ALLENDALE	GREEN CO.	4/3/2007	17:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	4/3/2007	18:35	Thunderstorm Wind	60 kts. EG	0	0	10.00K	0.00K
SALOMA	TAYLOR CO.	4/3/2007	18:43	Hail	1.75 in.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	4/3/2007	18:45	Thunderstorm Wind	65 kts. EG	0	0	300.00K	0.00K
JAMESTOWN	RUSSELL CO.	4/3/2007	18:53	Thunderstorm Wind	65 kts. EG	0	0	250.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	4/3/2007	18:55	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K

SALOMA	TAYLOR CO.	4/3/2007	18:58	Hail	1.75 in.	0	0	0.00K	0.00K
SALOMA	TAYLOR CO.	4/3/2007	18:58	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	4/3/2007	19:05	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CLEMENTSVILLE	CASEY CO.	4/3/2007	19:23	Hail	1.00 in.	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	4/3/2007	19:51	Hail	1.00 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	4/3/2007	19:54	Thunderstorm Wind	58 kts. EG	0	0	100.00K	0.00K
SOMERSET	PULASKI CO.	4/3/2007	19:58	Thunderstorm Wind	58 kts. EG	0	0	10.00K	0.00K
MONTICELLO	WAYNE CO.	4/3/2007	20:01	Hail	1.00 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	4/3/2007	20:03	Hail	0.75 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	4/3/2007	20:05	Thunderstorm Wind	58 kts. EG	0	0	25.00K	0.00K
MONTICELLO	WAYNE CO.	4/3/2007	20:05	Hail	1.00 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	4/3/2007	20:13	Thunderstorm Wind	58 kts. EG	0	0	35.00K	0.00K

WHITLEY CITY	MCCREARY CO.	4/3/2007	20:15	Hail	0.88 in.	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	4/3/2007	21:10	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
GADBERRY	ADAIR CO.	4/26/2007	15:23	Hail	0.88 in.	0	0	0.00K	0.00K
SNOW	CLINTON CO.	4/26/2007	15:50	Hail	0.75 in.	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	5/4/2007	14:25	Hail	1.00 in.	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	5/4/2007	15:26	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HATCHER	TAYLOR CO.	6/5/2007	17:40	Hail	0.75 in.	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	6/8/2007	12:18	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	6/15/2007	11:52	Hail	0.88 in.	0	0	0.00K	0.00K
HOLLYHILL	MCCREARY CO.	6/15/2007	15:45	Hail	0.88 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	6/24/2007	15:03	Thunderstorm Wind	55 kts. EG	0	0	20.00K	0.00K
POWERSBURG	WAYNE CO.	6/24/2007	16:18	Hail	0.88 in.	0	0	0.00K	0.00K
COOPER	WAYNE CO.	6/24/2007	16:43	Hail	0.88 in.	0	0	0.00K	0.00K

ELI	RUSSELL CO.	6/26/2007	19:30	Thunderstorm Wind	60 kts. EG	0	0	15.00K	0.00K
LIBERTY	CASEY CO.	7/15/2007	20:00	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
GILREATH	MCCREARY CO.	7/23/2007	16:31	Hail	0.88 in.	0	0	0.00K	0.00K
PINE KNOT	MCCREARY CO.	7/23/2007	17:45	Hail	0.75 in.	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	7/27/2007	15:18	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	7/27/2007	15:20	Hail	0.88 in.	0	0	0.00K	0.00K
BEE LICK	PULASKI CO.	8/13/2007	14:08	Hail	0.75 in.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	8/25/2007	14:40	Hail	1.00 in.	0	0	0.00K	5.00K
COLUMBIA	ADAIR CO.	8/25/2007	14:43	Hail	0.75 in.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	8/25/2007	14:44	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ARISTA	TAYLOR CO.	10/19/2007	0:30	Thunderstorm Wind	60 kts. EG	0	0	20.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	1/9/2008	0:01	High Wind	52 kts. EG	0	0	30.00K	0.00K

SCIENCE HILL	PULASKI CO.	1/10/2008	17:35	Thunderstorm Wind	53 kts. EG	0	0	1.00K	0.00K
MONTICELLO	WAYNE CO.	1/10/2008	17:45	Thunderstorm Wind	53 kts. EG	0	0	1.00K	0.00K
MILLTOWN	ADAIR CO.	1/29/2008	20:10	Thunderstorm Wind	65 kts. EG	0	0	50.00K	0.00K
MARROWBONE	CUMBERLAND CO.	1/29/2008	20:15	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	1/29/2008	20:25	Thunderstorm Wind	75 kts. EG	0	0	100.00K	0.00K
MAC	TAYLOR CO.	1/29/2008	21:00	Thunderstorm Wind	70 kts. EG	0	0	200.00K	0.00K
MAC	TAYLOR CO.	1/29/2008	21:07	Thunderstorm Wind	61 kts. EG	0	0	100.00K	0.00K
CLEMENTSVILLE	CASEY CO.	1/29/2008	21:20	Thunderstorm Wind	56 kts. EG	0	0	1.00K	0.00K
SOMERSET	PULASKI CO.	1/29/2008	21:45	Thunderstorm Wind	55 kts. EG	0	0	50.00K	0.00K
MONTICELLO	WAYNE CO.	1/29/2008	21:51	Thunderstorm Wind	55 kts. EG	0	0	50.00K	0.00K
WHITLEY CITY	MCCREARY CO.	1/29/2008	22:00	Thunderstorm Wind	55 kts. EG	0	0	30.00K	0.00K

MT VICTORY	PULASKI CO.	1/29/2008	22:10	Thunderstorm Wind	55 kts. EG	0	0	50.00K	0.00K
HOLLYHILL	MCCREARY CO.	1/29/2008	22:25	Thunderstorm Wind	53 kts. EG	0	0	4.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	2/5/2008	21:00	Strong Wind	48 kts. EG	0	0	25.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	2/5/2008	21:00	Strong Wind	48 kts. EG	0	0	50.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	2/6/2008	1:00	Strong Wind	48 kts. EG	0	0	25.00K	0.00K
CLEMENTSVILLE	CASEY CO.	2/6/2008	1:25	Thunderstorm Wind	74 kts. EG	0	0	20.00K	0.00K
LIBERTY	CASEY CO.	2/6/2008	1:35	Thunderstorm Wind	83 kts. EG	0	0	100.00K	0.00K
BEECH BOTTOM	CASEY CO.	2/6/2008	1:45	Thunderstorm Wind	74 kts. EG	0	0	25.00K	0.00K
SCIENCE HILL	PULASKI CO.	2/6/2008	4:15	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SCIENCE HILL	PULASKI CO.	2/6/2008	4:16	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
EUBANK	PULASKI CO.	2/6/2008	4:18	Thunderstorm Wind	51 kts. EG	0	0	3.00K	0.00K

MCCREARY (ZONE)	MCCREARY (ZONE)	2/6/2008	6:00	Strong Wind	48 kts. EG	0	0	35.00K	0.00K
SOMERSET	PULASKI CO.	3/4/2008	13:52	Thunderstorm Wind	55 kts. MG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	3/4/2008	14:00	Thunderstorm Wind	65 kts. EG	0	0	100.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	3/19/2008	4:30	Strong Wind	46 kts. EG	0	0	2.00K	0.00K
SOMERSET	PULASKI CO.	3/19/2008	14:32	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
SOMERSET	PULASKI CO.	3/19/2008	14:52	Thunderstorm Wind	60 kts. EG	0	0	15.00K	0.00K
WHITLEY CITY	MCCREARY CO.	3/19/2008	15:07	Thunderstorm Wind	53 kts. EG	0	0	5.00K	0.00K
STEARNS	MCCREARY CO.	3/19/2008	15:13	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
BLOYD	GREEN CO.	4/4/2008	2:43	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
BLACKS FERRY	CUMBERLAND CO.	4/11/2008	11:15	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CUMBERLAND CITY	CLINTON CO.	4/11/2008	11:35	Thunderstorm Wind	65 kts. EG	0	0	200.00K	0.00K

PEYTONSBURG	CUMBERLAND CO.	4/11/2008	11:40	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	4/11/2008	11:40	Hail	2.75 in.	0	0	0.00K	10.00K
LONG BOTTOM	RUSSELL CO.	4/11/2008	11:47	Hail	1.00 in.	0	0	0.00K	2.00K
MONTICELLO	WAYNE CO.	4/11/2008	13:01	Hail	0.75 in.	0	0	0.00K	0.00K
BURNSIDE	PULASKI CO.	4/11/2008	13:25	Hail	0.88 in.	0	0	0.00K	0.00K
BRONSTON	PULASKI CO.	4/28/2008	18:14	Hail	0.88 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/11/2008	7:45	Thunderstorm Wind	55 kts. EG	0	0	30.00K	0.00K
SOMERSET	PULASKI CO.	5/11/2008	7:48	Hail	0.75 in.	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	5/31/2008	22:25	Thunderstorm Wind	54 kts. EG	0	0	30.00K	0.00K
HIDALGO	WAYNE CO.	6/1/2008	5:18	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
ALBANY	CLINTON CO.	6/1/2008	15:53	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BOW	CUMBERLAND CO.	6/9/2008	20:02	Hail	0.88 in.	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	6/9/2008	20:04	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K

					EG				
COLUMBIA	ADAIR CO.	6/9/2008	20:30	Hail	0.88 in.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	6/9/2008	20:30	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
GARLIN	ADAIR CO.	6/9/2008	20:34	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ACTON	TAYLOR CO.	6/9/2008	21:45	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	6/9/2008	22:05	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	6/16/2008	15:26	Hail	0.88 in.	0	0	0.00K	0.00K
ROLLINGBURG	GREEN CO.	6/26/2008	18:35	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	6/26/2008	19:37	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	7/21/2008	13:20	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	7/21/2008	13:45	Hail	1.00 in.	0	0	0.00K	0.00K
SNOW	CLINTON CO.	7/21/2008	13:54	Hail	0.88 in.	0	0	0.00K	0.00K

SUNNYBROOK	WAYNE CO.	7/21/2008	14:37	Thunderstorm Wind	56 kts. EG	0	0	35.00K	0.00K
MONTICELLO	WAYNE CO.	7/21/2008	14:40	Thunderstorm Wind	55 kts. EG	0	0	30.00K	0.00K
STEARNS	MCCREARY CO.	7/21/2008	14:55	Thunderstorm Wind	54 kts. EG	0	0	15.00K	0.00K
GREGORY	WAYNE CO.	7/21/2008	14:55	Thunderstorm Wind	56 kts. EG	0	0	30.00K	0.00K
PARKERS LAKE	MCCREARY CO.	7/21/2008	15:27	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
BREEDING	ADAIR CO.	7/22/2008	12:00	Hail	0.88 in.	0	0	0.00K	0.00K
SPARKSVILLE	ADAIR CO.	7/22/2008	12:27	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
NANCY	PULASKI CO.	7/22/2008	13:40	Thunderstorm Wind	52 kts. EG	0	0	8.00K	0.00K
BURNSIDE	PULASKI CO.	7/22/2008	13:53	Thunderstorm Wind	53 kts. EG	0	0	5.00K	0.00K
SOMERSET	PULASKI CO.	7/22/2008	13:53	Thunderstorm Wind	61 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	7/22/2008	14:05	Hail	1.00 in.	0	0	0.00K	0.00K

SOMERSET	PULASKI CO.	7/22/2008	14:05	Thunderstorm Wind	60 kts. EG	0	0	35.00K	0.00K
BURNSIDE	PULASKI CO.	7/22/2008	14:07	Hail	0.88 in.	0	0	0.00K	0.00K
MT VICTORY	PULASKI CO.	7/22/2008	14:15	Thunderstorm Wind	60 kts. EG	0	0	50.00K	0.00K
MT VICTORY	PULASKI CO.	7/22/2008	14:17	Hail	0.75 in.	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	7/22/2008	16:40	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	7/28/2008	13:17	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SCIENCE HILL	PULASKI CO.	7/28/2008	13:19	Thunderstorm Wind	54 kts. EG	0	0	3.00K	0.00K
SOMERSET	PULASKI CO.	7/30/2008	15:10	Thunderstorm Wind	54 kts. EG	0	0	5.00K	0.00K
WHITLEY CITY	MCCREARY CO.	7/30/2008	16:28	Thunderstorm Wind	60 kts. EG	0	0	50.00K	0.00K
STEARNS	MCCREARY CO.	7/30/2008	17:01	Thunderstorm Wind	53 kts. EG	0	0	5.00K	0.00K
STEARNS	MCCREARY CO.	7/30/2008	17:15	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K

ALBANY	CLINTON CO.	8/6/2008	21:00	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	8/6/2008	21:00	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
PINE KNOT	MCCREARY CO.	9/9/2008	14:45	Thunderstorm Wind	54 kts. EG	0	0	10.00K	0.00K
TAYLOR (ZONE)	TAYLOR (ZONE)	9/14/2008	13:10	High Wind	56 kts. EG	0	0	0.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	12/9/2008	9:50	Strong Wind	46 kts. EG	0	0	100.00K	0.00K
WAYNE (ZONE)	WAYNE (ZONE)	12/19/2008	8:40	Strong Wind	41 kts. EG	0	0	2.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	12/24/2008	11:20	Strong Wind	41 kts. EG	0	0	10.00K	0.00K
CUMBERLAND (ZONE)	CUMBERLAND (ZONE)	2/11/2009	11:07	High Wind	52 kts. EG	0	0	0.00K	0.00K
RUSSELL (ZONE)	RUSSELL (ZONE)	2/11/2009	12:03	High Wind	52 kts. EG	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	2/11/2009	12:58	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ADAIR (ZONE)	ADAIR (ZONE)	2/11/2009	13:30	High Wind	52 kts. MG	0	0	0.00K	0.00K

JAMESTOWN	RUSSELL CO.	2/11/2009	13:50	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	2/11/2009	13:50	High Wind	52 kts. EG	0	0	12.00K	0.00K
WAYNE (ZONE)	WAYNE (ZONE)	2/11/2009	14:29	High Wind	52 kts. EG	0	0	20.00K	0.00K
WAYNE (ZONE)	WAYNE (ZONE)	2/11/2009	14:29	High Wind	52 kts. EG	0	0	25.00K	0.00K
WAYNE (ZONE)	WAYNE (ZONE)	2/11/2009	14:29	High Wind	52 kts. EG	0	0	25.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	2/11/2009	14:30	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	2/11/2009	15:07	High Wind	52 kts. EG	0	0	15.00K	0.00K
LIBERTY	CASEY CO.	2/11/2009	15:10	Thunderstorm Wind	56 kts. EG	0	0	1.00K	0.00K
SOMERSET	PULASKI CO.	2/11/2009	15:10	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	2/11/2009	15:12	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ADAIR (ZONE)	ADAIR (ZONE)	2/11/2009	19:25	High Wind	53 kts. MG	0	0	0.00K	0.00K

ADAIR (ZONE)	ADAIR (ZONE)	2/11/2009	19:35	High Wind	55 kts. MG	0	0	0.00K	0.00K
MARROWBONE	CUMBERLAND CO.	2/18/2009	12:12	Hail	1.00 in.	0	0	0.00K	0.00K
BRYAN	RUSSELL CO.	2/18/2009	12:12	Hail	1.25 in.	0	0	0.00K	0.00K
HIGHWAY	CLINTON CO.	2/18/2009	12:41	Hail	1.75 in.	0	0	0.00K	0.00K
CUMBERLAND CITY	CLINTON CO.	2/18/2009	12:42	Hail	1.75 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	2/18/2009	13:25	Hail	1.00 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	2/18/2009	13:32	Hail	2.00 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	2/18/2009	13:40	Hail	1.25 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	2/18/2009	13:47	Hail	1.75 in.	0	0	0.00K	0.00K
STEARNS	MCCREARY CO.	2/18/2009	14:38	Hail	0.75 in.	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	2/18/2009	14:38	Hail	0.75 in.	0	0	0.00K	0.00K
MT VICTORY	PULASKI CO.	2/27/2009	6:28	Thunderstorm Wind	51 kts. EG	0	0	1.00K	0.00K
SOMERSET	PULASKI CO.	2/27/2009	6:30	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K

DONANSBURG	GREEN CO.	4/5/2009	18:33	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
PICKETT	ADAIR CO.	4/5/2009	18:44	Hail	1.00 in.	0	0	0.00K	0.00K
CANE VLY	ADAIR CO.	4/5/2009	18:50	Thunderstorm Wind	50 kts. MG	0	0	0.00K	0.00K
PHIL	CASEY CO.	4/5/2009	20:10	Thunderstorm Wind	61 kts. EG	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	4/5/2009	20:10	Thunderstorm Wind	61 kts. EG	0	0	0.00K	0.00K
HOGUE	PULASKI CO.	4/5/2009	20:18	Hail	0.75 in.	0	0	0.00K	0.00K
SALOMA	TAYLOR CO.	4/10/2009	11:22	Hail	1.00 in.	0	0	0.00K	0.00K
MINTONVILLE	CASEY CO.	4/10/2009	13:39	Hail	0.88 in.	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	4/10/2009	14:28	Thunderstorm Wind	55 kts. EG	0	0	15.00K	0.00K
EUBANK	PULASKI CO.	4/10/2009	15:02	Thunderstorm Wind	60 kts. EG	0	0	75.00K	0.00K
MONTICELLO	WAYNE CO.	5/8/2009	6:06	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
NANCY	PULASKI CO.	5/8/2009	14:51	Thunderstorm Wind	53 kts. EG	0	0	10.00K	0.00K

PINE KNOT	MCCREARY CO.	5/8/2009	15:21	Hail	2.00 in.	0	0	0.00K	0.00K
PINE KNOT	MCCREARY CO.	5/8/2009	15:24	Hail	1.25 in.	0	0	0.00K	0.00K
STEARNS	MCCREARY CO.	5/8/2009	15:28	Hail	1.00 in.	0	0	0.00K	0.00K
PINE KNOT	MCCREARY CO.	5/8/2009	15:31	Hail	1.75 in.	0	0	0.00K	0.00K
HOLLYHILL	MCCREARY CO.	5/8/2009	15:41	Hail	1.75 in.	0	0	0.00K	0.00K
HOLLYHILL	MCCREARY CO.	5/8/2009	15:41	Hail	2.00 in.	0	0	0.00K	0.00K
REVELO	MCCREARY CO.	5/8/2009	15:46	Hail	1.00 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/15/2009	13:40	Hail	1.00 in.	0	0	0.00K	0.00K
YUMA	TAYLOR CO.	5/15/2009	14:15	Hail	1.00 in.	0	0	0.00K	0.00K
MT VICTORY	PULASKI CO.	5/16/2009	15:55	Thunderstorm Wind	60 kts. EG	0	0	30.00K	0.00K
WIBORG	MCCREARY CO.	6/2/2009	12:26	Hail	1.00 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	6/2/2009	14:09	Hail	1.00 in.	0	0	0.00K	0.00K
FERGUSON	PULASKI CO.	6/2/2009	14:21	Hail	1.75 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	6/2/2009	14:26	Hail	1.75 in.	0	0	0.00K	0.00K

SOMERSET	PULASKI CO.	6/2/2009	14:26	Thunderstorm Wind	53 kts. EG	0	0	5.00K	0.00K
SOMERSET	PULASKI CO.	6/2/2009	14:26	Hail	1.00 in.	0	0	0.00K	0.00K
FERGUSON	PULASKI CO.	6/2/2009	14:31	Hail	1.25 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	6/2/2009	15:03	Hail	1.00 in.	0	0	0.00K	0.00K
KNIFLEY	ADAIR CO.	6/2/2009	17:13	Hail	1.00 in.	0	0	0.00K	0.00K
DYKES	PULASKI CO.	6/10/2009	15:13	Thunderstorm Wind	53 kts. EG	0	0	5.00K	0.00K
MT VICTORY	PULASKI CO.	6/10/2009	15:16	Thunderstorm Wind	53 kts. EG	0	0	3.00K	0.00K
MT VICTORY	PULASKI CO.	6/10/2009	15:16	Thunderstorm Wind	52 kts. EG	0	0	8.00K	0.00K
MT VICTORY	PULASKI CO.	6/10/2009	15:16	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	6/10/2009	15:25	Thunderstorm Wind	53 kts. EG	0	0	3.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/11/2009	12:33	Thunderstorm Wind	51 kts. EG	0	0	1.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/11/2009	12:41	Thunderstorm Wind	51 kts. EG	0	0	3.00K	0.00K

ALBANY	CLINTON CO.	6/11/2009	20:25	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MARROWBONE	CUMBERLAND CO.	6/16/2009	14:12	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BECKS STORE	CUMBERLAND CO.	6/16/2009	14:13	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	6/16/2009	14:18	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PEYTONSBURG	CUMBERLAND CO.	6/16/2009	14:22	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CUMBERLAND CITY	CLINTON CO.	6/16/2009	14:36	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	6/16/2009	14:37	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	6/16/2009	14:41	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	6/16/2009	15:44	Thunderstorm Wind	55 kts. EG	0	0	30.00K	0.00K
NANCY	PULASKI CO.	6/16/2009	15:50	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
GREENWOOD	MCCREARY CO.	6/16/2009	16:03	Thunderstorm Wind	51 kts. EG	0	0	3.00K	0.00K

RUTH	PULASKI CO.	6/16/2009	16:07	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/16/2009	16:10	Thunderstorm Wind	55 kts. EG	0	0	30.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/16/2009	16:15	Thunderstorm Wind	52 kts. EG	0	0	10.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/16/2009	17:18	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	6/18/2009	10:55	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	6/18/2009	11:14	Hail	0.88 in.	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	6/18/2009	11:25	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
MONTICELLO	WAYNE CO.	6/18/2009	11:46	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
SCIENCE HILL	PULASKI CO.	6/20/2009	18:36	Thunderstorm Wind	55 kts. EG	0	0	25.00K	0.00K
SOMERSET	PULASKI CO.	6/20/2009	18:42	Thunderstorm Wind	55 kts. EG	0	0	25.00K	0.00K
ALBANY	CLINTON CO.	6/22/2009	11:21	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

PINE KNOT	MCCREARY CO.	6/22/2009	12:30	Thunderstorm Wind	53 kts. EG	0	0	7.00K	0.00K
GARLIN	ADAIR CO.	6/26/2009	16:18	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
GLENS FORK	ADAIR CO.	6/26/2009	16:30	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ROMINE	TAYLOR CO.	6/26/2009	16:50	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	6/26/2009	17:00	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PEYTONSBURG	CUMBERLAND CO.	6/26/2009	17:25	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PEYTONSBURG	CUMBERLAND CO.	6/26/2009	17:25	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
JAMESTOWN	RUSSELL CO.	6/30/2009	22:00	Hail	0.75 in.	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	6/30/2009	22:14	Hail	1.00 in.	0	0	0.30K	0.00K
JAMESTOWN	RUSSELL CO.	6/30/2009	22:18	Hail	1.00 in.	0	0	0.00K	0.00K
PULASKI	PULASKI CO.	7/1/2009	0:00	Hail	1.75 in.	0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	7/1/2009	0:27	Hail	1.75 in.	0	0	0.00K	0.00K

SOMERSET	PULASKI CO.	7/1/2009	0:45	Hail	1.00 in.	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	7/25/2009	14:22	Thunderstorm Wind	55 kts. EG	0	0	0.75K	0.00K
BURKESVILLE	CUMBERLAND CO.	7/25/2009	14:42	Thunderstorm Wind	55 kts. EG	0	0	2.00K	0.00K
NAOMI	PULASKI CO.	7/25/2009	15:40	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SOMERSET	PULASKI CO.	7/25/2009	15:41	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SOMERSET	PULASKI CO.	7/25/2009	15:45	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SOMERSET	PULASKI CO.	7/25/2009	15:50	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
NANCY	PULASKI CO.	7/25/2009	15:55	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SOMERSET	PULASKI CO.	7/25/2009	16:15	Thunderstorm Wind	56 kts. EG	0	0	7.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	8/4/2009	14:43	Thunderstorm Wind	61 kts. EG	0	0	0.00K	0.00K
PINE KNOT	MCCREARY CO.	8/4/2009	15:05	Thunderstorm Wind	55 kts. EG	0	0	50.00K	0.00K

PINE KNOT	MCCREARY CO.	8/4/2009	15:07	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
FAUBUSH	PULASKI CO.	10/9/2009	14:28	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
SOMERSET	PULASKI CO.	10/9/2009	14:42	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
SOMERSET	PULASKI CO.	10/9/2009	14:45	Thunderstorm Wind	60 kts. EG	0	0	79.00K	0.00K
STEUBENVILLE	WAYNE CO.	10/9/2009	14:55	Thunderstorm Wind	55 kts. EG	0	0	15.00K	0.00K
RUSSELL (ZONE)	RUSSELL (ZONE)	12/9/2009	3:00	High Wind	35 kts. MS	0	0	0.00K	0.00K
CASEY (ZONE)	CASEY (ZONE)	12/9/2009	9:00	High Wind	56 kts. EG	0	0	10.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	12/9/2009	12:00	High Wind	52 kts. EG	0	0	0.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	12/9/2009	12:49	Strong Wind	45 kts. EG	0	0	5.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	12/9/2009	12:49	Strong Wind	40 kts. EG	0	0	5.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	12/9/2009	13:32	High Wind	56 kts. EG	1	2	0.00K	0.00K

ALBANY	CLINTON CO.	1/21/2010	16:50	Hail	1.00 in.	0	0	0.00K	0.00K
BADGER	TAYLOR CO.	3/12/2010	11:13	Hail	1.75 in.	0	0	0.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	4/3/2010	8:45	Strong Wind	35 kts. EG	0	0	5.00K	0.00K
WAYNE (ZONE)	WAYNE (ZONE)	4/3/2010	8:50	Strong Wind	35 kts. EG	0	0	1.00K	0.00K
WAYNE (ZONE)	WAYNE (ZONE)	4/3/2010	8:50	Strong Wind	35 kts. EG	0	0	1.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	4/3/2010	8:55	Strong Wind	35 kts. EG	0	0	1.00K	0.00K
ALLENDALE	GREEN CO.	4/24/2010	17:29	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ELLER	RUSSELL CO.	4/24/2010	20:31	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CUMBERLAND CITY	CLINTON CO.	4/24/2010	20:55	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
FERGUSON	PULASKI CO.	4/24/2010	22:15	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
ALLENDALE	GREEN CO.	5/2/2010	1:45	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

BIG OAK	RUSSELL CO.	5/14/2010	13:33	Hail	1.75 in.	0	0	0.00K	0.00K
PARMLEYSVILLE	WAYNE CO.	5/15/2010	14:25	Hail	1.00 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	5/15/2010	15:58	Hail	1.00 in.	0	0	1.00K	0.00K
MONTICELLO	WAYNE CO.	5/15/2010	16:16	Hail	1.00 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	5/15/2010	16:22	Hail	1.00 in.	0	0	0.00K	0.00K
WHITE LILY	PULASKI CO.	5/15/2010	16:40	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SOMERSET	PULASKI CO.	5/17/2010	17:48	Hail	1.00 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/17/2010	17:55	Hail	1.00 in.	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/17/2010	17:55	Thunderstorm Wind	60 kts. EG	0	0	15.00K	0.00K
SHOPVILLE	PULASKI CO.	6/4/2010	17:45	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
CAMPBELLSVILLE ARPT	TAYLOR CO.	6/15/2010	22:05	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
DUNNVILLE	CASEY CO.	6/24/2010	14:55	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MINTONVILLE	CASEY CO.	6/24/2010	14:57	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K

					EG				
NANCY	PULASKI CO.	7/16/2010	12:50	Thunderstorm Wind	50 kts. EG	0	0	0.50K	0.00K
SCIENCE HILL	PULASKI CO.	7/16/2010	13:00	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
SOMERSET	PULASKI CO.	7/18/2010	21:30	Thunderstorm Wind	55 kts. EG	0	0	100.00K	0.00K
SUMMERSVILLE	GREEN CO.	7/19/2010	17:42	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
KNIFLEY	ADAIR CO.	7/19/2010	18:01	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	7/19/2010	19:01	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	7/19/2010	19:29	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BETHELRIDGE	CASEY CO.	7/19/2010	20:05	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
HUDGINS	GREEN CO.	7/31/2010	17:30	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
KNIFLEY	ADAIR CO.	8/4/2010	22:15	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K

HUNTERSVILLE	CLINTON CO.	8/5/2010	10:55	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CANE VLY	ADAIR CO.	8/5/2010	11:30	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
ROMINE	TAYLOR CO.	8/5/2010	12:20	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BETHELRIDGE	CASEY CO.	8/5/2010	12:55	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	8/5/2010	13:05	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	8/5/2010	13:12	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
MONTICELLO	WAYNE CO.	8/5/2010	13:20	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
MONTICELLO	WAYNE CO.	8/5/2010	13:25	Thunderstorm Wind	55 kts. EG	0	0	7.00K	0.00K
COOPER	WAYNE CO.	8/5/2010	13:30	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	8/11/2010	14:20	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
NANCY	PULASKI CO.	8/14/2010	19:35	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K

SOMERSET	PULASKI CO.	8/14/2010	19:35	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	8/14/2010	19:35	Thunderstorm Wind	55 kts. EG	0	0	125.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	9/11/2010	13:59	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MANNTOWN	RUSSELL CO.	9/11/2010	14:04	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BUG	CLINTON CO.	9/11/2010	14:40	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	9/11/2010	14:52	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	9/11/2010	15:20	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
MONTICELLO	WAYNE CO.	9/11/2010	15:40	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	10/26/2010	8:00	Strong Wind	45 kts. EG	0	0	10.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	10/26/2010	9:52	Strong Wind	45 kts. EG	0	0	20.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	10/26/2010	10:30	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

PULASKI (ZONE)	PULASKI (ZONE)	10/26/2010	12:35	Strong Wind	43 kts. EG	0	0	1.00K	0.00K
STEUBENVILLE	WAYNE CO.	10/26/2010	14:37	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
WHITLEY CITY	MCCREARY CO.	10/26/2010	14:51	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
HONEYBEE	MCCREARY CO.	10/26/2010	14:51	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	10/26/2010	15:14	Strong Wind	45 kts. EG	0	0	5.00K	0.00K
WAYNE (ZONE)	WAYNE (ZONE)	11/16/2010	15:30	Strong Wind	37 kts. MG	0	0	1.00K	1.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	11/16/2010	16:00	Strong Wind	30 kts. MG	0	0	1.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	11/16/2010	16:30	Strong Wind	39 kts. MG	0	0	1.00K	1.00K
RUSSELL (ZONE)	RUSSELL (ZONE)	11/16/2010	20:00	High Wind	50 kts. EG	0	0	5.00K	0.00K
COLUMBIA	ADAIR CO.	2/24/2011	23:00	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	2/24/2011	23:15	Strong Wind	38 kts. EG	0	0	5.00K	0.00K

STATIC	CLINTON CO.	2/24/2011	23:35	Thunderstorm Wind	70 kts. EG	0	0	0.00K	0.00K
ACTON	TAYLOR CO.	2/24/2011	23:55	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ARGYLE	CASEY CO.	2/25/2011	0:23	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MONTICELLO WAYNE ARP	WAYNE CO.	2/25/2011	0:30	Thunderstorm Wind	50 kts. EG	0	0	25.00K	0.00K
SALOMA	TAYLOR CO.	2/28/2011	6:20	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
GRIDER	CUMBERLAND CO.	2/28/2011	6:35	Thunderstorm Wind	51 kts. MG	0	0	0.00K	0.00K
PULASKI	PULASKI CO.	2/28/2011	7:35	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
BURNSIDE	PULASKI CO.	2/28/2011	7:50	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	2/28/2011	8:05	Thunderstorm Wind	60 kts. EG	0	0	50.00K	0.00K
BOURBON	PULASKI CO.	2/28/2011	8:05	Thunderstorm Wind	60 kts. EG	0	0	10.00K	0.00K
OAK HILL	PULASKI CO.	2/28/2011	8:05	Thunderstorm Wind	60 kts. EG	0	0	25.00K	0.00K

WHITLEY CITY	MCCREARY CO.	2/28/2011	8:55	Hail	1.00 in.	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	3/23/2011	13:40	Hail	0.88 in.	0	0	0.00K	0.00K
SUGAR HILL	PULASKI CO.	3/23/2011	14:06	Hail	1.00 in.	0	0	0.00K	0.00K
KNIFLEY	ADAIR CO.	3/23/2011	15:17	Hail	1.00 in.	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	3/23/2011	16:35	Hail	1.00 in.	0	0	0.00K	0.00K
PHIL	CASEY CO.	3/23/2011	16:37	Hail	1.00 in.	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	3/23/2011	16:50	Hail	0.88 in.	0	0	0.00K	0.00K
WATAUGA	CLINTON CO.	3/23/2011	16:55	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	3/23/2011	17:08	Hail	1.25 in.	0	0	0.00K	0.00K
SUGAR HILL	PULASKI CO.	3/23/2011	17:11	Hail	1.00 in.	0	0	0.00K	0.00K
WEST SOMERSET	PULASKI CO.	3/23/2011	17:17	Hail	1.75 in.	0	0	0.00K	0.00K
GRADYVILLE	CUMBERLAND CO.	4/4/2011	14:00	Thunderstorm Wind	53 kts. MG	0	0	0.00K	0.00K
GARLIN	ADAIR CO.	4/4/2011	14:05	Thunderstorm Wind	54 kts. MG	0	0	0.00K	0.00K

RUSSELL SPGS	RUSSELL CO.	4/4/2011	14:11	Thunderstorm Wind	61 kts. EG	0	0	0.00K	0.00K
WHITTLE	RUSSELL CO.	4/4/2011	14:16	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
IRVINS STORE	RUSSELL CO.	4/4/2011	14:20	Thunderstorm Wind	61 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	4/4/2011	14:23	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
WINDSOR	CASEY CO.	4/4/2011	15:16	Thunderstorm Wind	70 kts. EG	0	0	0.00K	0.00K
MONTICELLO WAYNE ARP	WAYNE CO.	4/4/2011	15:30	Thunderstorm Wind	52 kts. EG	0	0	20.00K	0.00K
DABNEY	PULASKI CO.	4/4/2011	15:30	Thunderstorm Wind	60 kts. EG	0	0	5.00K	0.00K
FERGUSON	PULASKI CO.	4/4/2011	15:35	Thunderstorm Wind	60 kts. EG	0	0	5.00K	0.00K
PULASKI	PULASKI CO.	4/4/2011	15:39	Hail	1.00 in.	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	4/4/2011	15:40	Thunderstorm Wind	52 kts. EG	0	0	8.00K	0.00K
SOMERSET	PULASKI CO.	4/4/2011	15:40	Thunderstorm Wind	61 kts. EG	0	0	0.00K	0.00K

STEARNS	MCCREARY CO.	4/4/2011	15:45	Thunderstorm Wind	57 kts. EG	0	0	10.00K	0.00K
EUBANK	PULASKI CO.	4/4/2011	15:55	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
MARSHES SIDING	MCCREARY CO.	4/4/2011	15:55	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
SWEENEYVILLE	TAYLOR CO.	4/9/2011	12:15	Hail	1.00 in.	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	4/9/2011	12:40	Hail	0.75 in.	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	4/9/2011	12:42	Hail	1.00 in.	0	0	0.00K	0.00K
CANTOWN	CASEY CO.	4/9/2011	12:50	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	4/9/2011	12:58	Hail	2.75 in.	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	4/9/2011	13:13	Hail	1.75 in.	0	0	0.00K	0.00K
FLOYD	PULASKI CO.	4/9/2011	13:17	Hail	4.00 in.	0	0	0.00K	0.00K
CEDAR GROVE	PULASKI CO.	4/9/2011	13:18	Hail	1.00 in.	0	0	0.00K	0.00K
RUSSELL SPGS ARPT	RUSSELL CO.	4/11/2011	11:30	Thunderstorm Wind	65 kts. EG	0	0	0.00K	0.00K
WEBBS XRDS	GREEN CO.	4/20/2011	1:00	Hail	1.00 in.	0	0	0.00K	0.00K

MILLTOWN	ADAIR CO.	4/20/2011	1:25	Hail	1.00 in.	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	4/20/2011	1:42	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	4/20/2011	3:03	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
BLACK GNAT	GREEN CO.	4/24/2011	0:47	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	4/24/2011	13:31	Hail	1.75 in.	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	4/24/2011	13:35	Hail	0.88 in.	0	0	0.00K	0.00K
ROMINE	TAYLOR CO.	4/26/2011	3:33	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	4/27/2011	6:23	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE ARPT	TAYLOR CO.	4/27/2011	6:59	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PARNELL	WAYNE CO.	4/27/2011	7:38	Thunderstorm Wind	52 kts. EG	0	0	4.00K	0.00K
DUNNVILLE	CASEY CO.	4/27/2011	7:41	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	4/27/2011	7:43	Thunderstorm Wind	52 kts.	0	0	2.00K	0.00K

					EG				
CEDARCREST	WAYNE CO.	4/27/2011	7:45	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
MONTICELLO	WAYNE CO.	4/27/2011	7:45	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
SCIENCE HILL	PULASKI CO.	4/27/2011	8:04	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
BEULAH HGTS	MCCREARY CO.	4/27/2011	8:13	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
COOPERATIVE	MCCREARY CO.	4/27/2011	8:24	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SILERVILLE	MCCREARY CO.	4/27/2011	8:32	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
GILREATH	MCCREARY CO.	4/27/2011	8:34	Thunderstorm Wind	52 kts. EG	0	0	4.00K	0.00K
CHANCE	ADAIR CO.	5/22/2011	13:33	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
GARLIN	ADAIR CO.	5/22/2011	13:35	Thunderstorm Wind	50 kts. MG	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	5/22/2011	13:40	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

DOORWAY	ADAIR CO.	5/22/2011	14:12	Hail	0.88 in.	0	0	0.00K	0.00K
EVONA	CASEY CO.	5/22/2011	15:03	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	5/22/2011	15:03	Thunderstorm Wind	52 kts. EG	0	0	4.00K	0.00K
EUBANK	PULASKI CO.	5/22/2011	15:13	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
WOODSTOCK	PULASKI CO.	5/22/2011	15:18	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
BURNSIDE	PULASKI CO.	5/22/2011	15:23	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
ELIHU	PULASKI CO.	5/22/2011	15:26	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
BURNSIDE	PULASKI CO.	5/22/2011	15:30	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
ALBANY	CLINTON CO.	5/23/2011	4:03	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LITTRELL	CUMBERLAND CO.	5/24/2011	5:23	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
FROGUE	CUMBERLAND CO.	5/24/2011	5:45	Lightning		0	0	15.00K	0.00K

FROGUE	CUMBERLAND CO.	5/24/2011	5:45	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
WAIT	WAYNE CO.	5/24/2011	6:50	Thunderstorm Wind	55 kts. EG	0	0	25.00K	0.00K
MONTICELLO	WAYNE CO.	5/24/2011	6:55	Thunderstorm Wind	55 kts. EG	0	0	15.00K	0.00K
DELTA	WAYNE CO.	5/24/2011	7:00	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
MARSHES SIDING	MCCREARY CO.	5/24/2011	7:15	Thunderstorm Wind	55 kts. EG	0	0	15.00K	0.00K
MARSHES SIDING	MCCREARY CO.	5/24/2011	11:30	Thunderstorm Wind	46 kts. EG	0	0	3.00K	0.00K
WHITLEY CITY	MCCREARY CO.	5/24/2011	14:45	Thunderstorm Wind	55 kts. EG	0	0	3.00K	0.00K
STRUNK	MCCREARY CO.	5/24/2011	15:07	Thunderstorm Wind	55 kts. EG	0	0	3.00K	0.00K
STRUNK	MCCREARY CO.	5/24/2011	15:10	Hail	1.00 in.	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	5/25/2011	23:09	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
FRISBY	WAYNE CO.	5/26/2011	1:43	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K

MURL	WAYNE CO.	5/26/2011	1:48	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
MONTICELLO	WAYNE CO.	5/26/2011	1:53	Thunderstorm Wind	52 kts. EG	0	0	8.00K	0.00K
WEST SOMERSET	PULASKI CO.	5/26/2011	2:03	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
PULASKI	PULASKI CO.	5/26/2011	2:03	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
BURNSIDE	PULASKI CO.	5/26/2011	2:13	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MARSHES SIDING	MCCREARY CO.	5/26/2011	2:16	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
MT VICTORY	PULASKI CO.	5/26/2011	2:19	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/26/2011	16:10	Hail	1.00 in.	0	0	0.00K	0.00K
PARMLEYSVILLE	WAYNE CO.	6/9/2011	14:07	Thunderstorm Wind	55 kts. EG	0	0	3.00K	0.00K
PHIL	CASEY CO.	6/9/2011	14:55	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	6/19/2011	5:58	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K

BUG	CLINTON CO.	6/21/2011	15:33	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	6/21/2011	18:14	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
PINE KNOT	MCCREARY CO.	6/21/2011	18:16	Thunderstorm Wind	40 kts. EG	0	0	3.00K	0.00K
STRUNK	MCCREARY CO.	6/21/2011	18:27	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
MANNSVILLE	TAYLOR CO.	7/12/2011	12:25	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MEECE	PULASKI CO.	8/8/2011	13:55	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
PULASKI	PULASKI CO.	8/8/2011	13:55	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	10/18/2011	16:08	Hail	1.00 in.	0	0	0.00K	0.00K
CLEMENTSVILLE	CASEY CO.	10/18/2011	16:55	Hail	1.00 in.	0	0	0.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	1/1/2012	10:15	Strong Wind	37 kts. MG	0	0	0.10K	0.00K
HUDGINS	GREEN CO.	1/17/2012	12:25	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

GREENSBURG	GREEN CO.	1/17/2012	12:31	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	1/17/2012	13:55	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	1/17/2012	14:53	Strong Wind	45 kts. EG	0	0	6.00K	0.00K
LONG BOTTOM	RUSSELL CO.	1/21/2012	1:50	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	1/23/2012	4:00	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	2/29/2012	13:22	Hail	1.00 in.	0	0	0.00K	0.00K
ARGYLE	CASEY CO.	2/29/2012	14:40	Hail	1.00 in.	0	0	0.00K	0.00K
TEDDY	CASEY CO.	2/29/2012	14:41	Hail	1.00 in.	0	0	0.00K	0.00K
CANTOWN	CASEY CO.	2/29/2012	14:41	Hail	1.00 in.	0	0	0.00K	0.00K
WOODSTOCK	PULASKI CO.	2/29/2012	14:42	Hail	1.75 in.	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	2/29/2012	14:50	Thunderstorm Wind	70 kts. EG	0	0	10.00K	0.00K
MARSHES SIDING	MCCREARY CO.	2/29/2012	14:50	Thunderstorm Wind	60 kts. EG	0	0	10.00K	0.00K

SCIENCE HILL	PULASKI CO.	2/29/2012	14:50	Thunderstorm Wind	70 kts. EG	0	0	10.00K	0.00K
NANCY	PULASKI CO.	2/29/2012	15:05	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SUNNYBROOK	WAYNE CO.	2/29/2012	15:30	Thunderstorm Wind	70 kts. EG	0	0	15.00K	0.00K
MT PISGAH	WAYNE CO.	2/29/2012	15:40	Thunderstorm Wind	60 kts. EG	0	0	5.00K	0.00K
WEED	ADAIR CO.	3/2/2012	15:53	Hail	2.00 in.	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	3/2/2012	17:00	Hail	1.75 in.	0	0	1.500M	0.00K
WHITE ROSE	TAYLOR CO.	3/2/2012	17:12	Hail	1.75 in.	0	0	0.00K	0.00K
HUMBLE	RUSSELL CO.	3/2/2012	17:14	Hail	1.75 in.	0	0	0.00K	0.00K
MARSHES SIDING	MCCREARY CO.	3/2/2012	17:43	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
STEARNS	MCCREARY CO.	3/2/2012	17:43	Thunderstorm Wind	56 kts. EG	0	0	15.00K	0.00K
CAINS STORE	PULASKI CO.	3/2/2012	18:10	Hail	1.00 in.	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	3/2/2012	18:40	Hail	1.75 in.	0	0	0.00K	0.00K

PULASKI	PULASKI CO.	3/2/2012	18:45	Hail	1.75 in.	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	3/2/2012	19:03	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SAVAGE	CLINTON CO.	3/15/2012	15:08	Hail	1.75 in.	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	3/15/2012	15:53	Hail	1.25 in.	0	0	0.00K	0.00K
ALBANY ARPT	CLINTON CO.	3/15/2012	16:37	Hail	1.00 in.	0	0	0.00K	0.00K
KIDDER	WAYNE CO.	3/15/2012	18:18	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
BENGAL	TAYLOR CO.	3/23/2012	21:40	Thunderstorm Wind	54 kts. MG	0	0	0.00K	0.00K
SWEENEYVILLE	TAYLOR CO.	3/24/2012	2:40	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PICKETT	ADAIR CO.	4/26/2012	3:24	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
FAIRPLAY	ADAIR CO.	4/26/2012	3:33	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	4/26/2012	3:42	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	4/26/2012	3:52	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

MONTICELLO WAYNE ARP	WAYNE CO.	4/26/2012	5:00	Thunderstorm Wind	52 kts. EG	0	0	10.00K	0.00K
BURNSIDE	PULASKI CO.	4/26/2012	5:05	Thunderstorm Wind	52 kts. EG	0	0	10.00K	0.00K
WHITLEY CITY	MCCREARY CO.	4/26/2012	5:20	Thunderstorm Wind	52 kts. EG	0	0	10.00K	0.00K
ELI	RUSSELL CO.	4/26/2012	14:50	Hail	1.75 in.	0	0	0.00K	0.00K
TOURISTVILLE	WAYNE CO.	4/26/2012	16:20	Hail	1.00 in.	0	0	0.00K	0.00K
MILL SPGS	WAYNE CO.	4/26/2012	16:25	Hail	1.75 in.	0	0	0.00K	0.00K
BURNSIDE	PULASKI CO.	4/26/2012	16:40	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
MURL	WAYNE CO.	4/26/2012	16:52	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
WHITLEY CITY	MCCREARY CO.	4/26/2012	17:30	Hail	1.00 in.	0	0	0.00K	0.00K
GABE	GREEN CO.	7/1/2012	20:00	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
HASKINGSVILLE	GREEN CO.	7/1/2012	20:25	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	7/1/2012	21:00	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

ELLER	RUSSELL CO.	7/5/2012	14:35	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
JABEZ	RUSSELL CO.	7/5/2012	14:41	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CHRISTINE	ADAIR CO.	7/5/2012	14:50	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
KIDDS STORE	CASEY CO.	7/5/2012	14:55	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	7/5/2012	14:55	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
RUSSELL SPGS ARPT	RUSSELL CO.	7/5/2012	14:59	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PHIL	CASEY CO.	7/5/2012	15:13	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	7/5/2012	15:16	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
YOSEMITE	CASEY CO.	7/5/2012	15:18	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LITTRELL	CUMBERLAND CO.	7/8/2012	17:42	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MT VICTORY	PULASKI CO.	7/8/2012	18:17	Thunderstorm Wind	60 kts. EG	0	0	30.00K	0.00K

WEST SOMERSET	PULASKI CO.	7/8/2012	18:51	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	7/8/2012	18:51	Thunderstorm Wind	50 kts. EG	0	0	20.00K	0.00K
ETNA	PULASKI CO.	7/8/2012	18:55	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
NORWOOD	PULASKI CO.	7/8/2012	19:00	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WAIT	WAYNE CO.	7/8/2012	19:00	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
FERGUSON	PULASKI CO.	7/8/2012	19:14	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOLLYHILL	MCCREARY CO.	7/8/2012	20:15	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	7/18/2012	13:45	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
DELTA	WAYNE CO.	7/18/2012	14:20	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COAKLEY	GREEN CO.	7/19/2012	18:51	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CANE VLY	ADAIR CO.	7/19/2012	19:42	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

BASIL	ADAIR CO.	7/19/2012	19:47	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MERRIMAC	TAYLOR CO.	7/19/2012	19:56	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	7/19/2012	20:15	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
NANCY	PULASKI CO.	7/19/2012	20:53	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
BRONSTON	PULASKI CO.	7/19/2012	21:02	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MERRIMAC	TAYLOR CO.	7/26/2012	22:38	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
DALLO	RUSSELL CO.	7/27/2012	21:50	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
HOBSON	TAYLOR CO.	7/27/2012	22:13	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	7/27/2012	22:44	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
SHEPOLA	PULASKI CO.	7/27/2012	22:57	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
BRONSTON	PULASKI CO.	7/27/2012	23:05	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K

MILL SPGS	WAYNE CO.	7/27/2012	23:11	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
WEST SOMERSET	PULASKI CO.	8/9/2012	11:35	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
WEST SOMERSET	PULASKI CO.	8/9/2012	11:41	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PINE KNOT	MCCREARY CO.	12/17/2012	17:45	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
TAYLOR (ZONE)	TAYLOR (ZONE)	12/20/2012	18:04	Strong Wind	44 kts. EG	0	0	10.00K	0.00K
COLUMBIA	ADAIR CO.	1/30/2013	4:43	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SANO	ADAIR CO.	1/30/2013	4:49	Thunderstorm Wind	60 kts. EG	0	0	15.00K	0.00K
MIDDLETOWN	RUSSELL CO.	1/30/2013	4:57	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	1/30/2013	5:36	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PARNELL	WAYNE CO.	1/30/2013	6:03	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SUSIE	WAYNE CO.	1/30/2013	6:06	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K

NANCY	PULASKI CO.	1/30/2013	6:12	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MONTICELLO WAYNE ARP	WAYNE CO.	1/30/2013	6:13	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
STEUBENVILLE	WAYNE CO.	1/30/2013	6:15	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ALBIA	PULASKI CO.	1/30/2013	6:24	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SUMPTER	WAYNE CO.	1/30/2013	6:24	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
STRAWBERRY	PULASKI CO.	1/30/2013	6:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WEST SOMERSET	PULASKI CO.	1/30/2013	6:35	Thunderstorm Wind	56 kts. MG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	1/30/2013	7:00	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
MONTICELLO WAYNE ARP	WAYNE CO.	3/24/2013	16:16	Thunderstorm Wind	70 kts. EG	0	0	5.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	4/11/2013	14:43	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
MONTICELLO	WAYNE CO.	5/21/2013	15:00	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K

POPLARVILLE	PULASKI CO.	5/21/2013	15:10	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
NANCY	PULASKI CO.	5/21/2013	15:30	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PINE KNOT	MCCREARY CO.	5/21/2013	15:32	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SLAVANS	MCCREARY CO.	5/21/2013	15:35	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
STEARNS	MCCREARY CO.	5/21/2013	15:40	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
SHOPVILLE	PULASKI CO.	5/21/2013	15:43	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
DABNEY	PULASKI CO.	5/21/2013	15:45	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/21/2013	15:45	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	5/21/2013	15:45	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	5/21/2013	15:45	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
SHOPVILLE	PULASKI CO.	5/21/2013	15:47	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

WHITLEY CITY	MCCREARY CO.	5/21/2013	15:48	Hail	1.00 in.	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	5/21/2013	15:48	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	5/21/2013	15:52	Thunderstorm Wind	40 kts. EG	0	0	1.00K	0.00K
WHITLEY CITY	MCCREARY CO.	5/21/2013	15:53	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	6/10/2013	15:15	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	6/13/2013	10:45	Thunderstorm Wind	45 kts. EG	0	0	10.00K	0.00K
COLUMBIA	ADAIR CO.	6/26/2013	21:21	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	6/26/2013	21:26	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
HUMBLE	RUSSELL CO.	6/26/2013	21:32	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LONGSTREET	RUSSELL CO.	6/26/2013	21:40	Thunderstorm Wind	56 kts. EG	0	0	2.00K	0.00K
KARLUS	RUSSELL CO.	6/26/2013	21:44	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

RUSSELL SPGS	RUSSELL CO.	6/26/2013	21:59	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	6/26/2013	22:10	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	6/26/2013	22:34	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PRICETOWN	CASEY CO.	6/26/2013	22:35	Thunderstorm Wind	50 kts. MG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	6/26/2013	23:09	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	6/26/2013	23:14	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PIERCE	GREEN CO.	7/1/2013	13:59	Hail	1.00 in.	0	0	0.00K	0.00K
SAWYER	MCCREARY CO.	7/1/2013	14:26	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ELK HORN	TAYLOR CO.	7/1/2013	16:30	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SWAIN	MCCREARY CO.	7/9/2013	17:20	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	7/10/2013	13:58	Thunderstorm Wind	52 kts. EG	0	0	15.00K	0.00K

CAMPBELLSVILLE	TAYLOR CO.	7/10/2013	14:00	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
PARNELL	WAYNE CO.	7/10/2013	14:45	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HAIL	PULASKI CO.	7/13/2013	12:45	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
MT VICTORY	PULASKI CO.	7/13/2013	12:48	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
DUNNVILLE	CASEY CO.	7/13/2013	13:20	Hail	1.75 in.	0	0	0.00K	0.00K
BASS	CASEY CO.	7/13/2013	13:45	Hail	1.00 in.	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	8/12/2013	21:15	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SHOPVILLE	PULASKI CO.	8/21/2013	12:50	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	8/31/2013	17:13	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	8/31/2013	17:20	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SLOANS VLY	PULASKI CO.	8/31/2013	18:05	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

SOMERSET	PULASKI CO.	8/31/2013	18:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MCCREARY (ZONE)	MCCREARY (ZONE)	10/31/2013	21:45	Strong Wind	43 kts. EG	0	0	0.50K	0.00K
MT VICTORY	PULASKI CO.	11/1/2013	0:40	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
HOLLYHILL	MCCREARY CO.	11/1/2013	1:10	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MARSHES SIDING	MCCREARY CO.	11/1/2013	1:20	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
NORWOOD	PULASKI CO.	11/17/2013	20:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COAKLEY	GREEN CO.	12/21/2013	22:00	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	12/21/2013	22:02	Thunderstorm Wind	56 kts. EG	0	0	5.00K	0.00K
PULASKI	PULASKI CO.	12/22/2013	0:10	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	12/22/2013	0:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	12/22/2013	0:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K

ELLINGTON	CUMBERLAND CO.	2/20/2014	21:26	Thunderstorm Wind	51 kts. MG	0	0	0.00K	0.00K
COLUMBIA	ADAIR CO.	2/20/2014	21:30	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	2/20/2014	21:45	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	2/20/2014	23:12	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WEST SOMERSET	PULASKI CO.	2/20/2014	23:15	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
COOPERATIVE	MCCREARY CO.	2/20/2014	23:38	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
NEVILSVILLE	MCCREARY CO.	2/20/2014	23:40	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	2/20/2014	23:55	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
PINE KNOT	MCCREARY CO.	2/21/2014	0:03	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SWAIN	MCCREARY CO.	2/21/2014	0:05	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
GRADYVILLE	ADAIR CO.	5/14/2014	11:52	Hail	1.00 in.	0	0	0.00K	0.00K

MIDDLEBURG	CASEY CO.	5/21/2014	20:42	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SWEENEYVILLE	TAYLOR CO.	5/22/2014	5:24	Thunderstorm Wind	63 kts. EG	0	0	150.00K	0.00K
BRONSTON	PULASKI CO.	5/27/2014	14:05	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	6/10/2014	13:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	6/10/2014	14:13	Thunderstorm Wind	50 kts. EG	0	0	20.00K	0.00K
COLUMBIA	ADAIR CO.	6/10/2014	14:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WEST SOMERSET	PULASKI CO.	6/10/2014	14:45	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
WEST SOMERSET	PULASKI CO.	6/10/2014	14:50	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	6/10/2014	14:50	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
YUMA	TAYLOR CO.	6/10/2014	15:55	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
PINE KNOT	MCCREARY CO.	6/10/2014	16:35	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

PINE KNOT	MCCREARY CO.	6/10/2014	16:35	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
HILL TOP	MCCREARY CO.	6/10/2014	16:35	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BARTHELL	MCCREARY CO.	6/10/2014	16:35	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
REVELO	MCCREARY CO.	6/10/2014	16:35	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CANTOWN	CASEY CO.	7/14/2014	11:47	Thunderstorm Wind	70 kts. EG	0	0	3.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	7/26/2014	22:20	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
DENT	RUSSELL CO.	7/27/2014	12:15	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PARNELL	WAYNE CO.	7/27/2014	13:54	Hail	1.75 in.	0	0	0.00K	0.00K
MARSHES SIDING	MCCREARY CO.	7/27/2014	14:28	Hail	1.50 in.	0	0	0.00K	0.00K
REVELO	MCCREARY CO.	7/27/2014	14:29	Hail	1.00 in.	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	7/27/2014	14:35	Hail	2.00 in.	0	0	0.00K	0.00K
STRUNK	MCCREARY CO.	7/27/2014	14:35	Hail	3.00 in.	0	0	0.00K	0.00K

STRUNK	MCCREARY CO.	7/27/2014	14:35	Hail	2.75 in.	0	0	0.00K	0.00K
BAKERTON	CUMBERLAND CO.	7/27/2014	14:36	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BECKS STORE	CUMBERLAND CO.	7/27/2014	14:38	Hail	1.00 in.	0	0	0.00K	0.00K
STRUNK	MCCREARY CO.	7/27/2014	14:40	Hail	1.00 in.	0	0	0.00K	0.00K
STRUNK	MCCREARY CO.	7/27/2014	14:41	Hail	1.75 in.	0	0	0.00K	0.00K
JAMESTOWN	RUSSELL CO.	7/27/2014	14:50	Hail	1.75 in.	0	0	0.00K	0.00K
MILL SPGS	WAYNE CO.	7/27/2014	15:10	Hail	1.00 in.	0	0	0.00K	0.00K
BRONSTON	PULASKI CO.	7/27/2014	15:30	Hail	1.00 in.	0	0	0.00K	0.00K
ALPINE	PULASKI CO.	7/27/2014	15:45	Hail	1.25 in.	0	0	0.00K	0.00K
ALPINE	PULASKI CO.	7/27/2014	15:50	Hail	1.75 in.	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	7/27/2014	16:00	Hail	1.50 in.	0	0	0.00K	0.00K
FLAT ROCK	MCCREARY CO.	7/27/2014	16:40	Hail	1.75 in.	0	0	0.00K	0.00K
BAKERTON	CUMBERLAND CO.	7/27/2014	18:55	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SEVENTY SIX	CLINTON CO.	7/27/2014	19:16	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K

					EG				
MONTICELLO WAYNE ARP	WAYNE CO.	8/20/2014	16:55	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
MARSHES SIDING	MCCREARY CO.	8/20/2014	17:38	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
FLAT ROCK	MCCREARY CO.	9/2/2014	16:41	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WHITLEY CITY	MCCREARY CO.	9/2/2014	16:45	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
GABE	GREEN CO.	10/6/2014	15:25	Hail	1.00 in.	0	0	0.00K	0.00K
BAKERTON	CUMBERLAND CO.	10/6/2014	17:01	Hail	2.00 in.	0	0	0.00K	0.00K
BAKERTON	CUMBERLAND CO.	10/6/2014	17:05	Hail	2.00 in.	0	0	0.00K	0.00K
CEDARCREST	WAYNE CO.	10/6/2014	18:45	Hail	1.00 in.	0	0	0.00K	0.00K
DUNNVILLE	CASEY CO.	10/6/2014	19:17	Hail	1.00 in.	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	10/6/2014	21:45	Hail	1.25 in.	0	0	0.00K	0.00K
HOLMES	ADAIR CO.	10/7/2014	2:24	Hail	1.75 in.	0	0	20.00K	0.00K
WEST SOMERSET	PULASKI CO.	10/7/2014	4:23	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K

RUTH	PULASKI CO.	10/7/2014	4:30	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	12/24/2014	14:10	Strong Wind	43 kts. EG	0	0	1.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	12/24/2014	14:15	High Wind	53 kts. EG	0	0	1.00K	0.00K
OLGA	RUSSELL CO.	4/2/2015	17:15	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
TRIMBLE	PULASKI CO.	4/2/2015	18:50	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WHITE ROSE	TAYLOR CO.	4/10/2015	3:05	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
WHITTLE	RUSSELL CO.	4/10/2015	3:12	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MARSHES SIDING	MCCREARY CO.	4/10/2015	5:15	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
PULASKI (ZONE)	PULASKI (ZONE)	4/20/2015	15:45	Strong Wind	40 kts. EG	0	0	1.00K	0.00K
COLUMBIA LUDOT ARPT	ADAIR CO.	4/25/2015	19:25	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MONTPELIER	ADAIR CO.	4/25/2015	19:38	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

GUM CORNERS	RUSSELL CO.	4/25/2015	19:40	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ESTO	RUSSELL CO.	4/25/2015	19:43	Thunderstorm Wind	53 kts. MG	0	0	0.00K	0.00K
MODOC	CUMBERLAND CO.	4/25/2015	19:57	Hail	0.88 in.	0	0	0.00K	0.00K
WAGO	CLINTON CO.	4/25/2015	20:04	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MURL	WAYNE CO.	4/25/2015	21:10	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
OTE	GREEN CO.	5/11/2015	12:15	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CRAYCRAFT	ADAIR CO.	5/11/2015	13:00	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/11/2015	13:20	Thunderstorm Wind	52 kts. MG	0	0	0.00K	0.00K
CAMPBELLSVILLE ARPT	TAYLOR CO.	5/11/2015	13:25	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/11/2015	13:30	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CANE VLY	ADAIR CO.	5/26/2015	14:40	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

WEST SOMERSET	PULASKI CO.	6/8/2015	15:15	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	6/16/2015	16:40	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
STEUBENVILLE	WAYNE CO.	6/16/2015	16:45	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	6/21/2015	14:10	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
GREENSBURG	GREEN CO.	6/21/2015	14:20	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MONTICELLO WAYNE ARP	WAYNE CO.	6/21/2015	16:43	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SUSIE	WAYNE CO.	6/21/2015	16:45	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
STEARNS	MCCREARY CO.	6/21/2015	17:25	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
STEARNS	MCCREARY CO.	6/21/2015	17:25	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
GRADYVILLE	ADAIR CO.	6/25/2015	17:16	Hail	0.88 in.	0	0	0.00K	0.00K
LANHAMTOWN	CASEY CO.	6/25/2015	23:03	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

DENT	RUSSELL CO.	6/26/2015	1:17	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	6/26/2015	1:27	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MONTICELLO WAYNE ARP	WAYNE CO.	6/26/2015	2:52	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
JABEZ	RUSSELL CO.	6/26/2015	2:55	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
CABELL	WAYNE CO.	6/26/2015	15:35	Hail	1.75 in.	0	0	0.00K	0.00K
CEDARCREST	WAYNE CO.	6/26/2015	16:00	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CAINS STORE	PULASKI CO.	6/26/2015	16:35	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	6/29/2015	15:52	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	7/7/2015	18:58	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SUMMERSVILLE	GREEN CO.	7/9/2015	10:58	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
GABE	GREEN CO.	7/9/2015	10:58	Thunderstorm Wind	52 kts. EG	0	0	50.00K	0.00K

CAMPBELLSVILLE	TAYLOR CO.	7/9/2015	12:09	Thunderstorm Wind	52 kts. EG	0	0	15.00K	0.00K
ELK HORN	TAYLOR CO.	7/9/2015	12:12	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	7/9/2015	12:15	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SPURLINGTON	TAYLOR CO.	7/9/2015	12:20	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PRICETOWN	CASEY CO.	7/9/2015	12:37	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
EUBANK	PULASKI CO.	7/9/2015	12:55	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
KEMP	ADAIR CO.	7/9/2015	14:19	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
GRADYVILLE	ADAIR CO.	7/9/2015	14:26	Thunderstorm Wind	52 kts. EG	0	0	20.00K	0.00K
RUSSELL SPGS ARPT	RUSSELL CO.	7/9/2015	14:56	Thunderstorm Wind	52 kts. EG	0	0	15.00K	0.00K
RUSSELL SPGS	RUSSELL CO.	7/9/2015	15:04	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
DALLO	RUSSELL CO.	7/9/2015	15:05	Thunderstorm Wind	52 kts. EG	0	0	20.00K	0.00K

BOURBON	PULASKI CO.	7/9/2015	15:37	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
BURNETTA	PULASKI CO.	7/9/2015	16:20	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
NANCY	PULASKI CO.	7/9/2015	16:27	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SARDIS	PULASKI CO.	7/9/2015	16:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
OAK HILL	PULASKI CO.	7/9/2015	16:37	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SOMERSET	PULASKI CO.	7/9/2015	16:37	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ELIHU	PULASKI CO.	7/9/2015	16:38	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	7/10/2015	13:13	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
HATCHER	TAYLOR CO.	7/10/2015	13:40	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	7/10/2015	15:00	Thunderstorm Wind	52 kts. EG	0	0	10.00K	0.00K
WATAUGA	CLINTON CO.	7/10/2015	15:30	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

ARISTA	TAYLOR CO.	7/12/2015	13:58	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BLACK GNAT	GREEN CO.	7/13/2015	16:07	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BLACK GNAT	GREEN CO.	7/13/2015	16:08	Hail	1.75 in.	0	0	0.00K	0.00K
GREENSBURG	GREEN CO.	7/13/2015	16:09	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BLACK GNAT	GREEN CO.	7/13/2015	16:09	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
BLISS	ADAIR CO.	7/13/2015	16:34	Thunderstorm Wind	52 kts. EG	0	0	30.00K	0.00K
BLISS	ADAIR CO.	7/13/2015	16:40	Hail	1.75 in.	0	0	0.00K	0.00K
WHITE ROSE	TAYLOR CO.	7/13/2015	16:45	Hail	0.88 in.	0	0	0.00K	0.00K
WHITE ROSE	TAYLOR CO.	7/13/2015	16:49	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
WHITE ROSE	TAYLOR CO.	7/13/2015	16:51	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
BURKESVILLE	CUMBERLAND CO.	7/13/2015	17:05	Thunderstorm Wind	65 kts. EG	0	0	75.00K	0.00K
BENGAL	TAYLOR CO.	7/13/2015	17:20	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K

					EG				
MARROWBONE	CUMBERLAND CO.	7/13/2015	17:31	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LESLIE	CUMBERLAND CO.	7/13/2015	17:32	Hail	2.75 in.	0	0	0.00K	0.00K
MUD CAMP	CUMBERLAND CO.	7/13/2015	17:33	Hail	1.00 in.	0	0	0.00K	0.00K
WRIGHTS	TAYLOR CO.	7/13/2015	17:35	Hail	1.25 in.	0	0	0.00K	0.00K
JUDIO	CUMBERLAND CO.	7/13/2015	17:53	Hail	1.00 in.	0	0	0.00K	0.00K
LIBERTY	CASEY CO.	7/14/2015	5:13	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CHANCE	ADAIR CO.	7/14/2015	5:52	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
OIL VLY	WAYNE CO.	7/14/2015	6:11	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
MONTICELLO WAYNE ARP	WAYNE CO.	7/14/2015	11:00	Hail	1.75 in.	0	0	0.00K	0.00K
MONTICELLO WAYNE ARP	WAYNE CO.	7/14/2015	11:01	Hail	1.75 in.	0	0	0.00K	0.00K
BOW	CUMBERLAND CO.	7/14/2015	11:56	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	7/14/2015	12:16	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K

					EG				
BAKERTON	CUMBERLAND CO.	7/14/2015	12:51	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CANTOWN	CASEY CO.	7/14/2015	19:20	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
WEST SOMERSET	PULASKI CO.	7/14/2015	19:50	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
SUGAR HILL	PULASKI CO.	7/14/2015	19:50	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ELIHU	PULASKI CO.	7/14/2015	19:55	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
EADSVILLE	WAYNE CO.	7/14/2015	20:00	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SCIENCE HILL	PULASKI CO.	7/18/2015	0:00	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
NANCY	PULASKI CO.	8/4/2015	15:40	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
SHAFTER	PULASKI CO.	8/4/2015	16:00	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
BURDICK	TAYLOR CO.	12/23/2015	22:04	Thunderstorm Wind	86 kts. EG	0	0	400.00K	0.00K

NORA	CLINTON CO.	12/23/2015	23:07	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
GREENWOOD	MCCREARY CO.	3/1/2016	14:50	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
GRADYVILLE	ADAIR CO.	3/31/2016	16:26	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
FAUBUSH	PULASKI CO.	3/31/2016	18:13	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
TANBARK	CUMBERLAND CO.	4/6/2016	17:47	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
WAGO	CLINTON CO.	4/6/2016	17:55	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
WATAUGA	CLINTON CO.	4/6/2016	17:55	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
BEECH BOTTOM	CASEY CO.	4/27/2016	15:15	Hail	1.00 in.	0	0	0.00K	0.00K
BEECH BOTTOM	CASEY CO.	4/27/2016	15:44	Hail	1.75 in.	0	0	50.00K	0.00K
LANHAMTOWN	CASEY CO.	4/27/2016	15:45	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
ALBANY ARPT	CLINTON CO.	5/4/2016	15:42	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

ALBANY	CLINTON CO.	5/4/2016	15:45	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	5/4/2016	15:48	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ALBANY	CLINTON CO.	5/4/2016	15:48	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/10/2016	17:56	Hail	1.00 in.	0	0	0.00K	0.00K
ACTON	TAYLOR CO.	5/10/2016	18:00	Hail	1.75 in.	0	0	0.00K	0.00K
MERRIMAC	TAYLOR CO.	5/10/2016	18:06	Hail	1.75 in.	0	0	0.00K	0.00K
ABSHER	ADAIR CO.	5/10/2016	18:10	Hail	1.75 in.	0	0	0.00K	0.00K
CANE VLY	ADAIR CO.	5/10/2016	18:17	Hail	1.75 in.	0	0	0.00K	0.00K
JACKTOWN	CASEY CO.	5/10/2016	18:25	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
GUM CORNERS	RUSSELL CO.	5/10/2016	19:15	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
CROCUS	ADAIR CO.	5/10/2016	19:15	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
FREEDOM	RUSSELL CO.	5/10/2016	19:40	Hail	1.75 in.	0	0	0.00K	0.00K

JAMESTOWN	RUSSELL CO.	5/10/2016	19:41	Hail	1.00 in.	0	0	0.00K	0.00K
FLOYD	PULASKI CO.	5/10/2016	20:55	Hail	1.50 in.	0	0	0.00K	0.00K
CEDARCREST	WAYNE CO.	5/10/2016	21:07	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
BURNSIDE	PULASKI CO.	5/10/2016	21:30	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE	TAYLOR CO.	5/10/2016	21:55	Hail	0.88 in.	0	0	0.00K	0.00K
SUGAR HILL	PULASKI CO.	5/10/2016	22:01	Hail	1.00 in.	0	0	0.00K	0.00K
MT VICTORY	PULASKI CO.	5/10/2016	22:15	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MONTICELLO	WAYNE CO.	5/26/2016	16:10	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
CAMPBELLSVILLE ARPT	TAYLOR CO.	5/26/2016	17:40	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
Totals: (3/1/1955-5/26/2016)						**1**	**47**	**23.46 M**	**520.005K**

[38]

Severe Thunderstorm & Wind

[38]NOAA National Centers for Environmental Information (NCEI); http://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=21%2CKENTUCKY

A thunderstorm that produces a tornado, winds of at least 58 mph (50 knots or ~93 km/h), and/or hail at least 1" in diameter. Structural wind damage may imply the occurrence of a severe thunderstorm. A thunderstorm wind equal to or greater than 40 mph (35 knots or ~64 km/h) and/or hail of at least ½" is defined as approaching severe.

Hail

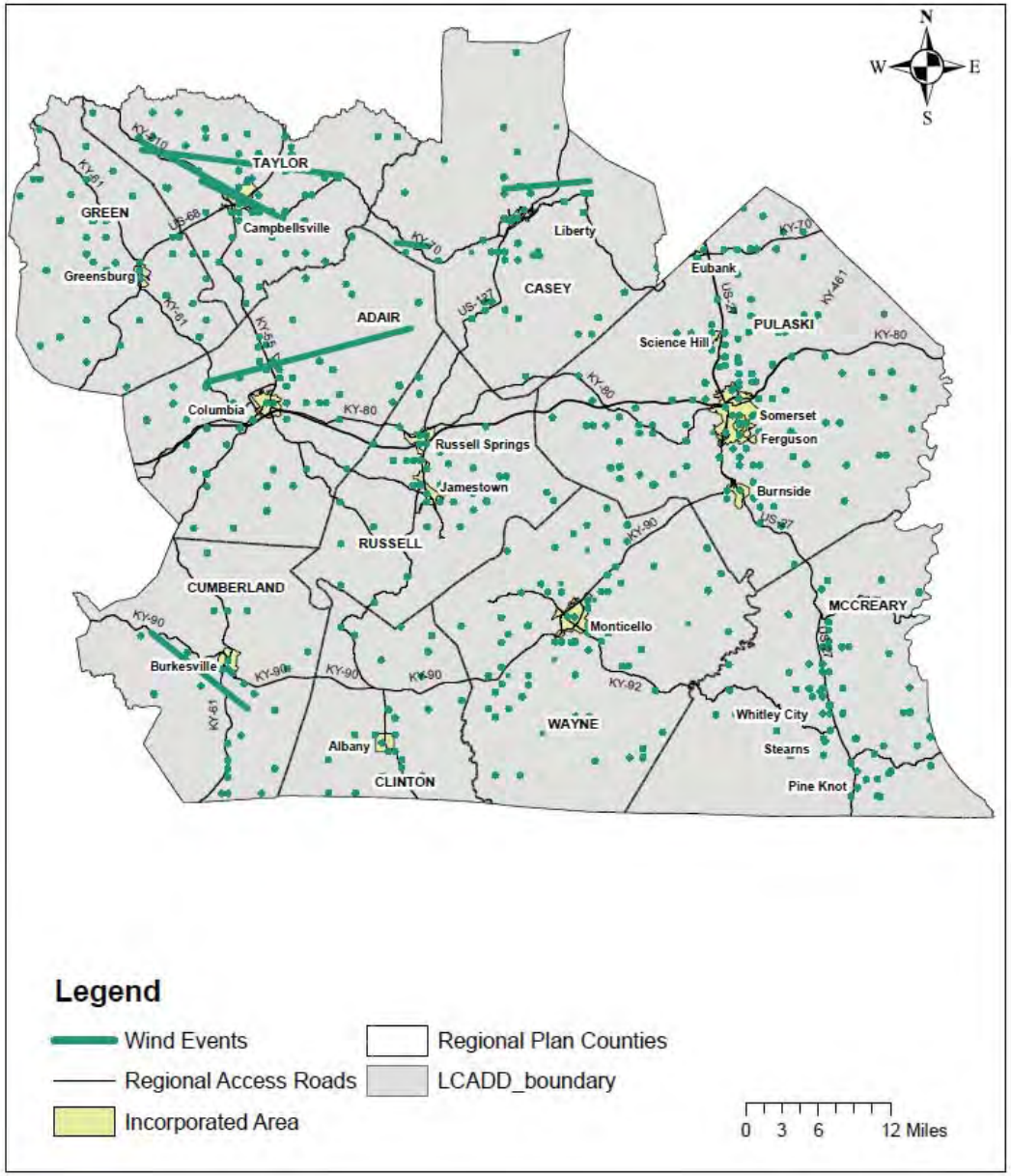
A hailstorm is an outgrowth of a severe thunderstorm in which balls or irregularly shaped lumps of ice greater than 0.75 inches in diameter fall with rain. Early in the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to warm air rising rapidly into the upper atmosphere and the subsequent cooling of the air mass. Frozen droplets gradually accumulate on the ice crystals until, having developed sufficient weight, they fall as precipitation.

The size of hailstones is a direct function of the severity and size of the storm. High velocity updraft winds are required to keep hail in suspension in thunderclouds. The strength of the updraft is a function of the intensity of heating at the Earth's surface. Higher temperature gradients relative to elevations above the surface result in increased suspension time and hailstone size.

Guide for determining hail sizes:

less than 0.50" Pea
0.50" - Marble/Mothball
0.75" - Dime/Penny
0.88" - Nickel
1.00" - Quarter
1.25" - Half Dollar
1.50" - Walnut/Ping Pong
1.75" - Golf Ball
2.00" - Hen Egg
2.50" - Tennis Ball
2.75" - Baseball
3.00" - Tea Cup
4.00" - Grapefruit
4.50" - Softball

Map 4.3(3)
LCADD Region Wind
1950-2015



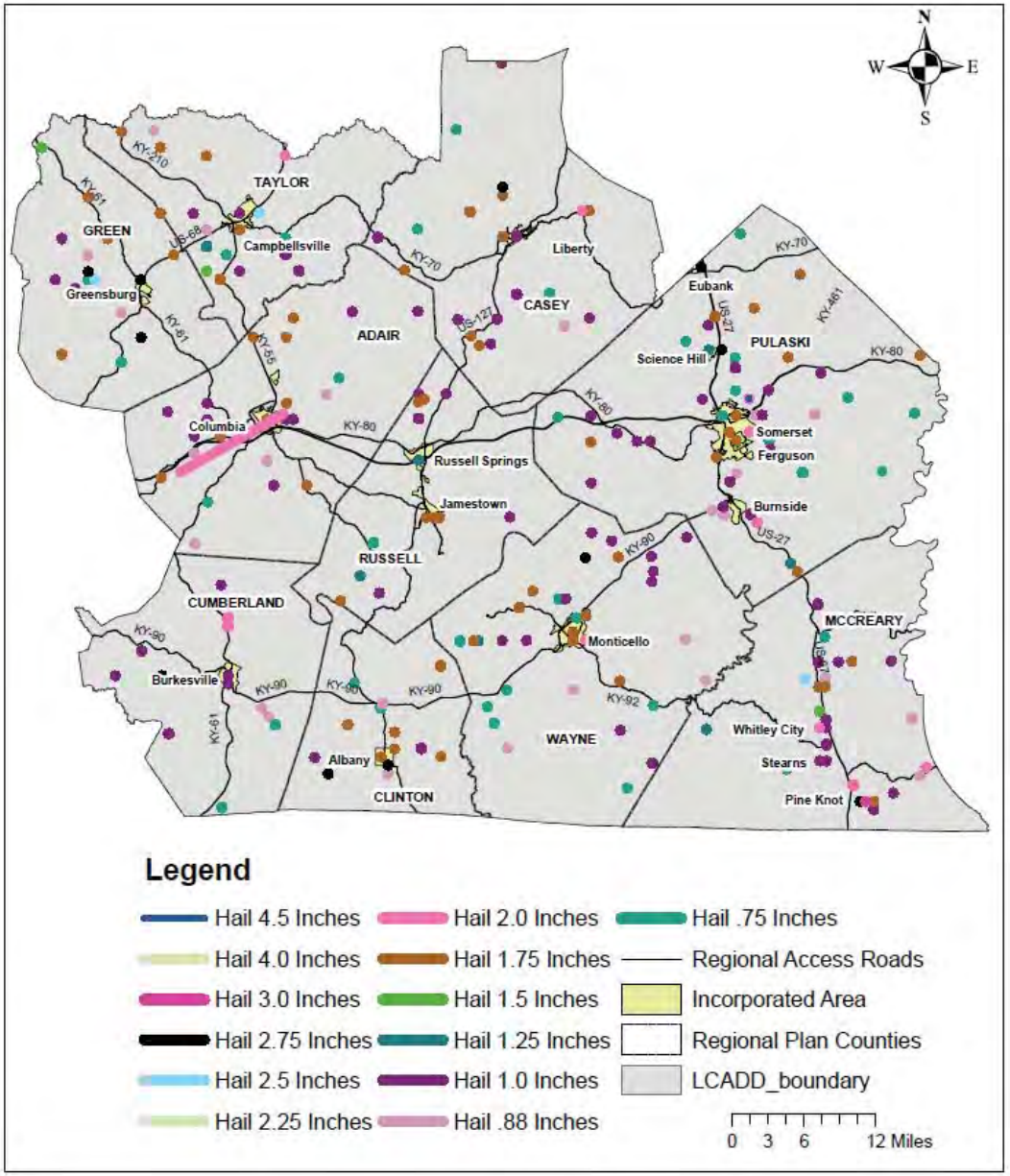
Data Source: National Weather Service Storm Prediction Center
http://www.spc.noaa.gov/gis/svrgis/
LCADD GIS Databases
Online Linkage: http://www.spc.noaa.gov/gis/svrgis/
Download Date: August 2016

Prepared By:
Lake Cumberland Area Development District

Table 4.3(5) NOAA Storm Events Database Probability Estimates (Event Types: Thunderstorm & Wind/High Wind/Lightning [no data for cities])

Event Probability Basis				Probable Future Events		
Jurisdiction	**Total # of Events**	**Total # Data Reporting Years**	**Total Losses Per County (Reporting Years)**	**Yearly Average Events Per County**	**Average Loss Per Event**	**Average Loss Per Year**
Adair County*	113	61	$314,000.00	1.85	$2,778.76	$5,147.54
Casey County*	99	61	$535,000.00	1.62	$5,404.04	$8,770.49
Clinton County*	78	61	$563,000.00	1.28	$7,217.95	$9,229.51
Cumberland County*	63	61	$310,000.00	1.04	$4,920.63	$5,081.97
Green County*	89	61	$336,000.00	1.46	$3,775.28	$5,508.20
McCreary County*	134	61	$1,077,000.00	2.20	$8,037.31	$17,655.74
Pulaski County*	326	61	$1,802,000.00	5.34	$5,527.61	$29,540.98
Russell County*	112	61	$633,000.00	1.84	$5,651.79	$10,377.05
Taylor County*	164	61	$2,045,000.00	2.69	$12,469.51	$33,524.59
Wayne County*	144	61	$654,000.00	2.36	$4,541.67	$10,721.31
Lake Cumberland Regional Totals	**1322**	**61**	**$8,269,000.00**	**2.17**	**$6,254.92**	**$135,557.38**

Map 4.3(2)
LCADD Region Hail
1950-2015



Data Source: National Weather Service Storm Prediction Center
http://www.spc.noaa.gov/gis/svrgis/
LCADD GIS Databases
Online Linkage: http://www.spc.noaa.gov/gis/svrgis/
Download Date: August 2016

Prepared By:
Lake Cumberland Area Development District

Table 4.3(6) NOAA Storm Events Database Probability Estimates (Event Types: Hail [no data for cities])

Event Probability Basis				Probable Future Events		
Jurisdiction	**Total # of Events**	**Total # Data Reporting Years**	**Total Losses Per County (Reporting Years)**	**Yearly Average Events Per County**	**Average Loss Per Event**	**Average Loss Per Year**
Adair County*	40	61	$1,525,000.00	0.66	$38,125.00	$25,000.00
Casey County*	43	61	$60,000.00	0.70	$1,395.35	$983.61
Clinton County*	24	61	$10,000.00	0.39	$416.67	$163.93
Cumberland County*	20	61	$0.00	0.33	$0.00	$0.00
Green County*	31	61	$50,000.00	0.51	$1,612.90	$819.67
McCreary County*	56	61	$0.00	0.92	$0.00	$0.00
Pulaski County*	125	61	$6,515,500.00	2.05	$52,124.00	$106,811.48
Russell County*	26	61	$2,300.00	0.43	$88.46	$37.70
Taylor County*	52	61	$5,000.00	0.85	$96.15	$81.97
Wayne County*	44	61	$2,500.00	0.72	$56.82	$40.98
Lake Cumberland Regional Totals	**461**	**61**	**$8,170,300.00**	7.56	**$17,722.99**	$133,939.34

Summary

Hazard Location:

- ≠ Tornadoes:
  - Very high winds across a generally narrow section of Region, typically less than 600 ft. wide. Exact locations are unpredictable and may occur anywhere
  - Lightning strikes across a broader portion of Region. Exact locations are unpredictable and may occur anywhere
- ≠ Thunderstorms:
  - Potentially high winds across a wide swath of the Region
  - Flash flooding occurrs along rivers and streams
  - Lightning strikes can occur across a wide swath of the Region

Potential Damage (All Hazards):

- ≠ Wind damage to infrastructure and trees
- ≠ Power outages, limited access to communications and utilities
- ≠ Impassible roads due to flooding, downed power lines and trees
- ≠ Flooded basements, buildings, parking lots, roadways, and other infrastructure
- ≠ Lightning strikes, potentially igniting a fire

Scale / Extent:

- ≠ Tornadoes:
  - o Very high winds depending on the magnitude of the storm, from <40 mph to >300 mph
- ≠ Thunderstorms:
  - o Inland flooding – flooding caused by rainfall up to 7 inches (100 year storm) but potentially up to and in excess of 12 inches
  - o High winds depending on the magnitude of the storm, from <40 mph to >100 mph

Previous Occurrences:

- ≠ Tornadoes:
  - o Lake Cumberland Region typically experiences one-two tornados on average per year over a decade, typically magnitude F0 or F1 on the Fujita Scale, with the potential for this event to occur anywhere within the Lake Cumberland Region
  - o A tornado causing significant damage has not occurred for many years (F3 in 2008)
- ≠ Thunderstorms:
  - o Thunderstorms occur on a monthly, if not weekly basis during summer months

Likelihood of Future Occurrences:

- ≠ Tornadoes:
  - o Lake Cumberland Region is located in an area of very low probability of occurrence, with less than a two tornado average per-year expected to occur over a ten year period
  - o Small tornadoes may occur causing localized damage
  - o A damaging tornado is unlikely to occur every 10-20 years
- ≠ Thunderstorms:
  - o Thunderstorms may be expected to occur several times a month during the late spring, summer, and early fall months

4.4 Geologic Hazards Earthquake

An earthquake is a sudden, intense shaking of the ground caused by the sudden movement of large portions of the Earth's crust, potentially causing massive damage to buildings and infrastructure. Earthquakes can occur suddenly at any time, with virtually no warning.

While major earthquakes are unlikely, they have occurred within the region in the past. Magnitude and Intensity measure different characteristics of earthquakes. Magnitude measures the energy released at the source of the earthquake. Magnitude is determined from measurements in seismographs. Intensity measures the strength of shaking produced by the earthquake at a certain location. Intensity is determined from effects on people, human structures, and the natural environment.

The Richter magnitude scale was developed in 1935 by Charles F. Richter of the California Institute of Technology as a mathematical device to compare the size of earthquakes. The magnitude of an earthquake is determined from the logarithm of the amplitude of waves recorded by seismographs. Adjustments are included in the magnitude formula to compensate for the variation in the distance between the various seismographs and the epicenter of the earthquakes. On the Richter Scale, magnitude is expressed in whole numbers and decimal fractions. For example, a magnitude of 5.3 might be computed for a moderate earthquake, and a strong earthquake might be rated as magnitude 6.3. Because of the logarithmic basis of the scale, each whole number increase in magnitude represents a tenfold increase in measured amplitude; as an estimate of energy, each whole number step in the magnitude scale corresponds to the release of about 31 times more energy than the amount associated with the preceding whole number value. Although the Richter Scale has no upper limit, the largest known shocks have had magnitudes in the 8.8 to 8.9 range. Recently, another scale called the moment magnitude scale has been devised for more precise study of great earthquakes. The Richter Scale is not used to express damage. An earthquake in a densely populated area which results in many deaths and considerable damage may have the same magnitude as a shock in a remote area that does nothing more than frighten the wildlife. Large-magnitude earthquakes that occur beneath the oceans may not even be felt by humans.

The Modified Mercalli Intensity Scale measures the effect of an earthquake on the Earth's surface and is called the intensity. The intensity scale consists of a series of certain key responses such as people awakening, movement of furniture, damage to chimneys, and finally--total destruction. Although numerous intensity scales have been developed over the last several hundred years to evaluate the effects of earthquakes, the one currently used in the United States is the Modified Mercalli (MM) Intensity Scale. It was developed in 1931 by the American seismologists Harry Wood and Frank Neumann. This scale, composed of 12 increasing levels of intensity that range from imperceptible shaking to catastrophic destruction, is designated by Roman numerals. It does not have a mathematical basis; instead it is an arbitrary ranking based on observed effects. The Modified Mercalli Intensity value assigned to a specific site after

an earthquake has a more meaningful measure of severity to the nonscientist than the magnitude because intensity refers to the effects actually experienced at that place.[39]

Table 4.4(1) outlines the Richter Magnitude Scale, a logarithmic scale used for documenting energy released during an earthquake.

Table 4.4(1) – Richter Magnitude Scale

Magnitude	Description	Typical Damage
<2.0	Micro	Micro earthquake, not felt
2.0-2.9	Minor	Generally not felt, but recorded
3.0-3.9		Often felt, but rarely causes damage
4.0-4.9	Light	Noticeable shaking of indoor items. Significant damage unlikely.
5.0-5.9	Moderate	Can cause major damage to poorly constructed buildings over small regions. At most slight damage to well-designed
6.0-6.9	Strong	Can be destructive in areas up to approximately 160 kilometers across populated areas
7.0-7.9	Major	Can cause serious damage over larger areas
8.0-8.9	Great	Can cause serious damage several hundred kilometers across
9.0-9.9		Devastating in areas several thousand kilometers across
10.0+	Massive	Never recorded, widespread devastation across very large areas.

[40]

The following is an abbreviated description of the levels of Modified Mercalli intensity.

Table 4.4(2) – Modified Mercalli Intensity Scale Scale

Intensity	Shaking	Description/Damage
I	Not felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest,especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.

[39] USGS, The Severity of an Earthquake; http://pubs.usgs.gov/gip/earthq4/severitygip.html
[40] United States Geological Survey. http://earthquake.usgs.gov/hazards/products/conterminous/2008/maps/

V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Very strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

[41]

Lake Cumberland Region History – Earthquakes

Although the risk of a damaging earthquake is low, only the two following recorded earthquakes have occurred in or near our region:

Magnitude 2.3 - 20km NNE of Whitley City, Kentucky
Time - 2014-09-09 03:16:07 (UTC-05:00)
Location - 36.904°N 84.406°W
Depth - 9.5 km

Magnitude 2.4 - 4km NNW of Byrdstown, Tennessee

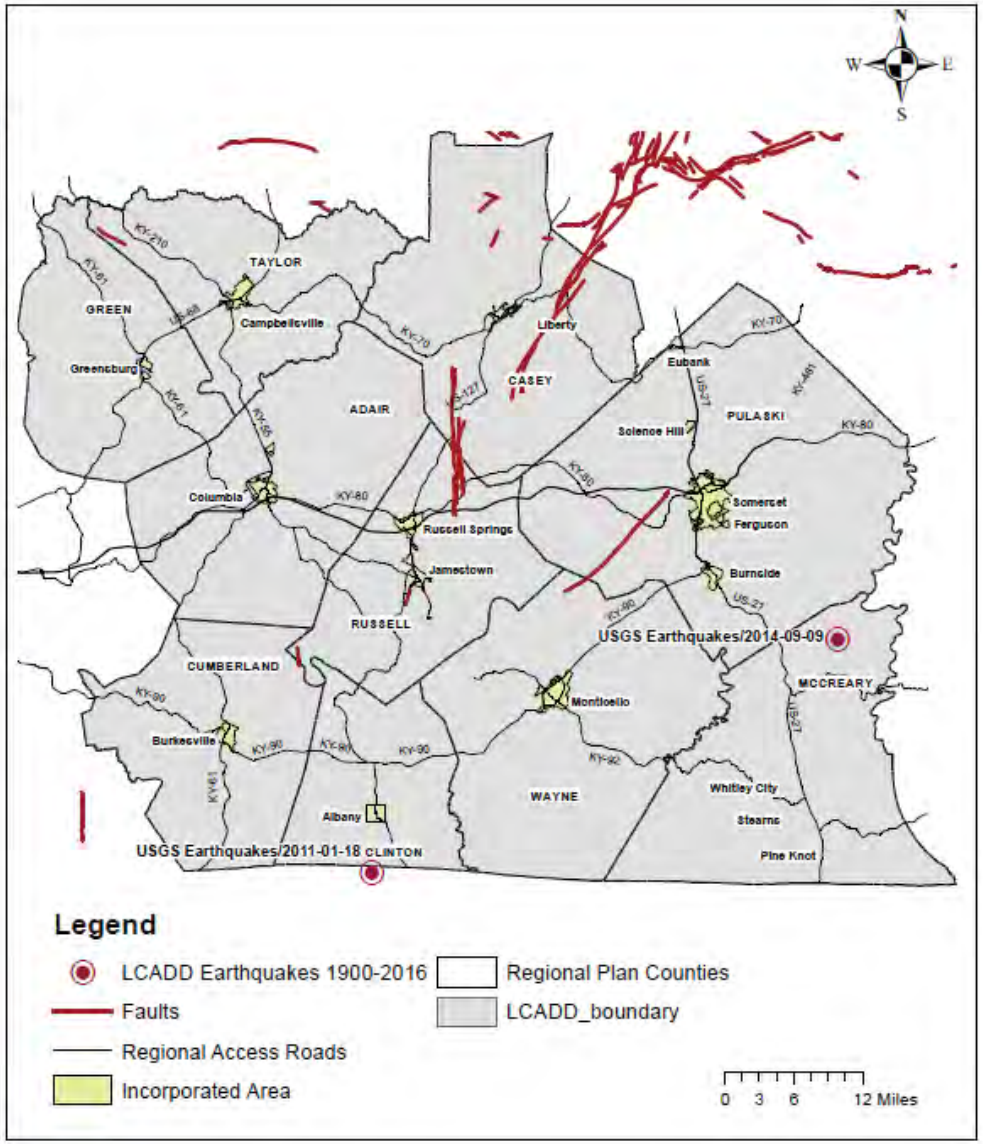
Time - 2011-01-18 05:08:47 (UTC-05:00)
Location - 36.615°N 85.142°W
Depth - 7.0 km [42]

[41] USGS, The Severity of an Earthquake; http://pubs.usgs.gov/gip/earthq4/severitygip.html;
[42] USGS, Online Earthquake Mapping;
https://earthquake.usgs.gov/earthquakes/map/#%7B%22autoUpdate%22%3A%5B%5D%2C%22basemap%22%3A%22grayscale%22%2C%22feed%22%3A%221476808496534%22%2C%22listFormat%22%3A%22default%22%2C%22mapposition%22%3A%5B%5B36.13787471840729%2C-87.09136962890625%5D%2C%5B37.97884504049713%2C-83.07037353515625%5D%5D%2C%22overlays%22%3A%5B%22plates%22%5D%2C%22restrictListToMap%22%3A%5B%22restrictListToMap%22%5D%2C%22search%22%3A%7B%22id%22%3A%221476808496534%22%2C%22name%22%3A%22Search%20Results%22%2C%22isSearch%22%3Atrue%2C%22params%22%3A%7B%22starttime%22%3A%221900-01-01%2000%3A00%3A00%22%2C%22endtime%22%3A%222016-10-18%2023%3A59%3A59%22%2C%22maxlatitude%22%3A37.571%2C%22minlatitude%22%3A36.558%2C%22maxlongitude%22%3A-84.298%2C%22minlongitude%22%3A-85.869%2C%22minmagnitude%22%3A2%2C%22orderby%22%3A%22time%22%7D%7D%2C%22sort%22%3A%22newest%22%2C%22timezone%22%3A%22local%22%2C%22viewModes%22%3A%5B%22map%22%5D%2C%22event%22%3A%22se609170%22%7D

Map 4.4(1)
LCADD Region
Earthquake & Fault Information
1950-2015

Data Source: USGS Mineral Resources On-Line Spatial Data
Kentucky geologic map data
LCADD GIS Databases
Online Linkage:
https://mrdata.usgs.gov/geology/state/state.php?state=KY
Download Date: Oct. 2016

Prepared By:
Lake Cumberland Area Development District



[43]

[43] USGS, About Latest Earthquakes; https://earthquake.usgs.gov/data/comcat/latest-eqs.php

Faults represent breaks in the Earth's crust. In the map above, these red lines show faults in the Lake Cumberland Region. Usually, movements along faults are not great at any one time. Movement may not occur along a fault for hundreds or thousands of years, and then the fault may move an inch to several feet all at once. Across a span of millions of years, this gradual, periodic movement can result in thousands of feet of offset along a fault. Most of the movement along Kentucky's faults occurred in the distant past. The Lake Cumberland Region has a small chance of major earthquake activity along the identified faults.

Most of the activity in Kentucky has occurred in the western portion of the State, near the New Madrid seismic zone. The series of catastrophic earthquakes at New Madrid, Missouri, in 1811 - 1812, dominates the seismic history of the middle Mississippi Valley.

As early as 1779 an earthquake was reported felt in northern Kentucky. No further details were available on this event. Meager reports of another earthquake in the northern and eastern portions of Kentucky indicated an occurrence during the spring of 1791 or 1792.

Reports of chimneys being knocked down in many places in Kentucky resulted from the 1811 - 1812 earthquakes at New Madrid, Missouri. Mr. Jared Brooks at Louisville, Kentucky kept a detailed record of 1,874 tremors from the initial shock of December 16, 1811, through March 15, 1812. Shocks continued to occur at frequent intervals for at least two years, thus the total number of shocks was much greater. It is not unlikely that between 2,000 and 3,000 tremors were felt in Kentucky in 1811 and 1812. Reelfoot Lake, a small portion of which extends into Kentucky, is a present-day reminder of the great forces associated with these earthquakes.

Evaluation of the historical information has shown that the LCADD region have only had two notable earthquake episodes since early 1900’s. No estimates or records of damages were located for the Lake Cumberland Region. Several other earthquakes in surrounding states and Kentucky have been felt throughout the Lake Cumberland Region; however no damage data was located.

However the potential earthquake hazard is high to western and central Kentucky and will have a critical impact on the Lake Cumberland Region as it is called upon to provide medical, shelter, emergency resources, and is impacted by economic losses in infrastructure and commerce. The Kentucky New Madrid Seismic Zone Scenario projects thousands of damaged buildings in the State of Kentucky, particularly western Kentucky that will generate a substantial amount of debris. A total of 4,000,000 tons of debris is expected to be produced.

The extensive damage to the critical counties leaves tens of thousands displaced, with thousands more displaced outside this region. Nearly 53,000, or over 65% of all displaced people, reside in the critical counties with another 25,000 displaced in central Kentucky. These

estimates indicate that 2% of the entire population is displaced, though when considering the critical counties only, more than 8% of the population is displaced, which is a far more significant portion. Table 79 shows the distribution of the shelter-seeking population in and out of the 25 critical counties. Approximately 20,700 people seek public shelter and roughly 13,900 are in the critical counties alone. Nearly ten million square feet of space are required to house the entire displaced population. In addition, 1.2 million pounds of ice and 300,000 MREs are required to feed this group of people for one week.

Table 4.4.(3) – NMSZ Event Shelter Requirements for the State of Kentucky

Displaced and Shelter Seeking Population			
	Total Population	**Displaced Population**	**helter Seeking Population**
25 Critical Counties	655,184	52,964	13,904
Remaining Counties	3,386,585	25,225	6,759
Total State	4,041,769	78,189	20,663

Damage to infrastructure leads to nearly 10,000 casualties throughout the state of Kentucky. Table 80 illustrates the various types of casualties estimated should the event occur at 2:00 PM. Approximately 6,800 minor injuries are expected (Level 1) while 69 nearly 600 fatalities are expected. Very few casualties, mostly injuries, are expected to occur outside the 25 critical counties.

Table 4.4(4) – NMSZ Event Casualties for the State of Kentucky

Worst Case Casualties (2:00 PM)					
Severity Level	**Level 1 (Green)**	**Level 2 (Yellow)**	**Level 3 (Red)**	**Level 4 (Black)**	**Total**
25 Critical	6,722	2,051	318	593	9,684
Other Remaining	49	5	1	0	56
Total State	6,771	2,056	319	593	9,740

Table 4.4(5) – NMSZ Event Total Direct Economic Losses for the State of Kentucky

Total Direct Economic Losses		
System	**Inventory Value**	**Total Direct Economic Loss**
Buildings	$259,784,000,000	$9,442,940,000
Transportation	$128,035,860,000	$1,291,480,000
Utility	$797,983,900,000	$35,291,800,000
Total	**$1,185,803,760,000**	**$46,026,220,000**

44

[44] Central U.S. Earthquake Consortium – CUSEC; Impact of Earthquakes on the Central USA; Comprehensive Mid-America Earthquake Center Report on earthquake scenarios in the central U.S.; http://www.cusec.org/documents/aar/NMSZ_CAT_PLANNING_SCENARIO.pdf

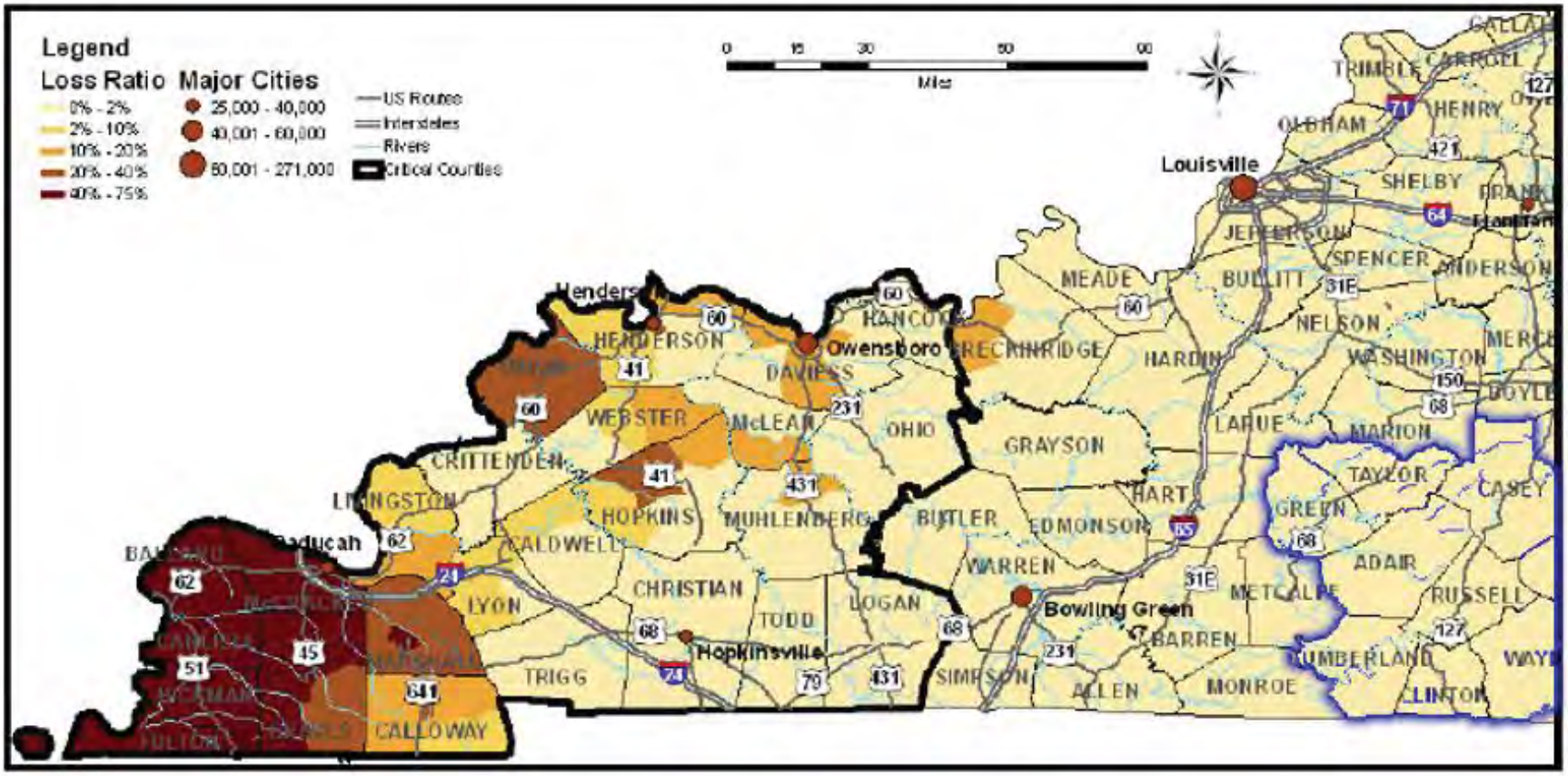
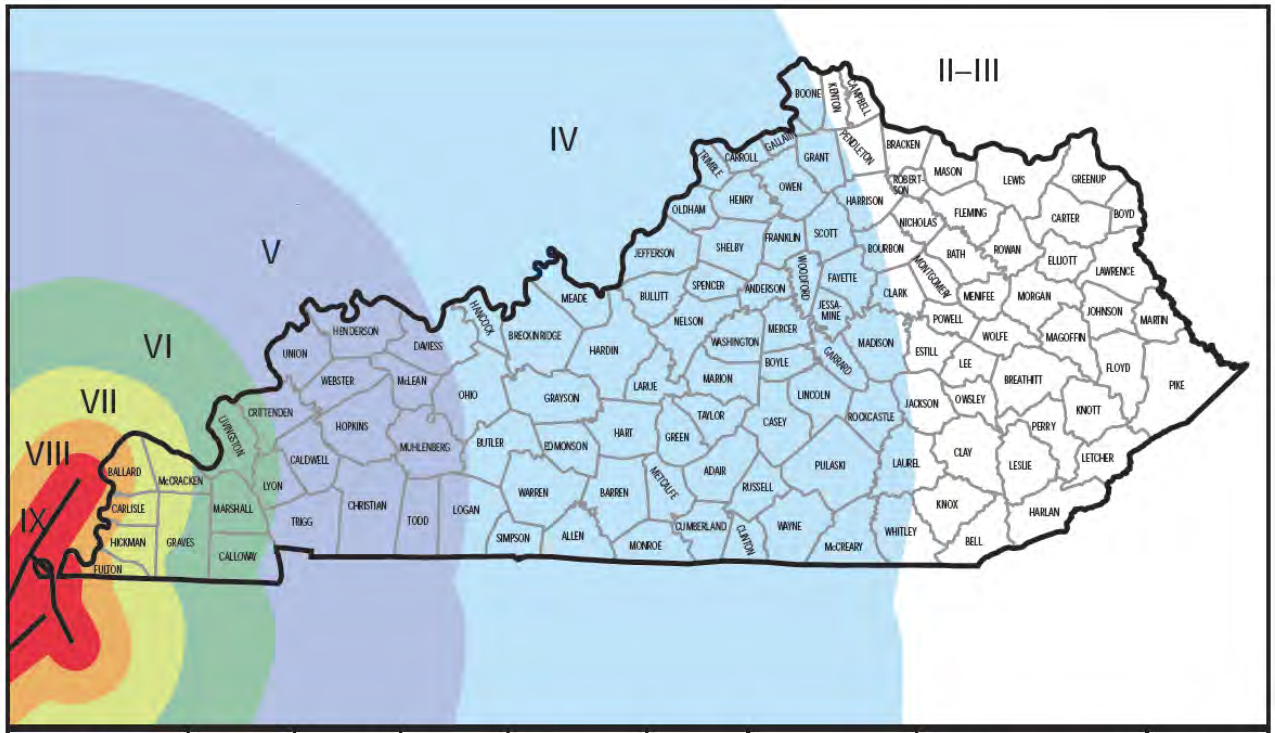


Figure 25: NMSZ Event Loss Ratio (% of Total Building Assets) for the State of Kentucky

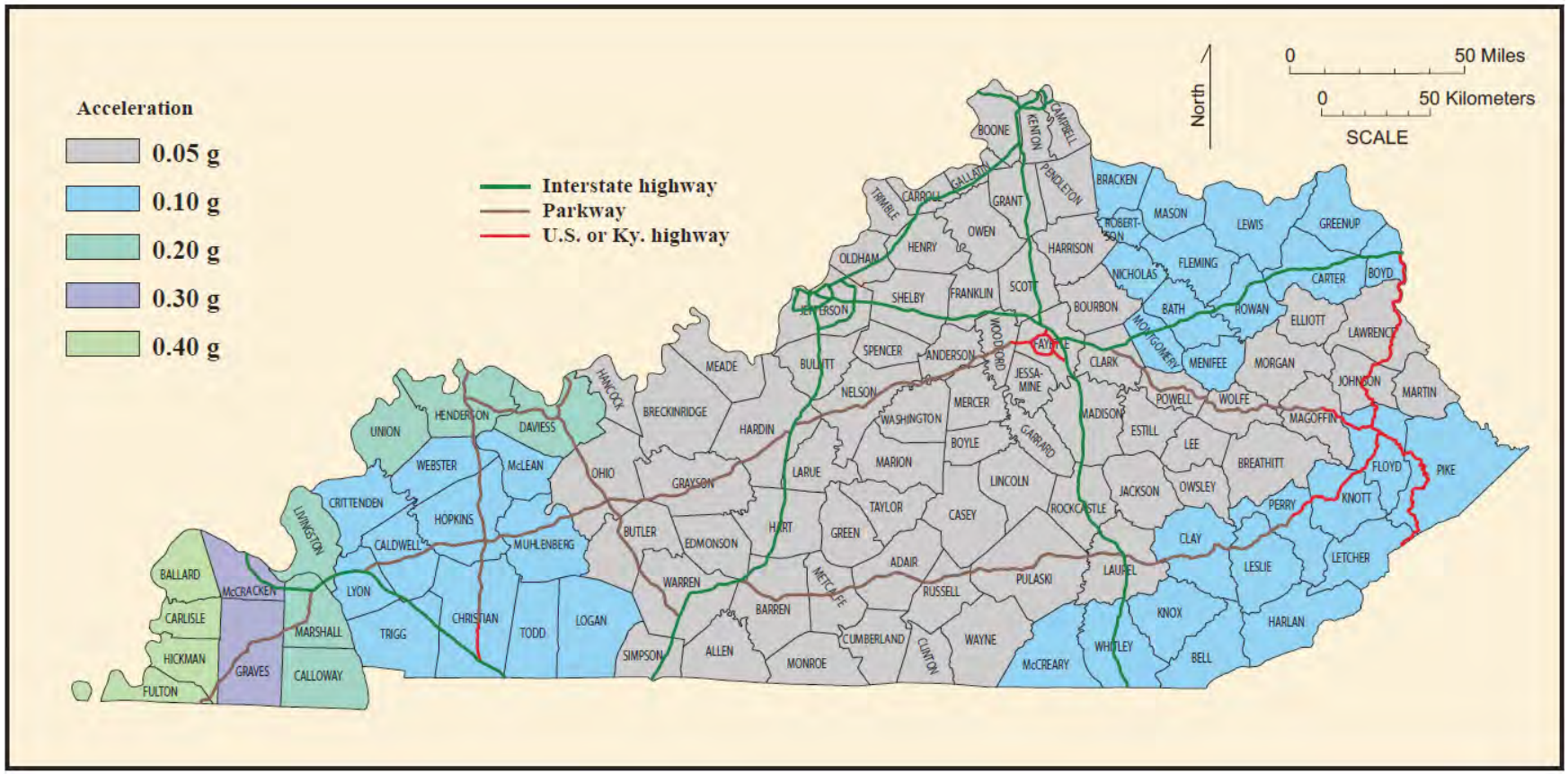
45

[45] Central U.S. Earthquake Consortium – CUSEC; Impact of Earthquakes on the Central USA; Comprehensive Mid-America Earthquake Center Report on earthquake scenarios in the central U.S.; http://www.cusec.org/documents/aar/NMSZ_CAT_PLANNING_SCENARIO.pdf



Perceived Shaking	Not Felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent
Potential Damage	None	None	None	Very Light	Light	Moderate	Moderately Heavy	Heavy
PGA (%g)	< 0.17	0.17–1.4	1.4–3.9	3.9–9.2	9.2–18	18–34	34–65	65–124
Instrumental Intensity	II	III	IV	V	VI	VII	VIII	IX

Predicted peak ground acceleration (PGA), in units of the percentage of the acceleration of gravity, on hard rock from a magnitude-7.5 earthquake in the New Madrid Seismic Zone. Map colored according to instrumental intensities.



Peak ground acceleration on hard rock, in units of g (acceleration due to gravity), recommended for mitigation considerations in Kentucky.[46]

[46] Earthquakes in Kentucky: Hazards, Mitigation, and Emergency Preparedness; http://kgs.uky.edu/kgsweb/olops/pub/kgs/SP17_12.pdf

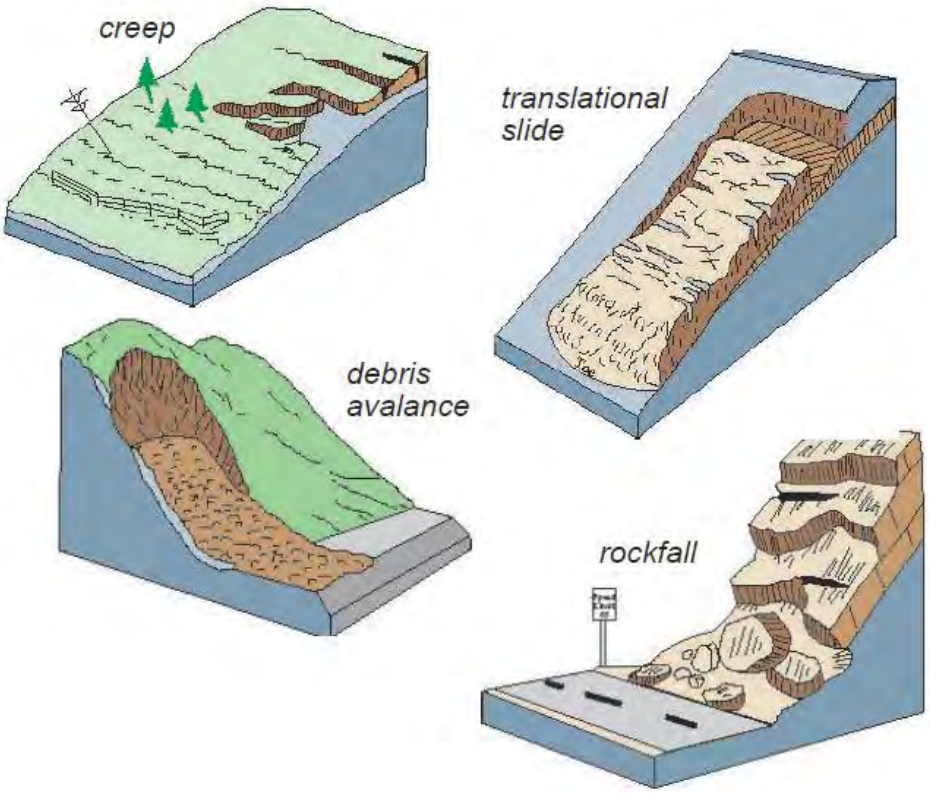
Landslide

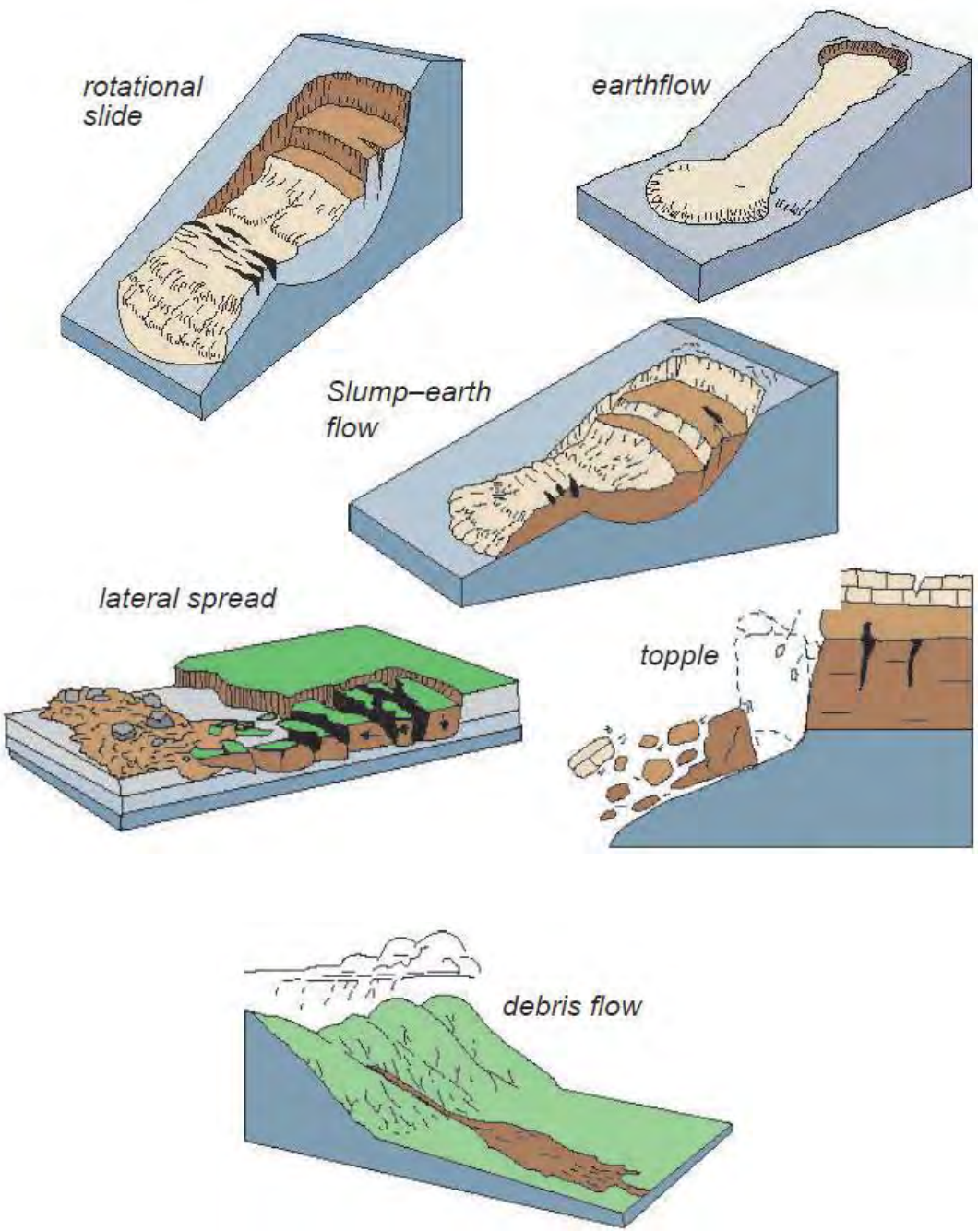
Landslides are the downslope movement of rock, soil, or both under the influence of gravity. Different landslide types are classified by rate of movement and the type of material. Velocity of landslide movement can also vary from slow to very rapid.

Landslides pose a hazard to hundreds of thousands of people in the United States every year, occurring in every state and U.S. territory. Kentucky's landslides occur in all regions of the state, mostly in the Eastern Kentucky Coal Field, Outer Bluegrass, the Knobs region, and along the Ohio River Valley. Areas generally prone to landslides include preexisting landslides, highly developed hillsides, poorly compacted artificial fill slopes, and steep drainage hollows or concave slopes with moderate to thick soils.

Intense rainfall–Soil and rock material on slopes may have high moisture levels, increasing pore-water pressure, which destabilizes the slope and causes slides. It is important to be aware of storm-water drainage near homes, offices, and other buildings. Water-level change–Rapid lowering of groundwater against a slope can trigger landslides, especially along dams, coastlines, reservoirs, and rivers. The pore pressure in soil or rock material may not be able to adjust to a sudden drawdown of water, causing slope instability. Erosion–Natural stream water erosion can destabilize slopes and cause failure. This is common at the toe (bottom) of a slope. Human activities–These include vegetation removal, excavation of toe slopes, loading on a slope, leakage from pipes, and surface and underground mining. Earthquakes–Ground shaking during earthquakes can cause landslides in many different topographic and geologic settings.

Common Landslide Types:


creep
translational slide
debris avalance
rockfall


rotational slide
earthflow
Slump–earth flow
lateral spread
topple
debris flow

The Kentucky Landslide Inventory, an ongoing project provides a comprehensive framework and understanding of landslide data for Kentucky. There is a wealth of landslide information, such as hard-copy maps, state agency reports, and digital databases, which originate from many different sources. The main goal is to compile this information into a standardized database and use the most important data to understand landslide hazards in Kentucky. Landslide locations from the inventory can be viewed below in the **Map 4.4(2) & Map 4.4(3).**[47]

No additional historical data was available for the LCADD region on landslides. City/County subcommittee members identified only road cut areas where past or current landslides occur. These were identified and mapped for each county in previous additions to this plan.

The county/city subcommittees identified or estimated on average four or five road cut landslide locations in each county. However not all locations could be identified for mapping. The following table is a list of landslide locations identified by each county/city subcommittee:

Table 4.4(6) - Subcommittee Identified Landslide Locations

YEAR IDENTIFIED	NAME	COUNTY
2006	US 127 Approx. 1 mi. South of Liberty	Casey
2006	KY 70 Approx. 11 mi. East of Liberty	Casey
2006	KY 243 Approx. 15 mi. North of Liberty	Casey
2006	Calvery Ridge Rd. Approx. .5 mi. East Ky 70	Casey
2006	Rayborn Hill Rd. Approx. 2 mi. South KY 501	Casey
2010	Landslide - US 127	Casey
2006	KY 449 Approx. 1.5 mi. South KY 90	Cumberland
2006	KY 1351 Approx. 2 mi. South KY 449	Cumberland
2010	Landslide - Hwy 953	Cumberland
2010	Landslide - Salt Lick Bend Rd. (KY 1424)	Cumberland
2010	Landslide - Hwy. 449	Cumberland
2010	Landslide - Ky 704	Cumberland
2010	Landslide - Hwy 61 South	Cumberland

[47] Kentucky Geological Survey Landslide Fact Sheet;
http://www.uky.edu/KGS/geologichazards/landslide_factsheet.pdf

2010	Landslide - Hwy. 449	Cumberland
2006	KY 92 Aprox. 10.5 mile marker	McCreary
2010	Landslide - Ky 1470 West	McCreary
2010	Landslide - Ky 1673 North	McCreary
2010	Landslide - Ky 3253	McCreary
2010	Landslide - Ky 92	McCreary
2010	Landslide - Ky 1363 and Ky 3258	McCreary
2010	Landslide - Jones Hollow Rd.	McCreary
2010	Landslide - Cumberland Parkway	Pulaski
2010	Landslide - KY 192	Pulaski
2010	Landslide - US 27	Pulaski
2006	US 127 Rock Wall at south side of Wolf Creek Dam	Russell
2006	US 127 Lake Cumberland State Park Ent. to Wolf Creek Dam	Russell
2006	KY 379 at the Rock House	Russell
2006	KY 379 Approx. 1 mi. South of Creelsboro	Russell
2006	KY 1730 Approx. 1.5 mi. from Manntown Rd.	Russell
2006	KY 196 at Lake Cumberland	Russell
2006	KY 70 at Taylor and Casey County Line	Taylor
2006	KY 210 at Sandy Y	Taylor

(Committee's identified locations based on personal knowledge only. See maps below for specific locations for each slide location.)

All locations of landslides, identified by subcommittee members, were road cuts that had been repaired in the past. The general discussion of this problem indicated that most landslide locations were random. Reoccurring road locations were repaired, but the repairs tended to last a few years and gradually degraded over time. The cost of road relocation or extensive redesign and repair was felt to be the reason for recurring landslides. Most members felt that this was a legitimate trade off when consideration was given to the lack of accidents or injuries resulting form these landslides.

Regional Mitigation Planning Committee (RMPC) member's, non-scientific conclusions, on previous occurrences was that two-landslide events occurred within each county on average annually over a ten year period and none within any city limits. An estimated cost of $2500 was assigned to each hazard event because no loss data was available. Committee's estimates are based on personal knowledge only.

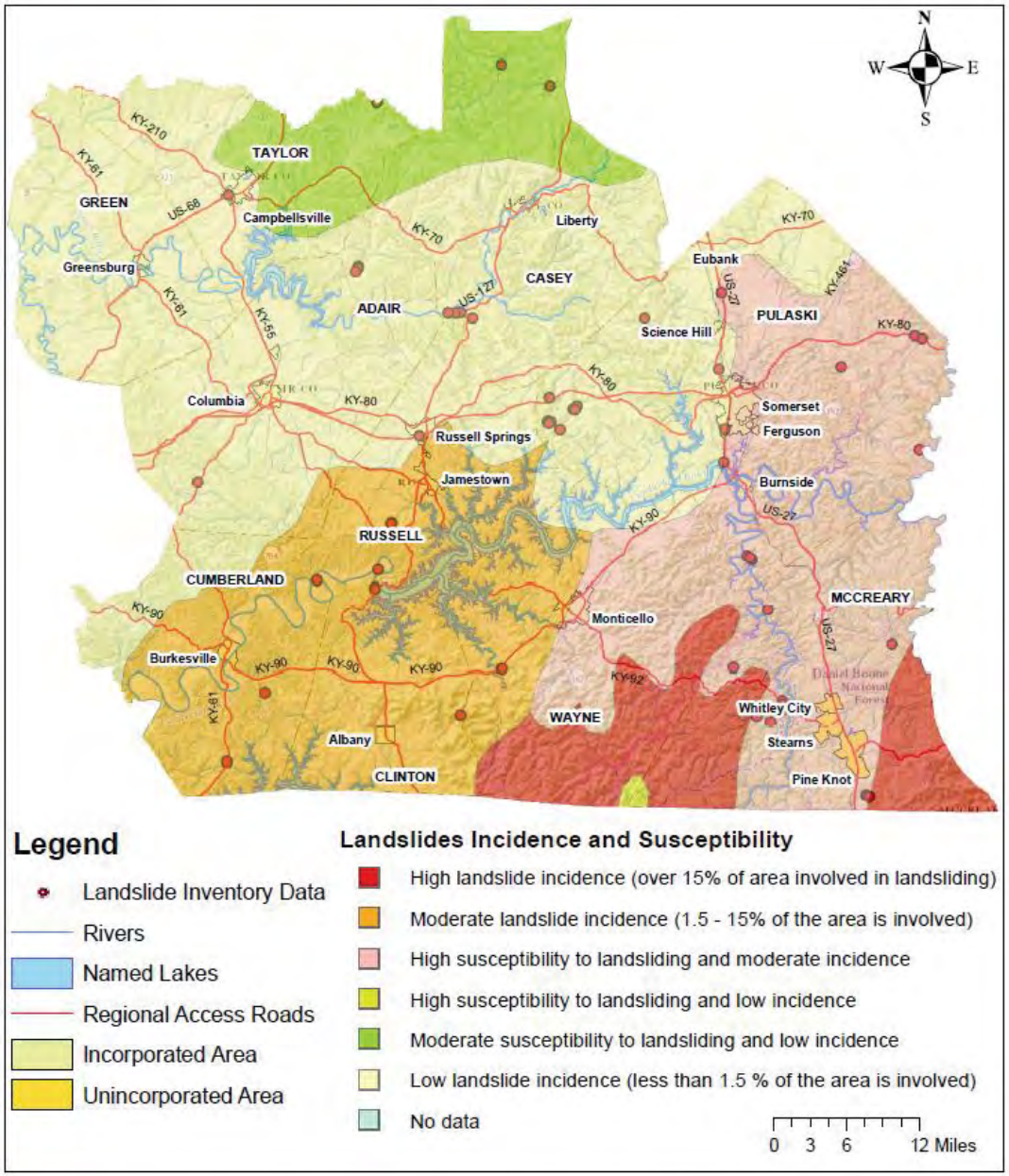
Table 4.4(7) - Landslide*

Event Probability Basis				Probable Future Events		
Jurisdiction	**Number of Events**	**Total # of Events**	**Total # Data Reporting Years**	**Yearly Average Events Per County**	**Countywide Average Loss Per Event**	**Countywide Average Loss Per Year**
Adair County*	2	2	7	2	$2500.00	$5,000.00
City of Columbia*	0	0				
Casey County*	2	2	7	2	$2500.00	$5,000.00
City of Liberty	0	0				
Clinton County*	2	2	7	2	$2500.00	$5,000.00
City of Albany	0	0				
Cumberland County*	2	2	7	2	$2500.00	$5,000.00
City of Burkesville	0	0				
Green County*	2	2	7	2	$2500.00	$5,000.00
City of Greensburg	0	0				
McCreary County*	2	2	7	2	$2500.00	$5,000.00
Pulaski County*	2	2	7	2	$2500.00	$5,000.00
City of Burnside*	0	0				
City of Eubank*	0	0				
City of Ferguson*	0	0				
City of Science	0	0				
City of Somerset						
Russell County*	2	2	7	2	$2500.00	$5,000.00
City of Jamestown	0					
City of Russell						
Taylor County*	2	2	7	2	$2500.00	$5,000.00
City of Campbellsvill						
Wayne County*	2	2	7	2	$2500.00	$5,000.00
City of Monticello	0					
Lake Cumberland	20	20	7	20	$2500.00	$50,000.00

Subcommittee member's, non-scientific conclusions, on previous occurrences of two- landslide events occurring within each county annually is the Probability of Future Hazard Events the RMPC has assigned to this hazard. This is supplemented with the following map shows the Landslide Susceptibility/Incidence and Potential/Incidence for the Lake Cumberland Region.

Note: No cities identified any Landslide Susceptibility so no mapping was developed for city jurisdictions.

Map 4.4(2)
LCADD Region
Landslide Information



Data Source: USGS Landslide Overview Map
Kentucky geologic map data
LCADD GIS Databases
ftp://hazards.cr.usgs.gov/web/landslides-website/Landslide-US-Overview-GIS.zip
Download Date: Oct. 2016

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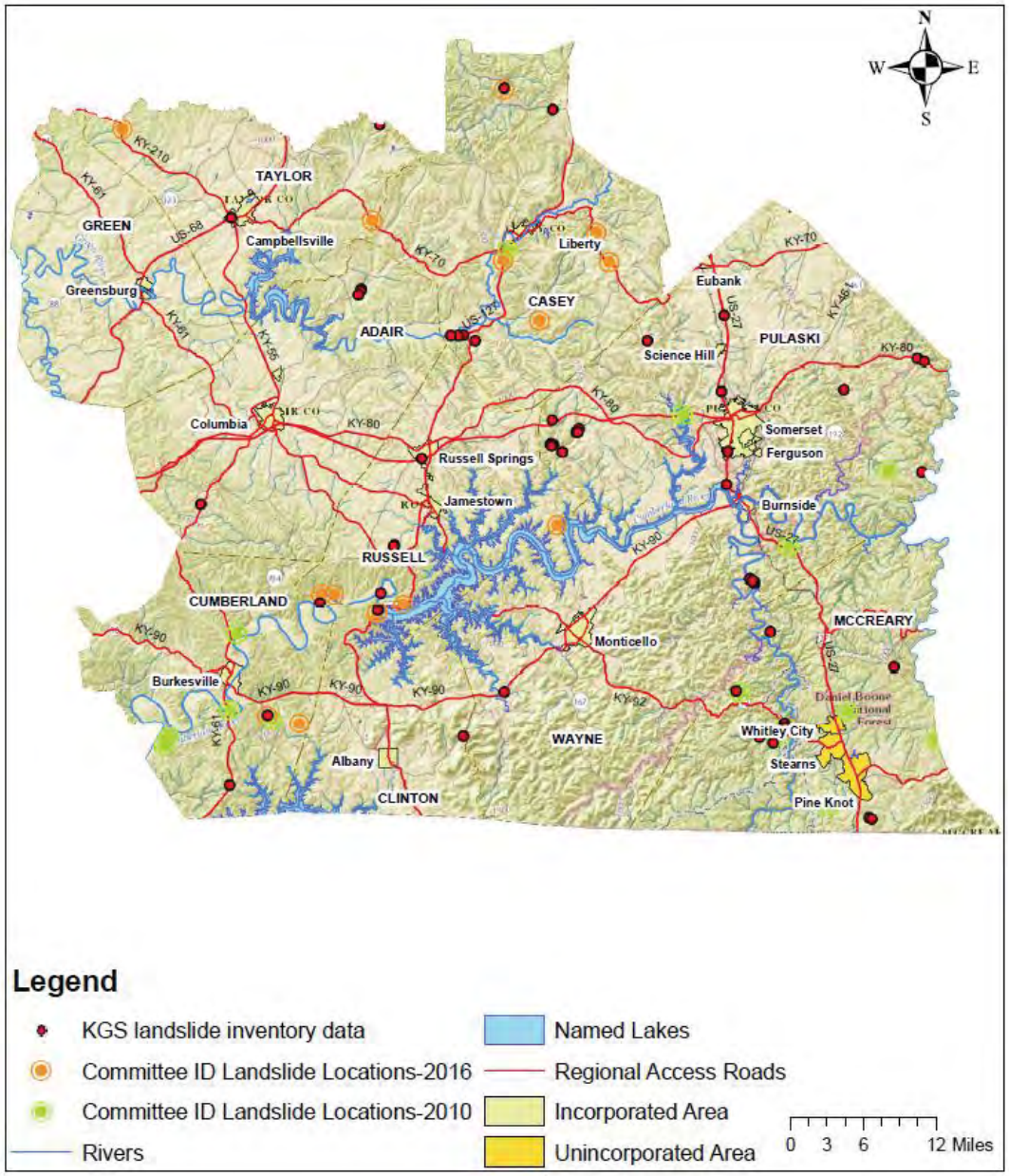
Lake Cumberland Area Development District

Map 4.4(3)
LCADD Region
HM Committee
and
Kentucky Geological Survey
Located Landslides



Data Source: USGS Landslide Overview Map
Kentucky geologic map data
LCADD GIS Databases
ftp://hazards.cr.usgs.gov/web/landslides-website/Landslide-US-Overview-GIS.zip
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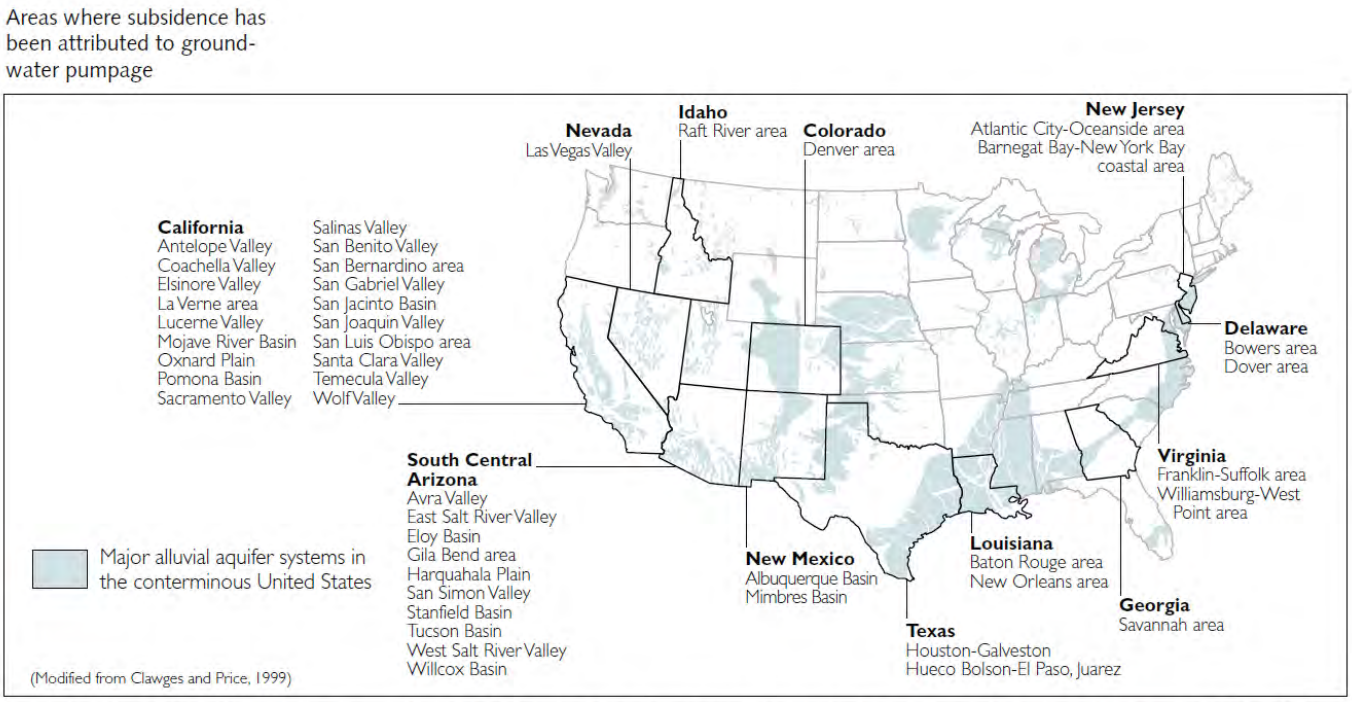
Land Subsidence (Karst/Sinkhole)

Land subsidence is a gradual settling or sudden sinking of the Earth's surface owing to subsurface movement of earth materials. Subsidence is a global problem and, in the United States, more than 17,000 square miles in 45 States, an area roughly the size of New Hampshire and Vermont combined, have been directly affected by subsidence. The principal causes are aquifer-system compaction, drainage of organic soils, underground mining, hydrocompaction, natural compaction, sinkholes, and thawing permafrost (National Research Council, 1991). More than 80 percent of the identified subsidence in the Nation is a consequence of our exploitation of underground water, and the increasing development of land and water resources threatens to exacerbate existing land-subsidence problems and initiate new ones. In many areas of the arid Southwest, and in more humid areas underlain by soluble rocks such as limestone, gypsum, or salt, land subsidence is an often- overlooked environmental consequence of our land- and water- use practices. [48]

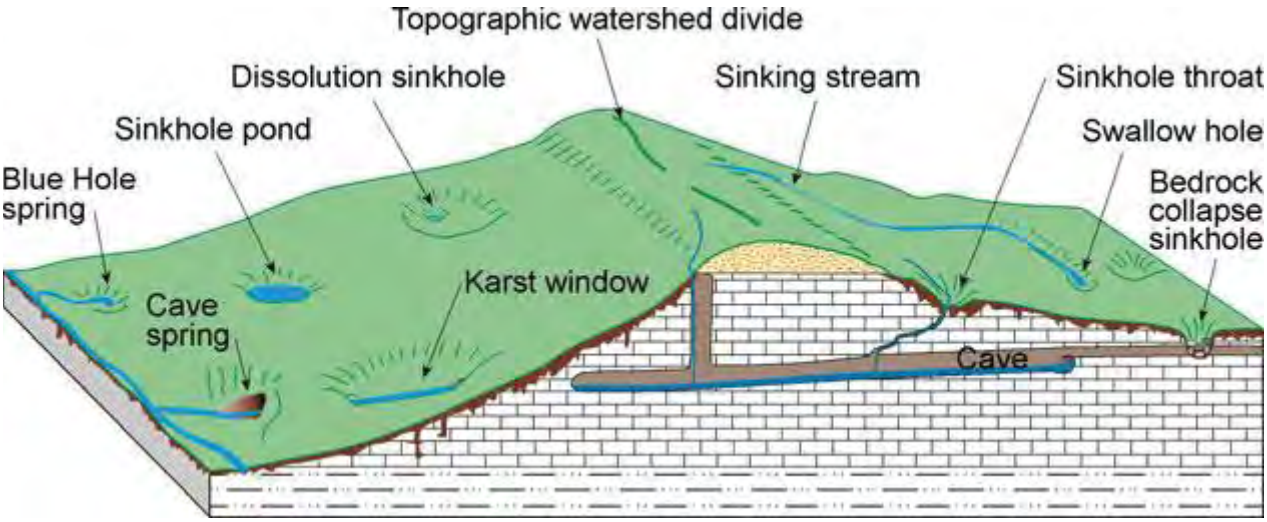


* Studies of subsidence in the Santa Clara Valley (Tolman and Poland, 1940; Poland and Green, 1962; Green, 1964; Poland and Ireland, 1988) and San Joaquin Valley (Poland, 1960; Miller, 1961; Riley, 1969; Helm, 1975; Poland and others, 1975; Ireland and others, 1984) in California established the theoretical and field application of the laboratory derived principle of effective stress and theory of hydrodynamic consolidation to the drainage and compaction of aquitards. For reviews of the history and application of the aquitard drainage model see Holzer (1998) and Riley (1998).

The word "karst" is the term used by geologists for areas with sinkholes, caves, and springs. A karst landscape has sinkholes, sinking streams, caves, and springs. The term "karst" is derived from a Slavic word that means barren, stony ground. It is also the name of a region in Slovenia near the border with Italy that is well known for its sinkholes and springs. Geologists have adopted karst as the term for all such terrain. The term "karst" describes the whole landscape, not a single sinkhole or spring. A karst landscape most commonly develops on limestone, but can develop on several other types of rocks, such as dolostone (magnesium carbonate or the

[48] USGS, Land Subsidence in the United States; http://pubs.usgs.gov/circ/circ1182/

mineral dolomite), gypsum, and salt. Precipitation infiltrates into the soil and flows into the subsurface from higher elevations and generally toward a stream at a lower elevation. Weak acids found naturally in rain and soil water slowly dissolve the tiny fractures in the soluble bedrock, enlarging the joints and bedding planes. Below is a schematic diagram of karst terrain in Kentucky.



Generalized block diagram showing typical karst landscape in Kentucky. Other types of karst features occur that are not illustrated.

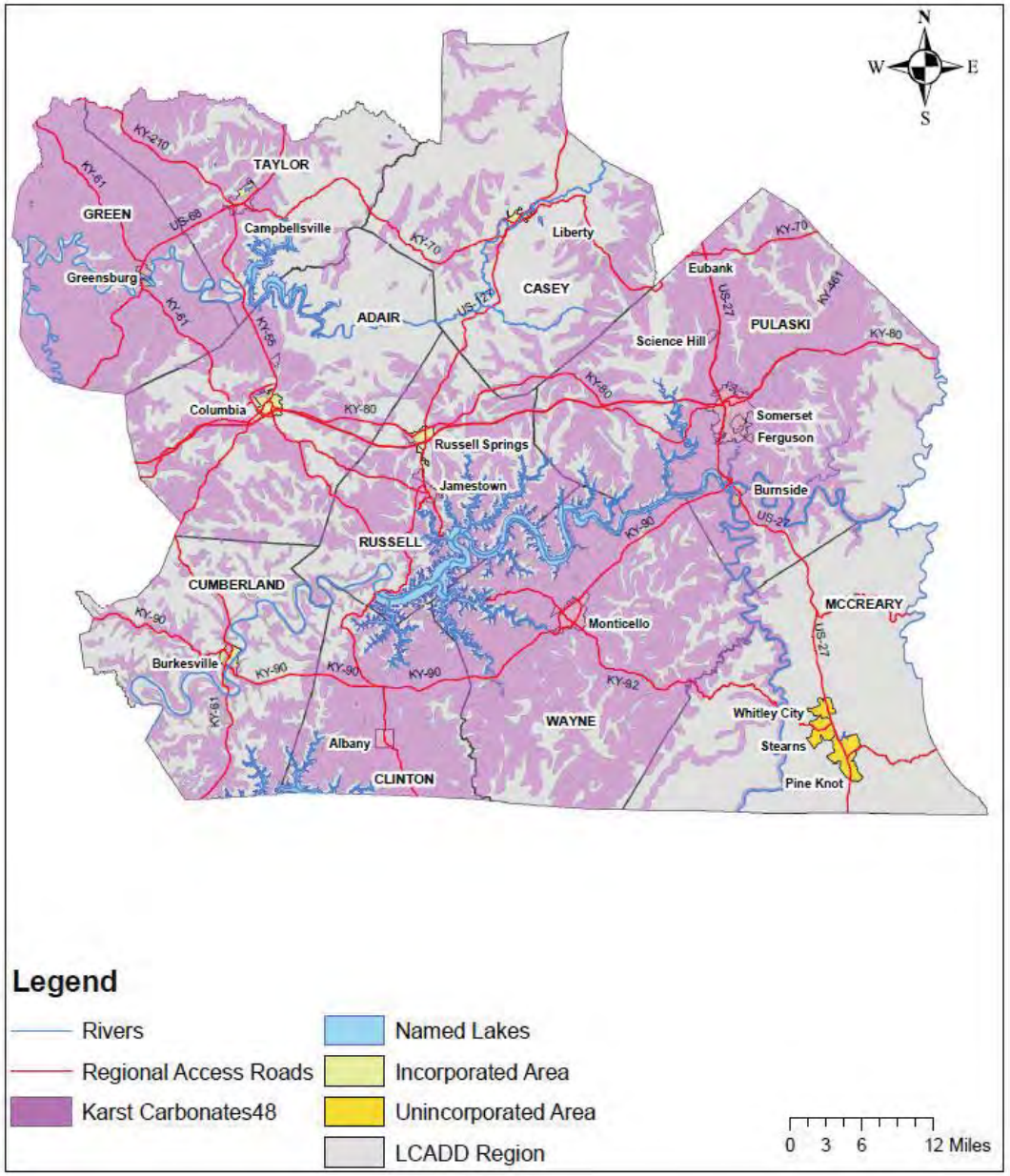
Karst hazards cause less damage than earthquakes or landslides, perhaps $500,000 to $2,000,000 of economic loss annually, but can still have devastating effect on individuals. Four geologic hazards are associated with karst. Two common karst-related geologic hazards -- cover-collapse sinkholes and sinkhole flooding -- cause the most damage to buildings. A third karst hazard is relatively high concentrations of radon, sometimes found in basements and crawl spaces of houses built on karst. Finally, the hydrogeology of karst aquifers makes the groundwater vulnerable to pollution, and this vulnerability may also be considered a type of geologic hazard.[49]

Sinkholes are common where the rock below the land surface is limestone, carbonate rock, salt beds, or rocks that can naturally be dissolved by groundwater circulating through them. As the rock dissolves, spaces and caverns develop underground. Sinkholes are dramatic because the land usually stays intact for a while until the underground spaces just get too big. If there is not enough support for the land above the spaces then a sudden collapse of the land surface can occur. These collapses can be small, or, as this picture shows, or they can be huge and can occur where a house or road is on top.

The most damage from sinkholes tends to occur in Florida, Texas, Alabama, Missouri, Kentucky, Tennessee, and Pennsylvania.

[49] Kentucky Geological Survey, Karst Frequently Asked Questions; https://www.uky.edu/KGS/water/general/karst/karstfaq.htm

Map 4.4(4)
LCADD Region
Karst Areas



Data Source: USGS Landslide Overview Map
Kentucky geologic map data
LCADD GIS Databases
ftp://hazards.cr.usgs.gov/web/landslides-website/Landslide-US-Overview-GIS.zip
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Lake Cumberland Area Development District

Map 4.4(5a)
LCADD Region - Adair
Sinkholes

Data Source: KGS Sinkhole Data by County
LCADD GIS Databases
http://www.uky.edu/KGS/gis/sinkpick.htm
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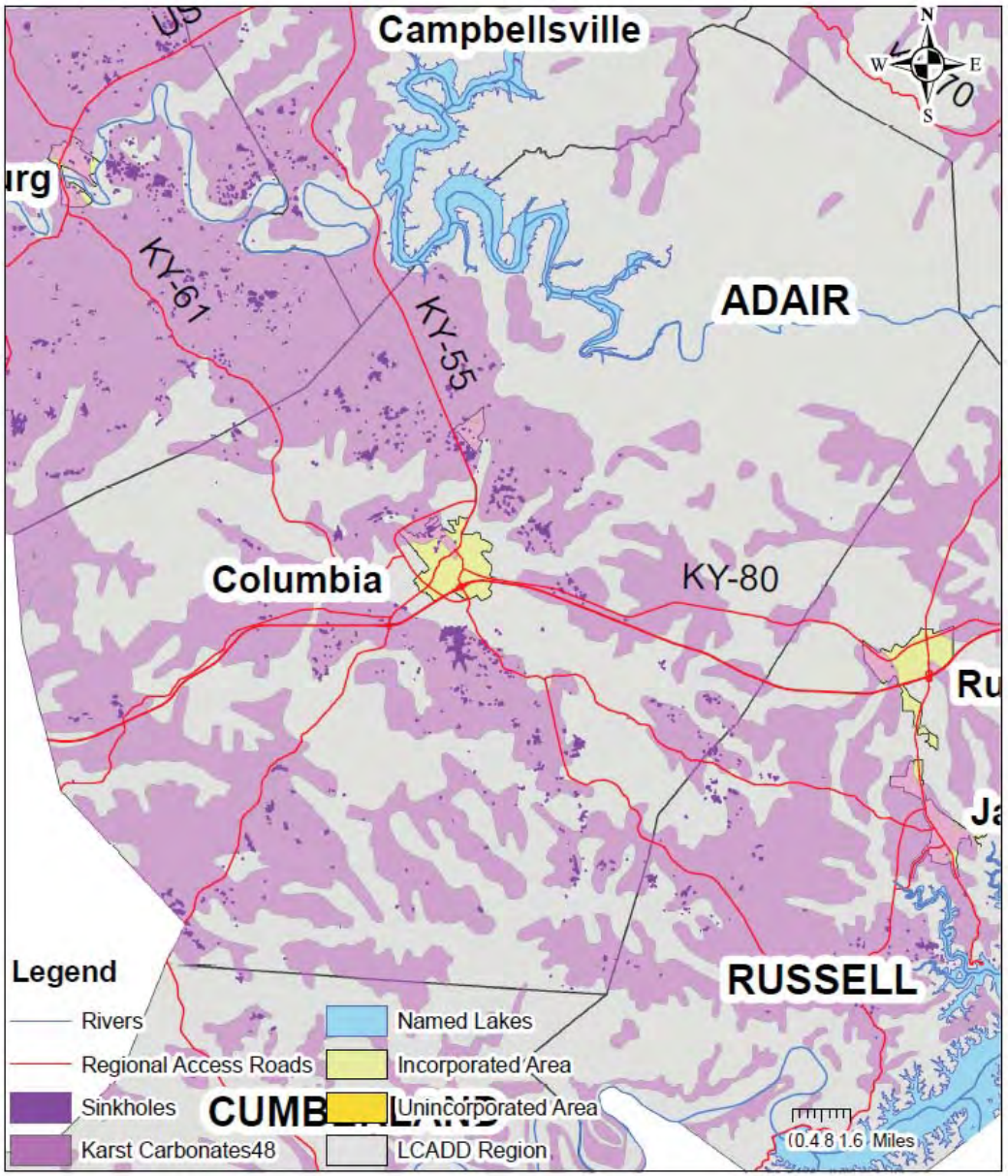

Map 4.4(5b)
LCADD Region - Casey
Sinkholes

Data Source: KGS Sinkhole Data by County
LCADD GIS Databases
http://www.uky.edu/KGS/gis/sinkpick.htm
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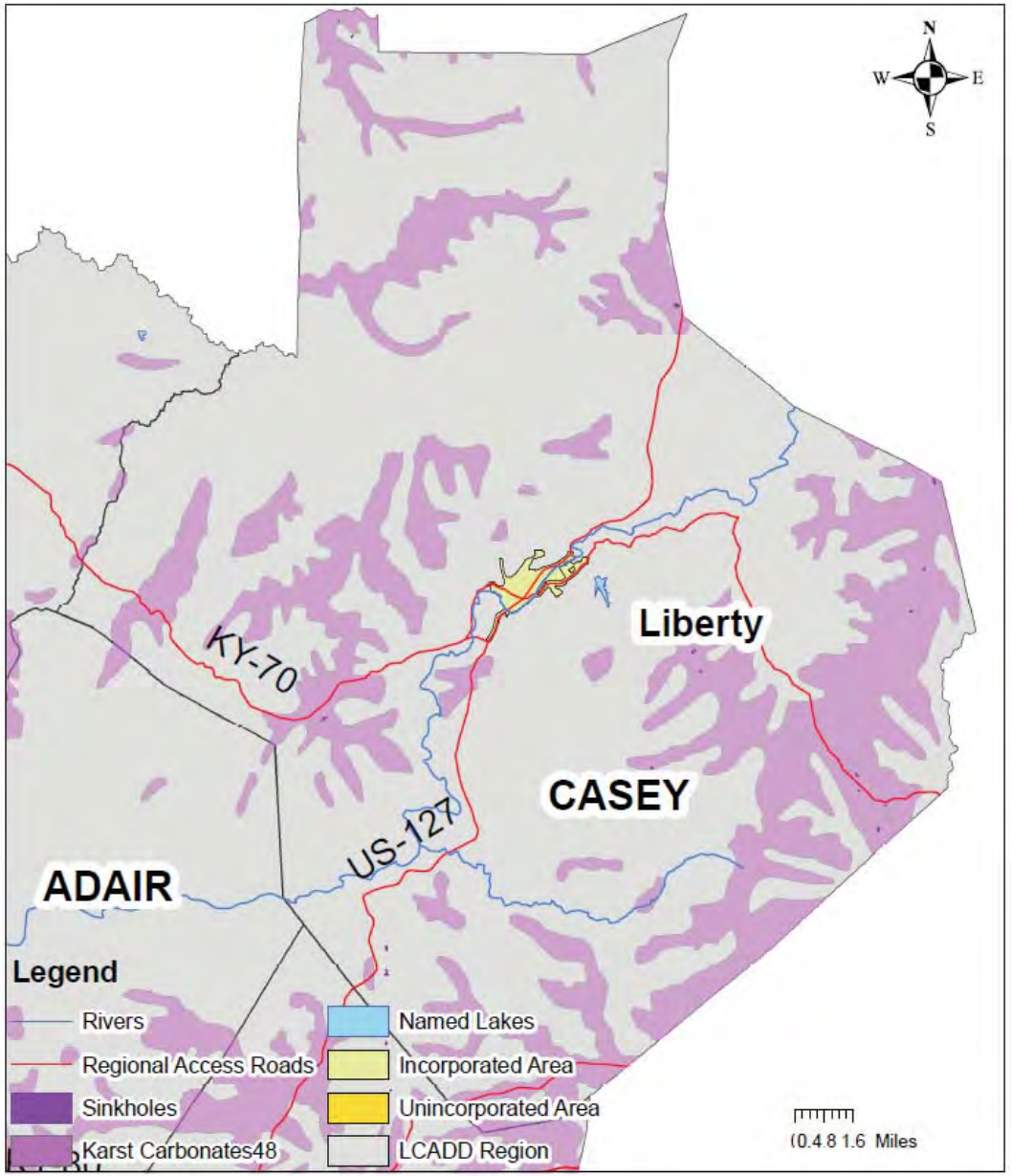

Map 4.4(5c)
LCADD Region - Clinton
Sinkholes

Data Source: KGS Sinkhole Data by County
LCADD GIS Databases
http://www.uky.edu/KGS/gis/sinkpick.htm
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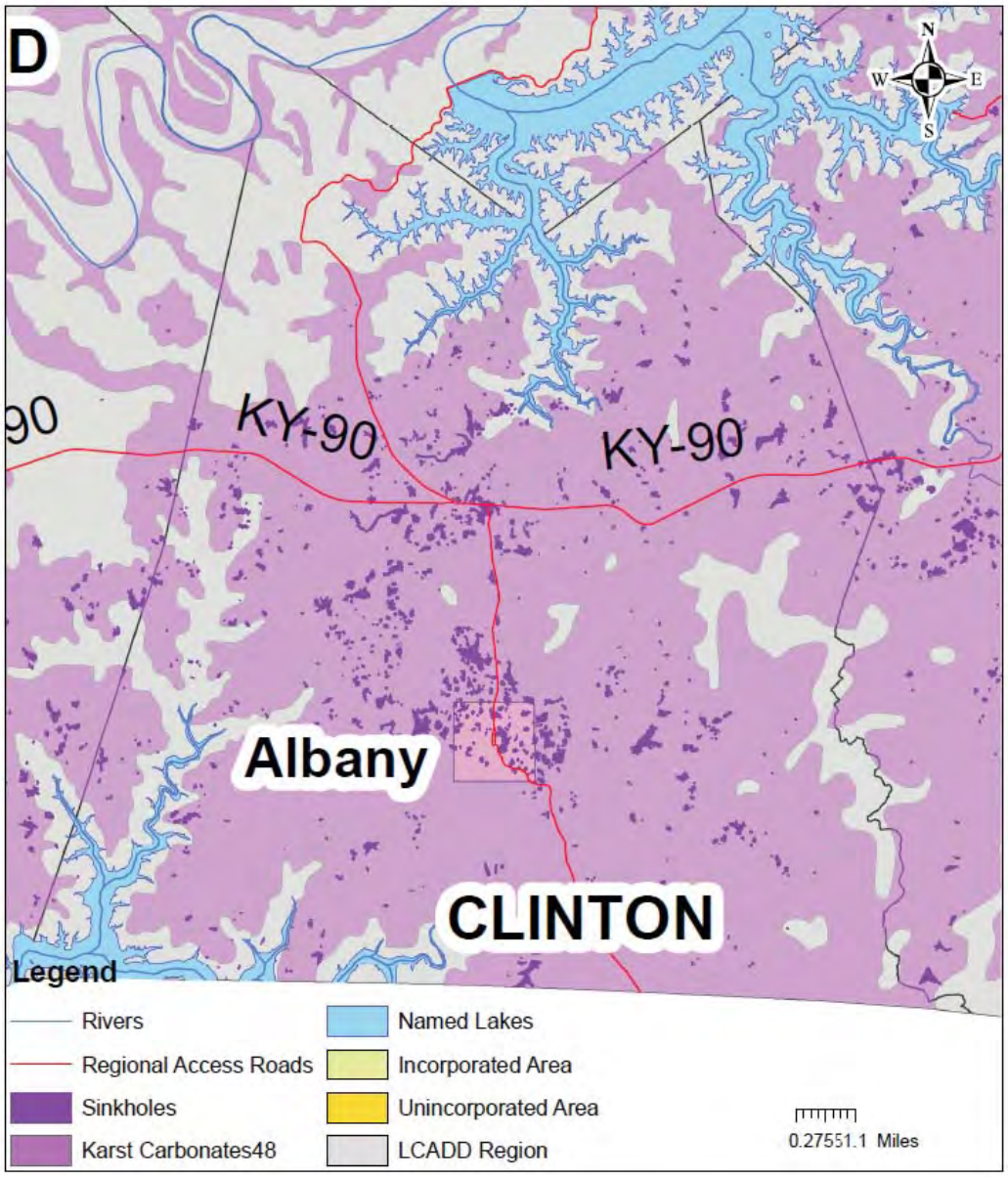

Map 4.4(5d)
LCADD Region - Cumberland
Sinkholes

Data Source: KGS Sinkhole Data by County
LCADD GIS Databases
http://www.uky.edu/KGS/gis/sinkpick.htm
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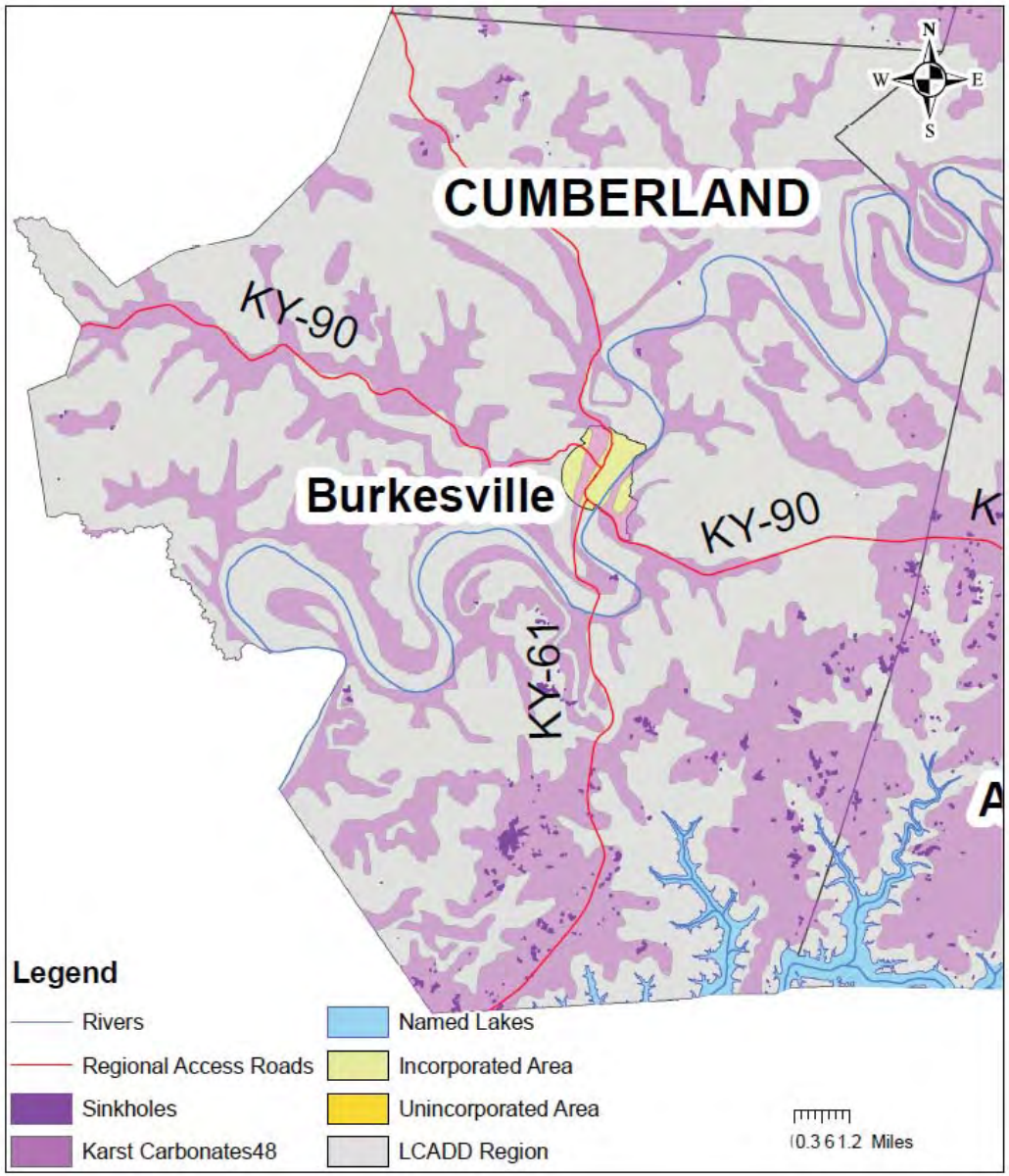

Map 4.4(5e)
LCADD Region - Green
Sinkholes

Data Source: KGS Sinkhole Data by County
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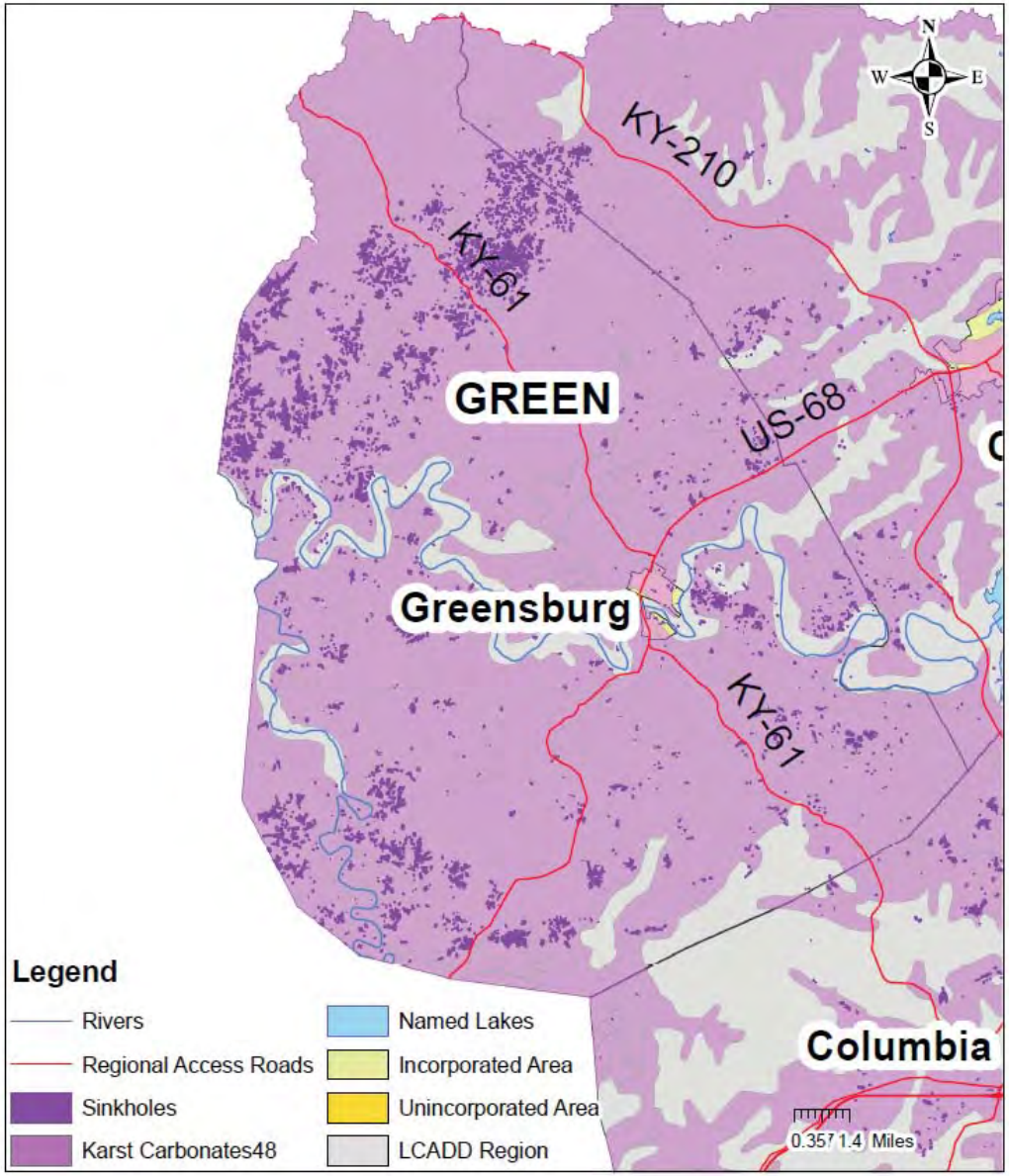
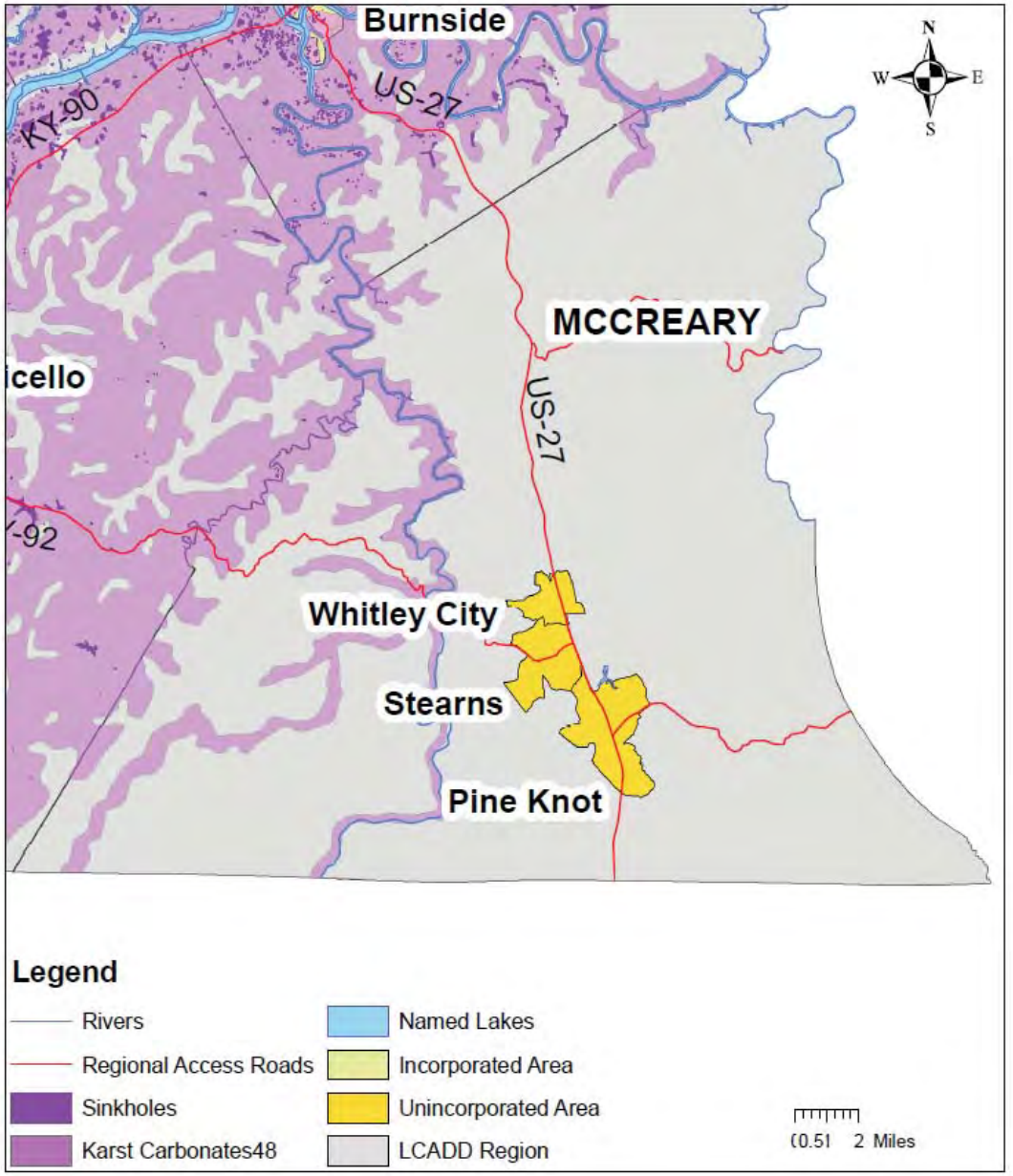


Map 4.4(5f)
LCADD Region - McCreary
Sinkholes



Data Source: KGS Sinkhole Data by County
LCADD GIS Databases
http://www.uky.edu/KGS/gis/sinkpick.htm
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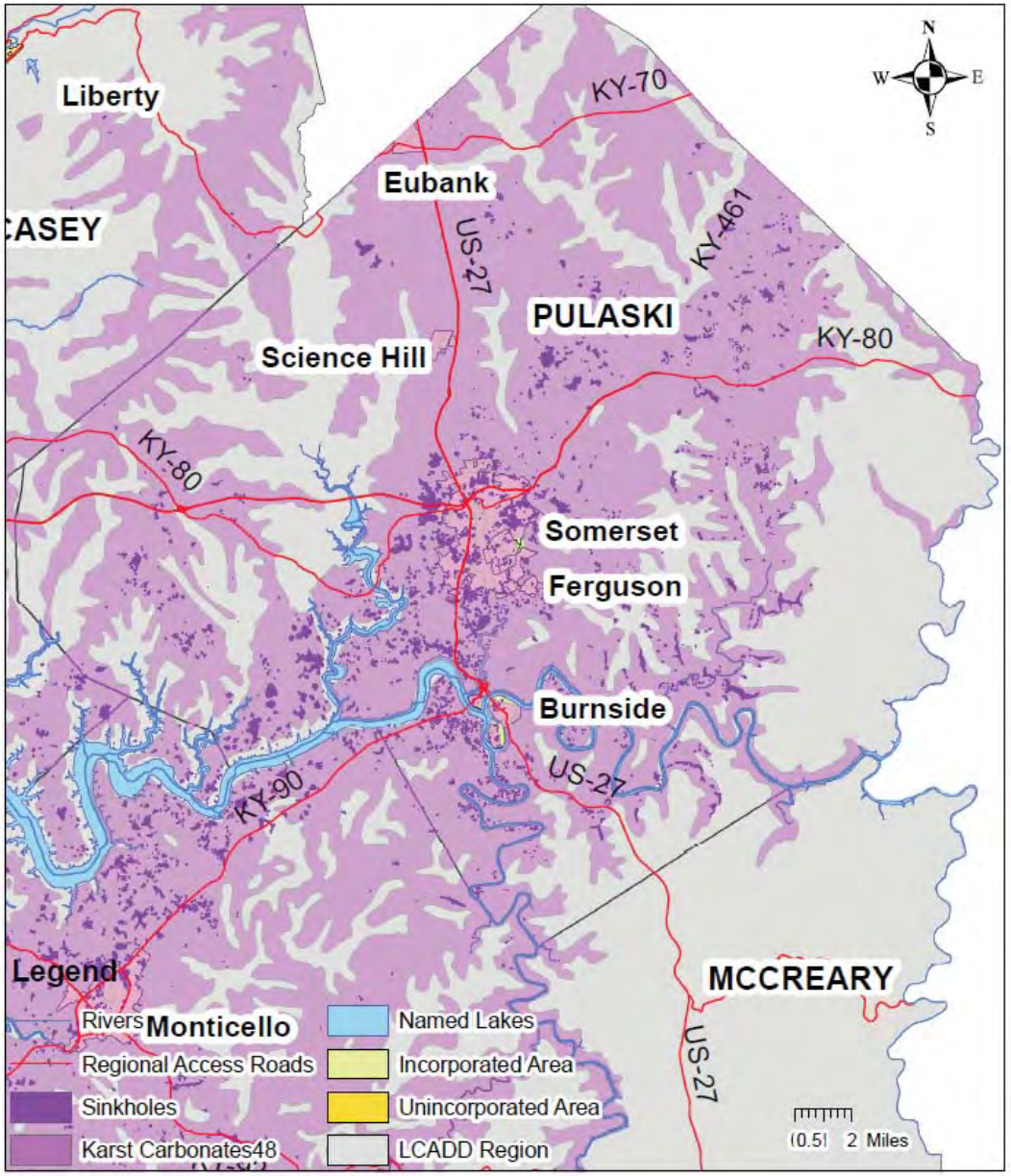
Map 4.4(5g)
LCADD Region - Pulaski
Sinkholes



Data Source: KGS Sinkhole Data by County
LCADD GIS Databases
http://www.uky.edu/KGS/gis/sinkpick.htm
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Map 4.4(5h)
LCADD Region - Russell
Sinkholes

Data Source: KGS Sinkhole Data by County
LCADD GIS Databases
http://www.uky.edu/KGS/gis/sinkpick.htm
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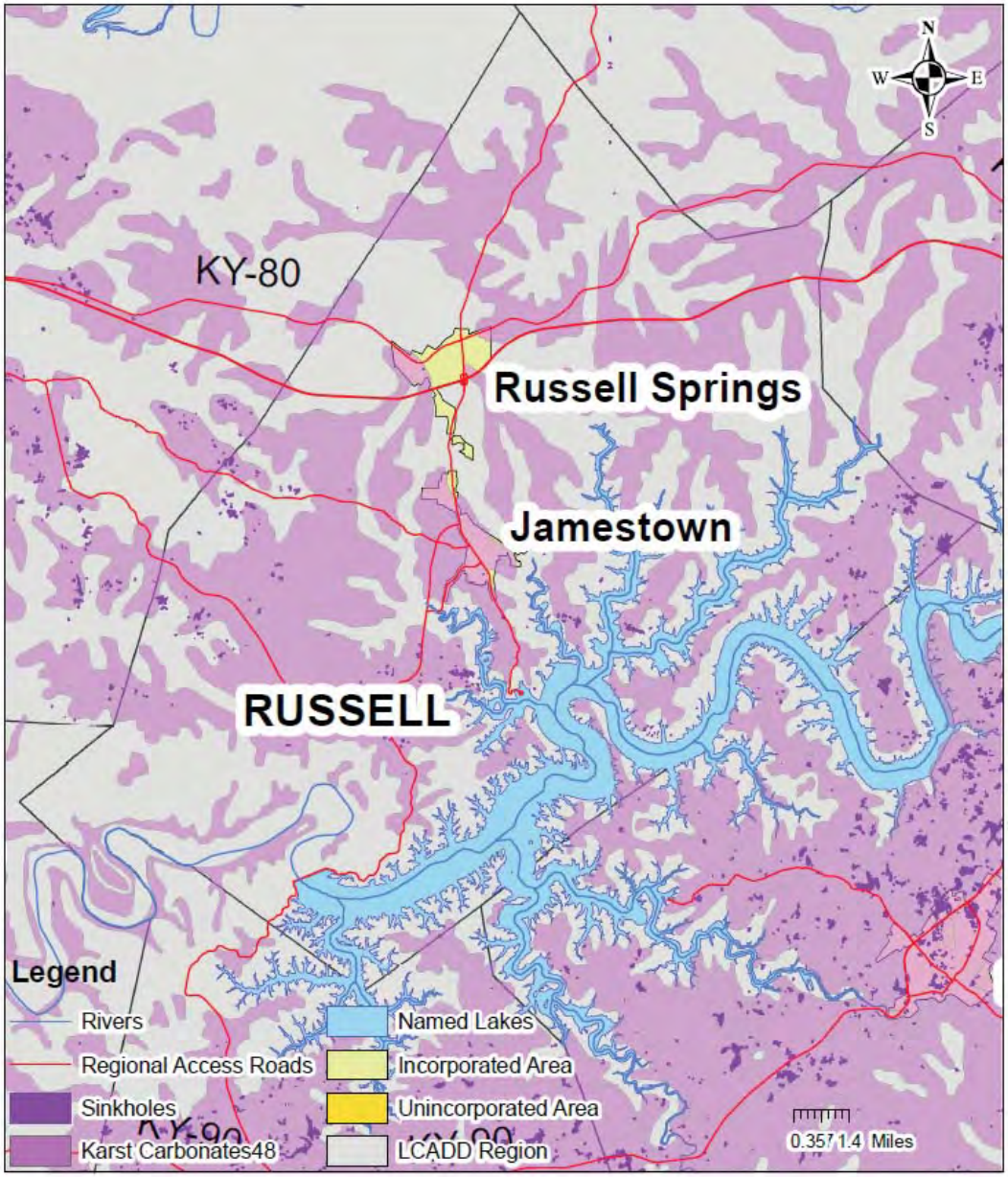

Map 4.4(5i)
LCADD Region - Taylor
Sinkholes

Data Source: KGS Sinkhole Data by County
LCADD GIS Databases
http://www.uky.edu/KGS/gis/sinkpick.htm
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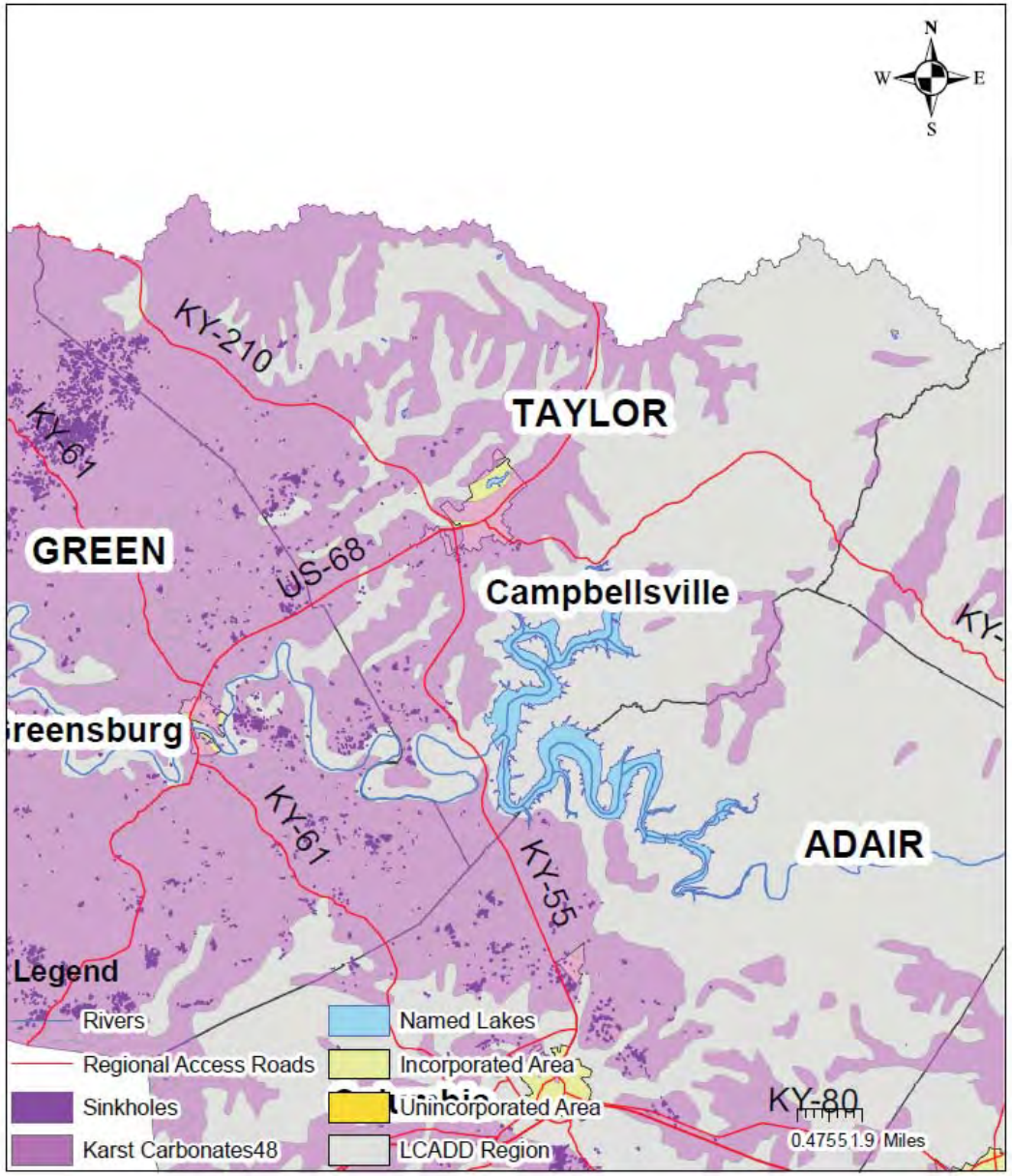

Map 4.4(5j)
LCADD Region - Wayne
Sinkholes

Data Source: KGS Sinkhole Data by County
LCADD GIS Databases
http://www.uky.edu/KGS/gis/sinkpick.htm
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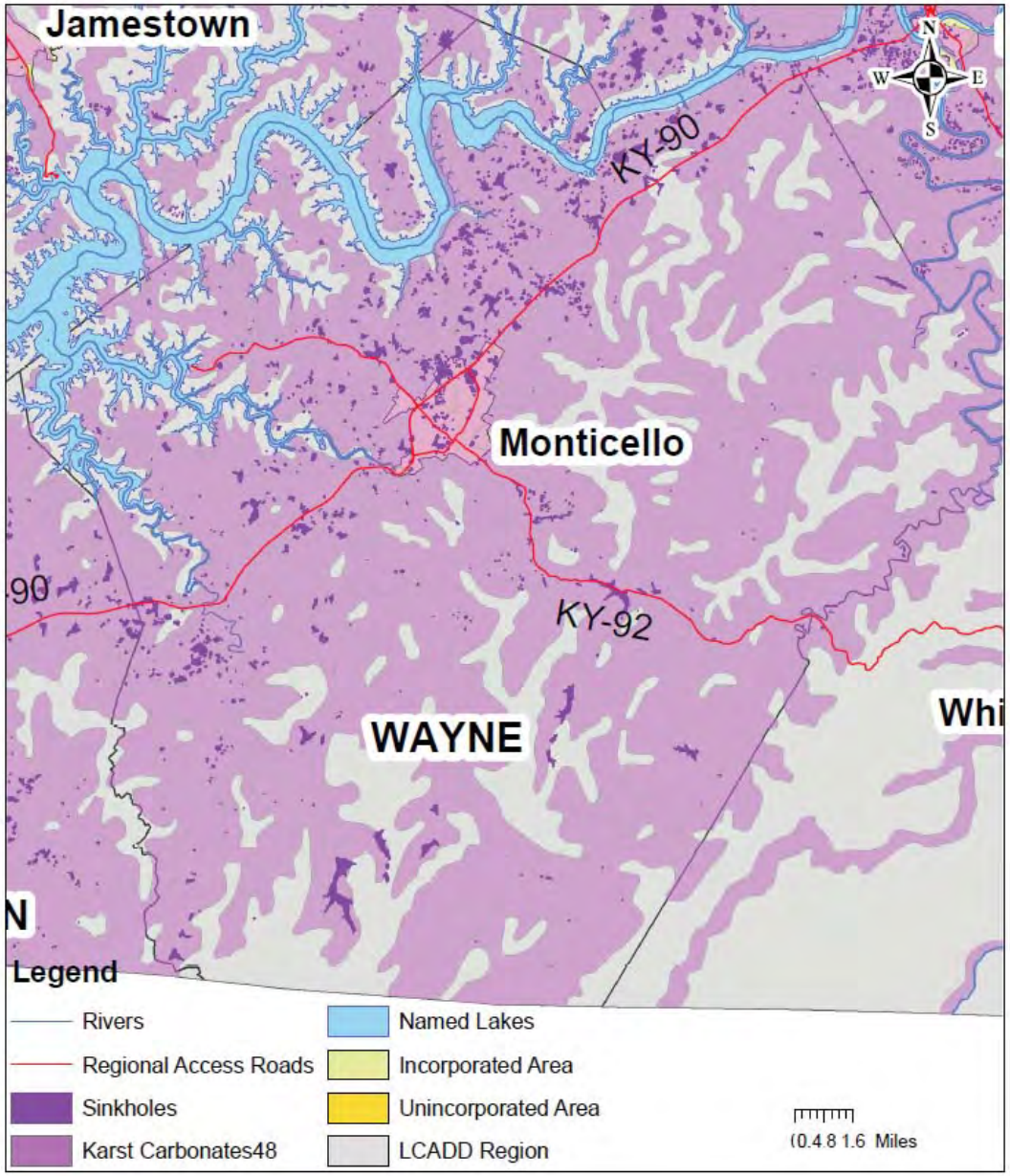

Only one incident of a major land subsidence was identified in the LCADD region. The infrastructure damage from karst involved Wolf Creek Dam on Lake Cumberland in southeastern Kentucky. Designed and constructed during the period 1938-1952, the 5,736 foot-long dam is a combination rolled earth fill and concrete gravity structure. It has a maximum height of 258 feet above founding level. A six- generator-unit power plant, with a capacity of 270,000 KW, is located immediately downstream. US Highway 127 crosses the top of the dam. Lake Cumberland, created by the dam, impounds 6,089,000 acre-feet at its maximum pool elevation of 760. It is the largest reservoir east of the Mississippi and the ninth largest in the United States.

In 1968, muddy flows in the tailrace and two sinkholes near the downstream toe of the embankment signaled serious reservoir seepage problems. Investigations indicated the problems were due to the karst geology of the site characterized by an extensive interconnected network of solution channels in the limestone foundation. Piping of filling materials in these features and collapse of overburden and embankment into the voids caused the problems. The District immediately began an emergency investigation and grouting program between 1968 and 1970 that is generally credited with saving the dam. However, grouting was not a long-term fix and a more permanent solution was sought. After studying numerous alternatives, the District chose to construct a concrete diaphragm wall through the earth embankment into the rock foundation to block the seepage. This wall was constructed between 1975 and 1979.

Since completion of the wall in 1979, District personnel have continued to closely monitor the project. Key instrumentation readings, persistent and increasing wet areas, and investigative borings that encountered soft, wet material at depth in the embankment confirm solution features still exist that have not been cut off. While the original wall interrupted the progression of erosion, seepage has since found new paths under and around the wall and perhaps through defects in the wall itself as erosion of solution features continues.
To address the seepage problems, the District has prepared a Major Rehabilitation Report. It evaluates several alternatives to improve the long-term reliability of the dam. From this analysis, the recommended alternative is a new concrete diaphragm wall constructed using newer technology that will reinforce the purpose of the original wall. This new wall will start immediately upstream of the right most concrete monoliths and run the length of the embankment into the right abutment which will take it 1,650 feet beyond the existing wall. It will be constructed to a depth which is deeper than the deepest sections of the original wall and as much as 75 feet deeper than the majority of the original wall. The fully funded estimated cost of this work is $317.1 million. Remedial construction is currently scheduled to be completed in 2014. An intensive grouting program designed to fill voids in the rock is taking place before construction of a cutoff wall proceeds. Grout is a fluid form of concrete that can be pumped into the foundation voids under pressure. This grouting program will reduce seepage under the cutoff wall. The concrete cutoff wall will be installed through the embankment and the problem foundation rock to provide additional seepage control. The wall thickness will be a minimum of three feet and be installed as deep as 275 feet. The wall will be placed on the upstream slope of the dam and will extend the full length of the embankment and a portion of the end concrete dam monoliths.

The main phase of construction began in March 2006 and was completed in March 2013 when the last concrete was placed for the 4,000-foot-long barrier wall through the dam's earthen embankment. [50]

Only four incidents of minor land subsidence were identified in the LCADD region. This occurred in Adair, Clinton, Pulaski, and Taylor Counties.

[50] U.S. Army Corps of Engineers Nashville District, Wolf Creek Dam Safety Rehabilitation Project; http://www.lrn.usace.army.mil/Missions/Current-Projects/Construction/Wolf-Creek-Dam-Safety-Rehabilitation-Project/

In Adair County, the sink hole is located on North 55 just off the shoulder of the road on the right (east side of roadway). The location of the sinkhole is in the area of 2200 Campbellsville RD, Columbia, KY. The sinkhole is about 30" across at the top and approximately 13-14 feet deep. The hole, on the Kentucky Department of Highways right of way, has been filled with fresh cement.

[51]

In Clinton County the Committee knew of minor damage to West Harper Lane in the spring of 2003 and 2010. Damage/repair costs were not available.

In Pulaski County, in July 2015, Kentucky Department of Highways crews temporarily repaired damage to the right westbound lane of Ky. 914 caused by a sinkhole. The driving lane had been closed for several hundred feet just east of U.S. 27. "We didn't know how deep the sinkhole was," said Bill Chaney, branch manager for project delivery and preservation, Kentucky Department of Highways, District 8. "We dug out about 5 feet but the hole goes on back down in the ground." The sinkhole, apparently triggered by unusually heavy rains this summer, appeared in the highway a week or so ago. Damage/repair costs were not available.

[51] Columbia Magazine, Sinkhole At 2200 Mp On Campbellsville Rd Capped, http://www.columbiamagazine.com/photoarchive.php?photo_id=39330

In Ferguson, on January 17, 2013, on West Govers Lane , located near the Norfolk Southern railroad tracks, at around 3:30 p.m. the home owner saw a strangely sunken-in area in her yard that hadn't been there before. Curious, she approached the area and pushed a toe into the ground. That's when the soil gave way completely, sending her straight down into a newly-developed sinkhole. The woman said she landed on soft dirt, and the edge of the sinkhole came up to her chest. The depth of the hole was at first estimated to be five- to five-and-a-half feet. Luckily, the resident wasn't hurt, save for some scrapes and bruises to her arms and knees. The Ferguson Volunteer Fire Department responded and, after just a few minutes, roped the area off until something could be done.

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[52] The Commonwealth Journal, Sinkhole Articles; http://www.somerset-kentucky.com/search/?l=25&sd=desc&s=start_time&f=html&t=article%2Cvideo%2Cyoutube%2Ccollection&app=editorial&q=sinkhole&nsa=eedition

In Taylor County, on September 2013, a Campbellsville resident was mowing his yard and on Lebanon Avenue. The resident fell in this sinkhole while doing yard work at his home.

He wasn't severely injured in the fall but was surprised to find it in his front yard.[53]

Neither the RHMP Committee nor any of the county/city hazard mitigation committee members could find any other incident of loss from Land Subsidence nor had knowledge of any losses due to land subsidence in the region. All counties had examples of sinkholes collapsing mostly on farms however no resulting damage or losses could be identified.

[53] **Central Kentucky News-Journal, Resident falls in sinkhole, suffers minor injuries,** Sunday, September 1, 2013 at 12:00 pm; http://www.cknj.com/content/resident-falls-sinkhole-suffers-minor-injuries

Summary

Hazard Location:

- ≠ Earthquake:
  - o No damaging ground movement affecting the entire Region and surrounding region
- ≠ Landslide:
  - o Steep hillsides, roadway cuts within Lake Cumberland Region
- ≠ Sinkhole:
  - o Could occur nearly anywhere, but typically associated with karst areas

Potential Damage

- ≠ Earthquake:
  - o Minor damage to buildings and infrastructure
  - o Extended power outages due to major quake in New Madrid seismic zone
  - o Limited access to transportation, communications and utilities due to major quake in New Madrid seismic zone
  - o Concerns arise from sheltering people and caring for injuries after major quake in New Madrid seismic zone
  - o
- ≠ Landslide:
  - o Regionalized damage to buildings, roadways, and utilities
- ≠ Sinkhole:
  - o Regionalized damage to roadways and utilities

Scale / Extent:

- ≠ Earthquake:
  - o Varies from undetectable (<2.0 Richter Magnitude Scale) to strong (6.0 to 6.9 Richter Magnitude Scale).
- ≠ Landslide:
  - o Likely minor in nature, if occurring at all
- ≠ Sinkhole:
  - o Damage will be minor and Regionalized

Previous Occurrences:

- ≠ Earthquake:
  - o Small, undetectable earthquakes occur rarely causing no damage
  - o A major earthquake has never been recorded in Lake Cumberland Region
- ≠ Landslide:
  - o Evaluation of the historical information and personal knowledge of subcommittee members revealed all areas of the LCADD region have the potential for landslides. Subcommittees in all counties indicated that landslides at road-cut locations were the primary landslide event in each county and average two per year

≠ Sinkhole:
- The ten county/city RHMPC could identify five land subsidence events from their knowledge that involved loss of property or potential death or injury to any individual. within Lake Cumberland Region

Likelihood of Future Occurrences:

≠ Earthquake:
- Small, undetectable earthquakes typically occur over intervals of several years
- Large, damaging earthquakes are extremely rare, never having occurred

≠ Landslide:
- Unlikely to occur

≠ Sinkhole:
- Could potentially occur Lake Cumberland Region wide. Evaluation of the historical information and personal knowledge of RHMPC committee members revealed all areas have had occurrences of sinkhole collapses

Other Hazards – Forest Fires/Wildfires, Drought, Dam/Levee Failures, Expansive Soil and Extreme Summer Weather

4.5 Forest Fires/Wildfires

A wildfire is an unplanned fire, a term which includes grass fires, forest fires, and scrub fires either man made or natural in origin. There are four different classes of wildland fires:

- ≠ Surface fires are the most common type and burn along the floor of a forest, moving slowly and killing or damaging trees.
- ≠ Ground fires are usually started by lightning and burn on or below the forest floor.
- ≠ Crown fires spread rapidly by wind and move quickly by jumping along the tops of trees.
- ≠ Spotting can be produced by crown fires as well as wind and topography conditions. Large burning embers are thrown ahead of the main fire. Once spotting begins, the fire will be very difficult to control.

The average forest fire kills most trees up to 3-4 inches in diameter, in the area burned. These trees represent approximately 20 years of growth. In the case of up-slope burning, under severe conditions, almost every tree is killed regardless of size or type. When the trees are burned and everything is killed, then the forest is slow to reestablish itself, because of the loss of these young seedlings, saplings, pole and saw timber trees.

Included in the destruction by fires are the leaf and other litter on the forest floor. This exposes the soil to erosive forces, allowing rainstorms to wear away the naked soil and wash silt and debris downhill, which will clog the streams and damage fertile farmlands in the valleys. Once the litter and humus (spongy layer of decaying matter) is destroyed, water flows more swiftly to the valleys and increases flood danger.

Other consequences of wildfires are the death of and loss of habitat for the forest's wildlife. Even when the adult animals escape, the young are left behind to perish. The heaviest wildlife lost is felt by game birds since they have ground nesting habits. Fish life also suffers as a result of the removal of stream shade and the loss of insect and plant food is destroyed by silt and lye from wood ashes washed down from burned hillsides.

Wildfires are fueled by many fuel categories:

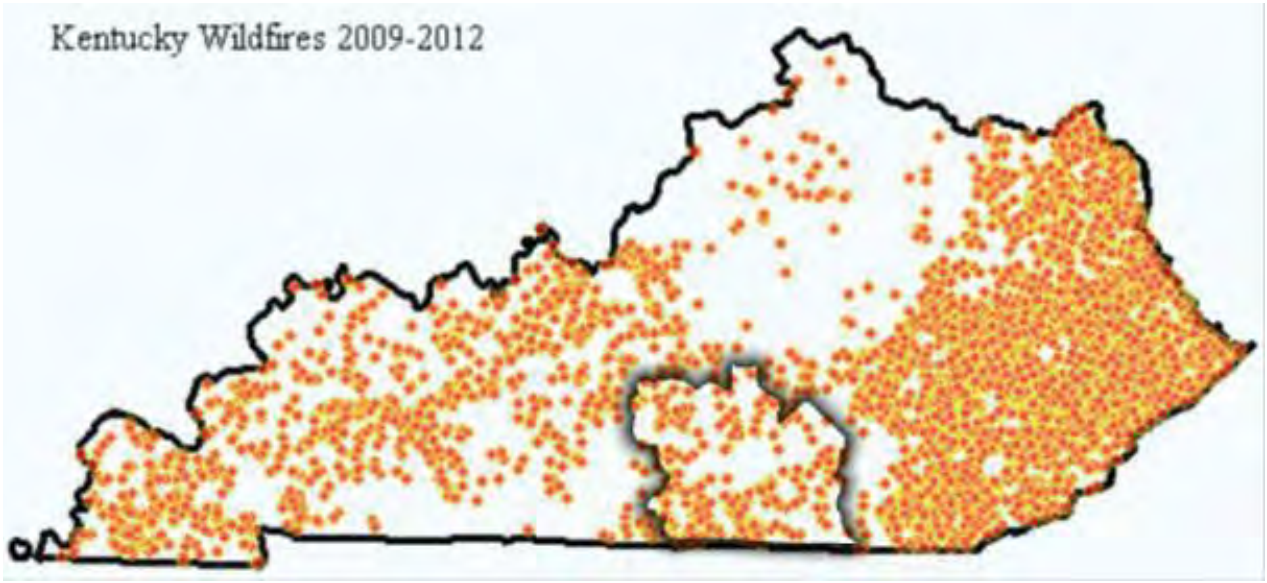
- ≠ Light fuels such as shrubs, grasses, leaves, and pine needles (any fuel having a diameter of one-half inch or less) burn rapidly and are quickly ignited because they are surrounded by plenty of oxygen. Fires in light fuels spread rapidly but burn out quickly, are easily extinguished, and fuel moisture changes more rapidly than in heavier fuels.
- ≠ Heavy fuels such as limbs, logs, and tree trunks (any fuel one-half inch or larger in diameter) warm more slowly than light fuels, and the interiors are exposed to oxygen only after the outer portion is burned.
- ≠ Uniform fuels include all of the fuels distributed continuously over an area. Areas containing a network of fuels that connect with each other to provide a continuous path for a fire to spread are included in this category.
- ≠ Patchy fuels include all fuels distributed unevenly over an area, or as areas of fuel with definite breaks or barriers present, such as patches of rock outcroppings, bare ground, swamps, or areas where the dominant type of fuel is much less combustible.
- ≠ Ground fuels are all of the combustible materials lying beneath the surface including deep duff, tree roots, rotten buried logs, and other organic material.
- ≠ Surface fuels are all of the combustible materials lying on or immediately above the ground, including needles or leaves, duff, grass, small deadwood, downed logs, stumps, large limbs, and low shrubs.
- ≠ Aerial fuels are all of the green and dead materials located in the upper canopy, including tree branches and crowns, snags, hanging moss, and tall shrubs.

Forest fires vary in size, however thanks to modern detection and firefighting equipment methods, fires are typically kept to a reasonably small area. While modern fire detection, prevention and extinguishing techniques have minimized damage from fires, it has also led to excessive vegetation growth in forests, meaning that there is excess fuel available, should a fire occur. Vegetated material that once would have been periodically consumed during natural fire events now stands crowded into the same area, potentially increasing the severity of a fire should one occur. Global warming has also increased the damage potential of a wildfire by raising average temperatures and increasing drought-like conditions.

There are two defined wildfire seasons in Kentucky: February 15-April 30 and October 1-December 15. These spring and fall seasons are separated by periods of higher moisture and colder, less conducive fire weather. Leaf drop in the fall from deciduous hardwood trees produces a thick litter layer in forested areas which rapidly carries expanding wildfires. Tall grasses across the state become very flammable in the fall and during periods of drought. Wildfire occurrence is possible outside of these defined fire seasons during any prolonged periods of drought. During these wildfire seasons, specific outdoor burning laws have been established to lessen the occurrence of damaging wildfires. Kentucky Revised Statute 149.400 prohibits outdoor burning during these fire seasons between 6 am and 6 pm unless at a distance of at least 150 feet from woodlands or brushland. Kentucky averages 1484 wildfires a year that burn 38,000 acres of private lands. During the past ten years, these wildfires have destroyed 270 homes, structures, and improvements valued at $4,145,216.00. However, during the same time

frame, 7,129 homes and structures have been saved by wildland firefighters for a value of $332,018,580.00. In the past five years wildfires in Kentucky have also been attributed to the deaths of at least five citizens including one Kentucky Division of Forestry firefighter. Based on a recent study conducted by the University of Kentucky and the Kentucky Division of Forestry (KDF), the loss in timber value over this ten year period exceeds $139,450,000.00(Reeves, Stringer, 2010). With such a clear threat to life, and property, identifying successful wildfire mitigation projects has become a priority for the state. Kentucky's wildfire risks are compounded by the state's extremely high arson rate. Kentucky has the highest arson rate of all the 13 southern states. In fact, 62 percent of all wildfires in Kentucky are deliberately set by arsonists. Over 90 percent are human caused. These high numbers also represent a high potential for prevention efforts.

The area of Kentucky generally referred to as Appalachia poses the greatest wildfire risk within the state due to the mountainous terrain, limited access roads, and high arson occurrence. This area is the most heavily forested area of the state and heavier fuel loading increases the risks of wildfire. To illustrate the concentration of wildfires in Kentucky within Appalachia, the attached map reflects fire occurrence data for just the past three years. The highlighted area is the Lake Cumberland Region.



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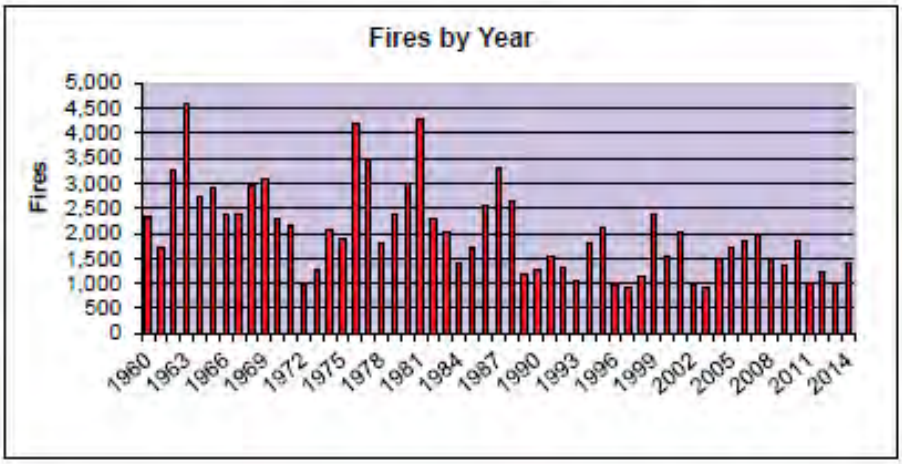
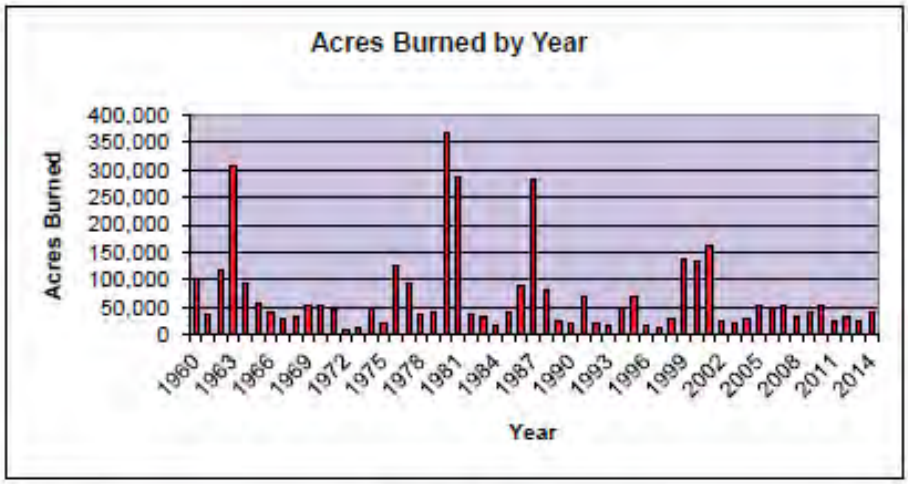
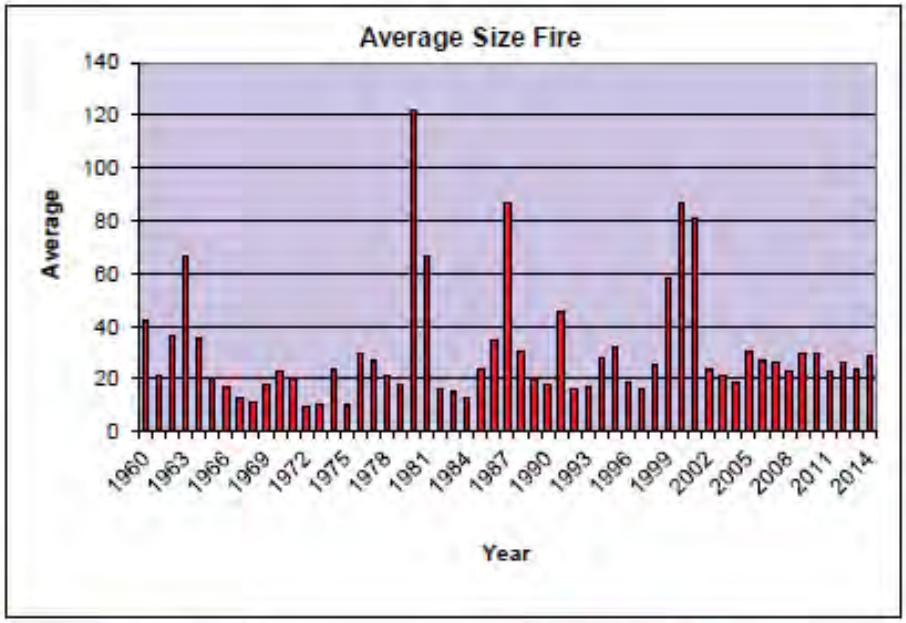
[54] Commonwealth of Kentucky Enhanced Hazard Mitigation Plan: 2013 Version, Appendix 4-2; http://kyem.ky.gov/recovery/Documents/CK-EHMP%202013,%20Appendix%204-02%20-%20KDF%20Wildfire%20Hazard%20Profile

Fire Summary 1960-2014 Report

Year	Fires	Acres	Average
1960	2,339	99,823	43
1961	1,713	36,177	21
1962	3,277	119,566	36
1963	4,579	306,253	67
1964	2,710	95,196	35
1965	2,911	58,635	20
1966	2,358	41,039	17
1967	2,352	30,158	13
1968	2,965	33,122	11
1969	3,079	54,000	18
1970	2,298	53,006	23
1971	2,153	44,567	21
1972	977	9,424	10
1973	1,258	13,396	11
1974	2,073	49,775	24
1975	1,900	19,021	10
1976	4,185	123,789	30
1977	3,485	94,106	27
1978	1,816	38,440	21
1979	2,364	41,480	18
1980	3,011	367,019	122
1981	4,298	287,568	67
1982	2,302	37,561	16
1983	2,041	31,702	16
1984	1,422	17,728	12
1985	1,730	40,533	23
1986	2,565	88,735	35
1987	3,283	285,036	87
1988	2,643	80,452	30
1989	1,188	23,755	20
1990	1,266	22,437	18
1991	1,514	68,904	46
1992	1,297	20,574	16
1993	1,068	18,126	17
1994	1,802	50,263	28
1995	2,097	67,828	32
1996	976	18,066	19
1997	913	14,475	16
1998	1,140	29,224	26
1999	2,396	139,110	58
2000	1,545	133,347	86
2001	2,010	163,327	81
2002	976	23,542	24
2003	926	19,681	21
2004	1,470	26,916	18
2005	1,710	51,586	30
2006	1,857	49,716	27
2007	1,965	52,506	27
2008	1,480	34,361	23
2009	1,369	40,934	30
2010	1,830	54,593	30
2011	1,002	23,090	23
2012	1,234	32,855	27
2013	980	23,212	24
2014	1,419	41,037	29
5av	1,293	34,957	26
10av	1,485	40,391	27
20av	1,465	51,971	33
53av	2,028	69,833	31







blue = lowest

red = highest

Ten Year Summary

Fire and Acres Burned 2005 - 2014

Year	Number of Fires	Acres Burned
2005	1,710	51,586
2006	1,857	49,759
2007	1,956	52,506
2008	1,480	34,381
2009	1,369	40,934
2010	1,830	54,578
2011	1,002	23,090
2012	1,234	32,855
2013	980	23,212
2014	1,419	41,037
Totals	**14,837**	**403,938**

Though fires can be started by natural occurrences, they are most frequently ignited by humans as a result of discarded cigarettes, downed power lines, or are intentionally set.

Ten Year Summary

Fire Causes 2005-2014

Causes	Number	Percent
Lightning	56	0.4%
Campfire	123	0.8%
Smoking	80	0.5%
Debris Burning	3,435	23.2%
Arson	9,442	63.6%
Equipment Use	388	2.6%
Railroad	48	0.3%
Children	73	0.5%
Miscellaneous	1,192	8.0%
Totals	**14,837**	**100.0%**

[55]

Monitoring Trends in Burn Severity (MTBS) is a multi-year project designed to consistently map the burn severity and perimeters of fires across all lands of the United States from 1984 and beyond. The data generated by MTBS will be used to identify national trends in burn severity, providing information necessary to monitor the effectiveness and effects of the National Fire Plan and Healthy Forests Restoration Act. The following maps will display MTBS data for the Lake Cumberland Region.[56]

[55] Division of Forestry, Wildland Fire Management, Wildland Fire Historical Statistics; http://forestry.ky.gov/wildlandfiremanagement/Pages/default.aspx

[56] Monitoring Trends in Burn Severity (MTBS); http://www.mtbs.gov/index.html

Table 4.5(1) - LCADD Region Wildfire Vulnerability Risk Exposure Assessment (State Data)

County	Total Acre	Fire Date	Loss Per Acre
Adair	2.0	2/8/2000	$165.04
Adair	142.0	2/26/2000	$11,717.84
Adair	5.0	2/26/2000	$412.60
Adair	2.0	3/6/2000	$165.04
Adair	2.0	3/8/2000	$165.04
Adair	4.0	3/15/2000	$330.08
Adair	0.2	10/26/2000	$16.50
Adair	2.0	10/29/2000	$165.04
Adair	1.0	11/1/2000	$82.52
Adair	1.0	11/2/2000	$82.52
Adair	0.5	11/29/2000	$41.26
Adair	5.0	1/10/2001	$412.60
Adair	0.3	2/6/2001	$24.76
Adair	1.5	2/8/2001	$123.78
Adair	3.0	2/9/2001	$247.56
Adair	2.0	2/24/2001	$165.04
Adair	1.0	3/8/2001	$82.52
Adair	3.0	4/4/2001	$247.56
Adair	1.5	4/6/2001	$123.78
Adair	3.0	4/12/2001	$247.56
Adair	3.0	4/23/2001	$247.56
Adair	10.0	4/23/2001	$825.20
Adair	2.0	4/26/2001	$165.04
Adair	20.0	10/30/2001	$1,650.40
Adair	80.0	11/1/2001	$6,601.60
Adair	5.0	11/2/2001	$412.60
Adair	0.5	11/10/2001	$41.26
Adair	2.0	11/14/2001	$165.04
Adair	1.5	11/21/2001	$123.78
Adair	0.3	11/22/2001	$20.63
Adair	0.2	2/18/2002	$16.50
Adair	1.0	2/21/2002	$82.52
Adair	2.0	2/25/2002	$165.04
Adair	0.3	3/2/2002	$24.76
Adair	80.0	3/7/2002	$6,601.60
Adair	35.0	3/8/2002	$2,888.20
Adair	0.1	3/15/2002	$8.25
Adair	0.2	7/8/2002	$16.50
Adair	1.0	9/10/2002	$82.52
Adair	0.4	11/14/2002	$33.01

Adair	8.1	4/1/2003	$668.41
Adair	2.0	10/21/2003	$165.04
Adair	1.0	10/25/2003	$82.52
Adair	1.5	11/21/2003	$123.78
Adair	20.0	2/22/2004	$1,650.40
Adair	2.5	2/28/2004	$206.30
Adair	8.0	4/6/2005	$660.16
Adair	0.1	6/18/2005	$8.25
Adair	1.0	6/23/2005	$82.52
Adair	1.5	6/24/2005	$123.78
Adair	7.0	10/31/2005	$577.64
Adair	20.0	11/3/2005	$1,650.40
Adair	12.0	11/26/2005	$990.24
Adair	1.1	11/26/2005	$90.77
Adair	40.0	11/28/2005	$3,300.80
Adair	37.0	11/28/2005	$3,053.24
Adair	2.1	12/22/2005	$173.29
Adair	5.6	3/2/2006	$462.11
Adair	8.0	3/9/2006	$660.16
Adair	1.0	4/15/2006	$82.52
Adair	2.0	11/22/2006	$165.04
Adair	1.0	11/27/2006	$82.52
Adair	3.0	12/6/2006	$247.56
Adair	3.1	2/11/2007	$255.81
Adair	1.2	3/8/2007	$99.02
Adair	8.0	3/9/2007	$660.16
Adair	1.0	3/11/2007	$82.52
Adair	7.0	3/12/2007	$577.64
Adair	2.5	3/23/2007	$206.30
Adair	2.5	8/25/2007	$206.30
Adair	3.0	9/6/2007	$247.56
Adair	8.0	1/8/2008	$660.16
Adair	3.0	3/3/2008	$247.56
Adair	10.5	3/21/2008	$866.46
Adair	2.5	9/26/2008	$206.30
Adair	4.0	10/3/2008	$330.08
Adair	1.5	10/4/2008	$123.78
Adair	11.0	10/4/2008	$907.72
Adair	8.0	10/7/2008	$660.16
Adair	2.1	10/12/2008	$173.29
Adair	8.0	10/30/2008	$660.16
Adair	1.0	10/30/2008	$82.52
Adair	2.5	11/1/2008	$206.30
Adair	2.0	3/6/2009	$165.04

Adair	5.0	11/9/2009	$412.60
Adair	26.0	11/9/2009	$2,145.52
Adair	1.1	11/14/2009	$90.77
Adair	1.1	11/16/2009	$90.77
Adair	1.0	1/28/2010	$82.52
Adair	2.0	3/6/2010	$165.04
Adair	5.0	3/6/2010	$412.60
Adair	5.0	3/6/2010	$412.60
Adair	12.0	4/2/2010	$990.24
Adair	10.1	4/4/2010	$833.45
Adair	3.0	4/6/2010	$247.56
Adair	15.0	4/6/2010	$1,237.80
Adair	1.0	10/18/2010	$82.52
Adair	5.0	11/13/2010	$412.60
Adair	3.0	3/22/2011	$247.56
Adair	2.0	1/1/2012	$165.04
Adair	10.0	11/2/2012	$825.20
Adair	6.0	11/20/2012	$495.12
Adair	9.0	12/4/2012	$742.68
Adair	1.2	2/18/2013	$99.02
Adair	8.0	4/3/2013	$660.16
Adair	13.0	2/1/2014	$1,072.76
Adair	10.0	2/13/2014	$825.20
Adair	5.0	3/1/2014	$412.60
Adair	30.5	3/10/2014	$2,516.86
Adair	2.0	3/20/2014	$165.04
Adair	2.0	3/22/2014	$165.04
Adair	10.0	4/2/2014	$825.20
Adair	13.0	4/13/2014	$1,072.76
Adair	3.0	5/20/2014	$247.56
Adair	11.0	3/31/2015	$907.72
Adair	25.0	2/28/2016	$2,063.00
Adair	0.1	3/8/2016	$8.25
Adair	8.0	3/9/2016	$660.16
Adair	4.1	3/30/2016	$338.33
Adair	3.0	4/16/2016	$247.56
Adair Totals	**975.6**		**$80,502.39**
Casey	30.0	2/29/2000	$2,475.60
Casey	4.2	2/29/2000	$346.58
Casey	0.5	3/2/2000	$41.26
Casey	3.0	3/5/2000	$247.56
Casey	3.0	3/5/2000	$247.56
Casey	2.5	3/5/2000	$206.30

Casey	80.0	3/7/2000	$6,601.60
Casey	132.0	3/9/2000	$10,892.64
Casey	2.0	3/9/2000	$165.04
Casey	4.0	3/23/2000	$330.08
Casey	10.0	4/9/2000	$825.20
Casey	0.1	10/26/2000	$8.25
Casey	2.0	10/30/2000	$165.04
Casey	15.0	10/30/2000	$1,237.80
Casey	5.0	10/30/2000	$412.60
Casey	28.0	11/1/2000	$2,310.56
Casey	0.5	11/2/2000	$41.26
Casey	1.0	11/2/2000	$82.52
Casey	5.0	11/3/2000	$412.60
Casey	0.4	11/5/2000	$33.01
Casey	1.0	2/8/2001	$82.52
Casey	0.2	2/8/2001	$16.50
Casey	4.0	2/9/2001	$330.08
Casey	20.0	2/9/2001	$1,650.40
Casey	5.0	3/11/2001	$412.60
Casey	10.0	3/11/2001	$825.20
Casey	20.0	3/11/2001	$1,650.40
Casey	1.0	3/11/2001	$82.52
Casey	8.0	4/7/2001	$660.16
Casey	1.0	4/7/2001	$82.52
Casey	10.0	4/21/2001	$825.20
Casey	2.0	4/25/2001	$165.04
Casey	3.0	5/3/2001	$247.56
Casey	1.0	5/5/2001	$82.52
Casey	15.0	5/18/2001	$1,237.80
Casey	0.5	6/30/2001	$41.26
Casey	7.0	10/26/2001	$577.64
Casey	30.0	10/30/2001	$2,475.60
Casey	25.0	10/31/2001	$2,063.00
Casey	0.5	11/3/2001	$41.26
Casey	15.0	11/5/2001	$1,237.80
Casey	1.1	11/7/2001	$90.77
Casey	3.0	11/10/2001	$247.56
Casey	12.0	11/10/2001	$990.24
Casey	3.0	11/17/2001	$247.56
Casey	2.0	11/23/2001	$165.04
Casey	20.0	11/23/2001	$1,650.40
Casey	16.0	12/5/2001	$1,320.32
Casey	2.0	12/28/2001	$165.04
Casey	1.0	1/4/2002	$82.52

Casey	3.0	2/15/2002	$247.56
Casey	5.0	2/17/2002	$412.60
Casey	2.0	2/17/2002	$165.04
Casey	6.0	2/18/2002	$495.12
Casey	1.5	2/19/2002	$123.78
Casey	15.0	3/6/2002	$1,237.80
Casey	35.0	3/8/2002	$2,888.20
Casey	21.0	3/23/2002	$1,732.92
Casey	3.0	3/23/2002	$247.56
Casey	9.0	3/24/2002	$742.68
Casey	2.0	3/24/2002	$165.04
Casey	15.0	3/29/2002	$1,237.80
Casey	35.0	4/7/2002	$2,888.20
Casey	25.0	12/2/2002	$2,063.00
Casey	0.5	12/2/2002	$41.26
Casey	2.0	3/8/2003	$165.04
Casey	14.0	3/16/2003	$1,155.28
Casey	25.0	3/17/2003	$2,063.00
Casey	15.0	3/24/2003	$1,237.80
Casey	30.0	3/27/2003	$2,475.60
Casey	0.5	4/3/2003	$41.26
Casey	20.0	4/3/2003	$1,650.40
Casey	100.0	4/3/2003	$8,252.00
Casey	3.0	11/1/2003	$247.56
Casey	0.1	1/29/2004	$8.25
Casey	10.0	2/24/2004	$825.20
Casey	1.5	2/27/2004	$123.78
Casey	35.0	2/27/2004	$2,888.20
Casey	4.0	2/28/2004	$330.08
Casey	0.6	2/28/2004	$49.51
Casey	1.0	2/29/2004	$82.52
Casey	15.0	3/13/2004	$1,237.80
Casey	100.0	3/18/2004	$8,252.00
Casey	20.0	3/23/2004	$1,650.40
Casey	15.0	3/25/2004	$1,237.80
Casey	5.0	3/28/2004	$412.60
Casey	16.0	3/28/2004	$1,320.32
Casey	3.0	4/5/2004	$247.56
Casey	75.0	4/7/2004	$6,189.00
Casey	0.2	4/17/2004	$16.50
Casey	0.5	2/27/2005	$41.26
Casey	0.2	6/11/2005	$16.50
Casey	1.5	11/3/2005	$123.78
Casey	12.0	11/3/2005	$990.24

Casey	77.0	11/5/2005	$6,354.04
Casey	35.0	11/7/2005	$2,888.20
Casey	5.0	11/9/2005	$412.60
Casey	0.6	11/11/2005	$49.51
Casey	1.5	11/11/2005	$123.78
Casey	15.0	11/12/2005	$1,237.80
Casey	53.0	11/12/2005	$4,373.56
Casey	22.0	11/12/2005	$1,815.44
Casey	2.5	11/19/2005	$206.30
Casey	0.1	11/23/2005	$8.25
Casey	8.0	11/26/2005	$660.16
Casey	50.0	2/16/2006	$4,126.00
Casey	40.0	2/25/2006	$3,300.80
Casey	5.0	2/25/2006	$412.60
Casey	10.0	2/25/2006	$825.20
Casey	50.0	2/27/2006	$4,126.00
Casey	25.0	4/12/2006	$2,063.00
Casey	90.0	4/12/2006	$7,426.80
Casey	3.5	4/15/2006	$288.82
Casey	15.0	11/25/2006	$1,237.80
Casey	2.0	3/5/2007	$165.04
Casey	1.0	3/6/2007	$82.52
Casey	3.0	3/15/2007	$247.56
Casey	6.0	4/25/2007	$495.12
Casey	2.5	10/4/2007	$206.30
Casey	5.0	11/3/2007	$412.60
Casey	12.0	4/2/2008	$990.24
Casey	8.0	4/15/2008	$660.16
Casey	6.0	4/16/2008	$495.12
Casey	35.0	4/17/2008	$2,888.20
Casey	6.2	8/17/2008	$511.62
Casey	8.0	9/25/2008	$660.16
Casey	20.0	10/13/2008	$1,650.40
Casey	15.0	10/19/2008	$1,237.80
Casey	25.0	10/21/2008	$2,063.00
Casey	40.0	10/23/2008	$3,300.80
Casey	0.4	11/2/2008	$33.01
Casey	2.0	2/16/2009	$165.04
Casey	8.0	2/16/2009	$660.16
Casey	2.0	2/17/2009	$165.04
Casey	20.0	3/4/2009	$1,650.40
Casey	40.0	3/4/2009	$3,300.80
Casey	2.0	3/5/2009	$165.04
Casey	20.0	3/22/2009	$1,650.40

Casey	25.5	3/24/2009	$2,104.26
Casey	40.0	4/22/2009	$3,300.80
Casey	45.0	4/25/2009	$3,713.40
Casey	35.0	3/6/2010	$2,888.20
Casey	3.0	3/18/2010	$247.56
Casey	20.0	3/18/2010	$1,650.40
Casey	20.0	3/27/2010	$1,650.40
Casey	90.0	4/6/2010	$7,426.80
Casey	25.0	10/20/2010	$2,063.00
Casey	12.0	11/1/2010	$990.24
Casey	1.0	11/11/2010	$82.52
Casey	25.0	11/12/2010	$2,063.00
Casey	9.0	11/22/2010	$742.68
Casey	1.5	1/4/2011	$123.78
Casey	11.0	2/19/2011	$907.72
Casey	25.0	3/18/2011	$2,063.00
Casey	5.0	3/20/2011	$412.60
Casey	2.0	3/20/2011	$165.04
Casey	4.0	4/10/2011	$330.08
Casey	10.0	10/31/2011	$825.20
Casey	30.0	3/14/2012	$2,475.60
Casey	2.0	11/4/2012	$165.04
Casey	30.0	11/5/2012	$2,475.60
Casey	8.0	11/9/2012	$660.16
Casey	1.0	11/11/2012	$82.52
Casey	18.0	11/17/2012	$1,485.36
Casey	1.0	11/19/2012	$82.52
Casey	5.0	11/20/2012	$412.60
Casey	71.0	12/3/2012	$5,858.92
Casey	50.0	2/10/2013	$4,126.00
Casey	70.0	2/25/2013	$5,776.40
Casey	45.0	2/25/2013	$3,713.40
Casey	3.0	3/20/2013	$247.56
Casey	45.0	4/2/2013	$3,713.40
Casey	15.0	4/6/2013	$1,237.80
Casey	41.0	4/7/2013	$3,383.32
Casey	4.0	4/9/2013	$330.08
Casey	10.0	4/9/2013	$825.20
Casey	0.5	11/5/2013	$41.26
Casey	2.5	12/19/2013	$206.30
Casey	27.0	12/19/2013	$2,228.04
Casey	40.0	2/1/2014	$3,300.80
Casey	5.0	2/22/2014	$412.60
Casey	0.5	2/25/2014	$41.26

Casey	10.0	3/10/2014	$825.20
Casey	15.1	3/11/2014	$1,246.05
Casey	17.0	3/20/2014	$1,402.84
Casey	50.0	3/27/2014	$4,126.00
Casey	52.0	4/2/2014	$4,291.04
Casey	46.0	4/13/2014	$3,795.92
Casey	31.0	4/22/2014	$2,558.12
Casey	41.0	4/24/2014	$3,383.32
Casey	2.0	11/23/2014	$165.04
Casey	5.0	4/1/2015	$412.60
Casey	6.0	4/12/2015	$495.12
Casey	4.0	11/15/2015	$330.08
Casey	6.0	1/14/2016	$495.12
Casey	4.0	2/28/2016	$330.08
Casey Totals	**3,290.5**		**$271,532.06**
Clinton	1.0	2/29/2000	$82.52
Clinton	0.4	3/1/2000	$33.01
Clinton	3.0	3/6/2000	$247.56
Clinton	4.0	4/10/2000	$330.08
Clinton	1.0	10/27/2000	$82.52
Clinton	100.0	10/31/2000	$8,252.00
Clinton	80.0	11/2/2000	$6,601.60
Clinton	3.0	3/11/2001	$247.56
Clinton	3.0	4/7/2001	$247.56
Clinton	80.0	4/11/2001	$6,601.60
Clinton	0.3	10/31/2001	$20.63
Clinton	0.1	10/31/2001	$8.25
Clinton	100.0	11/9/2001	$8,252.00
Clinton	1,000.0	11/10/2001	$82,520.00
Clinton	450.0	11/10/2001	$37,134.00
Clinton	5.0	11/11/2001	$412.60
Clinton	2.0	2/18/2002	$165.04
Clinton	0.2	2/28/2002	$16.50
Clinton	4.0	3/25/2002	$330.08
Clinton	2.0	3/29/2002	$165.04
Clinton	20.0	4/4/2002	$1,650.40
Clinton	20.0	4/11/2002	$1,650.40
Clinton	5.0	8/13/2002	$412.60
Clinton	2.0	9/12/2002	$165.04
Clinton	1.5	9/14/2002	$123.78
Clinton	0.5	11/2/2003	$41.26
Clinton	0.2	2/21/2004	$16.50
Clinton	2.0	2/24/2004	$165.04

Clinton	1.0	2/25/2004	$82.52
Clinton	0.2	2/29/2004	$16.50
Clinton	1.0	2/29/2004	$82.52
Clinton	5.0	2/29/2004	$412.60
Clinton	0.3	3/24/2004	$24.76
Clinton	10.0	3/24/2004	$825.20
Clinton	0.5	3/25/2004	$41.26
Clinton	35.0	3/26/2004	$2,888.20
Clinton	2.0	4/6/2004	$165.04
Clinton	1.0	4/7/2004	$82.52
Clinton	0.5	4/7/2004	$41.26
Clinton	40.0	4/10/2004	$3,300.80
Clinton	0.5	10/3/2004	$41.26
Clinton	1.0	10/11/2004	$82.52
Clinton	0.5	11/1/2004	$41.26
Clinton	2.0	3/12/2005	$165.04
Clinton	2.0	3/15/2005	$165.04
Clinton	10.0	3/15/2005	$825.20
Clinton	6.0	4/5/2005	$495.12
Clinton	4.0	8/1/2005	$330.08
Clinton	1.5	10/30/2005	$123.78
Clinton	4.0	11/12/2005	$330.08
Clinton	50.0	11/13/2005	$4,126.00
Clinton	0.5	11/19/2005	$41.26
Clinton	1.5	11/20/2005	$123.78
Clinton	0.5	11/27/2005	$41.26
Clinton	0.5	2/25/2006	$41.26
Clinton	3.0	3/2/2006	$247.56
Clinton	3.5	3/8/2006	$288.82
Clinton	0.1	3/17/2006	$8.25
Clinton	1.0	3/18/2006	$82.52
Clinton	1.0	3/30/2006	$82.52
Clinton	0.5	4/11/2006	$41.26
Clinton	0.5	4/14/2006	$41.26
Clinton	0.5	12/10/2006	$41.26
Clinton	527.0	2/28/2007	$43,488.04
Clinton	20.0	3/6/2007	$1,650.40
Clinton	0.3	3/7/2007	$24.76
Clinton	77.0	3/7/2007	$6,354.04
Clinton	11.0	3/7/2007	$907.72
Clinton	5.0	3/8/2007	$412.60
Clinton	217.0	3/9/2007	$17,906.84
Clinton	0.1	3/27/2007	$8.25
Clinton	0.3	3/28/2007	$24.76

Clinton	15.0	4/2/2007	$1,237.80
Clinton	10.0	4/21/2007	$825.20
Clinton	12.0	4/30/2007	$990.24
Clinton	0.5	9/12/2007	$41.26
Clinton	0.3	9/19/2007	$24.76
Clinton	6.0	11/9/2007	$495.12
Clinton	20.0	11/10/2007	$1,650.40
Clinton	0.3	11/11/2007	$24.76
Clinton	0.3	3/13/2008	$24.76
Clinton	98.0	9/25/2008	$8,086.96
Clinton	10.0	10/5/2008	$825.20
Clinton	1.0	10/6/2008	$82.52
Clinton	0.5	11/3/2008	$41.26
Clinton	30.0	11/3/2008	$2,475.60
Clinton	19.0	11/4/2008	$1,567.88
Clinton	4.0	11/6/2008	$330.08
Clinton	75.0	11/6/2008	$6,189.00
Clinton	0.5	3/5/2009	$41.26
Clinton	75.0	3/10/2009	$6,189.00
Clinton	0.5	3/22/2009	$41.26
Clinton	0.2	3/23/2009	$16.50
Clinton	0.5	11/3/2009	$41.26
Clinton	1.0	11/6/2009	$82.52
Clinton	9.0	11/7/2009	$742.68
Clinton	12.0	11/9/2009	$990.24
Clinton	4.0	3/4/2010	$330.08
Clinton	0.5	3/20/2010	$41.26
Clinton	10.0	4/6/2010	$825.20
Clinton	30.0	4/15/2010	$2,475.60
Clinton	15.0	4/18/2010	$1,237.80
Clinton	0.3	9/20/2010	$20.63
Clinton	1.3	10/8/2010	$103.15
Clinton	12.0	10/18/2010	$990.24
Clinton	0.3	10/18/2010	$20.63
Clinton	3.0	10/21/2010	$247.56
Clinton	75.0	10/23/2010	$6,189.00
Clinton	175.0	10/23/2010	$14,441.00
Clinton	25.0	10/24/2010	$2,063.00
Clinton	40.0	10/29/2010	$3,300.80
Clinton	300.0	10/30/2010	$24,756.00
Clinton	2.0	10/31/2010	$165.04
Clinton	20.0	11/12/2010	$1,650.40
Clinton	0.5	2/14/2011	$41.26
Clinton	3.0	2/17/2011	$247.56

Clinton	0.1	2/18/2011	$8.25
Clinton	3.0	2/18/2011	$247.56
Clinton	0.1	3/20/2011	$8.25
Clinton	2.0	10/18/2011	$165.04
Clinton	15.0	10/18/2011	$1,237.80
Clinton	1.0	11/13/2011	$82.52
Clinton	0.1	1/1/2012	$8.25
Clinton	76.0	2/28/2012	$6,271.52
Clinton	1.0	3/7/2012	$82.52
Clinton	65.0	3/14/2012	$5,363.80
Clinton	8.5	3/21/2012	$701.42
Clinton	90.0	3/28/2012	$7,426.80
Clinton	15.0	3/28/2012	$1,237.80
Clinton	25.0	3/29/2012	$2,063.00
Clinton	90.0	6/29/2012	$7,426.80
Clinton	95.0	10/23/2012	$7,839.40
Clinton	1.0	10/26/2012	$82.52
Clinton	50.0	11/23/2012	$4,126.00
Clinton	1.1	12/2/2012	$90.77
Clinton	15.0	12/2/2012	$1,237.80
Clinton	18.0	12/2/2012	$1,485.36
Clinton	0.1	12/2/2012	$8.25
Clinton	20.0	3/25/2013	$1,650.40
Clinton	1.0	4/13/2013	$82.52
Clinton	90.0	11/10/2013	$7,426.80
Clinton	25.0	11/14/2013	$2,063.00
Clinton	3.0	2/1/2014	$247.56
Clinton	20.0	2/1/2014	$1,650.40
Clinton	1.5	2/23/2014	$123.78
Clinton	15.5	2/23/2014	$1,279.06
Clinton	1.0	2/25/2014	$82.52
Clinton	87.0	2/28/2014	$7,179.24
Clinton	3.0	2/28/2014	$247.56
Clinton	26.0	3/14/2014	$2,145.52
Clinton	25.0	3/14/2014	$2,063.00
Clinton	1.0	3/27/2014	$82.52
Clinton	1.0	3/27/2014	$82.52
Clinton	2.0	4/19/2014	$165.04
Clinton	1.6	3/29/2015	$132.03
Clinton	0.5	4/1/2015	$41.26
Clinton Totals	**4,952.4**		**$408,672.05**
Cumberland	3.0	1/11/2000	$247.56
Cumberland	15.0	2/16/2000	$1,237.80

Cumberland	0.5	2/29/2000	$41.26
Cumberland	25.0	3/6/2000	$2,063.00
Cumberland	845.0	3/6/2000	$69,729.40
Cumberland	1.0	3/6/2000	$82.52
Cumberland	156.0	3/8/2000	$12,873.12
Cumberland	30.0	3/9/2000	$2,475.60
Cumberland	30.0	3/9/2000	$2,475.60
Cumberland	45.0	3/9/2000	$3,713.40
Cumberland	3.0	3/10/2000	$247.56
Cumberland	60.0	3/15/2000	$4,951.20
Cumberland	0.3	4/27/2000	$24.76
Cumberland	8.0	10/10/2000	$660.16
Cumberland	1.0	10/13/2000	$82.52
Cumberland	20.0	10/14/2000	$1,650.40
Cumberland	3.5	10/14/2000	$288.82
Cumberland	50.0	10/27/2000	$4,126.00
Cumberland	15.0	11/1/2000	$1,237.80
Cumberland	0.5	11/20/2000	$41.26
Cumberland	8.0	1/7/2001	$660.16
Cumberland	0.4	1/31/2001	$33.01
Cumberland	25.0	2/3/2001	$2,063.00
Cumberland	1.0	2/6/2001	$82.52
Cumberland	3.0	2/8/2001	$247.56
Cumberland	3.0	2/9/2001	$247.56
Cumberland	2.0	2/25/2001	$165.04
Cumberland	3.5	3/9/2001	$288.82
Cumberland	3.0	3/13/2001	$247.56
Cumberland	125.0	3/18/2001	$10,315.00
Cumberland	282.0	3/25/2001	$23,270.64
Cumberland	40.0	4/6/2001	$3,300.80
Cumberland	4.0	4/11/2001	$330.08
Cumberland	1.0	4/21/2001	$82.52
Cumberland	1.0	10/23/2001	$82.52
Cumberland	1.5	10/30/2001	$123.78
Cumberland	0.1	10/31/2001	$8.25
Cumberland	1.0	10/31/2001	$82.52
Cumberland	101.0	11/2/2001	$8,334.52
Cumberland	20.0	11/7/2001	$1,650.40
Cumberland	3.0	11/7/2001	$247.56
Cumberland	800.0	11/8/2001	$66,016.00
Cumberland	3.0	11/8/2001	$247.56
Cumberland	4.0	11/11/2001	$330.08
Cumberland	5.0	11/19/2001	$412.60
Cumberland	12.0	2/18/2002	$990.24

Cumberland	30.0	2/25/2002	$2,475.60
Cumberland	16.0	3/24/2002	$1,320.32
Cumberland	0.5	8/14/2002	$41.26
Cumberland	0.5	11/13/2002	$41.26
Cumberland	0.2	3/17/2003	$16.50
Cumberland	7.0	10/31/2003	$577.64
Cumberland	1.0	11/1/2003	$82.52
Cumberland	20.0	11/21/2003	$1,650.40
Cumberland	75.0	11/23/2003	$6,189.00
Cumberland	10.0	12/3/2003	$825.20
Cumberland	4.0	1/14/2004	$330.08
Cumberland	0.5	2/18/2004	$41.26
Cumberland	25.0	2/19/2004	$2,063.00
Cumberland	0.1	2/20/2004	$8.25
Cumberland	11.0	2/24/2004	$907.72
Cumberland	22.0	2/29/2004	$1,815.44
Cumberland	0.1	2/29/2004	$8.25
Cumberland	0.1	2/29/2004	$8.25
Cumberland	35.0	3/1/2004	$2,888.20
Cumberland	0.5	3/13/2004	$41.26
Cumberland	0.1	3/19/2004	$8.25
Cumberland	0.1	3/20/2004	$8.25
Cumberland	30.0	3/24/2004	$2,475.60
Cumberland	3.0	4/7/2004	$247.56
Cumberland	0.1	4/7/2004	$8.25
Cumberland	2.0	4/8/2004	$165.04
Cumberland	2.0	11/2/2004	$165.04
Cumberland	0.5	11/8/2004	$41.26
Cumberland	5.0	3/15/2005	$412.60
Cumberland	7.0	3/19/2005	$577.64
Cumberland	1.0	6/21/2005	$82.52
Cumberland	0.2	6/23/2005	$16.50
Cumberland	1.0	8/15/2005	$82.52
Cumberland	0.5	10/30/2005	$41.26
Cumberland	0.1	10/31/2005	$8.25
Cumberland	200.0	11/5/2005	$16,504.00
Cumberland	0.1	11/9/2005	$8.25
Cumberland	2.0	11/25/2005	$165.04
Cumberland	20.0	11/27/2005	$1,650.40
Cumberland	0.5	1/8/2006	$41.26
Cumberland	1.0	3/1/2006	$82.52
Cumberland	13.0	3/2/2006	$1,072.76
Cumberland	50.0	3/2/2006	$4,126.00
Cumberland	125.0	3/3/2006	$10,315.00

Cumberland	0.5	3/5/2006	$41.26
Cumberland	55.0	3/18/2006	$4,538.60
Cumberland	1.0	3/19/2006	$82.52
Cumberland	0.6	3/23/2006	$49.51
Cumberland	0.1	3/29/2006	$8.25
Cumberland	12.0	3/30/2006	$990.24
Cumberland	4.0	4/5/2006	$330.08
Cumberland	3.0	11/5/2006	$247.56
Cumberland	2.0	11/26/2006	$165.04
Cumberland	0.5	3/8/2007	$41.26
Cumberland	24.5	3/11/2007	$2,021.74
Cumberland	1.7	3/14/2007	$140.28
Cumberland	3.0	9/8/2007	$247.56
Cumberland	2.0	9/29/2007	$165.04
Cumberland	0.2	10/13/2007	$16.50
Cumberland	2.0	1/4/2008	$165.04
Cumberland	2.5	2/19/2008	$206.30
Cumberland	21.0	11/5/2008	$1,732.92
Cumberland	0.5	11/27/2008	$41.26
Cumberland	1.0	2/8/2009	$82.52
Cumberland	3.5	2/8/2009	$288.82
Cumberland	0.5	2/9/2009	$41.26
Cumberland	3.5	3/4/2009	$288.82
Cumberland	0.1	3/5/2009	$8.25
Cumberland	1.8	4/25/2009	$148.54
Cumberland	0.5	8/26/2009	$41.26
Cumberland	9.0	11/7/2009	$742.68
Cumberland	56.0	11/9/2009	$4,621.12
Cumberland	49.0	11/11/2009	$4,043.48
Cumberland	19.0	11/16/2009	$1,567.88
Cumberland	3.3	3/6/2010	$272.32
Cumberland	0.3	3/18/2010	$24.76
Cumberland	19.0	3/20/2010	$1,567.88
Cumberland	30.0	4/6/2010	$2,475.60
Cumberland	29.0	4/7/2010	$2,393.08
Cumberland	82.0	10/15/2010	$6,766.64
Cumberland	4.0	10/19/2010	$330.08
Cumberland	3.5	10/21/2010	$288.82
Cumberland	5.0	10/23/2010	$412.60
Cumberland	0.8	10/29/2010	$66.02
Cumberland	5.0	11/10/2010	$412.60
Cumberland	7.0	11/11/2010	$577.64
Cumberland	17.0	3/21/2011	$1,402.84
Cumberland	1.0	4/3/2011	$82.52

Cumberland	0.1	11/2/2011	$8.25
Cumberland	4.5	11/8/2011	$371.34
Cumberland	49.0	11/13/2011	$4,043.48
Cumberland	5.5	2/28/2012	$453.86
Cumberland	28.0	3/6/2012	$2,310.56
Cumberland	24.0	6/28/2012	$1,980.48
Cumberland	97.0	10/31/2012	$8,004.44
Cumberland	125.0	11/11/2012	$10,315.00
Cumberland	58.0	11/11/2012	$4,786.16
Cumberland	9.0	11/16/2012	$742.68
Cumberland	2.0	11/23/2012	$165.04
Cumberland	14.5	2/18/2013	$1,196.54
Cumberland	1.5	3/15/2013	$123.78
Cumberland	38.0	11/6/2013	$3,135.76
Cumberland	3.0	11/10/2013	$247.56
Cumberland	6.0	1/30/2014	$495.12
Cumberland	30.0	2/1/2014	$2,475.60
Cumberland	1.5	2/20/2014	$123.78
Cumberland	6.0	2/25/2014	$495.12
Cumberland	0.5	2/26/2014	$41.26
Cumberland	19.0	2/27/2014	$1,567.88
Cumberland	1.3	3/15/2014	$107.28
Cumberland	18.0	3/15/2014	$1,485.36
Cumberland	28.0	3/27/2014	$2,310.56
Cumberland	27.0	4/1/2014	$2,228.04
Cumberland	2.0	4/2/2014	$165.04
Cumberland	3.2	1/18/2015	$264.06
Cumberland	10.0	2/5/2015	$825.20
Cumberland	4.0	2/7/2015	$330.08
Cumberland	25.0	3/29/2015	$2,063.00
Cumberland	13.0	4/15/2016	$1,072.76
Cumberland	2.0	4/18/2016	$165.04
Cumberland Totals	**4,629.5**		**$382,026.34**
Green	0.1	1/12/2000	$8.25
Green	10.0	2/23/2000	$825.20
Green	2.0	3/1/2000	$165.04
Green	2.0	3/7/2000	$165.04
Green	1.0	3/14/2000	$82.52
Green	6.0	3/31/2000	$495.12
Green	4.0	10/21/2000	$330.08
Green	6.0	10/24/2000	$495.12
Green	4.0	10/28/2000	$330.08
Green	2.0	10/30/2000	$165.04

Green	0.5	11/6/2000	$41.26
Green	4.0	2/6/2001	$330.08
Green	2.0	2/7/2001	$165.04
Green	5.0	3/6/2001	$412.60
Green	6.0	3/28/2001	$495.12
Green	2.0	3/29/2001	$165.04
Green	0.1	11/16/2001	$8.25
Green	10.0	2/18/2002	$825.20
Green	1.0	3/16/2003	$82.52
Green	2.0	2/22/2004	$165.04
Green	2.0	2/22/2004	$165.04
Green	10.0	2/29/2004	$825.20
Green	1.0	3/10/2004	$82.52
Green	5.5	4/18/2004	$453.86
Green	0.2	3/19/2005	$16.50
Green	80.0	11/4/2005	$6,601.60
Green	5.0	11/8/2005	$412.60
Green	3.1	11/12/2005	$255.81
Green	3.0	11/26/2005	$247.56
Green	0.5	12/21/2005	$41.26
Green	12.0	1/8/2006	$990.24
Green	3.0	2/28/2006	$247.56
Green	35.0	3/2/2006	$2,888.20
Green	0.2	3/8/2006	$16.50
Green	3.0	3/8/2006	$247.56
Green	2.3	3/16/2006	$189.80
Green	1.5	3/16/2006	$123.78
Green	0.5	11/25/2006	$41.26
Green	1.0	2/22/2007	$82.52
Green	5.0	2/23/2007	$412.60
Green	5.0	2/23/2007	$412.60
Green	2.0	8/5/2007	$165.04
Green	5.0	2/20/2008	$412.60
Green	5.0	3/3/2008	$412.60
Green	0.3	10/23/2008	$24.76
Green	1.5	11/1/2008	$123.78
Green	10.0	2/7/2009	$825.20
Green	50.0	2/7/2009	$4,126.00
Green	5.0	2/8/2009	$412.60
Green	1.5	2/9/2009	$123.78
Green	1.8	2/13/2009	$148.54
Green	1.0	3/23/2009	$82.52
Green	0.2	11/8/2009	$16.50
Green	2.5	11/28/2009	$206.30

Green	5.0	3/8/2010	$412.60
Green	20.0	3/9/2010	$1,650.40
Green	3.0	3/18/2010	$247.56
Green	33.0	3/20/2010	$2,723.16
Green	25.0	4/2/2010	$2,063.00
Green	3.0	4/6/2010	$247.56
Green	35.0	9/9/2010	$2,888.20
Green	5.0	10/6/2010	$412.60
Green	3.0	10/17/2010	$247.56
Green	0.1	10/18/2010	$8.25
Green	0.1	10/22/2010	$8.25
Green	3.0	2/18/2011	$247.56
Green	50.0	3/6/2012	$4,126.00
Green	10.0	3/10/2013	$825.20
Green	3.0	2/27/2014	$247.56
Green	3.1	3/11/2014	$255.81
Green	11.3	3/14/2014	$932.48
Green	10.0	4/13/2014	$825.20
Green Totals	**556.9**		**$45,955.39**
McCreary	45.0	4/1/2000	$3,713.40
McCreary	150.0	5/9/2000	$12,378.00
McCreary	28.0	10/28/2000	$2,310.56
McCreary	40.0	10/28/2000	$3,300.80
McCreary	341.0	5/18/2001	$28,139.32
McCreary	20.0	11/5/2001	$1,650.40
McCreary	6.0	11/8/2001	$495.12
McCreary	4.0	11/15/2001	$330.08
McCreary	165.0	3/8/2002	$13,615.80
McCreary	2.0	4/5/2002	$165.04
McCreary	25.0	4/7/2002	$2,063.00
McCreary	120.0	4/30/2002	$9,902.40
McCreary	10.0	3/17/2003	$825.20
McCreary	3.0	3/22/2003	$247.56
McCreary	8.0	3/23/2003	$660.16
McCreary	50.0	3/28/2003	$4,126.00
McCreary	40.0	4/1/2003	$3,300.80
McCreary	2.0	3/4/2004	$165.04
McCreary	2.5	3/26/2004	$206.30
McCreary	2.0	3/28/2004	$165.04
McCreary	22.0	4/4/2004	$1,815.44
McCreary	3.5	4/7/2004	$288.82
McCreary	30.0	4/7/2004	$2,475.60
McCreary	15.0	4/19/2004	$1,237.80

McCreary	75.0	11/1/2004	$6,189.00
McCreary	6.0	11/2/2004	$495.12
McCreary	50.0	11/3/2004	$4,126.00
McCreary	1.0	2/19/2005	$82.52
McCreary	10.0	4/10/2005	$825.20
McCreary	20.0	9/23/2005	$1,650.40
McCreary	30.0	11/3/2005	$2,475.60
McCreary	10.0	11/9/2005	$825.20
McCreary	4.0	11/22/2005	$330.08
McCreary	10.0	4/2/2006	$825.20
McCreary	80.0	4/12/2006	$6,601.60
McCreary	20.0	5/15/2007	$1,650.40
McCreary	40.0	9/9/2007	$3,300.80
McCreary	5.0	9/19/2007	$412.60
McCreary	35.0	9/26/2007	$2,888.20
McCreary	5.0	9/28/2007	$412.60
McCreary	150.0	9/30/2007	$12,378.00
McCreary	40.0	9/30/2007	$3,300.80
McCreary	15.0	4/17/2008	$1,237.80
McCreary	175.0	4/17/2008	$14,441.00
McCreary	20.0	8/22/2008	$1,650.40
McCreary	55.0	9/25/2008	$4,538.60
McCreary	1.0	10/2/2008	$82.52
McCreary	90.0	10/5/2008	$7,426.80
McCreary	19.0	11/4/2008	$1,567.88
McCreary	5.0	3/4/2009	$412.60
McCreary	2.0	3/7/2009	$165.04
McCreary	30.0	3/10/2009	$2,475.60
McCreary	5.0	3/24/2009	$412.60
McCreary	2.0	11/14/2009	$165.04
McCreary	20.0	3/6/2010	$1,650.40
McCreary	2.0	4/11/2010	$165.04
McCreary	0.5	10/21/2010	$41.26
McCreary	1.0	11/20/2010	$82.52
McCreary	10.0	3/18/2011	$825.20
McCreary	1.0	3/13/2012	$82.52
McCreary	30.0	6/26/2012	$2,475.60
McCreary	8.0	2/21/2013	$660.16
McCreary	1.0	4/21/2013	$82.52
McCreary	5.0	4/22/2013	$412.60
McCreary	42.0	4/25/2013	$3,465.84
McCreary	8.0	11/1/2013	$660.16
McCreary	55.0	11/14/2013	$4,538.60
McCreary	6.0	3/11/2014	$495.12

McCreary	40.0	3/22/2014	$3,300.80
McCreary	0.1	3/23/2014	$8.25
McCreary	93.0	3/26/2014	$7,674.36
McCreary	188.0	3/27/2014	$15,513.76
McCreary	20.0	4/2/2014	$1,650.40
McCreary	24.0	4/11/2014	$1,980.48
McCreary	11.4	2/29/2016	$940.73
McCreary	260.0	3/22/2016	$21,455.20
McCreary	30.0	4/16/2016	$2,475.60
McCreary Totals	**3,000.0**		**$247,560.00**
Pulaski	1.0	1/11/2000	$82.52
Pulaski	4.0	2/25/2000	$330.08
Pulaski	15.0	2/26/2000	$1,237.80
Pulaski	0.1	2/28/2000	$8.25
Pulaski	0.2	3/7/2000	$16.50
Pulaski	80.2	3/8/2000	$6,618.10
Pulaski	15.0	4/6/2000	$1,237.80
Pulaski	25.0	4/7/2000	$2,063.00
Pulaski	3.0	10/29/2000	$247.56
Pulaski	1.5	10/30/2000	$123.78
Pulaski	20.0	11/4/2000	$1,650.40
Pulaski	10.0	3/10/2001	$825.20
Pulaski	3.5	3/10/2001	$288.82
Pulaski	0.1	3/12/2001	$8.25
Pulaski	5.0	3/26/2001	$412.60
Pulaski	4.0	3/28/2001	$330.08
Pulaski	60.0	4/6/2001	$4,951.20
Pulaski	25.0	4/6/2001	$2,063.00
Pulaski	5.0	4/27/2001	$412.60
Pulaski	46.0	4/28/2001	$3,795.92
Pulaski	20.0	4/28/2001	$1,650.40
Pulaski	10.0	10/19/2001	$825.20
Pulaski	117.0	10/27/2001	$9,654.84
Pulaski	1.0	10/30/2001	$82.52
Pulaski	1.0	10/31/2001	$82.52
Pulaski	0.5	10/31/2001	$41.26
Pulaski	20.0	10/31/2001	$1,650.40
Pulaski	2.0	11/5/2001	$165.04
Pulaski	5.0	11/8/2001	$412.60
Pulaski	500.0	11/9/2001	$41,260.00
Pulaski	1.0	11/11/2001	$82.52
Pulaski	20.0	11/14/2001	$1,650.40
Pulaski	5.0	11/17/2001	$412.60

Pulaski	0.2	11/23/2001	$16.50
Pulaski	0.1	11/23/2001	$8.25
Pulaski	3.0	2/19/2002	$247.56
Pulaski	1.0	2/24/2002	$82.52
Pulaski	9.0	2/24/2002	$742.68
Pulaski	12.0	2/25/2002	$990.24
Pulaski	3.0	2/25/2002	$247.56
Pulaski	17.0	3/6/2002	$1,402.84
Pulaski	15.0	3/8/2002	$1,237.80
Pulaski	50.0	3/8/2002	$4,126.00
Pulaski	5.0	3/29/2002	$412.60
Pulaski	3.0	3/11/2003	$247.56
Pulaski	15.1	3/12/2003	$1,246.05
Pulaski	40.0	3/22/2003	$3,300.80
Pulaski	0.5	3/24/2003	$41.26
Pulaski	10.0	3/25/2003	$825.20
Pulaski	150.0	3/28/2003	$12,378.00
Pulaski	0.3	11/23/2003	$24.76
Pulaski	2.0	2/22/2004	$165.04
Pulaski	3.0	2/28/2004	$247.56
Pulaski	0.5	2/29/2004	$41.26
Pulaski	3.0	3/23/2004	$247.56
Pulaski	25.0	3/23/2004	$2,063.00
Pulaski	0.5	4/6/2004	$41.26
Pulaski	0.2	4/7/2004	$16.50
Pulaski	50.0	4/8/2004	$4,126.00
Pulaski	2.0	4/10/2004	$165.04
Pulaski	50.0	11/8/2004	$4,126.00
Pulaski	9.0	3/22/2005	$742.68
Pulaski	10.0	8/15/2005	$825.20
Pulaski	0.5	10/30/2005	$41.26
Pulaski	1.0	10/31/2005	$82.52
Pulaski	50.0	11/10/2005	$4,126.00
Pulaski	165.0	11/12/2005	$13,615.80
Pulaski	4.0	11/20/2005	$330.08
Pulaski	3.0	11/26/2005	$247.56
Pulaski	2.0	11/26/2005	$165.04
Pulaski	0.6	11/28/2005	$49.51
Pulaski	2.0	3/4/2006	$165.04
Pulaski	0.5	3/8/2006	$41.26
Pulaski	3.0	3/10/2006	$247.56
Pulaski	20.0	3/30/2006	$1,650.40
Pulaski	20.0	4/1/2006	$1,650.40
Pulaski	10.0	11/25/2006	$825.20

Pulaski	2.0	3/7/2007	$165.04
Pulaski	40.5	3/9/2007	$3,342.06
Pulaski	4.0	3/11/2007	$330.08
Pulaski	14.0	3/12/2007	$1,155.28
Pulaski	3.0	3/12/2007	$247.56
Pulaski	3.0	3/24/2007	$247.56
Pulaski	3.0	3/25/2007	$247.56
Pulaski	1.0	3/26/2007	$82.52
Pulaski	5.5	3/26/2007	$453.86
Pulaski	5.0	4/1/2007	$412.60
Pulaski	15.0	4/2/2007	$1,237.80
Pulaski	3.0	4/10/2007	$247.56
Pulaski	10.0	5/1/2007	$825.20
Pulaski	5.0	5/2/2007	$412.60
Pulaski	5.0	6/17/2007	$412.60
Pulaski	0.5	6/18/2007	$41.26
Pulaski	5.0	8/15/2007	$412.60
Pulaski	2.0	8/16/2007	$165.04
Pulaski	0.4	8/28/2007	$33.01
Pulaski	3.0	10/2/2007	$247.56
Pulaski	3.0	10/21/2007	$247.56
Pulaski	10.0	11/11/2007	$825.20
Pulaski	4.0	3/21/2008	$330.08
Pulaski	3.0	3/26/2008	$247.56
Pulaski	15.0	4/24/2008	$1,237.80
Pulaski	5.0	4/24/2008	$412.60
Pulaski	3.0	6/23/2008	$247.56
Pulaski	1.5	9/22/2008	$123.78
Pulaski	15.0	9/26/2008	$1,237.80
Pulaski	10.0	10/1/2008	$825.20
Pulaski	0.1	10/4/2008	$8.25
Pulaski	7.0	10/19/2008	$577.64
Pulaski	12.0	10/24/2008	$990.24
Pulaski	6.5	10/28/2008	$536.38
Pulaski	2.0	11/7/2008	$165.04
Pulaski	0.1	2/16/2009	$8.25
Pulaski	20.0	3/7/2009	$1,650.40
Pulaski	50.0	3/9/2009	$4,126.00
Pulaski	15.0	3/22/2009	$1,237.80
Pulaski	1.0	4/18/2009	$82.52
Pulaski	8.0	4/18/2009	$660.16
Pulaski	0.5	11/7/2009	$41.26
Pulaski	1.0	11/9/2009	$82.52
Pulaski	6.0	11/11/2009	$495.12

Pulaski	2.0	11/11/2009	$165.04
Pulaski	83.0	11/28/2009	$6,849.16
Pulaski	5.0	3/4/2010	$412.60
Pulaski	22.0	3/20/2010	$1,815.44
Pulaski	35.0	4/1/2010	$2,888.20
Pulaski	2.0	4/6/2010	$165.04
Pulaski	2.0	4/6/2010	$165.04
Pulaski	10.2	4/16/2010	$841.70
Pulaski	10.0	11/22/2010	$825.20
Pulaski	8.0	3/22/2011	$660.16
Pulaski	6.0	1/31/2012	$495.12
Pulaski	3.0	3/22/2012	$247.56
Pulaski	15.0	6/27/2012	$1,237.80
Pulaski	6.0	6/29/2012	$495.12
Pulaski	40.0	6/30/2012	$3,300.80
Pulaski	7.0	11/23/2012	$577.64
Pulaski	25.0	3/16/2013	$2,063.00
Pulaski	0.1	4/6/2013	$8.25
Pulaski	0.2	3/11/2014	$16.50
Pulaski	19.0	3/15/2014	$1,567.88
Pulaski	20.0	4/1/2014	$1,650.40
Pulaski	80.0	4/10/2014	$6,601.60
Pulaski	8.0	4/11/2014	$660.16
Pulaski	17.0	4/12/2014	$1,402.84
Pulaski	0.5	4/13/2014	$41.26
Pulaski	30.0	4/13/2014	$2,475.60
Pulaski	0.3	4/19/2014	$24.76
Pulaski	55.0	10/27/2014	$4,538.60
Pulaski	95.0	2/7/2015	$7,839.40
Pulaski	5.0	11/15/2015	$412.60
Pulaski	140.0	3/22/2016	$11,552.80
Pulaski Totals	**2,877.0**		**$237,410.04**
Russell	4.0	3/5/2000	$330.08
Russell	10.0	3/26/2000	$825.20
Russell	30.0	10/29/2000	$2,475.60
Russell	0.1	2/4/2001	$8.25
Russell	1.0	9/14/2001	$82.52
Russell	2.0	11/4/2001	$165.04
Russell	3.0	3/10/2003	$247.56
Russell	0.4	3/27/2003	$33.01
Russell	3.0	11/26/2005	$247.56
Russell	13.0	11/27/2005	$1,072.76
Russell	0.5	12/19/2005	$41.26

Russell	150.0	9/20/2007	$12,378.00
Russell	370.0	10/13/2007	$30,532.40
Russell	5.0	8/16/2008	$412.60
Russell	10.0	9/13/2008	$825.20
Russell	10.1	9/25/2008	$833.45
Russell	10.1	7/8/2010	$833.45
Russell	8.0	2/18/2011	$660.16
Russell	30.5	3/22/2011	$2,516.86
Russell	10.0	11/12/2011	$825.20
Russell	21.0	6/25/2012	$1,732.92
Russell	1.1	11/10/2012	$90.77
Russell	15.0	3/14/2014	$1,237.80
Russell	5.0	3/22/2016	$412.60
Russell	2.0	4/3/2016	$165.04
Russell Totals	**714.8**		**$58,985.30**
Taylor	18.0	3/5/2000	$1,485.36
Taylor	2.1	3/8/2000	$173.29
Taylor	2.0	11/2/2000	$165.04
Taylor	5.0	3/11/2001	$412.60
Taylor	0.1	3/26/2001	$8.25
Taylor	0.2	4/7/2001	$16.50
Taylor	2.0	5/13/2001	$165.04
Taylor	0.1	10/3/2001	$8.25
Taylor	12.0	11/8/2001	$990.24
Taylor	3.0	11/8/2001	$247.56
Taylor	0.1	6/5/2002	$8.25
Taylor	1.5	8/8/2002	$123.78
Taylor	3.0	1/1/2004	$247.56
Taylor	2.2	2/22/2004	$181.54
Taylor	2.0	2/23/2004	$165.04
Taylor	0.7	2/28/2004	$57.76
Taylor	1.4	3/23/2004	$115.53
Taylor	7.0	3/23/2004	$577.64
Taylor	9.5	3/24/2004	$783.94
Taylor	1.7	3/6/2005	$140.28
Taylor	0.2	6/23/2005	$16.50
Taylor	0.2	10/31/2005	$16.50
Taylor	1.0	11/5/2005	$82.52
Taylor	3.0	11/12/2005	$247.56
Taylor	10.0	11/12/2005	$825.20
Taylor	5.0	11/27/2005	$412.60
Taylor	2.0	3/2/2006	$165.04
Taylor	20.0	3/3/2006	$1,650.40

Taylor	0.6	3/9/2006	$49.51
Taylor	2.0	3/19/2006	$165.04
Taylor	1.0	3/19/2006	$82.52
Taylor	0.1	3/19/2006	$8.25
Taylor	3.0	3/27/2006	$247.56
Taylor	60.0	3/27/2006	$4,951.20
Taylor	3.0	4/13/2006	$247.56
Taylor	15.0	4/15/2006	$1,237.80
Taylor	2.5	11/7/2006	$206.30
Taylor	0.5	12/5/2006	$41.26
Taylor	2.1	3/11/2007	$173.29
Taylor	10.0	3/12/2007	$825.20
Taylor	1.0	10/10/2007	$82.52
Taylor	1.0	1/8/2008	$82.52
Taylor	10.0	3/21/2008	$825.20
Taylor	0.1	7/27/2008	$8.25
Taylor	25.0	10/29/2008	$2,063.00
Taylor	30.0	3/9/2010	$2,475.60
Taylor	20.5	3/20/2010	$1,691.66
Taylor	5.0	4/16/2010	$412.60
Taylor	10.0	10/15/2010	$825.20
Taylor	0.2	11/5/2010	$16.50
Taylor	8.0	2/17/2011	$660.16
Taylor	4.5	3/20/2011	$371.34
Taylor	20.0	11/12/2011	$1,650.40
Taylor	2.0	11/13/2011	$165.04
Taylor	3.5	11/11/2012	$288.82
Taylor	33.0	2/1/2014	$2,723.16
Taylor	1.5	2/22/2014	$123.78
Taylor	2.0	2/27/2014	$165.04
Taylor	7.0	3/15/2014	$577.64
Taylor Totals	**399.1**		**$32,933.73**
Wayne	18.0	3/4/2000	$1,485.36
Wayne	3.0	3/5/2000	$247.56
Wayne	4.0	3/7/2000	$330.08
Wayne	75.0	3/9/2000	$6,189.00
Wayne	16.0	3/9/2000	$1,320.32
Wayne	25.0	3/10/2000	$2,063.00
Wayne	0.5	3/14/2000	$41.26
Wayne	2.0	3/24/2000	$165.04
Wayne	15.0	4/1/2000	$1,237.80
Wayne	10.0	10/24/2000	$825.20
Wayne	181.0	10/28/2000	$14,936.12

Wayne	375.0	10/29/2000	$30,945.00
Wayne	2.0	10/29/2000	$165.04
Wayne	520.0	10/31/2000	$42,910.40
Wayne	3.0	11/1/2000	$247.56
Wayne	15.0	11/2/2000	$1,237.80
Wayne	200.0	11/2/2000	$16,504.00
Wayne	5.0	11/20/2000	$412.60
Wayne	6.0	11/20/2000	$495.12
Wayne	70.0	11/28/2000	$5,776.40
Wayne	2.0	1/29/2001	$165.04
Wayne	2.2	2/4/2001	$181.54
Wayne	2.5	2/6/2001	$206.30
Wayne	575.0	2/8/2001	$47,449.00
Wayne	1.0	2/8/2001	$82.52
Wayne	60.0	2/8/2001	$4,951.20
Wayne	0.3	3/11/2001	$24.76
Wayne	150.0	3/11/2001	$12,378.00
Wayne	0.2	3/19/2001	$16.50
Wayne	2.0	3/19/2001	$165.04
Wayne	0.5	3/27/2001	$41.26
Wayne	0.1	4/8/2001	$8.25
Wayne	350.0	4/17/2001	$28,882.00
Wayne	6.0	5/16/2001	$495.12
Wayne	2.0	5/16/2001	$165.04
Wayne	0.5	7/25/2001	$41.26
Wayne	6.5	10/21/2001	$536.38
Wayne	2.0	10/31/2001	$165.04
Wayne	2.0	10/31/2001	$165.04
Wayne	163.0	11/1/2001	$13,450.76
Wayne	25.0	11/3/2001	$2,063.00
Wayne	2.0	11/11/2001	$165.04
Wayne	250.0	11/13/2001	$20,630.00
Wayne	75.0	11/14/2001	$6,189.00
Wayne	20.0	11/14/2001	$1,650.40
Wayne	500.1	11/17/2001	$41,268.25
Wayne	175.0	11/18/2001	$14,441.00
Wayne	10.0	2/15/2002	$825.20
Wayne	2.0	2/18/2002	$165.04
Wayne	52.0	3/5/2002	$4,291.04
Wayne	0.5	3/5/2002	$41.26
Wayne	0.3	3/5/2002	$24.76
Wayne	150.0	3/6/2002	$12,378.00
Wayne	6.0	3/7/2002	$495.12
Wayne	2.0	11/25/2002	$165.04

Wayne	10.0	2/13/2003	$825.20
Wayne	14.0	3/7/2003	$1,155.28
Wayne	8.0	3/10/2003	$660.16
Wayne	6.0	3/12/2003	$495.12
Wayne	0.2	3/12/2003	$16.50
Wayne	0.3	3/15/2003	$24.76
Wayne	75.0	3/15/2003	$6,189.00
Wayne	1.0	3/24/2003	$82.52
Wayne	3.5	3/24/2003	$288.82
Wayne	0.5	3/25/2003	$41.26
Wayne	3.0	3/25/2003	$247.56
Wayne	0.1	4/3/2003	$8.25
Wayne	0.5	4/4/2003	$41.26
Wayne	0.2	4/14/2003	$16.50
Wayne	0.1	4/14/2003	$8.25
Wayne	10.0	10/25/2003	$825.20
Wayne	3.0	10/31/2003	$247.56
Wayne	18.0	11/1/2003	$1,485.36
Wayne	80.0	11/1/2003	$6,601.60
Wayne	12.0	11/2/2003	$990.24
Wayne	0.5	12/2/2003	$41.26
Wayne	0.3	2/19/2004	$24.76
Wayne	60.0	2/28/2004	$4,951.20
Wayne	2.0	2/28/2004	$165.04
Wayne	10.0	2/29/2004	$825.20
Wayne	10.0	2/29/2004	$825.20
Wayne	4.0	2/29/2004	$330.08
Wayne	0.2	4/6/2004	$16.50
Wayne	20.0	4/7/2004	$1,650.40
Wayne	12.0	4/8/2004	$990.24
Wayne	170.0	4/8/2004	$14,028.40
Wayne	100.0	4/18/2004	$8,252.00
Wayne	90.0	4/18/2004	$7,426.80
Wayne	2.0	11/8/2004	$165.04
Wayne	0.2	11/8/2004	$16.50
Wayne	3.0	11/8/2004	$247.56
Wayne	1.0	11/9/2004	$82.52
Wayne	3.0	1/27/2005	$247.56
Wayne	2.0	2/7/2005	$165.04
Wayne	3.0	3/18/2005	$247.56
Wayne	3.0	3/18/2005	$247.56
Wayne	0.5	3/22/2005	$41.26
Wayne	2.0	4/4/2005	$165.04
Wayne	2.0	4/10/2005	$165.04

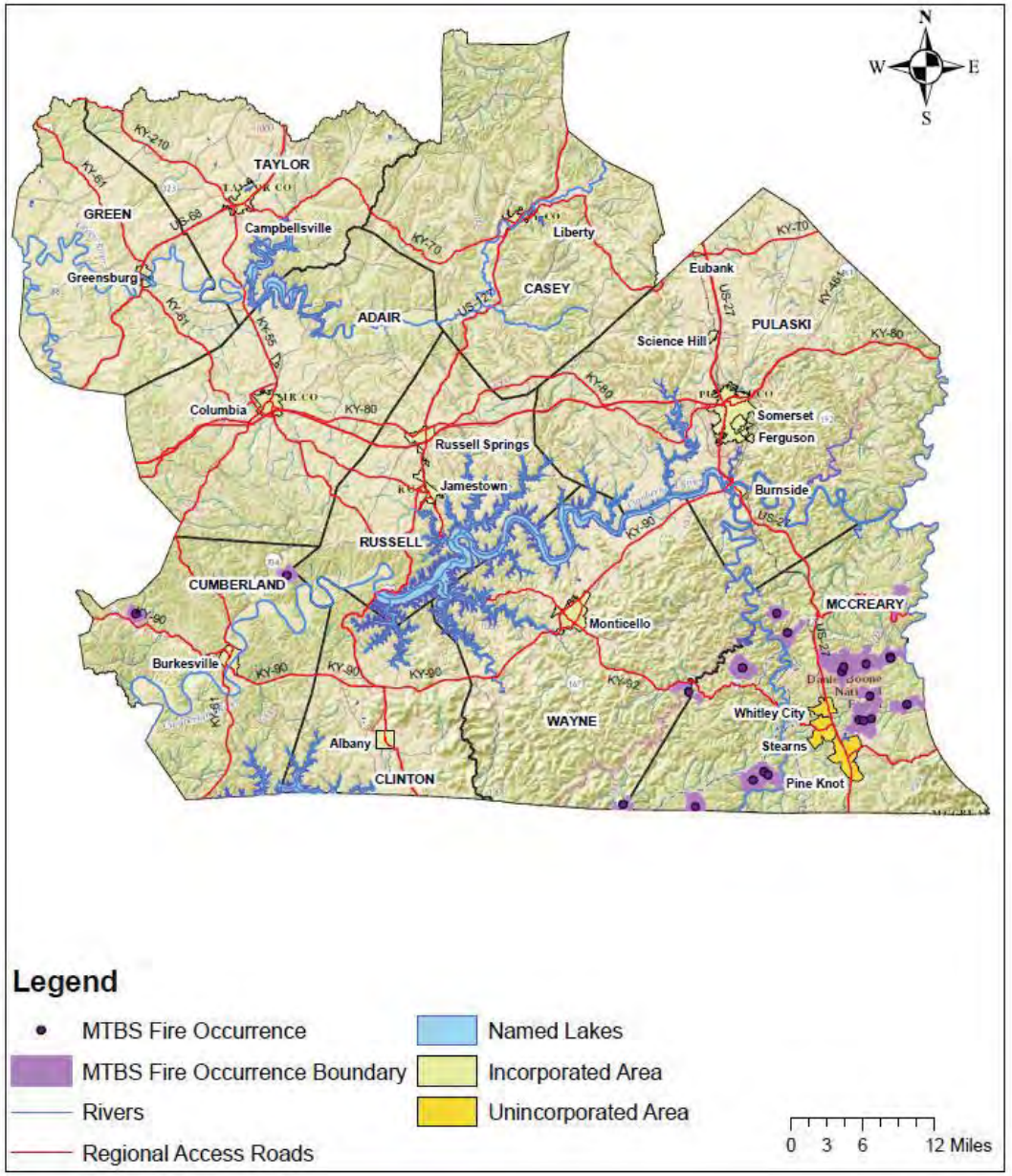
Wayne	2.0	4/18/2005	$165.04
Wayne	3.0	5/28/2005	$247.56
Wayne	4.0	9/24/2005	$330.08
Wayne	1.0	9/24/2005	$82.52
Wayne	10.0	10/29/2005	$825.20
Wayne	4.0	10/31/2005	$330.08
Wayne	110.0	10/31/2005	$9,077.20
Wayne	15.0	11/4/2005	$1,237.80
Wayne	2.0	11/5/2005	$165.04
Wayne	5.0	11/5/2005	$412.60
Wayne	200.0	11/9/2005	$16,504.00
Wayne	12.5	11/11/2005	$1,031.50
Wayne	20.0	11/12/2005	$1,650.40
Wayne	15.0	11/13/2005	$1,237.80
Wayne	13.0	11/22/2005	$1,072.76
Wayne	72.0	11/24/2005	$5,941.44
Wayne	20.0	11/28/2005	$1,650.40
Wayne	15.0	2/17/2006	$1,237.80
Wayne	55.0	3/3/2006	$4,538.60
Wayne	2.5	3/9/2006	$206.30
Wayne	60.0	3/11/2006	$4,951.20
Wayne	4.0	3/19/2006	$330.08
Wayne	80.0	3/19/2006	$6,601.60
Wayne	0.2	3/23/2006	$16.50
Wayne	0.1	3/30/2006	$8.25
Wayne	2.0	4/11/2006	$165.04
Wayne	2.0	4/14/2006	$165.04
Wayne	0.1	11/26/2006	$8.25
Wayne	1.5	11/26/2006	$123.78
Wayne	0.1	11/27/2006	$8.25
Wayne	18.0	1/14/2007	$1,485.36
Wayne	18.0	3/5/2007	$1,485.36
Wayne	0.3	3/8/2007	$24.76
Wayne	2.0	3/8/2007	$165.04
Wayne	1.0	3/9/2007	$82.52
Wayne	0.5	3/9/2007	$41.26
Wayne	7.0	3/13/2007	$577.64
Wayne	8.0	3/13/2007	$660.16
Wayne	320.0	3/13/2007	$26,406.40
Wayne	12.0	3/25/2007	$990.24
Wayne	92.0	4/1/2007	$7,591.84
Wayne	30.0	4/23/2007	$2,475.60
Wayne	197.0	6/10/2007	$16,256.44
Wayne	200.0	9/26/2007	$16,504.00

Wayne	1.0	10/15/2007	$82.52
Wayne	20.0	10/21/2007	$1,650.40
Wayne	7.0	11/1/2007	$577.64
Wayne	5.0	11/2/2007	$412.60
Wayne	45.0	11/3/2007	$3,713.40
Wayne	4.0	11/3/2007	$330.08
Wayne	4.0	11/3/2007	$330.08
Wayne	12.0	11/4/2007	$990.24
Wayne	65.0	11/4/2007	$5,363.80
Wayne	122.0	11/4/2007	$10,067.44
Wayne	940.0	11/5/2007	$77,568.80
Wayne	7.0	11/10/2007	$577.64
Wayne	4.0	1/8/2008	$330.08
Wayne	3.5	3/27/2008	$288.82
Wayne	17.0	4/17/2008	$1,402.84
Wayne	3.0	4/18/2008	$247.56
Wayne	12.0	4/23/2008	$990.24
Wayne	1.0	6/30/2008	$82.52
Wayne	10.0	7/2/2008	$825.20
Wayne	149.0	8/9/2008	$12,295.48
Wayne	2.0	8/16/2008	$165.04
Wayne	0.3	8/18/2008	$24.76
Wayne	4.0	8/19/2008	$330.08
Wayne	2.0	8/22/2008	$165.04
Wayne	1.5	8/23/2008	$123.78
Wayne	15.0	9/25/2008	$1,237.80
Wayne	0.1	10/6/2008	$8.25
Wayne	2.0	10/6/2008	$165.04
Wayne	0.3	10/7/2008	$24.76
Wayne	10.0	10/7/2008	$825.20
Wayne	3.0	10/7/2008	$247.56
Wayne	12.0	10/22/2008	$990.24
Wayne	326.0	10/23/2008	$26,901.52
Wayne	0.5	11/1/2008	$41.26
Wayne	6.0	11/5/2008	$495.12
Wayne	24.0	11/6/2008	$1,980.48
Wayne	725.0	11/6/2008	$59,827.00
Wayne	20.0	11/29/2008	$1,650.40
Wayne	0.1	12/9/2008	$8.25
Wayne	0.7	2/12/2009	$57.76
Wayne	35.0	3/5/2009	$2,888.20
Wayne	3.0	3/20/2009	$247.56
Wayne	3.0	3/21/2009	$247.56
Wayne	34.0	3/21/2009	$2,805.68

Wayne	5.0	3/21/2009	$412.60
Wayne	3.0	3/24/2009	$247.56
Wayne	10.0	4/27/2009	$825.20
Wayne	0.5	11/7/2009	$41.26
Wayne	0.5	11/12/2009	$41.26
Wayne	0.3	11/14/2009	$24.76
Wayne	40.0	11/26/2009	$3,300.80
Wayne	14.0	11/28/2009	$1,155.28
Wayne	15.0	4/2/2010	$1,237.80
Wayne	50.0	4/18/2010	$4,126.00
Wayne	40.0	4/18/2010	$3,300.80
Wayne	22.0	4/19/2010	$1,815.44
Wayne	30.0	4/20/2010	$2,475.60
Wayne	3.0	10/18/2010	$247.56
Wayne	285.0	10/21/2010	$23,518.20
Wayne	6.0	10/30/2010	$495.12
Wayne	25.0	10/31/2010	$2,063.00
Wayne	78.0	11/1/2010	$6,436.56
Wayne	182.0	11/2/2010	$15,018.64
Wayne	0.5	11/9/2010	$41.26
Wayne	25.0	11/10/2010	$2,063.00
Wayne	95.0	11/11/2010	$7,839.40
Wayne	1.0	11/13/2010	$82.52
Wayne	0.3	11/20/2010	$24.76
Wayne	0.2	11/21/2010	$16.50
Wayne	19.0	11/22/2010	$1,567.88
Wayne	0.2	3/8/2011	$16.50
Wayne	40.0	3/17/2011	$3,300.80
Wayne	3.0	4/3/2011	$247.56
Wayne	50.0	4/6/2011	$4,126.00
Wayne	20.0	10/16/2011	$1,650.40
Wayne	5.0	11/12/2011	$412.60
Wayne	170.0	11/12/2011	$14,028.40
Wayne	22.0	11/14/2011	$1,815.44
Wayne	4.0	1/6/2012	$330.08
Wayne	15.0	2/25/2012	$1,237.80
Wayne	10.0	3/14/2012	$825.20
Wayne	75.0	3/14/2012	$6,189.00
Wayne	59.0	3/21/2012	$4,868.68
Wayne	25.0	3/22/2012	$2,063.00
Wayne	80.0	3/22/2012	$6,601.60
Wayne	2.0	4/2/2012	$165.04
Wayne	2.0	7/2/2012	$165.04
Wayne	0.5	7/5/2012	$41.26

Wayne	2.0	10/24/2012	$165.04
Wayne	2.0	11/11/2012	$165.04
Wayne	2.0	11/11/2012	$165.04
Wayne	8.1	11/17/2012	$668.41
Wayne	0.5	11/25/2012	$41.26
Wayne	176.1	12/2/2012	$14,531.77
Wayne	15.0	2/18/2013	$1,237.80
Wayne	46.0	3/10/2013	$3,795.92
Wayne	2.0	4/2/2013	$165.04
Wayne	12.0	4/2/2013	$990.24
Wayne	30.0	4/2/2013	$2,475.60
Wayne	112.0	4/6/2013	$9,242.24
Wayne	20.0	4/7/2013	$1,650.40
Wayne	2.0	10/21/2013	$165.04
Wayne	1.3	11/20/2013	$103.15
Wayne	5.0	2/27/2014	$412.60
Wayne	11.0	2/28/2014	$907.72
Wayne	12.0	3/11/2014	$990.24
Wayne	60.0	3/15/2014	$4,951.20
Wayne	1.5	3/20/2014	$123.78
Wayne	13.0	3/21/2014	$1,072.76
Wayne	132.0	3/22/2014	$10,892.64
Wayne	65.0	4/12/2014	$5,363.80
Wayne	80.0	4/14/2014	$6,601.60
Wayne	4.5	4/21/2014	$371.34
Wayne	3.0	3/16/2015	$247.56
Wayne	5.0	3/23/2015	$412.60
Wayne	22.0	4/1/2015	$1,815.44
Wayne	27.0	4/5/2015	$2,228.04
Wayne	40.0	10/20/2015	$3,300.80
Wayne	5.0	11/14/2015	$412.60
Wayne	2.0	1/7/2016	$165.04
Wayne	12.0	3/9/2016	$990.24
Wayne	15.0	3/10/2016	$1,237.80
Wayne	1.0	3/17/2016	$82.52
Wayne	20.0	3/18/2016	$1,650.40
Wayne	27.0	3/22/2016	$2,228.04
Wayne	1.5	4/11/2016	$123.78
Wayne Totals	**11,715.6**		**$966,767.19**
LCADD Totals	**33,111.3**		**$2,732,344.48**

Map 4.5(1)
LCADD Region
Forest & Wildfire
Monitoring Trends
in
Burn Severity (MTBS)



Data Source: Monitoring Trends in Burn Severity (MTBS);
http://www.mtbs.gov/index.html
LCADD GIS Databases
Download Date: Oct. 2016

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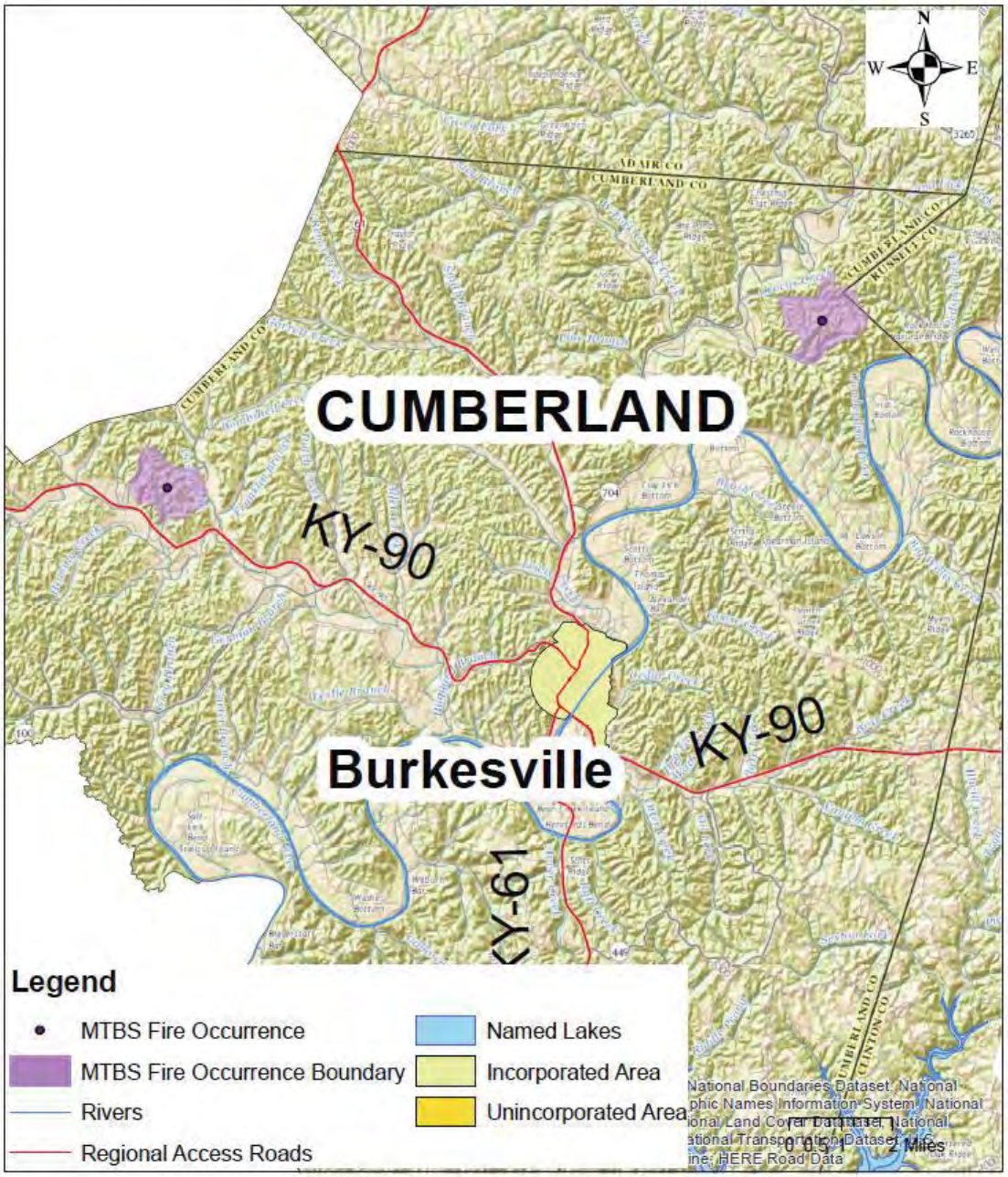
Map 4.5(2)
LCADD Region
Forest & Wildfire
Monitoring Trends
in
Burn Severity (MTBS)



Data Source: Monitoring Trends in Burn Severity (MTBS);
http://www.mtbs.gov/index.html
LCADD GIS Databases
Download Date: Oct. 2016

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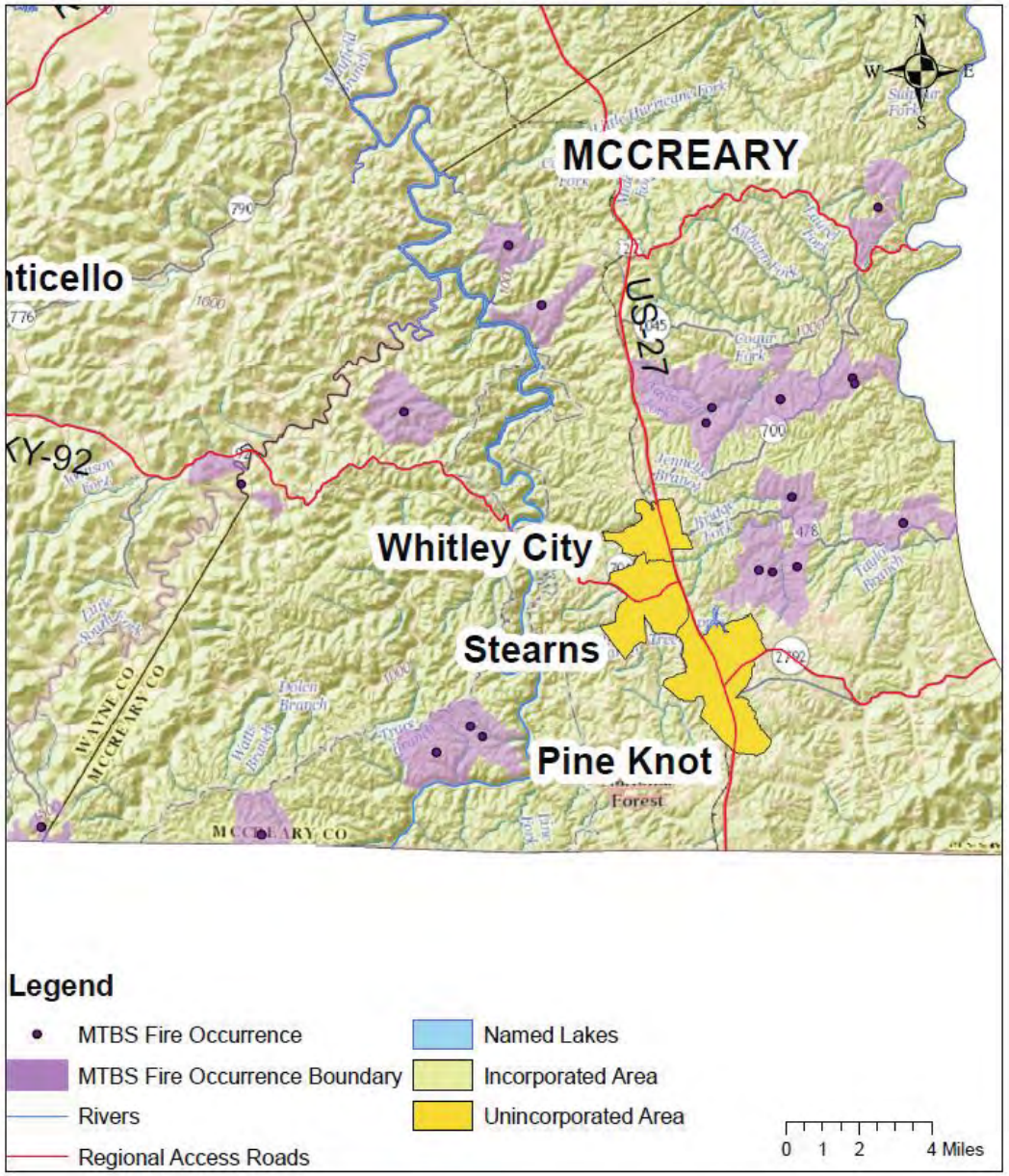
Map 4.5(3)
LCADD Region
Forest & Wildfire
Monitoring Trends
in
Burn Severity (MTBS)



Data Source: Monitoring Trends in Burn Severity (MTBS);
http://www.mtbs.gov/index.html
LCADD GIS Databases
Download Date: Oct. 2016

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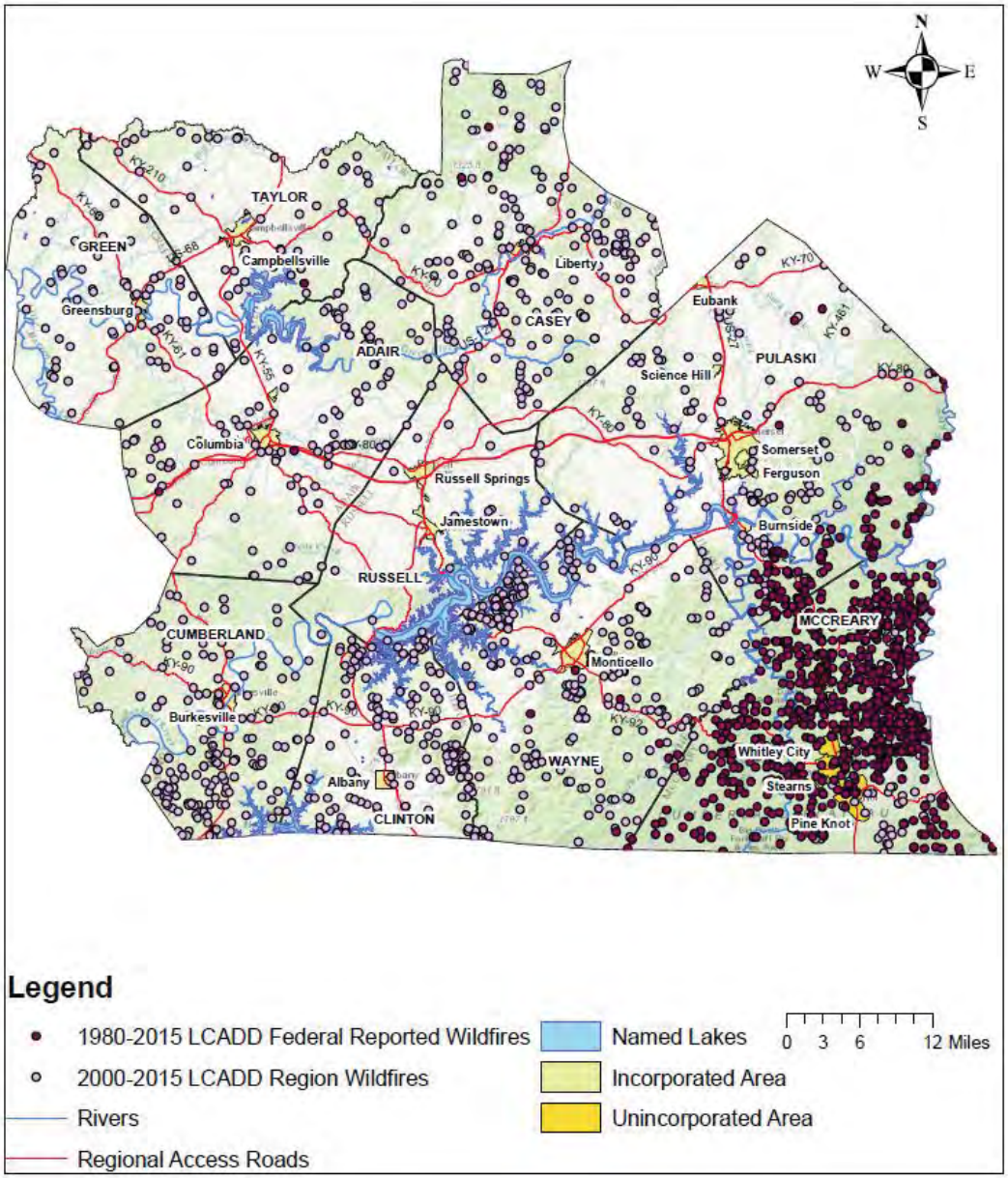
Map 4.5(4)
LCADD Region
StateReported (2000-2015)
&
Federal Reported (1980-2015)
Wildfires



Data Source: Kentucky Division of Forestry Wildfire GIS Shape Files & Data; Federal Wildland Fire Occurrence Data, http://wildfire.cr.usgs.gov/firehistory/data.html
LCADD GIS Databases
Download Date: Oct. 2016

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Lake Cumberland Area Development District

A study by the University of Kentucky states the loss in value averages $404.00 loss per acre burned. Using that figure there has been $13,376,844 loss in value due to fire since 2000. Table 4.5.1 Shows the Lake Cumberland Regional averages for losses from wildfires.

Table 4.5(1) - Wildfire Hazard Event Average Cost

2000-2015 Lake Cumberland Region Wildfires					
County	**Fire Year**	**Total Acre**	**Houses Lost**	**Lost Structures**	**Average Lost Per Fire (@$404 per acre)**
Adair	2000	2.0	0	0	$808.00
Adair	2000	142.0	0	0	$57,368.00
Adair	2000	5.0	0	0	$2,020.00
Adair	2000	2.0	0	0	$808.00
Adair	2000	2.0	0	0	$808.00
Adair	2000	4.0	0	0	$1,616.00
Adair	2000	0.2	0	0	$80.80
Adair	2000	2.0	0	0	$808.00
Adair	2000	1.0	0	0	$404.00
Adair	2000	0.5	0	0	$202.00
Adair	2000	1.0	0	0	$404.00
Adair	2001	5.0	0	0	$2,020.00
Adair	2001	0.3	0	0	$121.20
Adair	2001	1.5	0	0	$606.00
Adair	2001	3.0	0	2	$1,212.00
Adair	2001	2.0	0	0	$808.00
Adair	2001	1.0	0	0	$404.00
Adair	2001	3.0	0	0	$1,212.00
Adair	2001	1.5	0	0	$606.00
Adair	2001	3.0	0	0	$1,212.00
Adair	2001	3.0	0	0	$1,212.00
Adair	2001	10.0	0	0	$4,040.00
Adair	2001	20.0	0	0	$8,080.00
Adair	2001	80.0	0	0	$32,320.00
Adair	2001	5.0	0	0	$2,020.00
Adair	2001	0.5	0	0	$202.00
Adair	2001	2.0	0	0	$808.00
Adair	2001	1.5	0	0	$606.00
Adair	2001	0.3	0	0	$101.00

Adair	2001	2.0	0	0	$808.00
Adair	2002	1.0	0	0	$404.00
Adair	2002	2.0	0	2	$808.00
Adair	2002	80.0	0	0	$32,320.00
Adair	2002	35.0	0	0	$14,140.00
Adair	2002	0.1	0	0	$40.40
Adair	2002	0.2	0	0	$80.80
Adair	2002	1.0	0	0	$404.00
Adair	2002	0.4	0	0	$161.60
Adair	2002	0.2	0	0	$80.80
Adair	2002	0.3	0	1	$121.20
Adair	2003	8.1	0	0	$3,272.40
Adair	2003	2.0	0	0	$808.00
Adair	2003	1.0	0	0	$404.00
Adair	2003	1.5	0	0	$606.00
Adair	2004	2.5	0	0	$1,010.00
Adair	2004	20.0	0	0	$8,080.00
Adair	2005	8.0	0	0	$3,232.00
Adair	2005	7.0	0	0	$2,828.00
Adair	2005	20.0	0	0	$8,080.00
Adair	2005	12.0	0	0	$4,848.00
Adair	2005	1.1	0	0	$444.40
Adair	2005	40.0	0	0	$16,160.00
Adair	2005	37.0	0	0	$14,948.00
Adair	2005	2.1	0	0	$848.40
Adair	2005	0.1	0	0	$40.40
Adair	2005	1.0	0	0	$404.00
Adair	2005	1.5	0	0	$606.00
Adair	2006	5.6	0	0	$2,262.40
Adair	2006	8.0	0	0	$3,232.00
Adair	2006	1.0	0	0	$404.00
Adair	2006	2.0	0	0	$808.00
Adair	2006	1.0	0	0	$404.00
Adair	2006	3.0	0	0	$1,212.00
Adair	2007	3.1	0	0	$1,252.40
Adair	2007	1.2	0	0	$484.80
Adair	2007	8.0	0	0	$3,232.00
Adair	2007	7.0	0	0	$2,828.00

Adair	2007	2.5	0	0	$1,010.00
Adair	2007	2.5	0	0	$1,010.00
Adair	2007	3.0	0	0	$1,212.00
Adair	2007	1.0	0	0	$404.00
Adair	2008	8.0	0	0	$3,232.00
Adair	2008	3.0	0	0	$1,212.00
Adair	2008	10.5	0	0	$4,242.00
Adair	2008	2.5	0	0	$1,010.00
Adair	2008	4.0	0	0	$1,616.00
Adair	2008	1.5	0	0	$606.00
Adair	2008	11.0	0	0	$4,444.00
Adair	2008	8.0	0	0	$3,232.00
Adair	2008	2.1	0	0	$848.40
Adair	2008	8.0	0	0	$3,232.00
Adair	2008	1.0	0	0	$404.00
Adair	2008	2.5	0	0	$1,010.00
Adair	2009	2.0	0	0	$808.00
Adair	2009	5.0	0	0	$2,020.00
Adair	2009	26.0	0	0	$10,504.00
Adair	2009	1.1	0	0	$444.40
Adair	2009	1.1	0	0	$444.40
Adair	2010	2.0	0	0	$808.00
Adair	2010	5.0	0	0	$2,020.00
Adair	2010	5.0	0	0	$2,020.00
Adair	2010	12.0	0	0	$4,848.00
Adair	2010	10.1	0	0	$4,080.40
Adair	2010	3.0	0	0	$1,212.00
Adair	2010	15.0	0	0	$6,060.00
Adair	2010	1.0	0	0	$404.00
Adair	2010	1.0	0	0	$404.00
Adair	2010	5.0	0	0	$2,020.00
Adair	2011	3.0	0	0	$1,212.00
Adair	2012	2.0	0	0	$808.00
Adair	2012	10.0	0	0	$4,040.00
Adair	2012	6.0	0	0	$2,424.00
Adair	2012	9.0	0	0	$3,636.00
Adair	2013	1.2	0	0	$484.80
Adair	2013	8.0	0	0	$3,232.00

Adair	2014	5.0	0	0	$2,020.00
Adair	2014	13.0	0	1	$5,252.00
Adair	2014	10.0	0	0	$4,040.00
Adair	2014	2.0	0	0	$808.00
Adair	2014	2.0	0	0	$808.00
Adair	2014	10.0	0	0	$4,040.00
Adair	2014	30.5	0	0	$12,322.00
Adair	2014	13.0	0	0	$5,252.00
Adair	2014	3.0	0	0	$1,212.00
Adair	2015	11.0	0	0	$4,444.00
Adair	2016	25.0	0	0	$10,100.00
Adair	2016	8.0	0	0	$3,232.00
Adair	2016	0.1	0	0	$40.40
Adair	2016	4.1	0	0	$1,656.40
Adair	2016	3.0	0	0	$1,212.00
Adair Totals		**975.6**	**0**	**6**	**$394,122.20**
Casey	2000	30.0	0	1	$12,120.00
Casey	2000	4.2	0	0	$1,696.80
Casey	2000	0.5	0	0	$202.00
Casey	2000	3.0	0	0	$1,212.00
Casey	2000	3.0	0	0	$1,212.00
Casey	2000	2.5	0	0	$1,010.00
Casey	2000	80.0	0	0	$32,320.00
Casey	2000	132.0	0	0	$53,328.00
Casey	2000	2.0	0	0	$808.00
Casey	2000	4.0	0	2	$1,616.00
Casey	2000	10.0	0	0	$4,040.00
Casey	2000	0.1	0	0	$40.40
Casey	2000	2.0	0	0	$808.00
Casey	2000	15.0	0	0	$6,060.00
Casey	2000	28.0	0	1	$11,312.00
Casey	2000	5.0	0	0	$2,020.00
Casey	2000	0.4	0	0	$161.60
Casey	2000	5.0	0	0	$2,020.00
Casey	2000	0.5	0	0	$202.00
Casey	2000	1.0	0	0	$404.00
Casey	2001	4.0	0	0	$1,616.00
Casey	2001	20.0	0	2	$8,080.00

Casey	2001	5.0	0	0	$2,020.00
Casey	2001	10.0	0	0	$4,040.00
Casey	2001	20.0	0	1	$8,080.00
Casey	2001	1.0	0	0	$404.00
Casey	2001	8.0	0	0	$3,232.00
Casey	2001	10.0	0	0	$4,040.00
Casey	2001	2.0	0	0	$808.00
Casey	2001	3.0	0	0	$1,212.00
Casey	2001	1.0	0	0	$404.00
Casey	2001	15.0	0	0	$6,060.00
Casey	2001	0.5	0	0	$202.00
Casey	2001	7.0	0	0	$2,828.00
Casey	2001	30.0	0	0	$12,120.00
Casey	2001	25.0	0	0	$10,100.00
Casey	2001	0.5	0	0	$202.00
Casey	2001	15.0	0	0	$6,060.00
Casey	2001	1.1	0	0	$444.40
Casey	2001	3.0	0	0	$1,212.00
Casey	2001	12.0	0	0	$4,848.00
Casey	2001	3.0	0	0	$1,212.00
Casey	2001	2.0	0	0	$808.00
Casey	2001	20.0	0	0	$8,080.00
Casey	2001	16.0	0	0	$6,464.00
Casey	2001	2.0	0	0	$808.00
Casey	2001	1.0	0	0	$404.00
Casey	2001	0.2	0	0	$80.80
Casey	2001	1.0	0	0	$404.00
Casey	2002	1.0	0	0	$404.00
Casey	2002	5.0	0	0	$2,020.00
Casey	2002	2.0	0	0	$808.00
Casey	2002	6.0	0	0	$2,424.00
Casey	2002	1.5	0	0	$606.00
Casey	2002	15.0	0	0	$6,060.00
Casey	2002	35.0	0	0	$14,140.00
Casey	2002	21.0	0	0	$8,484.00
Casey	2002	9.0	0	0	$3,636.00
Casey	2002	15.0	0	0	$6,060.00
Casey	2002	35.0	0	1	$14,140.00

Casey	2002	25.0	0	0	$10,100.00
Casey	2002	3.0	0	0	$1,212.00
Casey	2002	3.0	0	0	$1,212.00
Casey	2002	2.0	0	0	$808.00
Casey	2002	0.5	0	0	$202.00
Casey	2003	2.0	0	0	$808.00
Casey	2003	14.0	0	0	$5,656.00
Casey	2003	25.0	0	0	$10,100.00
Casey	2003	15.0	0	0	$6,060.00
Casey	2003	30.0	0	0	$12,120.00
Casey	2003	0.5	0	0	$202.00
Casey	2003	20.0	0	0	$8,080.00
Casey	2003	100.0	0	0	$40,400.00
Casey	2003	3.0	0	0	$1,212.00
Casey	2004	0.1	0	0	$40.40
Casey	2004	1.5	0	0	$606.00
Casey	2004	35.0	0	0	$14,140.00
Casey	2004	4.0	0	0	$1,616.00
Casey	2004	0.6	0	0	$242.40
Casey	2004	1.0	0	0	$404.00
Casey	2004	15.0	0	0	$6,060.00
Casey	2004	100.0	0	0	$40,400.00
Casey	2004	20.0	0	0	$8,080.00
Casey	2004	15.0	0	0	$6,060.00
Casey	2004	5.0	0	0	$2,020.00
Casey	2004	16.0	0	0	$6,464.00
Casey	2004	3.0	0	0	$1,212.00
Casey	2004	75.0	0	0	$30,300.00
Casey	2004	0.2	0	0	$80.80
Casey	2004	10.0	0	0	$4,040.00
Casey	2005	0.5	0	0	$202.00
Casey	2005	1.5	0	0	$606.00
Casey	2005	12.0	0	0	$4,848.00
Casey	2005	77.0	0	0	$31,108.00
Casey	2005	35.0	1	0	$14,140.00
Casey	2005	5.0	0	0	$2,020.00
Casey	2005	0.6	0	0	$242.40
Casey	2005	1.5	0	0	$606.00

Casey	2005	15.0	0	0	$6,060.00
Casey	2005	53.0	0	0	$21,412.00
Casey	2005	22.0	0	1	$8,888.00
Casey	2005	2.5	0	0	$1,010.00
Casey	2005	0.1	0	0	$40.40
Casey	2005	8.0	0	0	$3,232.00
Casey	2005	0.2	0	1	$80.80
Casey	2006	50.0	0	0	$20,200.00
Casey	2006	40.0	0	0	$16,160.00
Casey	2006	5.0	0	0	$2,020.00
Casey	2006	10.0	0	0	$4,040.00
Casey	2006	50.0	1	0	$20,200.00
Casey	2006	25.0	0	0	$10,100.00
Casey	2006	90.0	0	0	$36,360.00
Casey	2006	3.5	0	0	$1,414.00
Casey	2006	15.0	0	0	$6,060.00
Casey	2007	2.0	0	0	$808.00
Casey	2007	1.0	0	0	$404.00
Casey	2007	3.0	0	0	$1,212.00
Casey	2007	6.0	0	0	$2,424.00
Casey	2007	2.5	0	0	$1,010.00
Casey	2007	5.0	0	0	$2,020.00
Casey	2008	12.0	0	0	$4,848.00
Casey	2008	8.0	0	0	$3,232.00
Casey	2008	6.0	0	0	$2,424.00
Casey	2008	35.0	0	0	$14,140.00
Casey	2008	6.2	0	0	$2,504.80
Casey	2008	8.0	0	0	$3,232.00
Casey	2008	20.0	0	0	$8,080.00
Casey	2008	15.0	0	0	$6,060.00
Casey	2008	25.0	0	0	$10,100.00
Casey	2008	40.0	0	0	$16,160.00
Casey	2008	0.4	0	0	$161.60
Casey	2009	2.0	0	0	$808.00
Casey	2009	8.0	0	1	$3,232.00
Casey	2009	2.0	0	0	$808.00
Casey	2009	20.0	0	0	$8,080.00
Casey	2009	40.0	0	0	$16,160.00

Casey	2009	2.0	0	0	$808.00
Casey	2009	20.0	0	0	$8,080.00
Casey	2009	25.5	0	0	$10,302.00
Casey	2009	40.0	0	0	$16,160.00
Casey	2009	45.0	0	0	$18,180.00
Casey	2010	35.0	0	0	$14,140.00
Casey	2010	3.0	0	0	$1,212.00
Casey	2010	20.0	0	0	$8,080.00
Casey	2010	20.0	0	0	$8,080.00
Casey	2010	90.0	0	0	$36,360.00
Casey	2010	25.0	0	0	$10,100.00
Casey	2010	12.0	0	0	$4,848.00
Casey	2010	9.0	0	0	$3,636.00
Casey	2010	25.0	0	0	$10,100.00
Casey	2010	1.0	0	0	$404.00
Casey	2011	1.5	0	0	$606.00
Casey	2011	11.0	0	0	$4,444.00
Casey	2011	25.0	0	0	$10,100.00
Casey	2011	5.0	0	0	$2,020.00
Casey	2011	2.0	0	0	$808.00
Casey	2011	4.0	0	0	$1,616.00
Casey	2011	10.0	0	0	$4,040.00
Casey	2012	30.0	0	0	$12,120.00
Casey	2012	2.0	0	0	$808.00
Casey	2012	30.0	0	0	$12,120.00
Casey	2012	8.0	0	0	$3,232.00
Casey	2012	1.0	0	0	$404.00
Casey	2012	18.0	0	0	$7,272.00
Casey	2012	1.0	0	0	$404.00
Casey	2012	5.0	0	0	$2,020.00
Casey	2012	71.0	0	0	$28,684.00
Casey	2013	50.0	0	0	$20,200.00
Casey	2013	70.0	0	0	$28,280.00
Casey	2013	45.0	0	0	$18,180.00
Casey	2013	3.0	0	0	$1,212.00
Casey	2013	45.0	0	0	$18,180.00
Casey	2013	15.0	0	0	$6,060.00
Casey	2013	41.0	0	0	$16,564.00

Casey	2013	4.0	0	0	$1,616.00
Casey	2013	10.0	0	0	$4,040.00
Casey	2013	0.5	0	0	$202.00
Casey	2013	2.5	0	0	$1,010.00
Casey	2013	27.0	0	0	$10,908.00
Casey	2014	40.0	0	0	$16,160.00
Casey	2014	5.0	0	2	$2,020.00
Casey	2014	0.5	0	0	$202.00
Casey	2014	10.0	0	0	$4,040.00
Casey	2014	15.1	0	0	$6,100.40
Casey	2014	17.0	0	0	$6,868.00
Casey	2014	50.0	0	0	$20,200.00
Casey	2014	31.0	0	0	$12,524.00
Casey	2014	52.0	0	0	$21,008.00
Casey	2014	46.0	0	0	$18,584.00
Casey	2014	41.0	0	0	$16,564.00
Casey	2014	2.0	0	0	$808.00
Casey	2015	6.0	0	0	$2,424.00
Casey	2015	5.0	0	0	$2,020.00
Casey	2015	4.0	0	0	$1,616.00
Casey	2016	6.0	0	0	$2,424.00
Casey	2016	4.0	0	0	$1,616.00
Casey Totals		**3,290.5**	**2**	**13**	**$1,329,362.00**
Clinton	2000	1.0	0	0	$404.00
Clinton	2000	3.0	0	0	$1,212.00
Clinton	2000	1.0	0	0	$404.00
Clinton	2000	100.0	0	0	$40,400.00
Clinton	2000	80.0	0	0	$32,320.00
Clinton	2000	0.4	0	0	$161.60
Clinton	2000	4.0	0	0	$1,616.00
Clinton	2001	3.0	0	0	$1,212.00
Clinton	2001	3.0	0	0	$1,212.00
Clinton	2001	80.0	0	0	$32,320.00
Clinton	2001	0.3	0	0	$101.00
Clinton	2001	100.0	0	0	$40,400.00
Clinton	2001	1,000.0	0	0	$404,000.00
Clinton	2001	450.0	0	0	$181,800.00

Clinton	2001	5.0	0	0	$2,020.00
Clinton	2001	0.1	0	0	$40.40
Clinton	2002	4.0	0	0	$1,616.00
Clinton	2002	2.0	0	0	$808.00
Clinton	2002	20.0	0	0	$8,080.00
Clinton	2002	20.0	0	0	$8,080.00
Clinton	2002	5.0	0	0	$2,020.00
Clinton	2002	2.0	0	0	$808.00
Clinton	2002	1.5	0	0	$606.00
Clinton	2002	2.0	0	0	$808.00
Clinton	2002	0.2	0	0	$80.80
Clinton	2003	0.5	0	0	$202.00
Clinton	2004	0.2	0	0	$80.80
Clinton	2004	0.2	0	0	$80.80
Clinton	2004	1.0	0	0	$404.00
Clinton	2004	5.0	0	0	$2,020.00
Clinton	2004	0.3	0	0	$121.20
Clinton	2004	10.0	0	0	$4,040.00
Clinton	2004	35.0	0	0	$14,140.00
Clinton	2004	2.0	0	0	$808.00
Clinton	2004	1.0	0	0	$404.00
Clinton	2004	0.5	0	0	$202.00
Clinton	2004	40.0	0	0	$16,160.00
Clinton	2004	0.5	0	0	$202.00
Clinton	2004	1.0	0	0	$404.00
Clinton	2004	0.5	0	0	$202.00
Clinton	2004	2.0	0	0	$808.00
Clinton	2004	1.0	0	0	$404.00
Clinton	2004	0.5	0	0	$202.00
Clinton	2005	2.0	0	0	$808.00
Clinton	2005	10.0	0	0	$4,040.00
Clinton	2005	6.0	0	0	$2,424.00
Clinton	2005	4.0	0	0	$1,616.00
Clinton	2005	1.5	0	0	$606.00
Clinton	2005	4.0	0	0	$1,616.00
Clinton	2005	50.0	0	0	$20,200.00
Clinton	2005	0.5	0	0	$202.00
Clinton	2005	1.5	0	0	$606.00

Clinton	2005	2.0	0	0	$808.00
Clinton	2005	0.5	0	0	$202.00
Clinton	2006	0.5	0	0	$202.00
Clinton	2006	3.0	0	0	$1,212.00
Clinton	2006	3.5	0	0	$1,414.00
Clinton	2006	1.0	0	0	$404.00
Clinton	2006	1.0	0	0	$404.00
Clinton	2006	0.5	0	0	$202.00
Clinton	2006	0.5	0	0	$202.00
Clinton	2006	0.5	0	0	$202.00
Clinton	2006	0.1	0	0	$40.40
Clinton	2007	527.0	0	0	$212,908.00
Clinton	2007	20.0	0	0	$8,080.00
Clinton	2007	0.3	0	0	$121.20
Clinton	2007	77.0	0	0	$31,108.00
Clinton	2007	11.0	0	1	$4,444.00
Clinton	2007	5.0	0	0	$2,020.00
Clinton	2007	217.0	1	0	$87,668.00
Clinton	2007	0.1	0	0	$40.40
Clinton	2007	0.3	0	0	$121.20
Clinton	2007	15.0	0	0	$6,060.00
Clinton	2007	10.0	0	0	$4,040.00
Clinton	2007	12.0	0	0	$4,848.00
Clinton	2007	0.5	0	0	$202.00
Clinton	2007	6.0	0	0	$2,424.00
Clinton	2007	20.0	0	0	$8,080.00
Clinton	2007	0.3	0	0	$121.20
Clinton	2007	0.3	0	0	$121.20
Clinton	2008	0.3	0	0	$121.20
Clinton	2008	98.0	0	0	$39,592.00
Clinton	2008	10.0	0	0	$4,040.00
Clinton	2008	1.0	0	0	$404.00
Clinton	2008	0.5	0	0	$202.00
Clinton	2008	30.0	0	0	$12,120.00
Clinton	2008	19.0	0	0	$7,676.00
Clinton	2008	4.0	0	0	$1,616.00
Clinton	2008	75.0	0	0	$30,300.00
Clinton	2009	0.5	0	2	$202.00

Clinton	2009	75.0	0	0	$30,300.00
Clinton	2009	0.5	0	0	$202.00
Clinton	2009	0.2	0	0	$80.80
Clinton	2009	9.0	0	0	$3,636.00
Clinton	2009	12.0	0	0	$4,848.00
Clinton	2009	0.5	0	0	$202.00
Clinton	2009	1.0	0	0	$404.00
Clinton	2010	4.0	0	0	$1,616.00
Clinton	2010	10.0	0	0	$4,040.00
Clinton	2010	30.0	0	0	$12,120.00
Clinton	2010	15.0	0	0	$6,060.00
Clinton	2010	0.5	0	0	$202.00
Clinton	2010	0.3	0	0	$101.00
Clinton	2010	75.0	0	0	$30,300.00
Clinton	2010	25.0	0	0	$10,100.00
Clinton	2010	40.0	0	0	$16,160.00
Clinton	2010	300.0	0	0	$121,200.00
Clinton	2010	2.0	0	0	$808.00
Clinton	2010	12.0	0	0	$4,848.00
Clinton	2010	175.0	0	0	$70,700.00
Clinton	2010	0.3	0	0	$101.00
Clinton	2010	1.3	0	0	$505.00
Clinton	2010	3.0	0	0	$1,212.00
Clinton	2010	20.0	0	0	$8,080.00
Clinton	2011	3.0	0	0	$1,212.00
Clinton	2011	0.5	0	0	$202.00
Clinton	2011	0.1	0	0	$40.40
Clinton	2011	3.0	0	0	$1,212.00
Clinton	2011	0.1	0	0	$40.40
Clinton	2011	2.0	0	0	$808.00
Clinton	2011	15.0	0	0	$6,060.00
Clinton	2011	1.0	0	0	$404.00
Clinton	2012	0.1	0	0	$40.40
Clinton	2012	76.0	0	0	$30,704.00
Clinton	2012	65.0	0	0	$26,260.00
Clinton	2012	8.5	0	0	$3,434.00
Clinton	2012	90.0	0	0	$36,360.00
Clinton	2012	15.0	0	0	$6,060.00

Clinton	2012	1.0	0	0	$404.00
Clinton	2012	25.0	0	0	$10,100.00
Clinton	2012	90.0	0	0	$36,360.00
Clinton	2012	95.0	0	0	$38,380.00
Clinton	2012	1.0	0	0	$404.00
Clinton	2012	50.0	0	0	$20,200.00
Clinton	2012	1.1	0	0	$444.40
Clinton	2012	15.0	0	0	$6,060.00
Clinton	2012	18.0	0	0	$7,272.00
Clinton	2012	0.1	0	0	$40.40
Clinton	2013	20.0	0	0	$8,080.00
Clinton	2013	1.0	0	0	$404.00
Clinton	2013	90.0	0	0	$36,360.00
Clinton	2013	25.0	0	0	$10,100.00
Clinton	2013	1.0	0	0	$404.00
Clinton	2014	3.0	0	0	$1,212.00
Clinton	2014	20.0	0	0	$8,080.00
Clinton	2014	1.5	0	0	$606.00
Clinton	2014	15.5	0	0	$6,262.00
Clinton	2014	1.0	0	0	$404.00
Clinton	2014	87.0	0	0	$35,148.00
Clinton	2014	26.0	0	0	$10,504.00
Clinton	2014	25.0	0	0	$10,100.00
Clinton	2014	1.0	0	0	$404.00
Clinton	2014	2.0	0	0	$808.00
Clinton	2014	3.0	0	0	$1,212.00
Clinton	2015	0.5	0	0	$202.00
Clinton	2015	1.6	0	0	$646.40
Clinton Totals		**4,952.4**	**1**	**3**	**$2,000,769.60**
Cumberland	2000	3.0	0	0	$1,212.00
Cumberland	2000	15.0	0	0	$6,060.00
Cumberland	2000	25.0	0	0	$10,100.00
Cumberland	2000	845.0	0	0	$341,380.00
Cumberland	2000	156.0	0	0	$63,024.00
Cumberland	2000	30.0	0	0	$12,120.00
Cumberland	2000	30.0	0	1	$12,120.00
Cumberland	2000	45.0	0	0	$18,180.00

Cumberland	2000	3.0	0	0	$1,212.00
Cumberland	2000	60.0	0	0	$24,240.00
Cumberland	2000	0.3	0	0	$121.20
Cumberland	2000	8.0	0	0	$3,232.00
Cumberland	2000	1.0	0	0	$404.00
Cumberland	2000	20.0	0	0	$8,080.00
Cumberland	2000	3.5	0	0	$1,414.00
Cumberland	2000	50.0	0	0	$20,200.00
Cumberland	2000	15.0	0	0	$6,060.00
Cumberland	2000	0.5	0	0	$202.00
Cumberland	2000	0.5	0	0	$202.00
Cumberland	2000	1.0	0	0	$404.00
Cumberland	2001	0.4	0	0	$161.60
Cumberland	2001	25.0	0	0	$10,100.00
Cumberland	2001	3.0	0	0	$1,212.00
Cumberland	2001	3.0	0	0	$1,212.00
Cumberland	2001	2.0	0	0	$808.00
Cumberland	2001	3.5	0	0	$1,414.00
Cumberland	2001	3.0	0	0	$1,212.00
Cumberland	2001	125.0	0	0	$50,500.00
Cumberland	2001	282.0	0	0	$113,928.00
Cumberland	2001	40.0	0	0	$16,160.00
Cumberland	2001	4.0	0	0	$1,616.00
Cumberland	2001	1.0	0	0	$404.00
Cumberland	2001	1.5	0	0	$606.00
Cumberland	2001	101.0	0	0	$40,804.00
Cumberland	2001	20.0	0	0	$8,080.00
Cumberland	2001	3.0	0	0	$1,212.00
Cumberland	2001	800.0	0	0	$323,200.00
Cumberland	2001	4.0	0	0	$1,616.00
Cumberland	2001	5.0	0	0	$2,020.00
Cumberland	2001	8.0	0	0	$3,232.00
Cumberland	2001	1.0	0	0	$404.00
Cumberland	2001	1.0	0	0	$404.00
Cumberland	2001	0.1	0	0	$40.40
Cumberland	2001	1.0	0	0	$404.00
Cumberland	2001	3.0	0	0	$1,212.00
Cumberland	2002	12.0	0	0	$4,848.00

Cumberland	2002	30.0	0	0	$12,120.00
Cumberland	2002	16.0	0	0	$6,464.00
Cumberland	2002	0.5	0	0	$202.00
Cumberland	2002	0.5	0	1	$202.00
Cumberland	2003	0.2	0	0	$80.80
Cumberland	2003	7.0	0	0	$2,828.00
Cumberland	2003	1.0	0	0	$404.00
Cumberland	2003	20.0	0	0	$8,080.00
Cumberland	2003	75.0	0	0	$30,300.00
Cumberland	2003	10.0	0	0	$4,040.00
Cumberland	2004	0.5	0	0	$202.00
Cumberland	2004	25.0	0	0	$10,100.00
Cumberland	2004	11.0	0	0	$4,444.00
Cumberland	2004	22.0	0	0	$8,888.00
Cumberland	2004	35.0	0	0	$14,140.00
Cumberland	2004	30.0	0	0	$12,120.00
Cumberland	2004	3.0	0	0	$1,212.00
Cumberland	2004	0.1	0	0	$40.40
Cumberland	2004	2.0	0	0	$808.00
Cumberland	2004	2.0	0	0	$808.00
Cumberland	2004	4.0	0	0	$1,616.00
Cumberland	2004	0.1	0	0	$40.40
Cumberland	2004	0.1	0	0	$40.40
Cumberland	2004	0.1	0	0	$40.40
Cumberland	2004	0.5	0	0	$202.00
Cumberland	2004	0.1	0	0	$40.40
Cumberland	2004	0.1	0	0	$40.40
Cumberland	2004	0.5	0	0	$202.00
Cumberland	2005	5.0	0	0	$2,020.00
Cumberland	2005	7.0	0	0	$2,828.00
Cumberland	2005	1.0	0	0	$404.00
Cumberland	2005	0.2	0	0	$80.80
Cumberland	2005	1.0	0	0	$404.00
Cumberland	2005	0.5	0	0	$202.00
Cumberland	2005	200.0	0	0	$80,800.00
Cumberland	2005	2.0	0	0	$808.00
Cumberland	2005	0.1	0	0	$40.40
Cumberland	2005	0.1	0	0	$40.40

Cumberland	2005	20.0	0	0	$8,080.00
Cumberland	2006	0.5	0	1	$202.00
Cumberland	2006	13.0	0	0	$5,252.00
Cumberland	2006	50.0	0	0	$20,200.00
Cumberland	2006	125.0	0	0	$50,500.00
Cumberland	2006	0.5	0	0	$202.00
Cumberland	2006	55.0	0	0	$22,220.00
Cumberland	2006	1.0	0	0	$404.00
Cumberland	2006	0.6	0	0	$242.40
Cumberland	2006	12.0	0	0	$4,848.00
Cumberland	2006	4.0	0	0	$1,616.00
Cumberland	2006	1.0	0	0	$404.00
Cumberland	2006	0.1	0	0	$40.40
Cumberland	2006	3.0	0	0	$1,212.00
Cumberland	2006	2.0	0	0	$808.00
Cumberland	2007	0.5	0	0	$202.00
Cumberland	2007	24.5	0	0	$9,898.00
Cumberland	2007	1.7	0	0	$686.80
Cumberland	2007	3.0	0	1	$1,212.00
Cumberland	2007	2.0	0	0	$808.00
Cumberland	2007	0.2	0	0	$80.80
Cumberland	2008	2.0	0	0	$808.00
Cumberland	2008	2.5	0	1	$1,010.00
Cumberland	2008	21.0	0	0	$8,484.00
Cumberland	2008	0.5	0	0	$202.00
Cumberland	2009	1.0	0	0	$404.00
Cumberland	2009	3.5	0	0	$1,414.00
Cumberland	2009	3.5	0	0	$1,414.00
Cumberland	2009	1.8	0	0	$727.20
Cumberland	2009	9.0	0	0	$3,636.00
Cumberland	2009	56.0	0	0	$22,624.00
Cumberland	2009	49.0	0	0	$19,796.00
Cumberland	2009	19.0	0	0	$7,676.00
Cumberland	2009	0.5	0	0	$202.00
Cumberland	2009	0.1	0	0	$40.40
Cumberland	2009	0.5	0	0	$202.00
Cumberland	2010	3.3	1	0	$1,333.20
Cumberland	2010	19.0	0	0	$7,676.00

Cumberland	2010	30.0	0	0	$12,120.00
Cumberland	2010	29.0	0	0	$11,716.00
Cumberland	2010	0.3	0	0	$121.20
Cumberland	2010	5.0	0	0	$2,020.00
Cumberland	2010	0.8	0	0	$323.20
Cumberland	2010	3.5	0	0	$1,414.00
Cumberland	2010	4.0	0	0	$1,616.00
Cumberland	2010	82.0	0	0	$33,128.00
Cumberland	2010	7.0	0	0	$2,828.00
Cumberland	2010	5.0	0	0	$2,020.00
Cumberland	2011	17.0	0	0	$6,868.00
Cumberland	2011	1.0	0	0	$404.00
Cumberland	2011	0.1	0	0	$40.40
Cumberland	2011	4.5	0	0	$1,818.00
Cumberland	2011	49.0	0	0	$19,796.00
Cumberland	2012	5.5	0	0	$2,222.00
Cumberland	2012	28.0	0	0	$11,312.00
Cumberland	2012	24.0	0	0	$9,696.00
Cumberland	2012	97.0	0	0	$39,188.00
Cumberland	2012	125.0	0	0	$50,500.00
Cumberland	2012	58.0	0	0	$23,432.00
Cumberland	2012	9.0	0	0	$3,636.00
Cumberland	2012	2.0	0	0	$808.00
Cumberland	2013	14.5	0	0	$5,858.00
Cumberland	2013	1.5	0	0	$606.00
Cumberland	2013	3.0	0	0	$1,212.00
Cumberland	2013	38.0	0	0	$15,352.00
Cumberland	2014	6.0	0	0	$2,424.00
Cumberland	2014	30.0	0	0	$12,120.00
Cumberland	2014	1.5	0	0	$606.00
Cumberland	2014	6.0	0	0	$2,424.00
Cumberland	2014	0.5	0	0	$202.00
Cumberland	2014	19.0	0	0	$7,676.00
Cumberland	2014	1.3	0	0	$525.20
Cumberland	2014	18.0	0	0	$7,272.00
Cumberland	2014	28.0	0	0	$11,312.00
Cumberland	2014	27.0	0	0	$10,908.00
Cumberland	2014	2.0	0	0	$808.00

Cumberland	2015	3.2	0	0	$1,292.80
Cumberland	2015	10.0	0	0	$4,040.00
Cumberland	2015	25.0	0	0	$10,100.00
Cumberland	2015	4.0	0	0	$1,616.00
Cumberland	2016	13.0	0	0	$5,252.00
Cumberland	2016	2.0	0	0	$808.00
Cumberland Totals		**4,629.5**	**1**	**5**	**$1,870,318.00**
Green	2000	2.0	0	0	$808.00
Green	2000	1.0	0	0	$404.00
Green	2000	6.0	0	0	$2,424.00
Green	2000	4.0	0	0	$1,616.00
Green	2000	6.0	0	0	$2,424.00
Green	2000	2.0	0	0	$808.00
Green	2000	0.5	0	0	$202.00
Green	2000	0.1	0	0	$40.40
Green	2000	10.0	0	0	$4,040.00
Green	2000	2.0	0	0	$808.00
Green	2000	4.0	0	0	$1,616.00
Green	2001	4.0	0	0	$1,616.00
Green	2001	5.0	0	0	$2,020.00
Green	2001	2.0	0	0	$808.00
Green	2001	2.0	0	0	$808.00
Green	2001	6.0	0	0	$2,424.00
Green	2001	0.1	0	0	$40.40
Green	2002	10.0	0	0	$4,040.00
Green	2003	1.0	0	0	$404.00
Green	2004	2.0	0	0	$808.00
Green	2004	10.0	0	0	$4,040.00
Green	2004	5.5	0	0	$2,222.00
Green	2004	2.0	0	0	$808.00
Green	2004	1.0	0	0	$404.00
Green	2005	0.2	0	0	$80.80
Green	2005	80.0	0	0	$32,320.00
Green	2005	5.0	0	0	$2,020.00
Green	2005	3.1	0	0	$1,252.40
Green	2005	3.0	0	0	$1,212.00
Green	2005	0.5	0	0	$202.00

Green	2006	12.0	0	0	$4,848.00
Green	2006	3.0	0	0	$1,212.00
Green	2006	35.0	0	0	$14,140.00
Green	2006	0.2	0	0	$80.80
Green	2006	3.0	0	0	$1,212.00
Green	2006	2.3	0	0	$929.20
Green	2006	1.5	0	0	$606.00
Green	2006	0.5	0	0	$202.00
Green	2007	1.0	0	0	$404.00
Green	2007	5.0	0	0	$2,020.00
Green	2007	2.0	0	0	$808.00
Green	2007	5.0	0	0	$2,020.00
Green	2008	1.5	0	0	$606.00
Green	2008	5.0	0	0	$2,020.00
Green	2008	5.0	0	0	$2,020.00
Green	2008	0.3	0	0	$121.20
Green	2009	10.0	0	0	$4,040.00
Green	2009	50.0	0	0	$20,200.00
Green	2009	5.0	0	0	$2,020.00
Green	2009	0.2	0	0	$80.80
Green	2009	1.5	0	2	$606.00
Green	2009	1.0	0	0	$404.00
Green	2009	2.5	0	0	$1,010.00
Green	2009	1.8	0	0	$727.20
Green	2010	5.0	0	0	$2,020.00
Green	2010	20.0	0	0	$8,080.00
Green	2010	33.0	0	0	$13,332.00
Green	2010	25.0	0	0	$10,100.00
Green	2010	3.0	0	0	$1,212.00
Green	2010	3.0	0	0	$1,212.00
Green	2010	35.0	0	0	$14,140.00
Green	2010	5.0	0	0	$2,020.00
Green	2010	3.0	0	0	$1,212.00
Green	2010	0.1	0	0	$40.40
Green	2010	0.1	0	0	$40.40
Green	2011	3.0	0	0	$1,212.00
Green	2012	50.0	0	0	$20,200.00
Green	2013	10.0	0	0	$4,040.00

Green	2014	3.0	0	0	$1,212.00
Green	2014	11.3	0	0	$4,565.20
Green	2014	3.1	0	0	$1,252.40
Green	2014	10.0	0	0	$4,040.00
Green Totals		**556.9**	**0**	**2**	**$224,987.60**
McCreary	2000	45.0	0	0	$18,180.00
McCreary	2000	150.0	0	0	$60,600.00
McCreary	2000	28.0	0	0	$11,312.00
McCreary	2000	40.0	0	0	$16,160.00
McCreary	2001	341.0	0	0	$137,764.00
McCreary	2001	20.0	0	0	$8,080.00
McCreary	2001	6.0	0	0	$2,424.00
McCreary	2001	4.0	0	0	$1,616.00
McCreary	2002	165.0	0	0	$66,660.00
McCreary	2002	2.0	0	0	$808.00
McCreary	2002	25.0	0	0	$10,100.00
McCreary	2002	120.0	0	0	$48,480.00
McCreary	2003	10.0	0	0	$4,040.00
McCreary	2003	8.0	0	0	$3,232.00
McCreary	2003	50.0	0	0	$20,200.00
McCreary	2003	40.0	0	0	$16,160.00
McCreary	2003	3.0	0	0	$1,212.00
McCreary	2004	2.0	0	0	$808.00
McCreary	2004	2.5	0	0	$1,010.00
McCreary	2004	2.0	0	0	$808.00
McCreary	2004	22.0	0	0	$8,888.00
McCreary	2004	3.5	0	0	$1,414.00
McCreary	2004	30.0	0	0	$12,120.00
McCreary	2004	15.0	0	0	$6,060.00
McCreary	2004	75.0	0	0	$30,300.00
McCreary	2004	6.0	0	0	$2,424.00
McCreary	2004	50.0	0	0	$20,200.00
McCreary	2005	1.0	0	0	$404.00
McCreary	2005	10.0	0	0	$4,040.00
McCreary	2005	20.0	0	0	$8,080.00
McCreary	2005	30.0	0	0	$12,120.00
McCreary	2005	10.0	0	0	$4,040.00

McCreary	2005	4.0	0	0	$1,616.00
McCreary	2006	10.0	0	0	$4,040.00
McCreary	2006	80.0	0	0	$32,320.00
McCreary	2007	20.0	0	0	$8,080.00
McCreary	2007	40.0	0	0	$16,160.00
McCreary	2007	5.0	0	0	$2,020.00
McCreary	2007	35.0	0	0	$14,140.00
McCreary	2007	5.0	0	0	$2,020.00
McCreary	2007	150.0	0	0	$60,600.00
McCreary	2007	40.0	0	0	$16,160.00
McCreary	2008	15.0	0	1	$6,060.00
McCreary	2008	175.0	0	0	$70,700.00
McCreary	2008	20.0	0	0	$8,080.00
McCreary	2008	55.0	0	0	$22,220.00
McCreary	2008	1.0	0	0	$404.00
McCreary	2008	90.0	0	0	$36,360.00
McCreary	2008	19.0	0	0	$7,676.00
McCreary	2009	5.0	0	0	$2,020.00
McCreary	2009	2.0	0	0	$808.00
McCreary	2009	30.0	0	0	$12,120.00
McCreary	2009	5.0	0	0	$2,020.00
McCreary	2009	2.0	0	0	$808.00
McCreary	2010	20.0	0	0	$8,080.00
McCreary	2010	2.0	0	0	$808.00
McCreary	2010	0.5	0	0	$202.00
McCreary	2010	1.0	0	0	$404.00
McCreary	2011	10.0	0	0	$4,040.00
McCreary	2012	1.0	0	0	$404.00
McCreary	2012	30.0	0	0	$12,120.00
McCreary	2013	8.0	0	0	$3,232.00
McCreary	2013	1.0	0	0	$404.00
McCreary	2013	5.0	0	0	$2,020.00
McCreary	2013	42.0	0	0	$16,968.00
McCreary	2013	8.0	0	0	$3,232.00
McCreary	2013	55.0	0	0	$22,220.00
McCreary	2014	0.1	0	0	$40.40
McCreary	2014	6.0	0	0	$2,424.00
McCreary	2014	40.0	0	0	$16,160.00

McCreary	2014	93.0	0	0	$37,572.00
McCreary	2014	188.0	0	0	$75,952.00
McCreary	2014	20.0	0	0	$8,080.00
McCreary	2014	24.0	0	0	$9,696.00
McCreary	2016	11.4	0	0	$4,605.60
McCreary	2016	260.0	0	0	$105,040.00
McCreary	2016	30.0	0	0	$12,120.00
McCreary Totals		**3,000.0**	**0**	**1**	**$1,212,000.00**
Pulaski	2000	15.0	0	0	$6,060.00
Pulaski	2000	25.0	0	0	$10,100.00
Pulaski	2000	1.0	0	0	$404.00
Pulaski	2000	15.0	0	1	$6,060.00
Pulaski	2000	0.1	0	0	$40.40
Pulaski	2000	0.2	0	0	$80.80
Pulaski	2000	80.2	0	0	$32,400.80
Pulaski	2000	3.0	0	0	$1,212.00
Pulaski	2000	1.5	0	0	$606.00
Pulaski	2000	20.0	0	0	$8,080.00
Pulaski	2000	4.0	0	0	$1,616.00
Pulaski	2001	0.2	0	0	$80.80
Pulaski	2001	10.0	0	0	$4,040.00
Pulaski	2001	0.1	0	0	$40.40
Pulaski	2001	5.0	0	0	$2,020.00
Pulaski	2001	4.0	0	0	$1,616.00
Pulaski	2001	60.0	0	0	$24,240.00
Pulaski	2001	25.0	0	0	$10,100.00
Pulaski	2001	5.0	0	0	$2,020.00
Pulaski	2001	46.0	0	0	$18,584.00
Pulaski	2001	20.0	0	0	$8,080.00
Pulaski	2001	3.5	0	0	$1,414.00
Pulaski	2001	10.0	0	0	$4,040.00
Pulaski	2001	117.0	0	0	$47,268.00
Pulaski	2001	1.0	0	0	$404.00
Pulaski	2001	1.0	0	0	$404.00
Pulaski	2001	0.5	0	0	$202.00
Pulaski	2001	20.0	0	0	$8,080.00
Pulaski	2001	2.0	0	0	$808.00

Pulaski	2001	5.0	0	0	$2,020.00
Pulaski	2001	500.0	0	0	$202,000.00
Pulaski	2001	1.0	0	0	$404.00
Pulaski	2001	20.0	0	0	$8,080.00
Pulaski	2001	5.0	0	0	$2,020.00
Pulaski	2001	0.1	0	0	$40.40
Pulaski	2002	3.0	0	0	$1,212.00
Pulaski	2002	1.0	0	0	$404.00
Pulaski	2002	9.0	0	0	$3,636.00
Pulaski	2002	12.0	0	1	$4,848.00
Pulaski	2002	3.0	0	2	$1,212.00
Pulaski	2002	15.0	0	0	$6,060.00
Pulaski	2002	50.0	0	0	$20,200.00
Pulaski	2002	5.0	0	0	$2,020.00
Pulaski	2002	17.0	0	0	$6,868.00
Pulaski	2003	3.0	0	0	$1,212.00
Pulaski	2003	15.1	0	0	$6,100.40
Pulaski	2003	40.0	0	0	$16,160.00
Pulaski	2003	0.5	0	0	$202.00
Pulaski	2003	10.0	0	0	$4,040.00
Pulaski	2003	150.0	0	0	$60,600.00
Pulaski	2003	0.3	0	0	$121.20
Pulaski	2004	2.0	0	0	$808.00
Pulaski	2004	3.0	0	0	$1,212.00
Pulaski	2004	0.5	0	0	$202.00
Pulaski	2004	3.0	0	0	$1,212.00
Pulaski	2004	25.0	0	0	$10,100.00
Pulaski	2004	0.5	0	0	$202.00
Pulaski	2004	0.2	0	0	$80.80
Pulaski	2004	50.0	0	0	$20,200.00
Pulaski	2004	2.0	0	0	$808.00
Pulaski	2004	50.0	0	0	$20,200.00
Pulaski	2005	9.0	0	0	$3,636.00
Pulaski	2005	10.0	0	0	$4,040.00
Pulaski	2005	0.5	0	0	$202.00
Pulaski	2005	1.0	0	0	$404.00
Pulaski	2005	50.0	0	0	$20,200.00
Pulaski	2005	165.0	1	0	$66,660.00

Pulaski	2005	4.0	0	0	$1,616.00
Pulaski	2005	3.0	0	0	$1,212.00
Pulaski	2005	2.0	0	0	$808.00
Pulaski	2005	0.6	0	0	$242.40
Pulaski	2006	2.0	0	0	$808.00
Pulaski	2006	0.5	0	0	$202.00
Pulaski	2006	3.0	0	0	$1,212.00
Pulaski	2006	20.0	0	0	$8,080.00
Pulaski	2006	20.0	0	0	$8,080.00
Pulaski	2006	10.0	0	0	$4,040.00
Pulaski	2007	2.0	0	0	$808.00
Pulaski	2007	40.5	0	0	$16,362.00
Pulaski	2007	4.0	0	0	$1,616.00
Pulaski	2007	14.0	0	0	$5,656.00
Pulaski	2007	3.0	0	0	$1,212.00
Pulaski	2007	3.0	0	0	$1,212.00
Pulaski	2007	3.0	0	0	$1,212.00
Pulaski	2007	1.0	0	0	$404.00
Pulaski	2007	5.5	0	0	$2,222.00
Pulaski	2007	5.0	0	0	$2,020.00
Pulaski	2007	15.0	0	0	$6,060.00
Pulaski	2007	3.0	0	0	$1,212.00
Pulaski	2007	10.0	0	0	$4,040.00
Pulaski	2007	5.0	0	0	$2,020.00
Pulaski	2007	5.0	0	0	$2,020.00
Pulaski	2007	0.5	0	0	$202.00
Pulaski	2007	5.0	0	0	$2,020.00
Pulaski	2007	2.0	0	0	$808.00
Pulaski	2007	0.4	0	0	$161.60
Pulaski	2007	3.0	0	0	$1,212.00
Pulaski	2007	3.0	0	0	$1,212.00
Pulaski	2007	10.0	0	0	$4,040.00
Pulaski	2008	4.0	0	0	$1,616.00
Pulaski	2008	3.0	0	0	$1,212.00
Pulaski	2008	15.0	0	0	$6,060.00
Pulaski	2008	5.0	0	0	$2,020.00
Pulaski	2008	3.0	0	0	$1,212.00
Pulaski	2008	1.5	0	0	$606.00

Pulaski	2008	15.0	0	0	$6,060.00
Pulaski	2008	10.0	0	0	$4,040.00
Pulaski	2008	7.0	0	0	$2,828.00
Pulaski	2008	12.0	0	0	$4,848.00
Pulaski	2008	6.5	0	0	$2,626.00
Pulaski	2008	2.0	0	0	$808.00
Pulaski	2008	0.1	0	0	$40.40
Pulaski	2009	20.0	0	0	$8,080.00
Pulaski	2009	50.0	0	0	$20,200.00
Pulaski	2009	15.0	0	0	$6,060.00
Pulaski	2009	1.0	0	0	$404.00
Pulaski	2009	8.0	0	0	$3,232.00
Pulaski	2009	0.5	0	0	$202.00
Pulaski	2009	1.0	0	0	$404.00
Pulaski	2009	6.0	0	0	$2,424.00
Pulaski	2009	2.0	0	0	$808.00
Pulaski	2009	83.0	0	0	$33,532.00
Pulaski	2009	0.1	0	0	$40.40
Pulaski	2010	5.0	0	0	$2,020.00
Pulaski	2010	22.0	0	0	$8,888.00
Pulaski	2010	35.0	0	0	$14,140.00
Pulaski	2010	2.0	0	0	$808.00
Pulaski	2010	2.0	0	0	$808.00
Pulaski	2010	10.2	0	0	$4,120.80
Pulaski	2010	10.0	0	0	$4,040.00
Pulaski	2011	8.0	0	0	$3,232.00
Pulaski	2012	6.0	0	0	$2,424.00
Pulaski	2012	3.0	0	1	$1,212.00
Pulaski	2012	15.0	0	0	$6,060.00
Pulaski	2012	6.0	0	0	$2,424.00
Pulaski	2012	40.0	0	0	$16,160.00
Pulaski	2012	7.0	0	0	$2,828.00
Pulaski	2013	25.0	0	0	$10,100.00
Pulaski	2013	0.1	0	0	$40.40
Pulaski	2014	0.2	0	0	$80.80
Pulaski	2014	19.0	0	0	$7,676.00
Pulaski	2014	20.0	0	0	$8,080.00
Pulaski	2014	0.3	0	0	$121.20

Pulaski	2014	80.0	0	0	$32,320.00
Pulaski	2014	8.0	0	0	$3,232.00
Pulaski	2014	17.0	0	0	$6,868.00
Pulaski	2014	0.5	0	0	$202.00
Pulaski	2014	30.0	0	0	$12,120.00
Pulaski	2014	55.0	0	0	$22,220.00
Pulaski	2015	95.0	0	0	$38,380.00
Pulaski	2015	5.0	0	0	$2,020.00
Pulaski	2016	140.0	0	0	$56,560.00
Pulaski Totals		**2,877.0**	**1**	**5**	**$1,162,308.00**
Russell	2000	4.0	0	0	$1,616.00
Russell	2000	10.0	0	0	$4,040.00
Russell	2000	30.0	0	0	$12,120.00
Russell	2001	0.1	0	0	$40.40
Russell	2001	1.0	0	0	$404.00
Russell	2001	2.0	0	0	$808.00
Russell	2003	3.0	0	0	$1,212.00
Russell	2003	0.4	0	0	$161.60
Russell	2005	3.0	0	0	$1,212.00
Russell	2005	13.0	0	0	$5,252.00
Russell	2005	0.5	0	0	$202.00
Russell	2007	150.0	0	0	$60,600.00
Russell	2007	370.0	0	0	$149,480.00
Russell	2008	5.0	0	0	$2,020.00
Russell	2008	10.0	0	0	$4,040.00
Russell	2008	10.1	0	0	$4,080.40
Russell	2010	10.1	0	0	$4,080.40
Russell	2011	8.0	0	0	$3,232.00
Russell	2011	30.5	0	0	$12,322.00
Russell	2011	10.0	0	0	$4,040.00
Russell	2012	21.0	0	0	$8,484.00
Russell	2012	1.1	0	0	$444.40
Russell	2014	15.0	0	0	$6,060.00
Russell	2016	5.0	0	0	$2,020.00
Russell	2016	2.0	0	0	$808.00
Russell Totals		**714.8**	**0**	**0**	**$288,779.20**

Taylor	2000	18.0	0	0	$7,272.00
Taylor	2000	2.1	0	0	$848.40
Taylor	2000	2.0	0	0	$808.00
Taylor	2001	5.0	0	0	$2,020.00
Taylor	2001	0.2	0	0	$80.80
Taylor	2001	2.0	0	0	$808.00
Taylor	2001	0.1	0	0	$40.40
Taylor	2001	12.0	0	0	$4,848.00
Taylor	2001	0.1	0	0	$40.40
Taylor	2001	3.0	0	0	$1,212.00
Taylor	2002	0.1	0	0	$40.40
Taylor	2002	1.5	0	0	$606.00
Taylor	2004	3.0	0	0	$1,212.00
Taylor	2004	2.2	0	0	$888.80
Taylor	2004	2.0	0	0	$808.00
Taylor	2004	1.4	0	0	$565.60
Taylor	2004	7.0	0	0	$2,828.00
Taylor	2004	9.5	0	0	$3,838.00
Taylor	2004	0.7	0	0	$282.80
Taylor	2005	1.7	0	0	$686.80
Taylor	2005	1.0	0	1	$404.00
Taylor	2005	3.0	0	0	$1,212.00
Taylor	2005	10.0	0	0	$4,040.00
Taylor	2005	5.0	0	0	$2,020.00
Taylor	2005	0.2	0	0	$80.80
Taylor	2005	0.2	0	0	$80.80
Taylor	2006	2.0	0	0	$808.00
Taylor	2006	20.0	0	0	$8,080.00
Taylor	2006	0.6	0	0	$242.40
Taylor	2006	2.0	0	0	$808.00
Taylor	2006	1.0	0	0	$404.00
Taylor	2006	0.1	0	0	$40.40
Taylor	2006	3.0	0	0	$1,212.00
Taylor	2006	60.0	0	0	$24,240.00
Taylor	2006	3.0	0	0	$1,212.00
Taylor	2006	15.0	0	0	$6,060.00
Taylor	2006	2.5	0	0	$1,010.00
Taylor	2006	0.5	0	0	$202.00

Taylor	2007	2.1	0	0	$848.40
Taylor	2007	10.0	0	0	$4,040.00
Taylor	2007	1.0	0	0	$404.00
Taylor	2008	10.0	0	0	$4,040.00
Taylor	2008	0.1	0	0	$40.40
Taylor	2008	25.0	0	0	$10,100.00
Taylor	2008	1.0	0	0	$404.00
Taylor	2010	30.0	0	0	$12,120.00
Taylor	2010	20.5	0	0	$8,282.00
Taylor	2010	5.0	0	0	$2,020.00
Taylor	2010	0.2	0	0	$80.80
Taylor	2010	10.0	0	0	$4,040.00
Taylor	2011	8.0	0	0	$3,232.00
Taylor	2011	4.5	0	0	$1,818.00
Taylor	2011	20.0	0	0	$8,080.00
Taylor	2011	2.0	0	0	$808.00
Taylor	2012	3.5	0	0	$1,414.00
Taylor	2014	33.0	0	0	$13,332.00
Taylor	2014	1.5	0	0	$606.00
Taylor	2014	2.0	0	0	$808.00
Taylor	2014	7.0	0	0	$2,828.00
Taylor Totals		**399.1**	**0**	**1**	**$161,236.40**
Wayne	2000	18.0	0	0	$7,272.00
Wayne	2000	3.0	0	0	$1,212.00
Wayne	2000	4.0	0	0	$1,616.00
Wayne	2000	75.0	0	0	$30,300.00
Wayne	2000	16.0	0	0	$6,464.00
Wayne	2000	25.0	0	0	$10,100.00
Wayne	2000	0.5	0	0	$202.00
Wayne	2000	2.0	0	0	$808.00
Wayne	2000	15.0	0	0	$6,060.00
Wayne	2000	10.0	0	0	$4,040.00
Wayne	2000	181.0	0	0	$73,124.00
Wayne	2000	375.0	0	0	$151,500.00
Wayne	2000	520.0	0	0	$210,080.00
Wayne	2000	3.0	0	0	$1,212.00
Wayne	2000	15.0	0	0	$6,060.00

Wayne	2000	200.0	0	0	$80,800.00
Wayne	2000	5.0	0	0	$2,020.00
Wayne	2000	6.0	0	0	$2,424.00
Wayne	2000	70.0	0	0	$28,280.00
Wayne	2000	2.0	0	0	$808.00
Wayne	2001	2.0	0	0	$808.00
Wayne	2001	2.2	0	0	$888.80
Wayne	2001	2.5	0	0	$1,010.00
Wayne	2001	575.0	0	5	$232,300.00
Wayne	2001	1.0	0	0	$404.00
Wayne	2001	60.0	0	0	$24,240.00
Wayne	2001	0.3	0	0	$121.20
Wayne	2001	150.0	0	0	$60,600.00
Wayne	2001	0.2	0	0	$80.80
Wayne	2001	0.5	0	0	$202.00
Wayne	2001	350.0	0	0	$141,400.00
Wayne	2001	6.0	0	0	$2,424.00
Wayne	2001	2.0	0	0	$808.00
Wayne	2001	0.5	0	0	$202.00
Wayne	2001	6.5	0	0	$2,626.00
Wayne	2001	2.0	0	0	$808.00
Wayne	2001	2.0	0	0	$808.00
Wayne	2001	163.0	0	0	$65,852.00
Wayne	2001	25.0	0	0	$10,100.00
Wayne	2001	2.0	0	0	$808.00
Wayne	2001	250.0	0	0	$101,000.00
Wayne	2001	75.0	0	0	$30,300.00
Wayne	2001	20.0	0	0	$8,080.00
Wayne	2001	500.1	0	0	$202,040.40
Wayne	2001	175.0	0	0	$70,700.00
Wayne	2001	2.0	0	0	$808.00
Wayne	2001	0.1	0	0	$40.40
Wayne	2002	10.0	0	2	$4,040.00
Wayne	2002	2.0	0	0	$808.00
Wayne	2002	52.0	0	0	$21,008.00
Wayne	2002	0.5	0	0	$202.00
Wayne	2002	0.3	0	1	$121.20
Wayne	2002	6.0	0	0	$2,424.00

Wayne	2002	150.0	0	0	$60,600.00
Wayne	2002	2.0	0	0	$808.00
Wayne	2003	10.0	0	0	$4,040.00
Wayne	2003	14.0	0	0	$5,656.00
Wayne	2003	8.0	0	0	$3,232.00
Wayne	2003	6.0	0	0	$2,424.00
Wayne	2003	0.2	0	0	$80.80
Wayne	2003	0.3	0	0	$121.20
Wayne	2003	75.0	0	0	$30,300.00
Wayne	2003	1.0	0	0	$404.00
Wayne	2003	3.5	0	0	$1,414.00
Wayne	2003	0.5	0	0	$202.00
Wayne	2003	3.0	0	0	$1,212.00
Wayne	2003	0.1	0	0	$40.40
Wayne	2003	0.5	0	0	$202.00
Wayne	2003	0.2	0	0	$80.80
Wayne	2003	0.1	0	0	$40.40
Wayne	2003	10.0	0	0	$4,040.00
Wayne	2003	3.0	0	0	$1,212.00
Wayne	2003	18.0	0	0	$7,272.00
Wayne	2003	80.0	0	0	$32,320.00
Wayne	2003	12.0	0	0	$4,848.00
Wayne	2003	0.5	0	0	$202.00
Wayne	2004	0.3	0	0	$121.20
Wayne	2004	60.0	0	0	$24,240.00
Wayne	2004	2.0	0	0	$808.00
Wayne	2004	10.0	1	4	$4,040.00
Wayne	2004	10.0	0	0	$4,040.00
Wayne	2004	0.2	0	0	$80.80
Wayne	2004	20.0	0	0	$8,080.00
Wayne	2004	12.0	0	0	$4,848.00
Wayne	2004	170.0	0	0	$68,680.00
Wayne	2004	100.0	0	0	$40,400.00
Wayne	2004	90.0	0	0	$36,360.00
Wayne	2004	2.0	0	0	$808.00
Wayne	2004	0.2	0	0	$80.80
Wayne	2004	3.0	0	0	$1,212.00
Wayne	2004	1.0	0	0	$404.00

Wayne	2004	4.0	0	0	$1,616.00
Wayne	2005	3.0	0	0	$1,212.00
Wayne	2005	0.5	0	0	$202.00
Wayne	2005	2.0	0	0	$808.00
Wayne	2005	2.0	0	0	$808.00
Wayne	2005	2.0	0	0	$808.00
Wayne	2005	3.0	0	0	$1,212.00
Wayne	2005	4.0	0	0	$1,616.00
Wayne	2005	1.0	0	0	$404.00
Wayne	2005	10.0	0	0	$4,040.00
Wayne	2005	4.0	0	0	$1,616.00
Wayne	2005	110.0	0	0	$44,440.00
Wayne	2005	15.0	0	0	$6,060.00
Wayne	2005	2.0	0	0	$808.00
Wayne	2005	5.0	0	0	$2,020.00
Wayne	2005	200.0	0	0	$80,800.00
Wayne	2005	12.5	0	0	$5,050.00
Wayne	2005	20.0	0	0	$8,080.00
Wayne	2005	15.0	0	0	$6,060.00
Wayne	2005	13.0	0	0	$5,252.00
Wayne	2005	72.0	0	0	$29,088.00
Wayne	2005	20.0	0	0	$8,080.00
Wayne	2005	3.0	0	0	$1,212.00
Wayne	2005	2.0	0	0	$808.00
Wayne	2005	3.0	0	0	$1,212.00
Wayne	2006	15.0	0	0	$6,060.00
Wayne	2006	55.0	0	0	$22,220.00
Wayne	2006	2.5	0	0	$1,010.00
Wayne	2006	60.0	0	0	$24,240.00
Wayne	2006	4.0	0	0	$1,616.00
Wayne	2006	80.0	0	0	$32,320.00
Wayne	2006	0.1	0	0	$40.40
Wayne	2006	2.0	0	0	$808.00
Wayne	2006	2.0	0	0	$808.00
Wayne	2006	0.1	0	0	$40.40
Wayne	2006	1.5	0	0	$606.00
Wayne	2006	0.1	0	0	$40.40
Wayne	2006	0.2	0	0	$80.80

Wayne	2007	18.0	0	0	$7,272.00
Wayne	2007	18.0	0	1	$7,272.00
Wayne	2007	0.3	0	0	$121.20
Wayne	2007	2.0	0	0	$808.00
Wayne	2007	1.0	0	0	$404.00
Wayne	2007	0.5	0	0	$202.00
Wayne	2007	7.0	0	0	$2,828.00
Wayne	2007	8.0	0	0	$3,232.00
Wayne	2007	320.0	0	0	$129,280.00
Wayne	2007	12.0	0	0	$4,848.00
Wayne	2007	92.0	0	0	$37,168.00
Wayne	2007	30.0	0	0	$12,120.00
Wayne	2007	197.0	0	0	$79,588.00
Wayne	2007	200.0	0	0	$80,800.00
Wayne	2007	1.0	0	0	$404.00
Wayne	2007	20.0	0	0	$8,080.00
Wayne	2007	7.0	0	0	$2,828.00
Wayne	2007	5.0	0	0	$2,020.00
Wayne	2007	45.0	0	0	$18,180.00
Wayne	2007	4.0	0	0	$1,616.00
Wayne	2007	4.0	0	0	$1,616.00
Wayne	2007	12.0	0	0	$4,848.00
Wayne	2007	65.0	0	0	$26,260.00
Wayne	2007	940.0	0	0	$379,760.00
Wayne	2007	122.0	0	0	$49,288.00
Wayne	2007	7.0	0	0	$2,828.00
Wayne	2008	4.0	0	0	$1,616.00
Wayne	2008	3.5	0	0	$1,414.00
Wayne	2008	17.0	0	0	$6,868.00
Wayne	2008	3.0	0	0	$1,212.00
Wayne	2008	12.0	0	0	$4,848.00
Wayne	2008	1.0	0	0	$404.00
Wayne	2008	10.0	0	0	$4,040.00
Wayne	2008	149.0	0	0	$60,196.00
Wayne	2008	2.0	0	0	$808.00
Wayne	2008	0.3	0	0	$121.20
Wayne	2008	4.0	0	0	$1,616.00
Wayne	2008	2.0	0	0	$808.00

Wayne	2008	1.5	0	0	$606.00
Wayne	2008	15.0	0	0	$6,060.00
Wayne	2008	0.1	0	0	$40.40
Wayne	2008	2.0	0	0	$808.00
Wayne	2008	0.3	0	0	$121.20
Wayne	2008	10.0	0	0	$4,040.00
Wayne	2008	3.0	0	0	$1,212.00
Wayne	2008	12.0	0	0	$4,848.00
Wayne	2008	326.0	0	0	$131,704.00
Wayne	2008	6.0	0	0	$2,424.00
Wayne	2008	24.0	0	0	$9,696.00
Wayne	2008	725.0	0	0	$292,900.00
Wayne	2008	20.0	0	0	$8,080.00
Wayne	2008	0.1	0	0	$40.40
Wayne	2008	0.5	0	0	$202.00
Wayne	2009	0.7	0	0	$282.80
Wayne	2009	35.0	0	0	$14,140.00
Wayne	2009	3.0	0	0	$1,212.00
Wayne	2009	3.0	0	0	$1,212.00
Wayne	2009	34.0	0	0	$13,736.00
Wayne	2009	5.0	0	0	$2,020.00
Wayne	2009	3.0	0	0	$1,212.00
Wayne	2009	10.0	0	0	$4,040.00
Wayne	2009	0.5	0	0	$202.00
Wayne	2009	0.5	0	0	$202.00
Wayne	2009	0.3	0	0	$121.20
Wayne	2009	40.0	0	0	$16,160.00
Wayne	2009	14.0	0	0	$5,656.00
Wayne	2010	15.0	0	0	$6,060.00
Wayne	2010	50.0	0	0	$20,200.00
Wayne	2010	40.0	0	0	$16,160.00
Wayne	2010	22.0	0	0	$8,888.00
Wayne	2010	30.0	0	0	$12,120.00
Wayne	2010	25.0	0	0	$10,100.00
Wayne	2010	6.0	0	1	$2,424.00
Wayne	2010	285.0	0	0	$115,140.00
Wayne	2010	19.0	0	0	$7,676.00
Wayne	2010	0.2	0	0	$80.80

Wayne	2010	0.3	0	0	$121.20
Wayne	2010	1.0	0	0	$404.00
Wayne	2010	95.0	0	0	$38,380.00
Wayne	2010	25.0	0	0	$10,100.00
Wayne	2010	0.5	0	0	$202.00
Wayne	2010	182.0	0	0	$73,528.00
Wayne	2010	78.0	0	0	$31,512.00
Wayne	2010	3.0	0	0	$1,212.00
Wayne	2011	0.2	0	0	$80.80
Wayne	2011	40.0	0	0	$16,160.00
Wayne	2011	3.0	0	0	$1,212.00
Wayne	2011	50.0	0	0	$20,200.00
Wayne	2011	20.0	0	0	$8,080.00
Wayne	2011	5.0	0	0	$2,020.00
Wayne	2011	170.0	0	0	$68,680.00
Wayne	2011	22.0	0	0	$8,888.00
Wayne	2012	4.0	0	0	$1,616.00
Wayne	2012	15.0	0	0	$6,060.00
Wayne	2012	10.0	0	0	$4,040.00
Wayne	2012	75.0	0	0	$30,300.00
Wayne	2012	59.0	0	0	$23,836.00
Wayne	2012	25.0	0	0	$10,100.00
Wayne	2012	80.0	0	0	$32,320.00
Wayne	2012	2.0	0	0	$808.00
Wayne	2012	2.0	0	0	$808.00
Wayne	2012	0.5	0	0	$202.00
Wayne	2012	2.0	0	0	$808.00
Wayne	2012	2.0	0	0	$808.00
Wayne	2012	2.0	0	0	$808.00
Wayne	2012	8.1	0	0	$3,272.40
Wayne	2012	0.5	0	0	$202.00
Wayne	2012	176.1	0	0	$71,144.40
Wayne	2013	15.0	0	0	$6,060.00
Wayne	2013	46.0	0	0	$18,584.00
Wayne	2013	2.0	0	0	$808.00
Wayne	2013	12.0	0	0	$4,848.00
Wayne	2013	30.0	0	0	$12,120.00
Wayne	2013	112.0	0	0	$45,248.00

Wayne	2013	20.0	0	0	$8,080.00
Wayne	2013	2.0	0	0	$808.00
Wayne	2013	1.3	0	0	$505.00
Wayne	2014	5.0	0	0	$2,020.00
Wayne	2014	11.0	0	0	$4,444.00
Wayne	2014	12.0	0	0	$4,848.00
Wayne	2014	60.0	0	0	$24,240.00
Wayne	2014	1.5	0	0	$606.00
Wayne	2014	13.0	0	0	$5,252.00
Wayne	2014	132.0	0	0	$53,328.00
Wayne	2014	65.0	0	0	$26,260.00
Wayne	2014	80.0	0	0	$32,320.00
Wayne	2014	4.5	0	0	$1,818.00
Wayne	2015	3.0	0	0	$1,212.00
Wayne	2015	5.0	0	0	$2,020.00
Wayne	2015	22.0	0	0	$8,888.00
Wayne	2015	27.0	0	0	$10,908.00
Wayne	2015	40.0	0	0	$16,160.00
Wayne	2015	5.0	0	0	$2,020.00
Wayne	2016	2.0	0	2	$808.00
Wayne	2016	20.0	0	0	$8,080.00
Wayne	2016	27.0	0	0	$10,908.00
Wayne	2016	1.0	0	0	$404.00
Wayne	2016	15.0	0	0	$6,060.00
Wayne	2016	12.0	0	0	$4,848.00
Wayne	2016	1.5	0	0	$606.00
Wayne Totals		**11,715.6**	**1**	**16**	**$4,733,082.20**
Lake Cumberland Region Totals		**33,111.3**	**6**	**52**	**$13,376,965.20**

Table 4.5(2) - LCADD Region Wildfire Vulnerability Risk Exposure Assessment (Federal Data)

County	Total Acres	Fire Date	Loss Per Acre
Adair	0.1	10/14/83	Unknown
Adair	1.0	10/31/87	Unknown
Adair	**1.1**		
Casey	0.1	04/03/86	Unknown
Casey	2.0	11/08/05	Unknown
Casey	**2.1**		
McCreary	0.1	02/28/80	Unknown
McCreary	3.0	03/15/80	Unknown
McCreary	13.0	03/16/80	Unknown
McCreary	13.0	03/16/80	Unknown
McCreary	0.1	03/19/80	Unknown
McCreary	1.0	03/23/80	Unknown
McCreary	3.0	03/23/80	Unknown
McCreary	2.0	03/23/80	Unknown
McCreary	0.1	04/07/80	Unknown
McCreary	0.1	04/07/80	Unknown
McCreary	0.1	04/07/80	Unknown
McCreary	0.1	04/16/80	Unknown
McCreary	1.0	04/19/80	Unknown
McCreary	2.0	04/20/80	Unknown
McCreary	1.0	04/20/80	Unknown
McCreary	1.0	04/21/80	Unknown
McCreary	7.0	04/23/80	Unknown
McCreary	3.0	04/23/80	Unknown
McCreary	2.0	04/23/80	Unknown
McCreary	2.0	04/23/80	Unknown
McCreary	1.0	05/04/80	Unknown
McCreary	1.0	05/06/80	Unknown
McCreary	2.0	05/07/80	Unknown
McCreary	40.0	05/08/80	Unknown
McCreary	40.0	05/10/80	Unknown
McCreary	3.0	08/10/80	Unknown
McCreary	10.0	08/10/80	Unknown

McCreary	0.1	08/11/80	Unknown
McCreary	0.1	08/12/80	Unknown
McCreary	3.0	08/26/80	Unknown
McCreary	4.0	09/02/80	Unknown
McCreary	8.0	10/10/80	Unknown
McCreary	0.1	10/21/80	Unknown
McCreary	0.1	11/02/80	Unknown
McCreary	4.0	11/02/80	Unknown
McCreary	2.0	11/03/80	Unknown
McCreary	95.0	11/03/80	Unknown
McCreary	5.0	11/04/80	Unknown
McCreary	2.0	11/05/80	Unknown
McCreary	0.1	11/06/80	Unknown
McCreary	1.0	11/07/80	Unknown
McCreary	2.0	11/07/80	Unknown
McCreary	2.0	11/07/80	Unknown
McCreary	2.0	11/08/80	Unknown
McCreary	11.0	11/08/80	Unknown
McCreary	95.0	11/08/80	Unknown
McCreary	1.0	11/10/80	Unknown
McCreary	1.0	11/11/80	Unknown
McCreary	2.0	11/11/80	Unknown
McCreary	8.0	11/12/80	Unknown
McCreary	2.0	11/13/80	Unknown
McCreary	95.0	11/13/80	Unknown
McCreary	15.0	11/14/80	Unknown
McCreary	1.0	11/20/80	Unknown
McCreary	95.0	11/30/80	Unknown
McCreary	2.0	12/13/80	Unknown
McCreary	6.0	12/22/80	Unknown
McCreary	4.0	12/22/80	Unknown
McCreary	4.0	12/22/80	Unknown
McCreary	80.0	01/03/81	Unknown
McCreary	0.1	01/16/81	Unknown
McCreary	6.0	01/28/81	Unknown
McCreary	8.0	02/26/81	Unknown
McCreary	20.0	02/26/81	Unknown
McCreary	442.0	02/27/81	Unknown

McCreary	0.1	02/27/81	Unknown
McCreary	8.0	02/27/81	Unknown
McCreary	432.0	02/27/81	Unknown
McCreary	91.0	02/27/81	Unknown
McCreary	0.1	03/10/81	Unknown
McCreary	1.0	03/11/81	Unknown
McCreary	5.0	03/12/81	Unknown
McCreary	1.0	03/15/81	Unknown
McCreary	4.0	03/18/81	Unknown
McCreary	1.0	03/18/81	Unknown
McCreary	1.0	03/27/81	Unknown
McCreary	2.0	03/28/81	Unknown
McCreary	91.0	03/29/81	Unknown
McCreary	132.0	03/29/81	Unknown
McCreary	0.1	03/29/81	Unknown
McCreary	91.0	03/29/81	Unknown
McCreary	3.0	03/31/81	Unknown
McCreary	0.1	04/02/81	Unknown
McCreary	60.0	04/07/81	Unknown
McCreary	2.0	04/08/81	Unknown
McCreary	3.0	04/08/81	Unknown
McCreary	1.0	04/15/81	Unknown
McCreary	235.0	04/25/81	Unknown
McCreary	0.1	09/12/81	Unknown
McCreary	0.1	11/02/81	Unknown
McCreary	1.0	11/12/81	Unknown
McCreary	2.0	03/23/82	Unknown
McCreary	2.0	04/12/82	Unknown
McCreary	0.1	04/15/82	Unknown
McCreary	2.0	05/03/82	Unknown
McCreary	0.1	05/04/82	Unknown
McCreary	0.1	05/09/82	Unknown
McCreary	1.0	05/12/82	Unknown
McCreary	0.1	05/15/82	Unknown
McCreary	12.0	11/01/82	Unknown
McCreary	1.0	11/10/82	Unknown
McCreary	0.1	11/10/82	Unknown
McCreary	4.0	11/10/82	Unknown

McCreary	15.0	11/10/82	Unknown
McCreary	0.1	11/10/82	Unknown
McCreary	0.1	11/10/82	Unknown
McCreary	1.0	11/10/82	Unknown
McCreary	1.0	11/10/82	Unknown
McCreary	1.0	11/10/82	Unknown
McCreary	3.0	11/13/82	Unknown
McCreary	2.0	02/26/83	Unknown
McCreary	6.0	03/03/83	Unknown
McCreary	0.1	03/05/83	Unknown
McCreary	5.0	03/07/83	Unknown
McCreary	15.0	03/15/83	Unknown
McCreary	0.1	03/17/83	Unknown
McCreary	0.1	05/07/83	Unknown
McCreary	81.0	05/07/83	Unknown
McCreary	0.1	07/08/83	Unknown
McCreary	0.1	07/23/83	Unknown
McCreary	3.0	08/01/83	Unknown
McCreary	9.0	08/12/83	Unknown
McCreary	1.0	08/27/83	Unknown
McCreary	12.0	09/11/83	Unknown
McCreary	2.0	09/30/83	Unknown
McCreary	15.0	10/30/83	Unknown
McCreary	0.1	01/08/84	Unknown
McCreary	1.0	01/08/84	Unknown
McCreary	0.1	01/27/84	Unknown
McCreary	4.0	02/10/84	Unknown
McCreary	16.0	02/18/84	Unknown
McCreary	0.1	02/18/84	Unknown
McCreary	0.1	02/18/84	Unknown
McCreary	5.0	03/24/84	Unknown
McCreary	0.1	04/25/84	Unknown
McCreary	0.1	04/26/84	Unknown
McCreary	7.0	04/26/84	Unknown
McCreary	0.1	04/26/84	Unknown
McCreary	2.0	04/27/84	Unknown
McCreary	0.1	06/26/84	Unknown
McCreary	0.1	07/25/84	Unknown

McCreary	0.1	09/12/84	Unknown
McCreary	20.0	03/04/85	Unknown
McCreary	0.1	03/04/85	Unknown
McCreary	30.0	03/04/85	Unknown
McCreary	1.0	03/17/85	Unknown
McCreary	1.0	03/18/85	Unknown
McCreary	2.0	03/18/85	Unknown
McCreary	1.0	03/19/85	Unknown
McCreary	1.0	03/30/85	Unknown
McCreary	2.0	04/04/85	Unknown
McCreary	0.1	04/08/85	Unknown
McCreary	0.1	04/20/85	Unknown
McCreary	2.0	04/22/85	Unknown
McCreary	0.1	04/22/85	Unknown
McCreary	0.1	04/30/85	Unknown
McCreary	2.0	10/31/85	Unknown
McCreary	0.1	11/09/85	Unknown
McCreary	0.5	01/12/86	Unknown
McCreary	2.0	01/15/86	Unknown
McCreary	2.0	01/15/86	Unknown
McCreary	31.0	01/16/86	Unknown
McCreary	0.5	01/24/86	Unknown
McCreary	5.0	03/17/86	Unknown
McCreary	0.1	03/21/86	Unknown
McCreary	0.5	03/24/86	Unknown
McCreary	0.1	03/26/86	Unknown
McCreary	1.0	03/29/86	Unknown
McCreary	3.0	03/29/86	Unknown
McCreary	8.0	03/29/86	Unknown
McCreary	0.1	03/31/86	Unknown
McCreary	10.0	03/31/86	Unknown
McCreary	6.0	03/31/86	Unknown
McCreary	0.1	04/01/86	Unknown
McCreary	0.5	04/02/86	Unknown
McCreary	4.1	04/04/86	Unknown
McCreary	0.1	04/05/86	Unknown
McCreary	0.2	04/05/86	Unknown
McCreary	4.0	04/06/86	Unknown

McCreary	0.1	04/06/86	Unknown
McCreary	5.0	04/10/86	Unknown
McCreary	0.3	04/11/86	Unknown
McCreary	2.0	04/11/86	Unknown
McCreary	20.0	04/11/86	Unknown
McCreary	0.1	04/11/86	Unknown
McCreary	65.0	04/12/86	Unknown
McCreary	0.1	04/12/86	Unknown
McCreary	3.0	04/12/86	Unknown
McCreary	0.5	04/13/86	Unknown
McCreary	20.0	04/13/86	Unknown
McCreary	15.0	04/13/86	Unknown
McCreary	8.0	04/14/86	Unknown
McCreary	5.0	04/18/86	Unknown
McCreary	3.0	04/26/86	Unknown
McCreary	1.0	04/26/86	Unknown
McCreary	4.0	04/30/86	Unknown
McCreary	4.0	05/02/86	Unknown
McCreary	0.1	05/04/86	Unknown
McCreary	0.1	05/04/86	Unknown
McCreary	0.1	05/11/86	Unknown
McCreary	0.1	07/08/86	Unknown
McCreary	0.5	07/22/86	Unknown
McCreary	0.1	07/26/86	Unknown
McCreary	0.5	07/28/86	Unknown
McCreary	0.1	03/07/87	Unknown
McCreary	18.0	03/14/87	Unknown
McCreary	0.1	03/21/87	Unknown
McCreary	16.0	03/21/87	Unknown
McCreary	267.0	03/25/87	Unknown
McCreary	15.0	03/25/87	Unknown
McCreary	47.0	03/25/87	Unknown
McCreary	0.1	03/28/87	Unknown
McCreary	1.5	03/28/87	Unknown
McCreary	2.0	03/28/87	Unknown
McCreary	20.0	03/28/87	Unknown
McCreary	0.1	03/29/87	Unknown
McCreary	0.1	03/29/87	Unknown

McCreary	1.0	03/29/87	Unknown
McCreary	1.0	03/29/87	Unknown
McCreary	0.1	03/29/87	Unknown
McCreary	2.0	03/29/87	Unknown
McCreary	0.3	03/29/87	Unknown
McCreary	0.5	03/29/87	Unknown
McCreary	0.6	03/29/87	Unknown
McCreary	1.0	03/29/87	Unknown
McCreary	1.0	03/29/87	Unknown
McCreary	2.0	03/29/87	Unknown
McCreary	3.0	04/21/87	Unknown
McCreary	0.7	04/22/87	Unknown
McCreary	25.0	04/22/87	Unknown
McCreary	1.0	05/02/87	Unknown
McCreary	0.1	05/30/87	Unknown
McCreary	1.5	09/04/87	Unknown
McCreary	17.0	10/09/87	Unknown
McCreary	12.0	10/22/87	Unknown
McCreary	0.1	10/22/87	Unknown
McCreary	0.3	10/23/87	Unknown
McCreary	35.0	10/23/87	Unknown
McCreary	2.0	10/24/87	Unknown
McCreary	15.0	10/24/87	Unknown
McCreary	9.0	10/25/87	Unknown
McCreary	0.5	10/26/87	Unknown
McCreary	0.1	10/28/87	Unknown
McCreary	3,400.0	10/30/87	Unknown
McCreary	0.1	10/30/87	Unknown
McCreary	0.2	10/30/87	Unknown
McCreary	0.1	10/31/87	Unknown
McCreary	1.0	10/31/87	Unknown
McCreary	0.2	11/01/87	Unknown
McCreary	3.0	11/01/87	Unknown
McCreary	0.2	11/01/87	Unknown
McCreary	1.5	11/01/87	Unknown
McCreary	1.0	11/01/87	Unknown
McCreary	0.1	11/02/87	Unknown
McCreary	23.0	11/02/87	Unknown

McCreary	10.0	11/02/87	Unknown
McCreary	10.0	11/02/87	Unknown
McCreary	23.0	11/02/87	Unknown
McCreary	1.0	11/02/87	Unknown
McCreary	95.0	11/03/87	Unknown
McCreary	95.0	11/03/87	Unknown
McCreary	1.0	11/04/87	Unknown
McCreary	8.0	11/04/87	Unknown
McCreary	3.0	11/04/87	Unknown
McCreary	40.0	11/04/87	Unknown
McCreary	0.1	11/04/87	Unknown
McCreary	0.5	11/04/87	Unknown
McCreary	0.1	11/04/87	Unknown
McCreary	0.1	11/04/87	Unknown
McCreary	0.1	11/04/87	Unknown
McCreary	0.1	11/04/87	Unknown
McCreary	1,500.0	11/05/87	Unknown
McCreary	6.0	11/05/87	Unknown
McCreary	1.0	11/05/87	Unknown
McCreary	0.1	11/05/87	Unknown
McCreary	0.2	11/05/87	Unknown
McCreary	2.0	11/05/87	Unknown
McCreary	1,854.1	11/05/87	Unknown
McCreary	1.0	11/05/87	Unknown
McCreary	1.0	11/05/87	Unknown
McCreary	0.1	11/07/87	Unknown
McCreary	0.2	11/07/87	Unknown
McCreary	9.0	11/07/87	Unknown
McCreary	0.1	11/07/87	Unknown
McCreary	88.0	11/08/87	Unknown
McCreary	9.0	11/08/87	Unknown
McCreary	5.0	11/08/87	Unknown
McCreary	28.0	11/08/87	Unknown
McCreary	6.0	11/08/87	Unknown
McCreary	73.0	11/08/87	Unknown
McCreary	3.0	11/08/87	Unknown
McCreary	55.0	11/08/87	Unknown
McCreary	21.0	11/08/87	Unknown

McCreary	88.0	11/08/87	Unknown
McCreary	88.0	11/08/87	Unknown
McCreary	1.0	11/21/87	Unknown
McCreary	4.0	11/26/87	Unknown
McCreary	80.0	01/30/88	Unknown
McCreary	20.0	01/30/88	Unknown
McCreary	1.5	03/02/88	Unknown
McCreary	2.0	03/23/88	Unknown
McCreary	0.1	03/24/88	Unknown
McCreary	0.5	03/24/88	Unknown
McCreary	4.0	03/25/88	Unknown
McCreary	4.0	03/28/88	Unknown
McCreary	10.0	04/11/88	Unknown
McCreary	54.0	04/11/88	Unknown
McCreary	10.0	04/11/88	Unknown
McCreary	0.1	04/12/88	Unknown
McCreary	1.0	04/14/88	Unknown
McCreary	11.0	04/14/88	Unknown
McCreary	0.2	04/16/88	Unknown
McCreary	3.0	04/20/88	Unknown
McCreary	1.0	04/22/88	Unknown
McCreary	0.1	04/22/88	Unknown
McCreary	15.0	04/26/88	Unknown
McCreary	1.0	04/26/88	Unknown
McCreary	3.0	04/28/88	Unknown
McCreary	0.2	04/29/88	Unknown
McCreary	0.3	05/01/88	Unknown
McCreary	7.0	05/01/88	Unknown
McCreary	2.0	05/03/88	Unknown
McCreary	1.5	05/13/88	Unknown
McCreary	0.5	05/16/88	Unknown
McCreary	1.0	05/18/88	Unknown
McCreary	5.0	05/31/88	Unknown
McCreary	0.1	06/13/88	Unknown
McCreary	0.1	06/25/88	Unknown
McCreary	1.5	07/02/88	Unknown
McCreary	16.0	07/06/88	Unknown
McCreary	4.0	07/07/88	Unknown

McCreary	0.1	07/07/88	Unknown
McCreary	0.1	07/08/88	Unknown
McCreary	1.0	07/08/88	Unknown
McCreary	8.0	07/08/88	Unknown
McCreary	0.4	07/08/88	Unknown
McCreary	15.0	07/10/88	Unknown
McCreary	15.0	07/10/88	Unknown
McCreary	0.6	11/04/88	Unknown
McCreary	5.0	11/12/88	Unknown
McCreary	0.1	01/04/89	Unknown
McCreary	6.0	01/25/89	Unknown
McCreary	30.0	03/15/89	Unknown
McCreary	0.5	03/17/89	Unknown
McCreary	2.0	03/26/89	Unknown
McCreary	3.0	03/27/89	Unknown
McCreary	0.5	04/02/89	Unknown
McCreary	1.0	04/02/89	Unknown
McCreary	0.1	04/25/89	Unknown
McCreary	3.0	04/27/89	Unknown
McCreary	5.0	10/28/89	Unknown
McCreary	44.0	11/05/89	Unknown
McCreary	1.0	11/20/89	Unknown
McCreary	2.0	11/20/89	Unknown
McCreary	2.5	11/21/89	Unknown
McCreary	0.5	12/06/89	Unknown
McCreary	70.0	01/15/90	Unknown
McCreary	13.0	01/26/90	Unknown
McCreary	4.0	01/26/90	Unknown
McCreary	2.0	01/27/90	Unknown
McCreary	4.0	03/07/90	Unknown
McCreary	1.0	03/17/90	Unknown
McCreary	0.1	10/20/90	Unknown
McCreary	0.5	10/21/90	Unknown
McCreary	4.0	11/02/90	Unknown
McCreary	0.2	11/03/90	Unknown
McCreary	4.0	11/04/90	Unknown
McCreary	2.0	11/27/90	Unknown
McCreary	20.0	03/01/91	Unknown

McCreary	5.0	03/23/91	Unknown
McCreary	0.5	03/23/91	Unknown
McCreary	0.1	03/24/91	Unknown
McCreary	10.0	04/02/91	Unknown
McCreary	5.0	04/09/91	Unknown
McCreary	40.0	04/17/91	Unknown
McCreary	1.0	10/28/91	Unknown
McCreary	0.1	10/30/91	Unknown
McCreary	0.1	11/01/91	Unknown
McCreary	1.0	11/02/91	Unknown
McCreary	0.1	11/02/91	Unknown
McCreary	339.0	11/06/91	Unknown
McCreary	3.0	11/06/91	Unknown
McCreary	80.0	11/11/91	Unknown
McCreary	3.0	11/11/91	Unknown
McCreary	1.0	11/14/91	Unknown
McCreary	10.0	11/15/91	Unknown
McCreary	20.0	11/15/91	Unknown
McCreary	2.0	11/18/91	Unknown
McCreary	30.0	11/26/91	Unknown
McCreary	0.3	11/27/91	Unknown
McCreary	15.0	02/10/92	Unknown
McCreary	4.0	02/11/92	Unknown
McCreary	2.0	02/11/92	Unknown
McCreary	1.0	03/02/92	Unknown
McCreary	50.0	04/03/92	Unknown
McCreary	18.0	04/16/92	Unknown
McCreary	0.1	05/12/92	Unknown
McCreary	1.0	01/28/93	Unknown
McCreary	1.0	01/30/93	Unknown
McCreary	0.4	02/04/93	Unknown
McCreary	2.0	02/10/93	Unknown
McCreary	0.2	02/10/93	Unknown
McCreary	0.2	02/10/93	Unknown
McCreary	9.0	02/10/93	Unknown
McCreary	1.0	02/24/93	Unknown
McCreary	0.4	04/22/93	Unknown
McCreary	3.0	04/24/93	Unknown

McCreary	3.0	05/01/93	Unknown
McCreary	2.0	07/09/93	Unknown
McCreary	1.2	10/28/93	Unknown
McCreary	40.0	02/18/94	Unknown
McCreary	0.5	03/15/94	Unknown
McCreary	0.1	03/18/94	Unknown
McCreary	35.0	03/18/94	Unknown
McCreary	5.0	03/20/94	Unknown
McCreary	12.0	04/10/94	Unknown
McCreary	20.0	04/13/94	Unknown
McCreary	20.0	04/19/94	Unknown
McCreary	11.0	04/20/94	Unknown
McCreary	0.1	04/21/94	Unknown
McCreary	1.2	04/21/94	Unknown
McCreary	16.0	04/25/94	Unknown
McCreary	0.5	10/07/94	Unknown
McCreary	0.1	11/04/94	Unknown
McCreary	20.0	11/05/94	Unknown
McCreary	25.0	11/05/94	Unknown
McCreary	0.5	11/05/94	Unknown
McCreary	10.0	11/05/94	Unknown
McCreary	3.0	11/05/94	Unknown
McCreary	50.0	11/12/94	Unknown
McCreary	0.1	11/15/94	Unknown
McCreary	0.2	11/20/94	Unknown
McCreary	0.1	02/25/95	Unknown
McCreary	25.0	02/25/95	Unknown
McCreary	40.0	02/26/95	Unknown
McCreary	5.0	02/26/95	Unknown
McCreary	30.0	03/12/95	Unknown
McCreary	25.0	03/15/95	Unknown
McCreary	2.0	03/15/95	Unknown
McCreary	0.5	03/15/95	Unknown
McCreary	0.2	03/15/95	Unknown
McCreary	25.0	03/17/95	Unknown
McCreary	27.0	03/19/95	Unknown
McCreary	0.1	03/19/95	Unknown
McCreary	0.5	03/21/95	Unknown

McCreary	0.5	03/24/95	Unknown
McCreary	1.5	03/26/95	Unknown
McCreary	1.0	04/02/95	Unknown
McCreary	40.0	04/03/95	Unknown
McCreary	50.0	04/03/95	Unknown
McCreary	0.5	04/05/95	Unknown
McCreary	0.1	04/06/95	Unknown
McCreary	5.0	04/06/95	Unknown
McCreary	0.5	04/06/95	Unknown
McCreary	0.5	04/07/95	Unknown
McCreary	5.0	04/08/95	Unknown
McCreary	0.2	04/08/95	Unknown
McCreary	0.5	04/08/95	Unknown
McCreary	21.0	04/08/95	Unknown
McCreary	1.0	04/08/95	Unknown
McCreary	2.0	04/08/95	Unknown
McCreary	0.5	04/08/95	Unknown
McCreary	0.1	04/11/95	Unknown
McCreary	2.0	04/13/95	Unknown
McCreary	25.0	04/16/95	Unknown
McCreary	2.5	04/16/95	Unknown
McCreary	0.5	04/26/95	Unknown
McCreary	4.0	11/20/95	Unknown
McCreary	20.0	12/15/95	Unknown
McCreary	0.5	02/15/96	Unknown
McCreary	0.1	02/26/96	Unknown
McCreary	0.3	04/03/96	Unknown
McCreary	2.0	04/12/96	Unknown
McCreary	3.0	04/17/96	Unknown
McCreary	10.0	04/18/96	Unknown
McCreary	6.0	04/18/96	Unknown
McCreary	1.0	04/18/96	Unknown
McCreary	15.0	04/22/96	Unknown
McCreary	3.0	04/22/96	Unknown
McCreary	2.0	04/26/96	Unknown
McCreary	0.5	04/27/96	Unknown
McCreary	1.0	04/28/96	Unknown
McCreary	0.5	10/31/96	Unknown

McCreary	0.1	10/31/96	Unknown
McCreary	0.5	10/31/96	Unknown
McCreary	0.5	10/31/96	Unknown
McCreary	0.5	10/31/96	Unknown
McCreary	5.0	02/25/97	Unknown
McCreary	0.1	03/08/97	Unknown
McCreary	5.0	03/11/97	Unknown
McCreary	15.0	03/22/97	Unknown
McCreary	60.0	03/24/97	Unknown
McCreary	5.0	03/25/97	Unknown
McCreary	6.0	03/27/97	Unknown
McCreary	0.3	04/02/97	Unknown
McCreary	0.1	04/13/97	Unknown
McCreary	3.5	04/17/97	Unknown
McCreary	2.0	11/29/97	Unknown
McCreary	0.1	02/02/98	Unknown
McCreary	2.0	03/28/98	Unknown
McCreary	0.5	03/31/98	Unknown
McCreary	0.1	04/13/98	Unknown
McCreary	0.1	09/17/98	Unknown
McCreary	2.0	09/24/98	Unknown
McCreary	5.0	09/26/98	Unknown
McCreary	2.0	10/02/98	Unknown
McCreary	0.1	10/22/98	Unknown
McCreary	0.1	10/27/98	Unknown
McCreary	1.0	10/28/98	Unknown
McCreary	0.1	10/28/98	Unknown
McCreary	57.0	11/02/98	Unknown
McCreary	2.0	11/19/98	Unknown
McCreary	0.5	11/24/98	Unknown
McCreary	2.0	11/30/98	Unknown
McCreary	0.5	12/04/98	Unknown
McCreary	1.0	12/04/98	Unknown
McCreary	1.0	12/04/98	Unknown
McCreary	25.0	02/22/99	Unknown
McCreary	3.0	03/12/99	Unknown
McCreary	2.0	03/17/99	Unknown
McCreary	10.0	03/19/99	Unknown

McCreary	0.3	03/21/99	Unknown
McCreary	0.1	03/22/99	Unknown
McCreary	1.5	03/27/99	Unknown
McCreary	0.1	03/28/99	Unknown
McCreary	1.5	03/30/99	Unknown
McCreary	1.5	04/04/99	Unknown
McCreary	54.0	04/07/99	Unknown
McCreary	14.0	04/13/99	Unknown
McCreary	0.5	04/14/99	Unknown
McCreary	1.0	04/20/99	Unknown
McCreary	6.0	04/21/99	Unknown
McCreary	500.0	04/22/99	Unknown
McCreary	1.0	04/23/99	Unknown
McCreary	5.0	04/25/99	Unknown
McCreary	5.0	04/25/99	Unknown
McCreary	10.0	04/25/99	Unknown
McCreary	1.0	04/25/99	Unknown
McCreary	0.1	06/17/99	Unknown
McCreary	5.0	08/18/99	Unknown
McCreary	21.0	09/09/99	Unknown
McCreary	0.3	09/18/99	Unknown
McCreary	5.0	09/18/99	Unknown
McCreary	3.0	10/03/99	Unknown
McCreary	6.0	10/23/99	Unknown
McCreary	0.1	10/29/99	Unknown
McCreary	0.3	10/30/99	Unknown
McCreary	50.7	11/01/99	Unknown
McCreary	0.3	11/12/99	Unknown
McCreary	3.0	11/13/99	Unknown
McCreary	1.5	11/14/99	Unknown
McCreary	195.0	11/14/99	Unknown
McCreary	0.6	11/14/99	Unknown
McCreary	7.0	11/14/99	Unknown
McCreary	1.0	11/16/99	Unknown
McCreary	13.0	11/19/99	Unknown
McCreary	1.0	11/23/99	Unknown
McCreary	1.0	12/02/99	Unknown
McCreary	8.0	12/02/99	Unknown

McCreary	0.0	12/03/99	Unknown
McCreary	0.3	12/03/99	Unknown
McCreary	10.0	12/05/99	Unknown
McCreary	15.0	12/31/99	Unknown
McCreary	15.0	03/06/00	Unknown
McCreary	15.0	03/09/00	Unknown
McCreary	3.0	03/24/00	Unknown
McCreary	80.0	03/26/00	Unknown
McCreary	5.0	03/28/00	Unknown
McCreary	15.0	04/01/00	Unknown
McCreary	212.0	04/10/00	Unknown
McCreary	7.0	05/01/00	Unknown
McCreary	5.0	05/01/00	Unknown
McCreary	2.0	05/05/00	Unknown
McCreary	1.0	05/08/00	Unknown
McCreary	0.8	05/09/00	Unknown
McCreary	31.0	05/11/00	Unknown
McCreary	43.0	05/11/00	Unknown
McCreary	7.0	05/11/00	Unknown
McCreary	10.0	05/11/00	Unknown
McCreary	0.5	05/19/00	Unknown
McCreary	0.5	06/12/00	Unknown
McCreary	0.1	08/30/00	Unknown
McCreary	0.1	08/30/00	Unknown
McCreary	6.0	09/19/00	Unknown
McCreary	3.0	10/23/00	Unknown
McCreary	0.3	10/27/00	Unknown
McCreary	1.0	10/27/00	Unknown
McCreary	175.0	10/29/00	Unknown
McCreary	12.0	10/29/00	Unknown
McCreary	60.0	10/30/00	Unknown
McCreary	500.0	10/30/00	Unknown
McCreary	3.0	10/30/00	Unknown
McCreary	6.0	10/30/00	Unknown
McCreary	2,079.0	10/30/00	Unknown
McCreary	3.0	10/31/00	Unknown
McCreary	1.0	10/31/00	Unknown
McCreary	1,952.0	10/31/00	Unknown

McCreary	0.1	10/31/00	Unknown
McCreary	15.0	10/31/00	Unknown
McCreary	0.1	10/31/00	Unknown
McCreary	120.0	11/02/00	Unknown
McCreary	0.1	11/02/00	Unknown
McCreary	0.5	11/03/00	Unknown
McCreary	1.0	02/04/01	Unknown
McCreary	2.0	02/25/01	Unknown
McCreary	2.0	03/01/01	Unknown
McCreary	206.0	03/09/01	Unknown
McCreary	0.5	03/09/01	Unknown
McCreary	2.0	03/11/01	Unknown
McCreary	1.0	03/11/01	Unknown
McCreary	1.0	03/18/01	Unknown
McCreary	15.0	03/20/01	Unknown
McCreary	7.0	03/24/01	Unknown
McCreary	15.0	03/24/01	Unknown
McCreary	3.0	04/04/01	Unknown
McCreary	0.3	04/05/01	Unknown
McCreary	5.0	04/06/01	Unknown
McCreary	5.0	04/15/01	Unknown
McCreary	3.0	04/22/01	Unknown
McCreary	7.0	04/23/01	Unknown
McCreary	0.5	04/23/01	Unknown
McCreary	4.0	04/25/01	Unknown
McCreary	4.0	04/26/01	Unknown
McCreary	1.0	04/28/01	Unknown
McCreary	8.0	07/01/01	Unknown
McCreary	0.5	10/26/01	Unknown
McCreary	1.0	10/30/01	Unknown
McCreary	0.1	10/31/01	Unknown
McCreary	3.0	10/31/01	Unknown
McCreary	0.5	11/01/01	Unknown
McCreary	45.0	11/02/01	Unknown
McCreary	2.0	11/03/01	Unknown
McCreary	4.0	11/04/01	Unknown
McCreary	45.0	11/05/01	Unknown
McCreary	20.0	11/07/01	Unknown

McCreary	85.0	11/07/01	Unknown
McCreary	5.0	11/10/01	Unknown
McCreary	0.2	11/10/01	Unknown
McCreary	1.5	11/10/01	Unknown
McCreary	780.0	11/11/01	Unknown
McCreary	0.2	11/11/01	Unknown
McCreary	0.5	11/11/01	Unknown
McCreary	3.0	11/16/01	Unknown
McCreary	0.2	11/16/01	Unknown
McCreary	10.0	11/16/01	Unknown
McCreary	0.5	01/28/02	Unknown
McCreary	2.0	02/14/02	Unknown
McCreary	5.0	02/24/02	Unknown
McCreary	6.0	02/25/02	Unknown
McCreary	0.1	02/25/02	Unknown
McCreary	4.0	03/15/02	Unknown
McCreary	5.0	03/24/02	Unknown
McCreary	14.0	04/06/02	Unknown
McCreary	20.0	04/07/02	Unknown
McCreary	5.0	04/07/02	Unknown
McCreary	140.0	04/07/02	Unknown
McCreary	0.2	04/08/02	Unknown
McCreary	4.0	04/18/02	Unknown
McCreary	0.1	04/18/02	Unknown
McCreary	0.2	04/19/02	Unknown
McCreary	8.0	04/30/02	Unknown
McCreary	0.5	04/30/02	Unknown
McCreary	9.0	04/30/02	Unknown
McCreary	0.5	04/30/02	Unknown
McCreary	7.0	04/30/02	Unknown
McCreary	2.0	04/30/02	Unknown
McCreary	0.5	04/30/02	Unknown
McCreary	7.0	09/08/02	Unknown
McCreary	5.0	11/25/02	Unknown
McCreary	0.2	03/18/03	Unknown
McCreary	3.0	03/22/03	Unknown
McCreary	4.0	03/23/03	Unknown
McCreary	17.0	03/24/03	Unknown

McCreary	10.0	10/21/03	Unknown
McCreary	1.0	10/29/03	Unknown
McCreary	15.0	11/03/03	Unknown
McCreary	9.0	11/11/03	Unknown
McCreary	0.5	01/24/04	Unknown
McCreary	3.0	02/01/04	Unknown
McCreary	1.0	02/29/04	Unknown
McCreary	0.5	02/29/04	Unknown
McCreary	2.0	02/29/04	Unknown
McCreary	0.1	03/05/04	Unknown
McCreary	0.1	03/13/04	Unknown
McCreary	2.0	03/24/04	Unknown
McCreary	6.0	03/26/04	Unknown
McCreary	2.0	03/28/04	Unknown
McCreary	20.0	04/06/04	Unknown
McCreary	1.0	04/06/04	Unknown
McCreary	1.5	04/06/04	Unknown
McCreary	15.0	04/07/04	Unknown
McCreary	0.1	04/07/04	Unknown
McCreary	40.0	04/07/04	Unknown
McCreary	30.0	04/07/04	Unknown
McCreary	0.4	04/08/04	Unknown
McCreary	3.0	04/09/04	Unknown
McCreary	8.0	04/10/04	Unknown
McCreary	6.0	04/11/04	Unknown
McCreary	2.0	04/15/04	Unknown
McCreary	50.0	04/18/04	Unknown
McCreary	8.0	04/18/04	Unknown
McCreary	0.5	10/25/04	Unknown
McCreary	2.0	10/25/04	Unknown
McCreary	166.0	11/02/04	Unknown
McCreary	60.0	11/02/04	Unknown
McCreary	5.3	11/02/04	Unknown
McCreary	0.5	11/10/04	Unknown
McCreary	4.0	02/26/05	Unknown
McCreary	0.5	03/04/05	Unknown
McCreary	117.0	03/21/05	Unknown
McCreary	0.2	03/29/05	Unknown

McCreary	12.0	03/30/05	Unknown
McCreary	0.4	04/04/05	Unknown
McCreary	20.0	04/05/05	Unknown
McCreary	0.2	04/09/05	Unknown
McCreary	2.0	04/09/05	Unknown
McCreary	0.3	04/09/05	Unknown
McCreary	0.5	04/09/05	Unknown
McCreary	0.3	04/10/05	Unknown
McCreary	28.0	04/11/05	Unknown
McCreary	20.0	04/17/05	Unknown
McCreary	33.0	04/18/05	Unknown
McCreary	7.0	04/19/05	Unknown
McCreary	1.5	05/17/05	Unknown
McCreary	1.0	09/19/05	Unknown
McCreary	6.0	09/20/05	Unknown
McCreary	7.0	09/23/05	Unknown
McCreary	1.0	09/23/05	Unknown
McCreary	3.0	09/24/05	Unknown
McCreary	46.0	10/30/05	Unknown
McCreary	8.0	10/31/05	Unknown
McCreary	0.5	11/04/05	Unknown
McCreary	0.5	11/04/05	Unknown
McCreary	0.3	11/07/05	Unknown
McCreary	6.8	11/07/05	Unknown
McCreary	7.6	11/07/05	Unknown
McCreary	1.0	11/08/05	Unknown
McCreary	2.0	11/09/05	Unknown
McCreary	1,555.0	11/12/05	Unknown
McCreary	0.5	11/12/05	Unknown
McCreary	228.0	11/24/05	Unknown
McCreary	89.0	11/24/05	Unknown
McCreary	20.0	11/25/05	Unknown
McCreary	20.0	11/26/05	Unknown
McCreary	1.5	11/27/05	Unknown
McCreary	4.0	11/27/05	Unknown
McCreary	0.3	11/28/05	Unknown
McCreary	0.5	12/02/05	Unknown
McCreary	4.0	01/19/06	Unknown

McCreary	20.0	02/27/06	Unknown
McCreary	40.0	02/28/06	Unknown
McCreary	4.0	03/01/06	Unknown
McCreary	0.3	03/02/06	Unknown
McCreary	0.3	03/02/06	Unknown
McCreary	0.3	03/02/06	Unknown
McCreary	2.0	03/03/06	Unknown
McCreary	2.5	03/08/06	Unknown
McCreary	326.0	03/09/06	Unknown
McCreary	0.5	03/10/06	Unknown
McCreary	4.0	03/12/06	Unknown
McCreary	4.0	03/15/06	Unknown
McCreary	2.0	03/15/06	Unknown
McCreary	2.0	03/16/06	Unknown
McCreary	0.5	03/17/06	Unknown
McCreary	1.0	03/29/06	Unknown
McCreary	1.0	04/04/06	Unknown
McCreary	1.5	04/05/06	Unknown
McCreary	0.3	04/14/06	Unknown
McCreary	5.0	04/14/06	Unknown
McCreary	0.5	04/15/06	Unknown
McCreary	25.0	04/16/06	Unknown
McCreary	16.0	04/16/06	Unknown
McCreary	1.0	10/31/06	Unknown
McCreary	0.0	10/31/06	Unknown
McCreary	2.0	01/13/07	Unknown
McCreary	2.6	02/28/07	Unknown
McCreary	4.0	03/06/07	Unknown
McCreary	4.0	03/07/07	Unknown
McCreary	30.0	03/09/07	Unknown
McCreary	8.0	03/10/07	Unknown
McCreary	0.5	03/11/07	Unknown
McCreary	0.5	03/12/07	Unknown
McCreary	0.5	03/13/07	Unknown
McCreary	0.5	03/24/07	Unknown
McCreary	10.0	04/09/07	Unknown
McCreary	0.3	04/20/07	Unknown
McCreary	55.0	04/30/07	Unknown

McCreary	10.0	05/09/07	Unknown
McCreary	46.0	05/23/07	Unknown
McCreary	50.0	06/08/07	Unknown
McCreary	6.0	06/08/07	Unknown
McCreary	28.0	06/16/07	Unknown
McCreary	0.3	06/23/07	Unknown
McCreary	0.9	07/16/07	Unknown
McCreary	0.1	09/04/07	Unknown
McCreary	13.0	09/08/07	Unknown
McCreary	0.1	09/08/07	Unknown
McCreary	10.0	09/23/07	Unknown
McCreary	4.0	09/25/07	Unknown
McCreary	280.0	09/26/07	Unknown
McCreary	0.1	09/30/07	Unknown
McCreary	0.3	10/01/07	Unknown
McCreary	37.0	10/02/07	Unknown
McCreary	0.1	10/03/07	Unknown
McCreary	0.1	10/07/07	Unknown
McCreary	0.3	10/14/07	Unknown
McCreary	1.0	10/20/07	Unknown
McCreary	8.0	11/04/07	Unknown
McCreary	0.3	11/04/07	Unknown
McCreary	3.0	11/05/07	Unknown
McCreary	6.0	02/10/08	Unknown
McCreary	0.8	03/03/08	Unknown
McCreary	0.1	03/17/08	Unknown
McCreary	11.0	03/18/08	Unknown
McCreary	8.0	03/18/08	Unknown
McCreary	300.0	03/26/08	Unknown
McCreary	0.3	04/13/08	Unknown
McCreary	90.0	04/16/08	Unknown
McCreary	40.0	04/17/08	Unknown
McCreary	15.0	04/17/08	Unknown
McCreary	2.0	04/22/08	Unknown
McCreary	1.0	05/02/08	Unknown
McCreary	0.1	06/21/08	Unknown
McCreary	2.0	08/22/08	Unknown
McCreary	5.0	09/09/08	Unknown

McCreary	107.0	10/04/08	Unknown
McCreary	2.5	10/31/08	Unknown
McCreary	0.1	11/02/08	Unknown
McCreary	0.5	11/05/08	Unknown
McCreary	1.5	11/20/08	Unknown
McCreary	4.0	12/09/08	Unknown
McCreary	0.1	01/22/09	Unknown
McCreary	0.3	01/26/09	Unknown
McCreary	59.0	03/06/09	Unknown
McCreary	4.0	03/07/09	Unknown
McCreary	2.0	03/09/09	Unknown
McCreary	4.0	03/24/09	Unknown
McCreary	3.0	04/05/09	Unknown
McCreary	0.5	11/07/09	Unknown
McCreary	3.8	11/07/09	Unknown
McCreary	0.5	11/15/09	Unknown
McCreary	7.0	11/27/09	Unknown
McCreary	1.5	12/27/09	Unknown
McCreary	54.0	03/06/10	Unknown
McCreary	1.0	03/08/10	Unknown
McCreary	0.3	03/21/10	Unknown
McCreary	0.1	03/31/10	Unknown
McCreary	0.5	04/03/10	Unknown
McCreary	0.8	04/06/10	Unknown
McCreary	11.0	04/06/10	Unknown
McCreary	0.5	04/11/10	Unknown
McCreary	7.0	04/16/10	Unknown
McCreary	0.1	10/21/10	Unknown
McCreary	0.0	10/21/10	Unknown
McCreary	0.0	10/23/10	Unknown
McCreary	0.0	10/23/10	Unknown
McCreary	0.0	10/23/10	Unknown
McCreary	1.0	10/26/10	Unknown
McCreary	1.0	10/30/10	Unknown
McCreary	0.1	10/31/10	Unknown
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McCreary	6.0	11/14/10	Unknown
McCreary	6.0	11/14/10	Unknown

McCreary	2.0	11/22/10	Unknown
McCreary	1.0	01/30/11	Unknown
McCreary	0.5	02/16/11	Unknown
McCreary	6.5	02/20/11	Unknown
McCreary	1.5	03/21/11	Unknown
McCreary	8.2	04/02/11	Unknown
McCreary	80.0	04/03/11	Unknown
McCreary	0.3	04/17/11	Unknown
McCreary	10.5	11/05/11	Unknown
McCreary	0.5	11/09/11	Unknown
McCreary	1.5	11/09/11	Unknown
McCreary	0.3	12/04/11	Unknown
McCreary	2.0	12/04/11	Unknown
McCreary	0.5	12/04/11	Unknown
McCreary	0.1	02/23/12	Unknown
McCreary	1.0	03/07/12	Unknown
McCreary	0.3	03/15/12	Unknown
McCreary	0.3	01/23/13	Unknown
McCreary	1.0	03/15/13	Unknown
McCreary	1.0	03/28/13	Unknown
McCreary	0.5	04/18/13	Unknown
McCreary	0.4	04/26/13	Unknown
McCreary	1.5	11/10/13	Unknown
McCreary	28.0	11/14/13	Unknown
McCreary	3.4	11/21/13	Unknown
McCreary	0.7	12/20/13	Unknown
McCreary	1.0	02/01/14	Unknown
McCreary	6.0	02/23/14	Unknown
McCreary	11.0	02/24/14	Unknown
McCreary	12.0	03/01/14	Unknown
McCreary	0.3	03/02/14	Unknown
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McCreary	15.0	03/11/14	Unknown
McCreary	2.9	03/22/14	Unknown
McCreary	153.0	04/21/14	Unknown
McCreary	0.0	06/03/14	Unknown
McCreary	92.0	11/03/14	Unknown
McCreary	1.5	11/04/14	Unknown

McCreary	392.0	11/29/14	Unknown
McCreary	1.0	11/29/14	Unknown
McCreary	6.0	02/07/15	Unknown
McCreary	67.0	02/13/15	Unknown
McCreary	0.1	03/21/15	Unknown
McCreary	0.1	03/24/15	Unknown
McCreary	1.0	03/29/15	Unknown
McCreary	0.3	03/31/15	Unknown
McCreary	0.1	03/31/15	Unknown
McCreary	1.1	04/01/15	Unknown
McCreary	0.1	11/05/15	Unknown
McCreary	0.1	11/16/15	Unknown
McCreary	0.1	11/18/15	Unknown
McCreary	960.0	11/18/15	Unknown
McCreary	34.0	11/21/15	Unknown
McCreary	0.3		Unknown
McCreary	0.1		Unknown
McCreary	580.0		Unknown
McCreary	0.1		Unknown
McCreary	174.0		Unknown
McCreary	0.1		Unknown
McCreary	0.5		Unknown
McCreary	1.0		Unknown
McCreary	0.0		Unknown
McCreary	0.0		Unknown
McCreary	0.0		Unknown
McCreary	72.8		Unknown
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McCreary	35.0		Unknown
McCreary	45.0		Unknown
McCreary	0.1		Unknown
McCreary	127.0		Unknown
McCreary	43.0		Unknown
McCreary	127.0		Unknown
McCreary	628.0		Unknown
McCreary	43.0		Unknown
McCreary	44.0		Unknown

McCreary	137.0		Unknown
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McCreary	2,080.0		Unknown
McCreary	1.0		Unknown
McCreary	7.0		Unknown
McCreary	7.0		Unknown
McCreary	0.1		Unknown
McCreary	1.0		Unknown
McCreary	0.3		Unknown
McCreary	3.0		Unknown
McCreary	1.0		Unknown
McCreary	3.0		Unknown
McCreary	2.0		Unknown
McCreary	20.0		Unknown
McCreary	4.0		Unknown
McCreary	4.0		Unknown
McCreary	25.8		Unknown
McCreary	2.0		Unknown
McCreary	2.0		Unknown
McCreary	63.1		Unknown
McCreary	0.5		Unknown
McCreary	0.5		Unknown
McCreary	0.5		Unknown
McCreary	0.1		Unknown
McCreary	0.1		Unknown
McCreary	0.3		Unknown
McCreary	**34,298.6**		
Pulaski	1.0	04/19/80	Unknown
Pulaski	5.0	04/23/80	Unknown
Pulaski	5.0	11/07/80	Unknown
Pulaski	5.0	11/07/80	Unknown
Pulaski	75.0	11/07/80	Unknown
Pulaski	2.0	11/07/80	Unknown
Pulaski	3.0	11/10/80	Unknown
Pulaski	1.0	11/12/80	Unknown
Pulaski	7.0	11/13/80	Unknown
Pulaski	2.0	11/13/80	Unknown

Pulaski	20.0	01/01/81	Unknown
Pulaski	0.1	01/28/81	Unknown
Pulaski	2.0	02/23/82	Unknown
Pulaski	9.0	05/03/82	Unknown
Pulaski	55.0	11/01/82	Unknown
Pulaski	0.1	03/03/83	Unknown
Pulaski	2.0	03/24/86	Unknown
Pulaski	3.0	03/31/86	Unknown
Pulaski	3.0	04/01/86	Unknown
Pulaski	45.0	03/15/87	Unknown
Pulaski	3.0	04/12/87	Unknown
Pulaski	0.1	11/01/87	Unknown
Pulaski	0.1	11/01/87	Unknown
Pulaski	0.1	11/01/87	Unknown
Pulaski	4.0	11/01/87	Unknown
Pulaski	1.0	11/02/87	Unknown
Pulaski	0.5	11/07/87	Unknown
Pulaski	0.1	01/29/88	Unknown
Pulaski	5.0	04/17/88	Unknown
Pulaski	10.0	04/24/88	Unknown
Pulaski	3.0	04/26/88	Unknown
Pulaski	15.0	04/27/88	Unknown
Pulaski	0.1	05/03/88	Unknown
Pulaski	3.0	03/04/89	Unknown
Pulaski	4.0	03/04/89	Unknown
Pulaski	49.0	03/15/89	Unknown
Pulaski	0.1	03/17/89	Unknown
Pulaski	4.0	03/17/89	Unknown
Pulaski	0.3	04/19/89	Unknown
Pulaski	0.1	02/04/90	Unknown
Pulaski	10.0	04/01/90	Unknown
Pulaski	0.3	06/29/90	Unknown
Pulaski	0.2	10/27/90	Unknown
Pulaski	0.2	11/04/90	Unknown
Pulaski	3.0	11/16/90	Unknown
Pulaski	3.0	11/16/90	Unknown
Pulaski	2.0	11/16/90	Unknown
Pulaski	0.1	11/20/90	Unknown

Pulaski	4.0	09/30/91	Unknown
Pulaski	1.0	10/03/91	Unknown
Pulaski	6.0	11/08/91	Unknown
Pulaski	7.1	11/09/91	Unknown
Pulaski	4.0	11/11/91	Unknown
Pulaski	1.0	11/15/91	Unknown
Pulaski	4.0	11/18/91	Unknown
Pulaski	1.5	11/18/91	Unknown
Pulaski	0.5	11/18/91	Unknown
Pulaski	1.5	11/20/92	Unknown
Pulaski	10.0	02/06/93	Unknown
Pulaski	20.0	11/11/93	Unknown
Pulaski	0.1	03/16/94	Unknown
Pulaski	1.5	03/16/94	Unknown
Pulaski	1.5	03/19/94	Unknown
Pulaski	39.2	03/23/94	Unknown
Pulaski	0.2	11/03/94	Unknown
Pulaski	100.0	11/04/94	Unknown
Pulaski	50.0	11/08/94	Unknown
Pulaski	8.0	02/25/95	Unknown
Pulaski	5.0	03/18/95	Unknown
Pulaski	6.0	03/30/95	Unknown
Pulaski	4.0	04/14/95	Unknown
Pulaski	0.1	07/06/95	Unknown
Pulaski	3.0	11/10/95	Unknown
Pulaski	0.8	11/19/95	Unknown
Pulaski	1.0	11/19/95	Unknown
Pulaski	10.0	11/21/95	Unknown
Pulaski	10.0	11/27/95	Unknown
Pulaski	5.0	04/12/96	Unknown
Pulaski	0.1	09/26/96	Unknown
Pulaski	40.0	04/11/97	Unknown
Pulaski	0.2	03/13/98	Unknown
Pulaski	4.0	02/26/99	Unknown
Pulaski	3.0	04/02/99	Unknown
Pulaski	1.5	04/03/99	Unknown
Pulaski	0.5	04/10/99	Unknown
Pulaski	5.0	04/23/99	Unknown

Pulaski	88.0	11/13/99	Unknown
Pulaski	3.1	01/11/00	Unknown
Pulaski	3.0	03/15/00	Unknown
Pulaski	13.0	02/08/01	Unknown
Pulaski	204.0	04/29/01	Unknown
Pulaski	1.0	10/24/01	Unknown
Pulaski	0.1	11/03/01	Unknown
Pulaski	40.0	02/16/02	Unknown
Pulaski	5.0	03/29/02	Unknown
Pulaski	119.0	11/07/04	Unknown
Pulaski	10.0	08/14/05	Unknown
Pulaski	0.2	10/13/05	Unknown
Pulaski	2,537.0	11/13/05	Unknown
Pulaski	3.0	04/15/06	Unknown
Pulaski	2.0	05/08/07	Unknown
Pulaski	1.0	10/01/07	Unknown
Pulaski	27.0	10/06/07	Unknown
Pulaski	80.0	03/28/08	Unknown
Pulaski	15.0	09/26/08	Unknown
Pulaski	0.1	10/01/08	Unknown
Pulaski	4.0	04/18/10	Unknown
Pulaski	0.1	03/19/12	Unknown
Pulaski	12.0	11/15/15	Unknown
Pulaski	8.5		Unknown
Pulaski	0.1		Unknown
Pulaski	**3,903.0**		
Taylor	5.0	04/02/81	Unknown
Taylor	**5.0**		
Wayne	1.0	12/14/80	Unknown
Wayne	0.1	09/14/81	Unknown
Wayne	2.0	03/29/86	Unknown
Wayne	14.0	04/03/86	Unknown
Wayne	0.1	04/11/99	Unknown
Wayne	2.0	03/18/09	Unknown
Wayne	125.0	03/24/09	Unknown
Wayne	0.5	10/31/10	Unknown

Wayne	50.0	03/15/14	Unknown
Wayne	0.1	10/25/14	Unknown
Wayne	**194.8**		
LCADD Totals=	**38,404.6**		

The members of the RHMPC felt that no estimated loss to city areas would be assigned since no past loss data was available. The members of the subcommittees felt that an estimated loss to county areas would be equal to the average yearly amount of loss from the available data for wildfire as Total Risk Exposure of each jurisdiction for each five year period for losses. Loss was calculated using the Kentucky Division of Forestry (KDF) wildland fire loss of $82.52 per acre of burn.

4.6 Drought

Drought is a natural and recurring feature of our climate that can be considered a "severe" weather event much like a tornado, a flood or a hurricane. However, there are a few key differences that distinguish drought from other weather events that make it difficult to detect, track and respond to drought.

Part of the difficulty in detecting drought is in the lack of an obvious onset of drought conditions. A drought develops slowly and can appear to mimic a normal spell of dry weather in the summer, a time of the year when dry weather is accepted and expected. Short-term rainfall shortages create problems for agricultural crops, livestock, urban landscapes and other activities that depend on stored soil moisture between rainfall events. We are accustomed to dealing with short-term dry spells in part because there is an expectation that rainfall is just around the corner. However, when rainfall shortages persist for weeks or months at a time, activities that depend on long-term storage of water will be adversely impacted as well. Droughts in Kentucky can have serious negative consequences for drinking water supplies, energy production, commercial and industrial operations, recreation and aquatic habitat.

The negative impacts of drought cannot be avoided, but there are ways to reduce them to a manageable level. All water suppliers in the Commonwealth should have a water shortage response plan to guide both the supplier and customer during a drought event. It is important for customers to listen to their water suppliers and be ready to take necessary actions to prevent a water shortage problem from developing. This is critical to a successful outcome because the only way to effectively manage the source of water supply is to first manage the demand for water.

There is no easy method for determining when a dry spell has become a drought, how long a drought will persist or how intense a drought may become. However, by closely tracking certain sources of information, referred to as drought indicators, it is possible to detect potential drought development early enough to allow at least some lead-time

for notification and initiation of drought response preparations at the local level. The Division of Water monitors for the potential development of drought in Kentucky by tracking precipitation, stream flows, lake levels, groundwater and water supplies. There are also several tools that are useful in assessing the severity of a "dry spell" and the potential impacts to agriculture, forest fires, water supplies and other vulnerabilities to drought. These tools include the Palmer Drought Severity Index, the Drought Monitor, the Standardized Precipitation Index and several others.[57]

The Palmer Drought Severity Index (PDSI) and Crop Moisture Index (CMI) are indices of the relative dryness or wetness effecting water sensitive economies. The PDSI indicates the prolonged and abnormal moisture deficiency or excess. The CMI gives the short-term or current status of purely agricultural drought or moisture surplus and can change rapidly from week to week. Both indices' indicate general conditions and not local variations caused by isolated rain. Calculation of the PDSI and CMI are made for 350 climatic divisions in the United States and Puerto Rico. Inputs to the calculations include the weekly precipitation total and average temperature, division constants (water capacity of the soil, etc.) and previous history of the indices.

The PDSI is an important climatological tool for evaluating the scope, severity, and frequency of prolonged periods of abnormally dry or wet weather. It can be used to help delineate disaster areas and indicate the availability of irrigation water supplies, reservoir levels, range conditions, amount of stock water, and potential intensity of forest fires. The CMI can be used to measure the status of dryness or wetness affecting warm season crops and field activities.

Table 4.6(1) - Palmer Drought Severity Index (PDSI)

-4.0 or less (Extreme Drought)	+2.0 or +2.9 (Unusual Moist Spell)
-3.0 or -3.9 (Severe Drought)	+3.0 or +3.9 (Very Moist Spell)
-2.0 or -2.9 (Moderate Drought)	+4.0 or above (Extremely Moist)
-1.9 to +1.9 (Near Normal)	

Table 4.6(2) - Crop Moisture Index (CMI)

-3.0 or less (Severely Dry)	+1.0 or +1.9 (Abnormally Moist)
-2.0 or -2.9 (Excessively Dry)	+2.0 or +2.9 (Wet)
-1.0 or -1.9 (Abnormally Dry)	+3.0 and above (Excessively Wet)
-0.9 or +0.9 (Slightly Dry/Favorably Moist)	

58

To identify the major droughts over all of Kentucky, the sum of PDSI values for the extreme and severe years were totaled for each region then divided by the number of regions in Kentucky, to

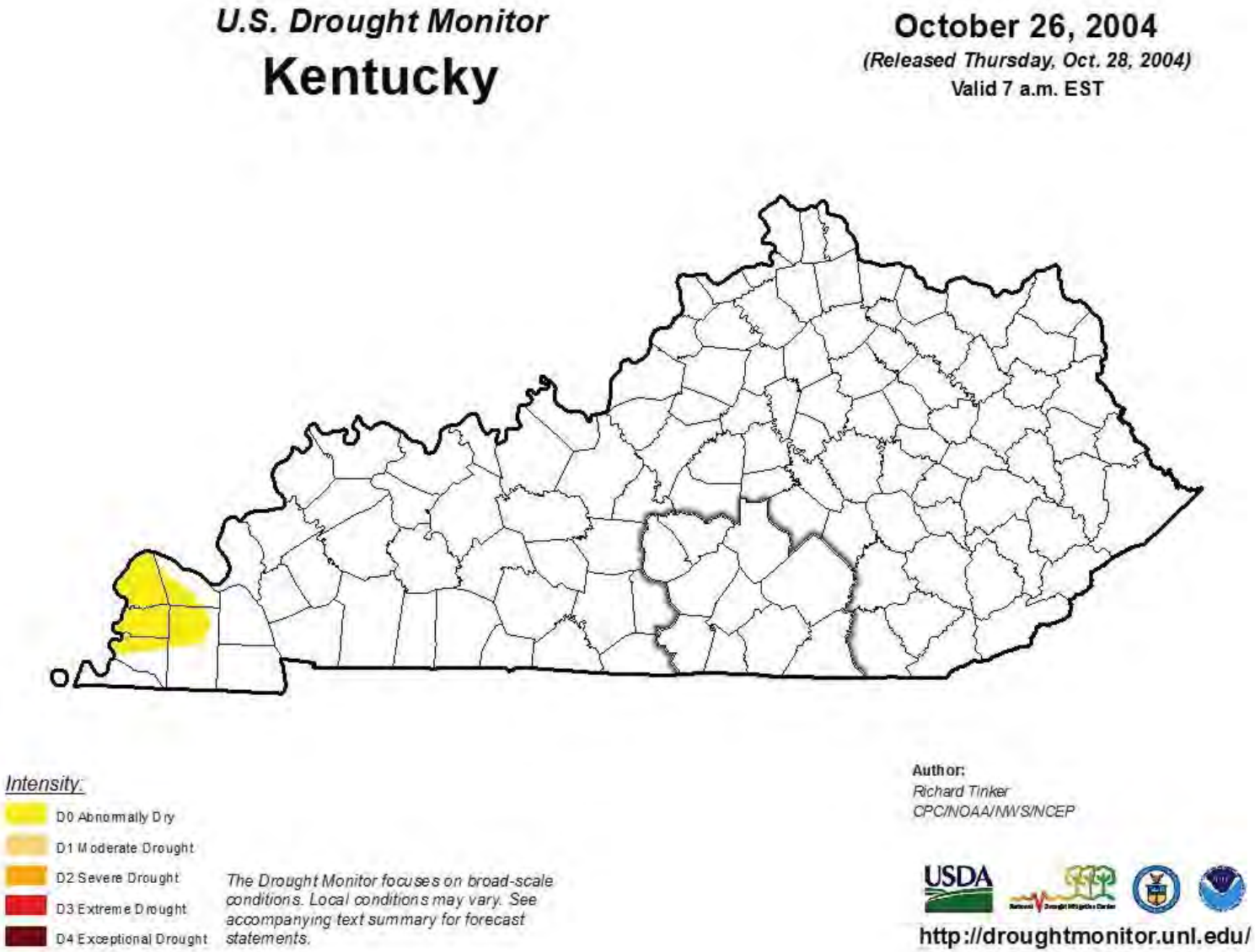
[57] Kentucky Division of Water, Drought Monitoring Center; http://water.ky.gov/wa/Pages/AboutDrought.aspx
[58] University of Kentucky Agricultural Weather Center (UKAWC), About the Palmer Drought Severity and Crop Moisture Indices; http://wwwagwx.ca.uky.edu/wpdanote.html

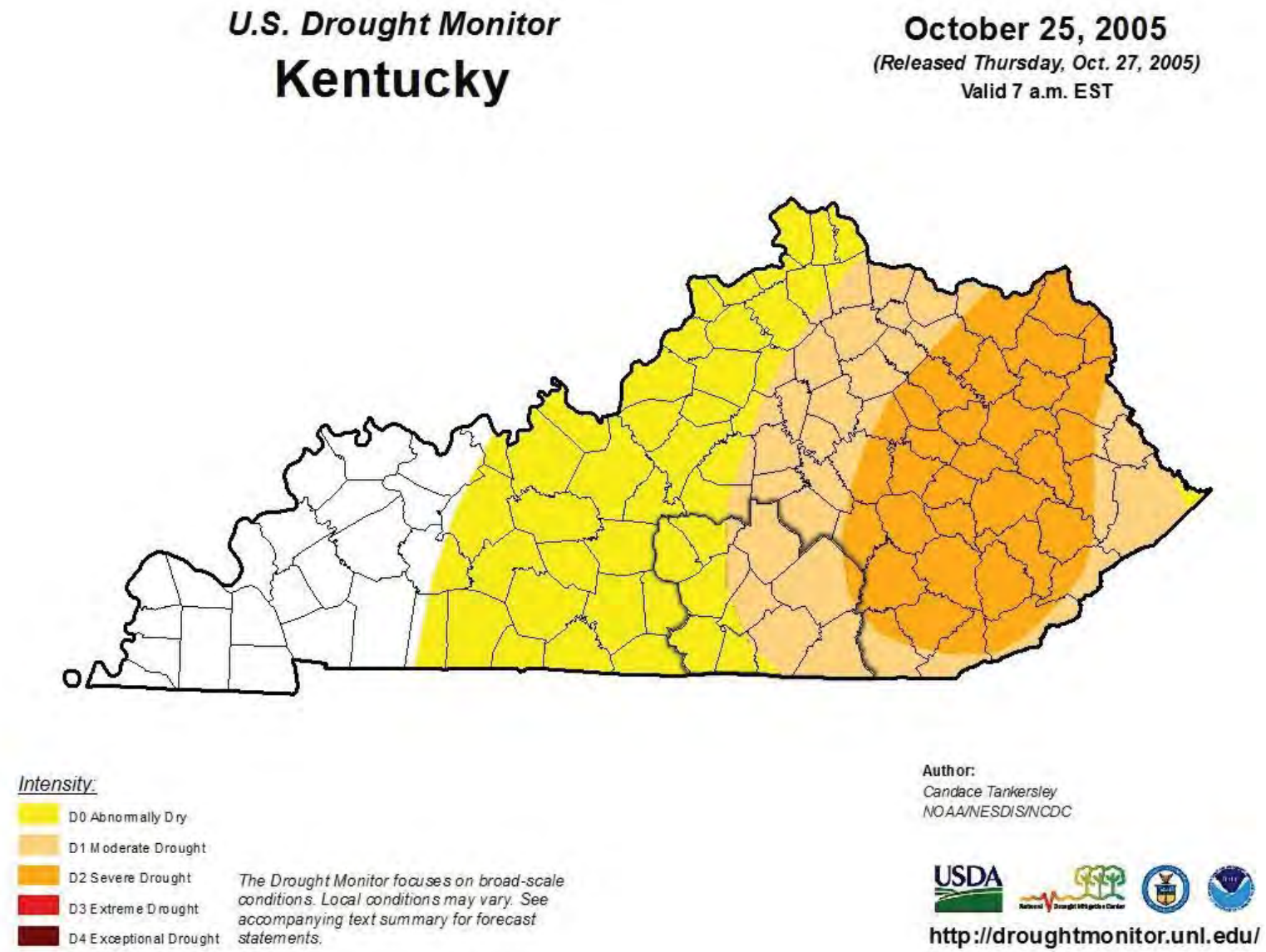
get an average PDSI value for the drought year. The top five drought years in Kentucky are the results of three significant drought episodes. These episodes in Kentucky were as follows:1930-1931, 1953-1954, and 1941.[59]

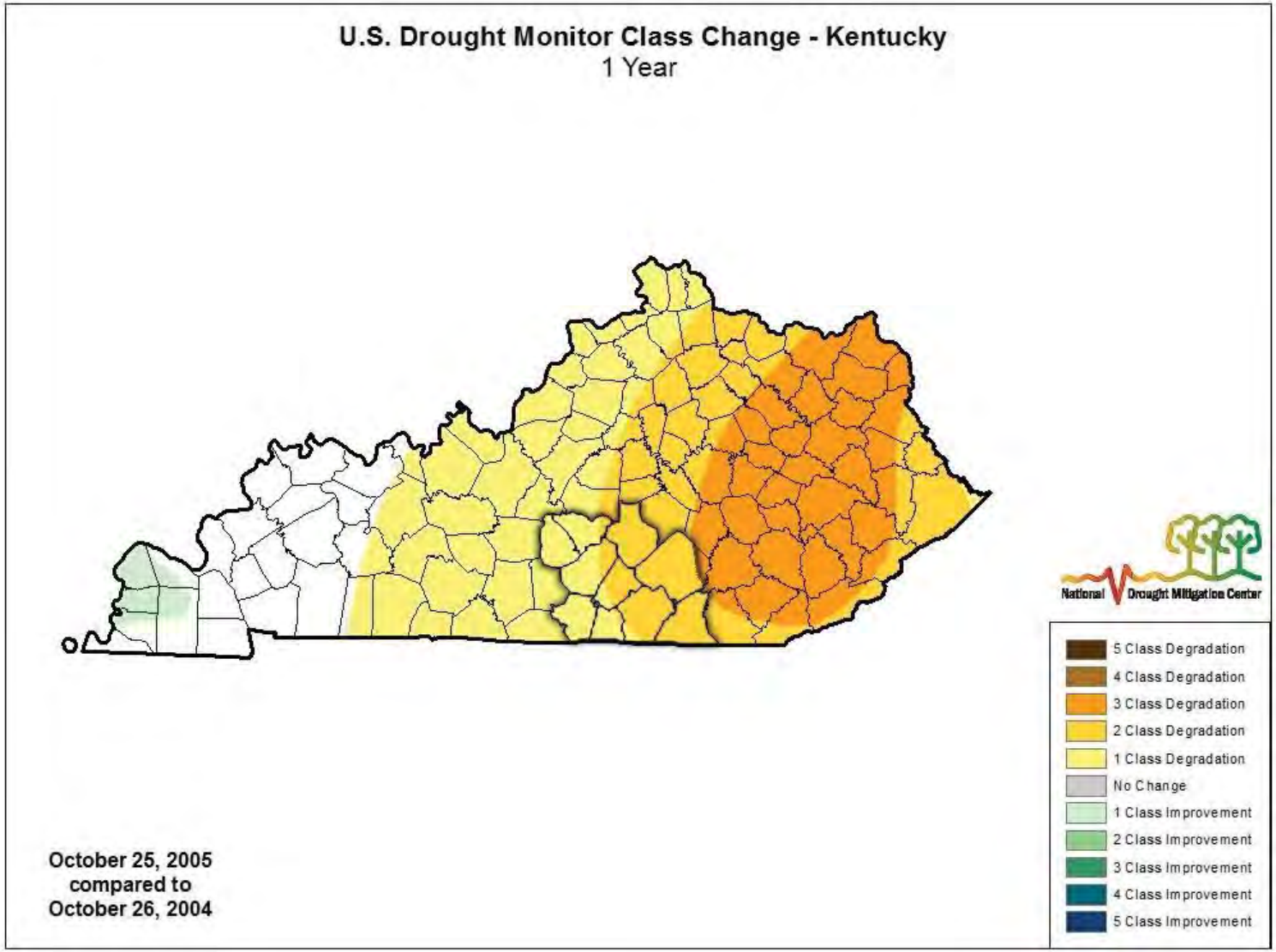
The following maps from the United States Drought Monitor, show Kentucky Annual Drought Conditions 2004-2016 and annual drought change in October of each year.[60]

[59] Kentucky Climate Center, Historic Droughts in Kentucky; http://www.kyclimate.org/factsheets/historicdroughts1930-1931.html

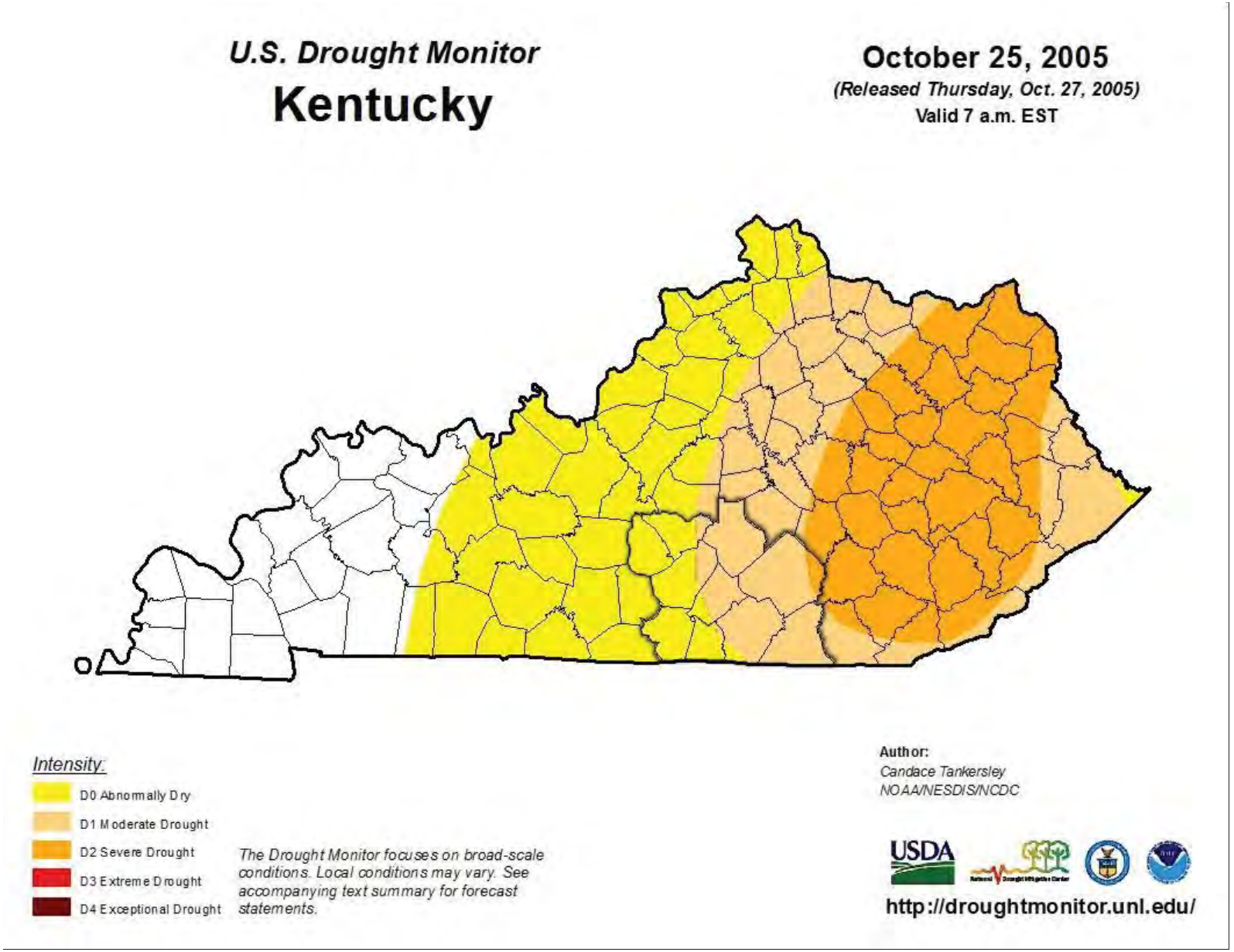
[60] United States Drought Monitor, Drought Monitor Change Maps & Drought Monitor Maps; http://droughtmonitor.unl.edu/MapsAndData/ChangeMaps.aspx & http://droughtmonitor.unl.edu/MapsAndData/MapArchive.aspx

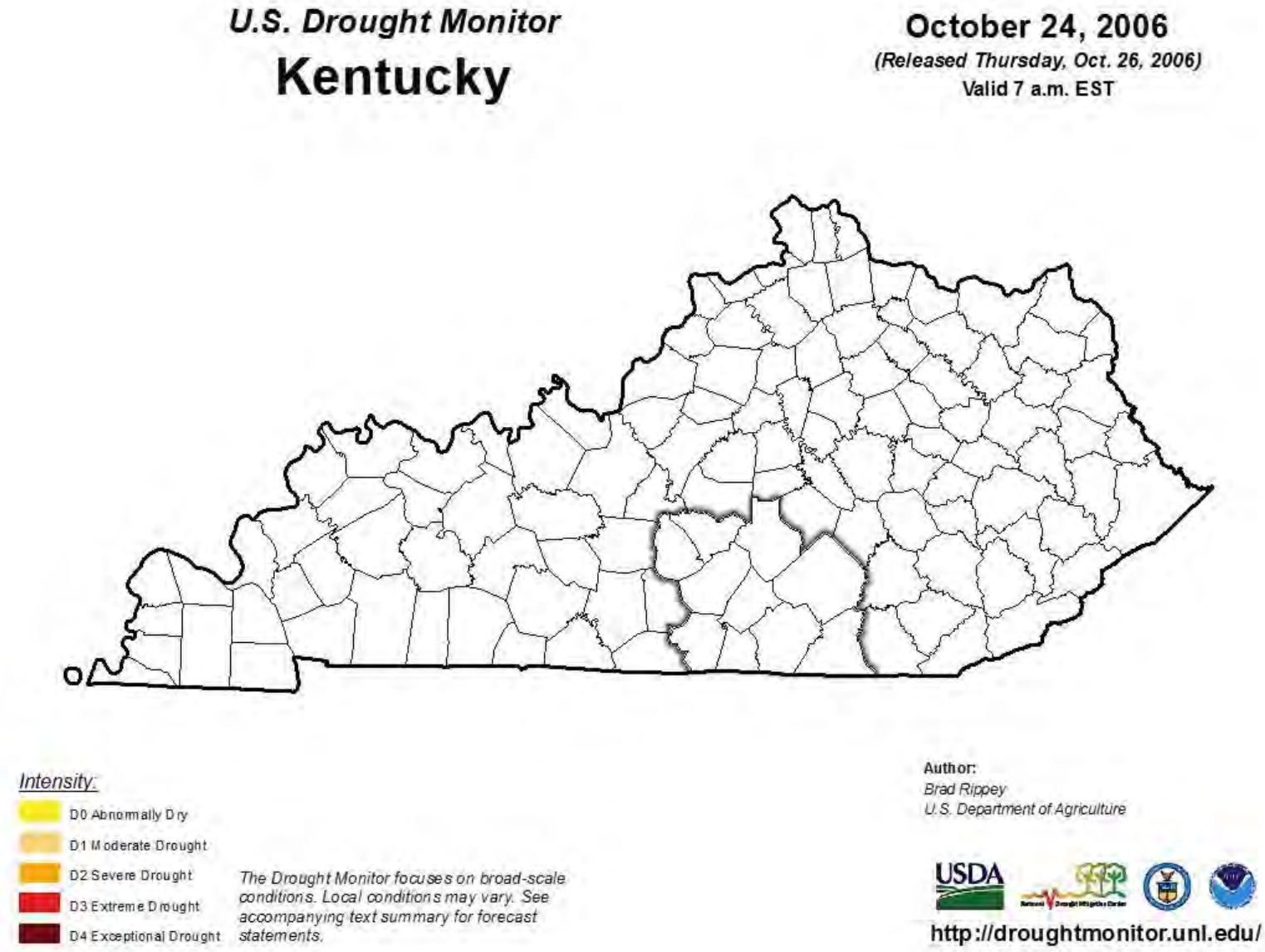

U.S. Drought Monitor
Kentucky
October 26, 2004
(Released Thursday, Oct. 28, 2004)
Valid 7 a.m. EST
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
Richard Tinker
CPC/NOAA/NWS/NCEP
USDA
http://droughtmonitor.unl.edu/

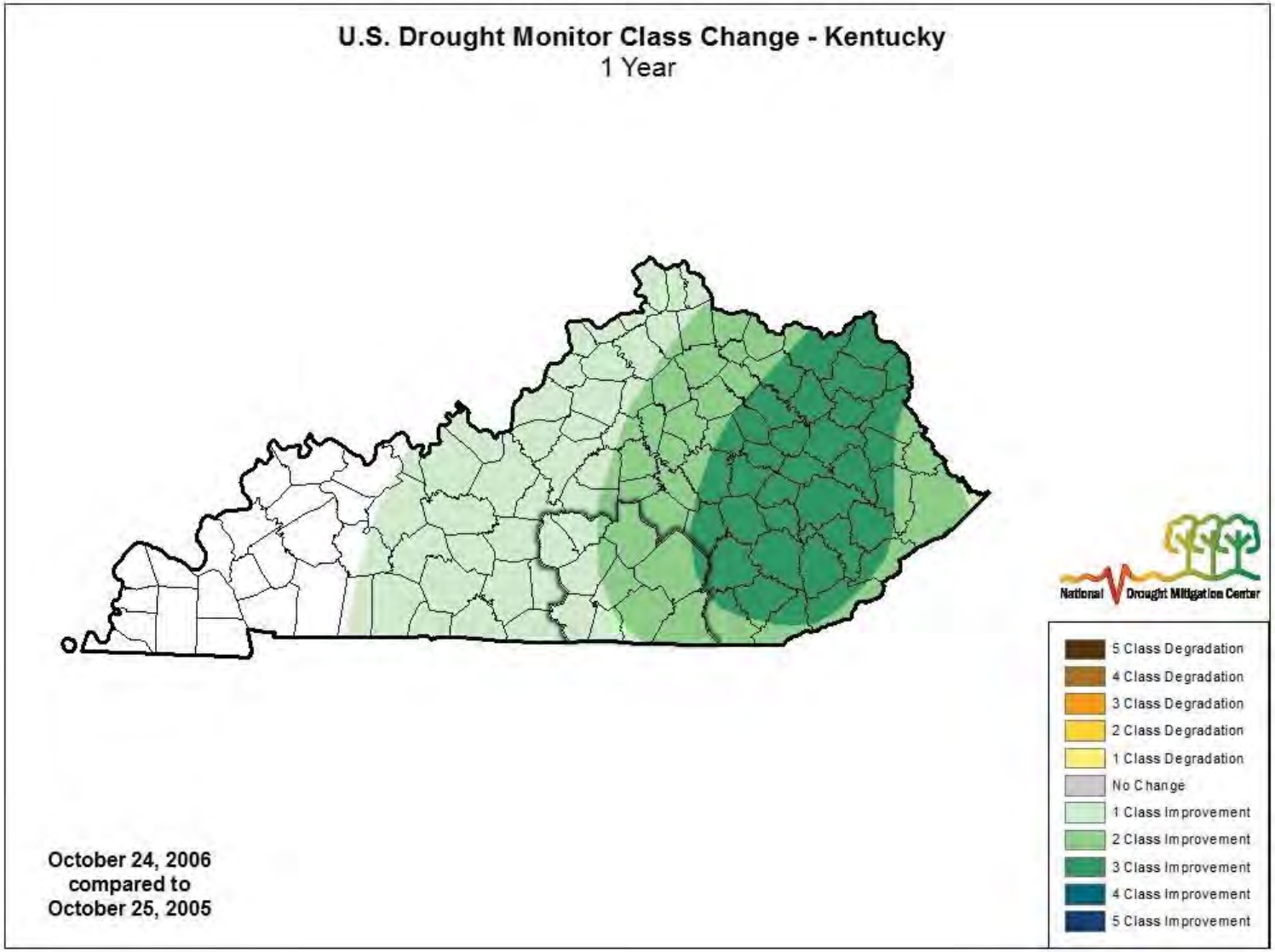

U.S. Drought Monitor
Kentucky
October 25, 2005
(Released Thursday, Oct. 27, 2005)
Valid 7 a.m. EST
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
Candace Tankersley
NOAA/NESDIS/NCDC
USDA
http://droughtmonitor.unl.edu/

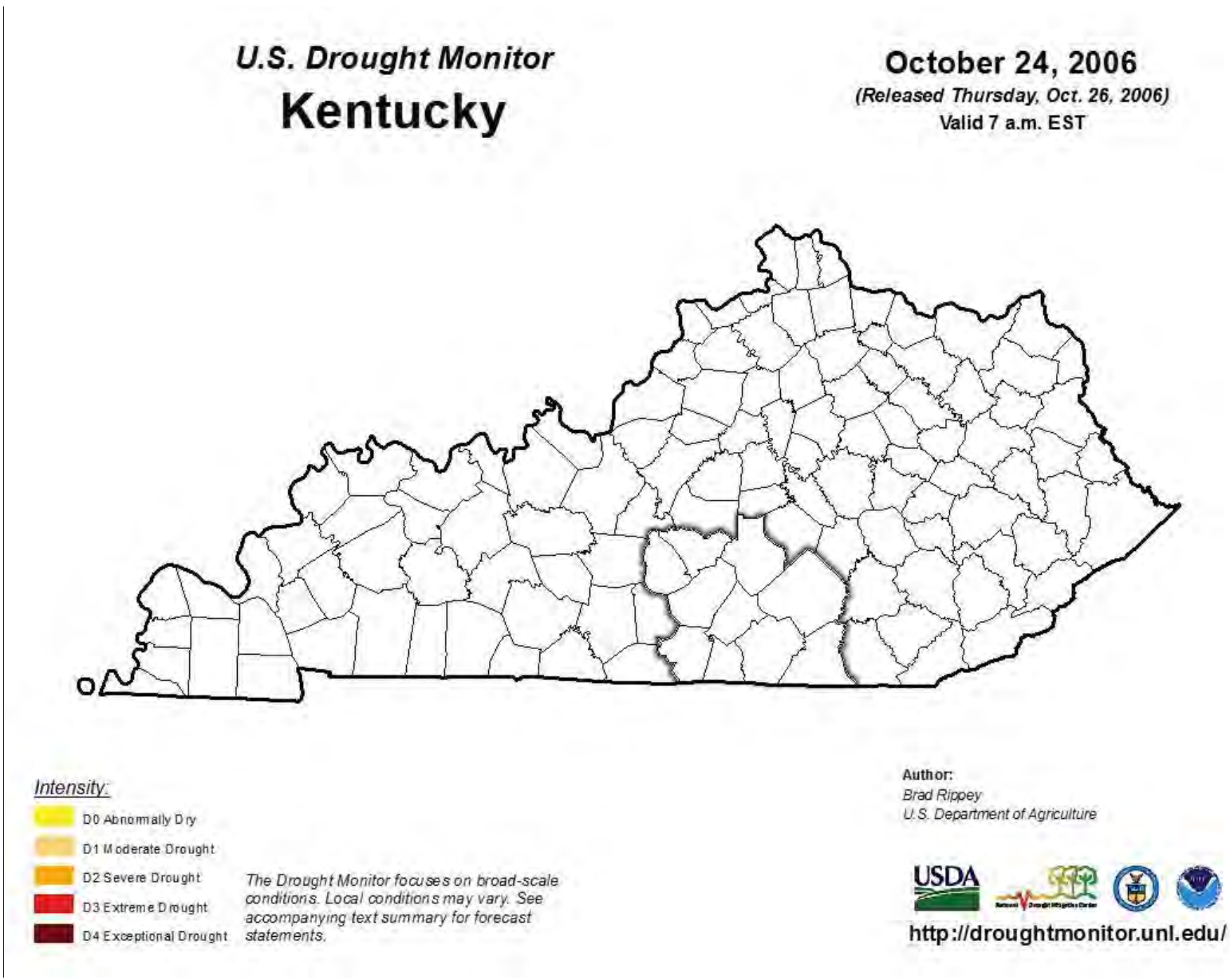


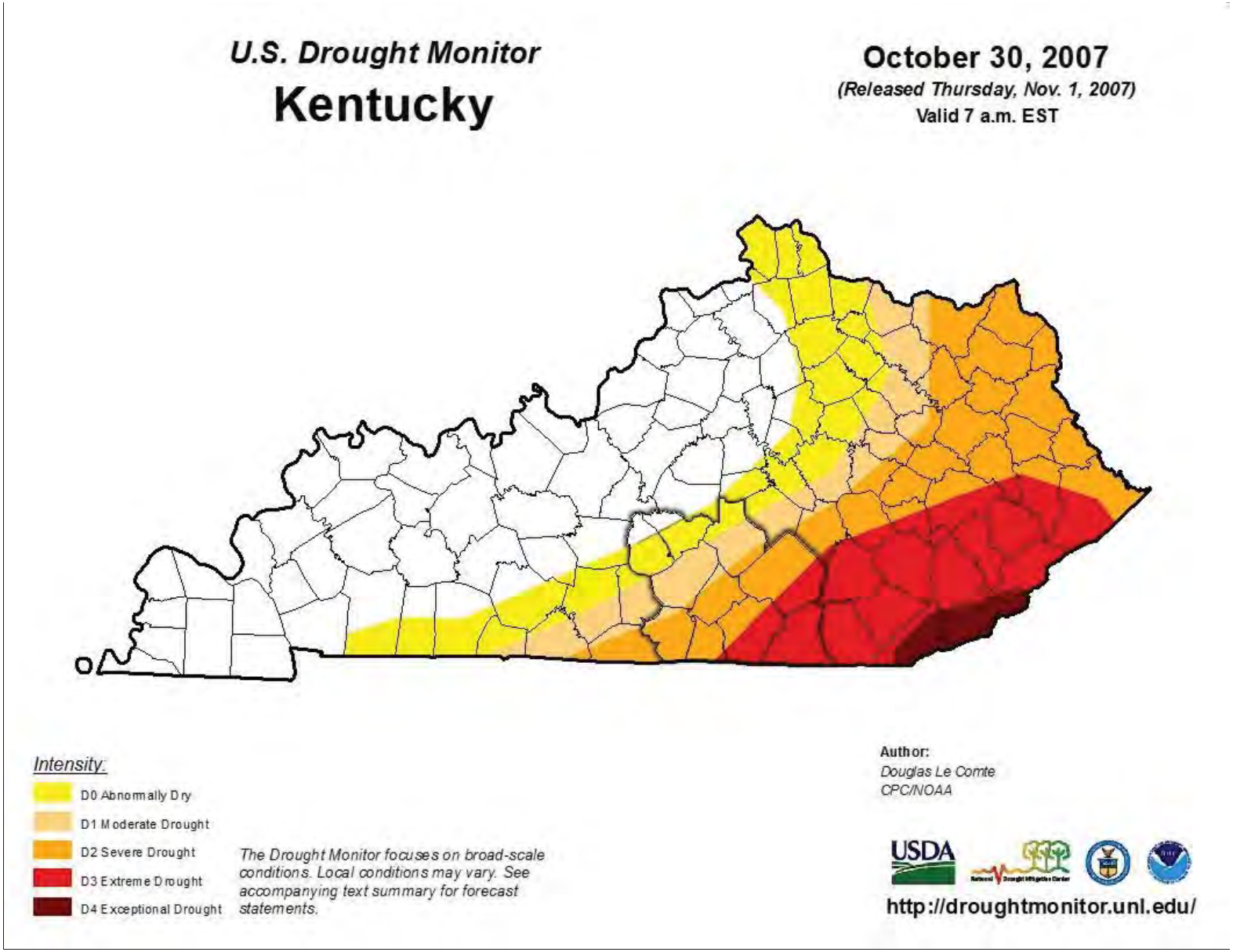
http://droughtmonitor.unl.edu

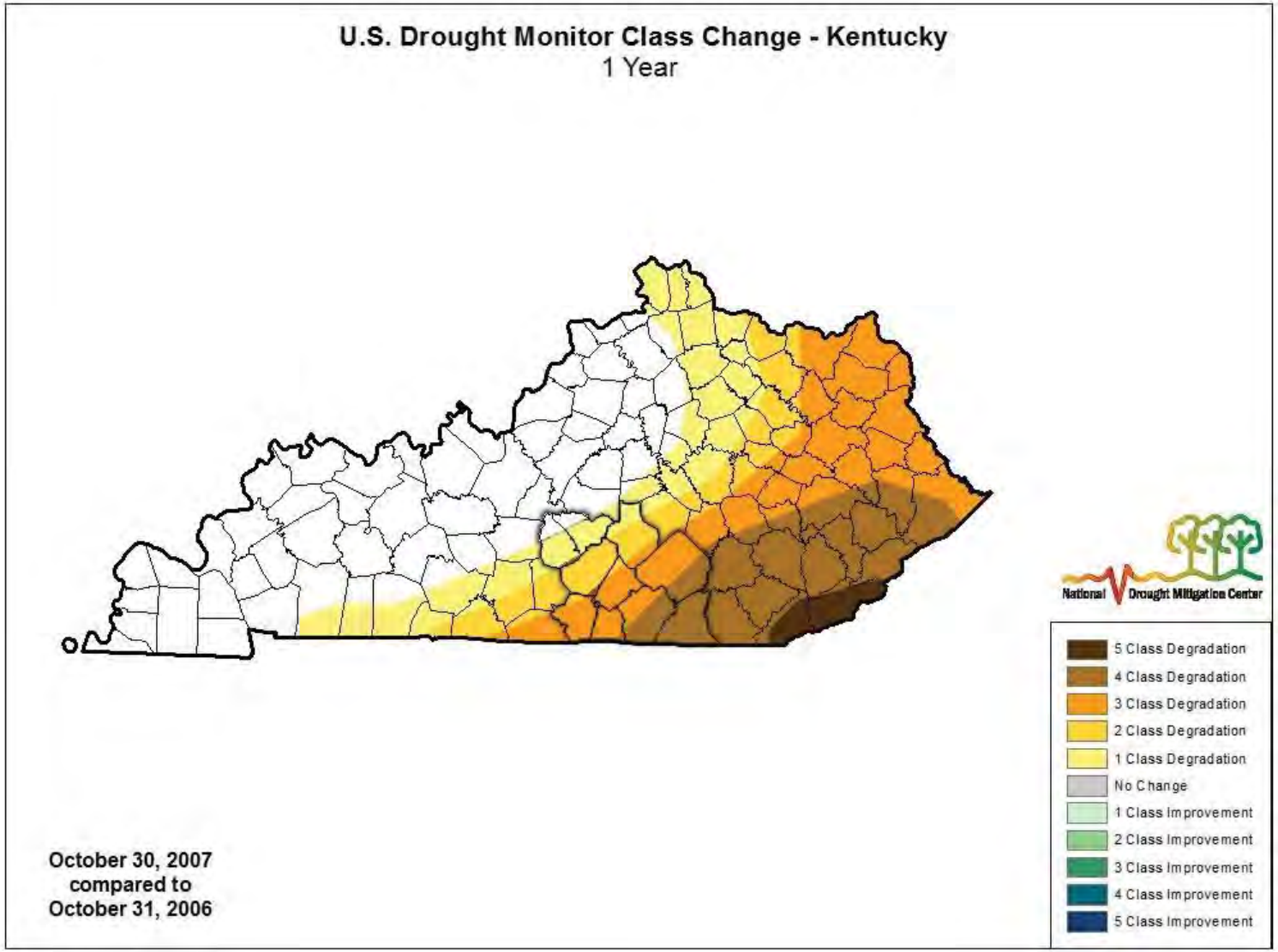

U.S. Drought Monitor
Kentucky
October 25, 2005
(Released Thursday, Oct. 27, 2005)
Valid 7 a.m. EST
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
Candace Tankersley
NOAA/NESDIS/NCDC
USDA
http://droughtmonitor.unl.edu/


U.S. Drought Monitor
Kentucky
October 24, 2006
(Released Thursday, Oct. 26, 2006)
Valid 7 a.m. EST
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
Brad Rippey
U.S. Department of Agriculture
USDA
http://droughtmonitor.unl.edu/

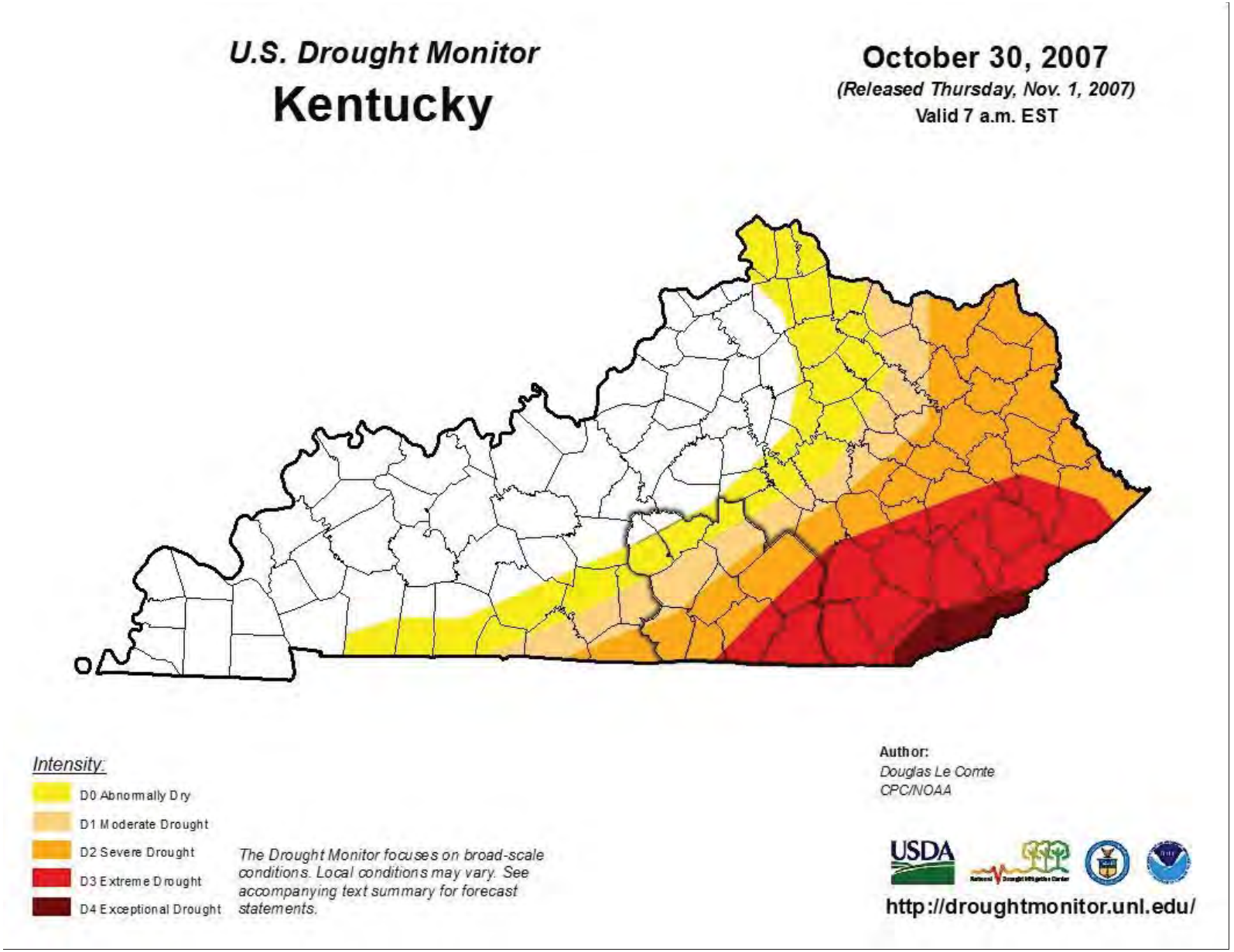

U.S. Drought Monitor Class Change - Kentucky
1 Year
National Drought Mitigation Center
5 Class Degradation
4 Class Degradation
3 Class Degradation
2 Class Degradation
1 Class Degradation
No Change
1 Class Improvement
2 Class Improvement
3 Class Improvement
4 Class Improvement
5 Class Improvement
October 24, 2006
compared to
October 25, 2005
http://droughtmonitor.unl.edu

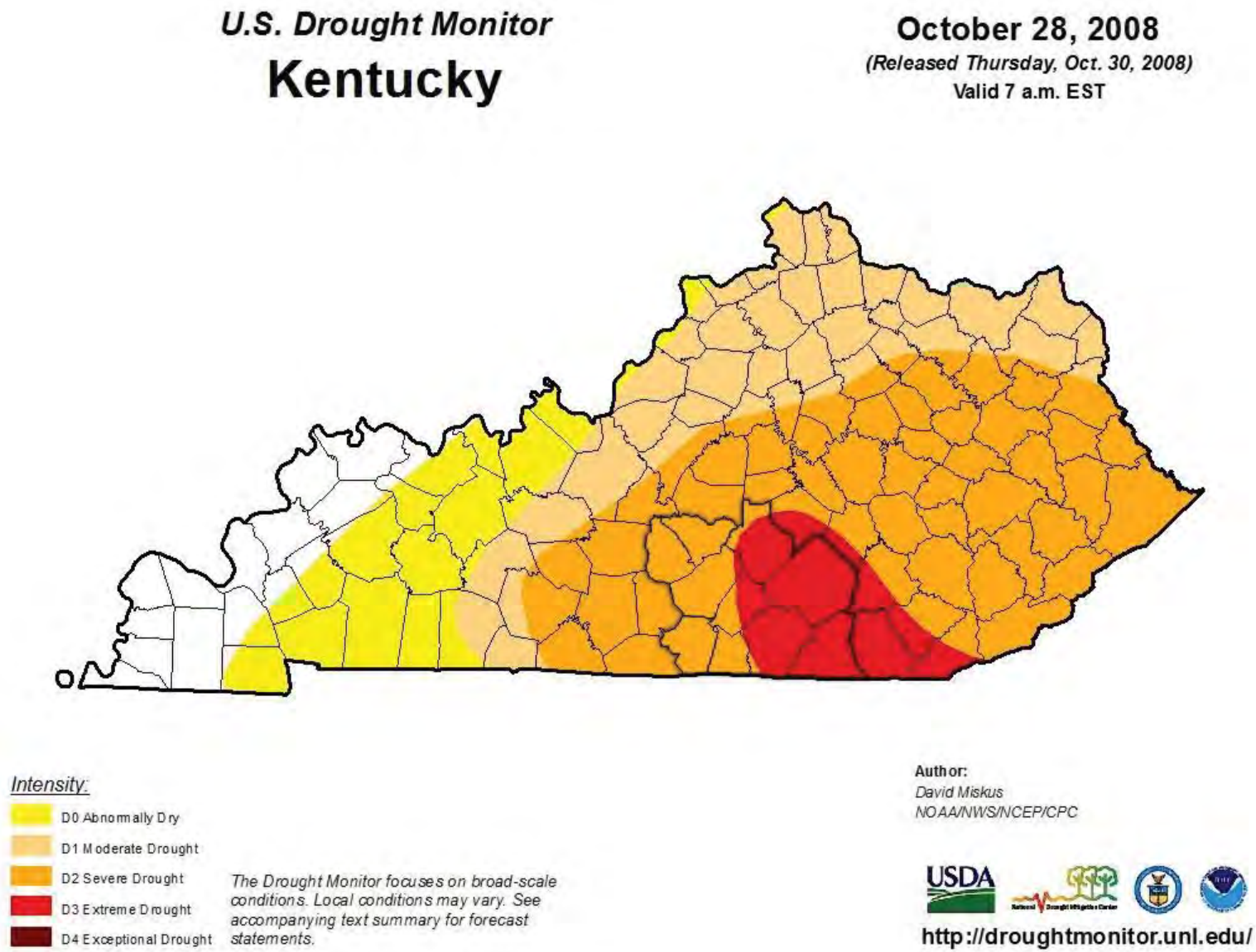

U.S. Drought Monitor
Kentucky
October 24, 2006
(Released Thursday, Oct. 26, 2006)
Valid 7 a.m. EST
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
Brad Rippey
U.S. Department of Agriculture
USDA
http://droughtmonitor.unl.edu/


U.S. Drought Monitor
Kentucky
October 30, 2007
(Released Thursday, Nov. 1, 2007)
Valid 7 a.m. EST
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
Douglas Le Comte
CPC/NOAA
USDA
http://droughtmonitor.unl.edu/



http://droughtmonitor.unl.edu


U.S. Drought Monitor
Kentucky
October 30, 2007
(Released Thursday, Nov. 1, 2007)
Valid 7 a.m. EST
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
Douglas Le Comte
CPC/NOAA
USDA
http://droughtmonitor.unl.edu/


U.S. Drought Monitor
Kentucky
October 28, 2008
(Released Thursday, Oct. 30, 2008)
Valid 7 a.m. EST
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
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D4 Exceptional Drought
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Author:
David Miskus
NOAA/NWS/NCEP/CPC
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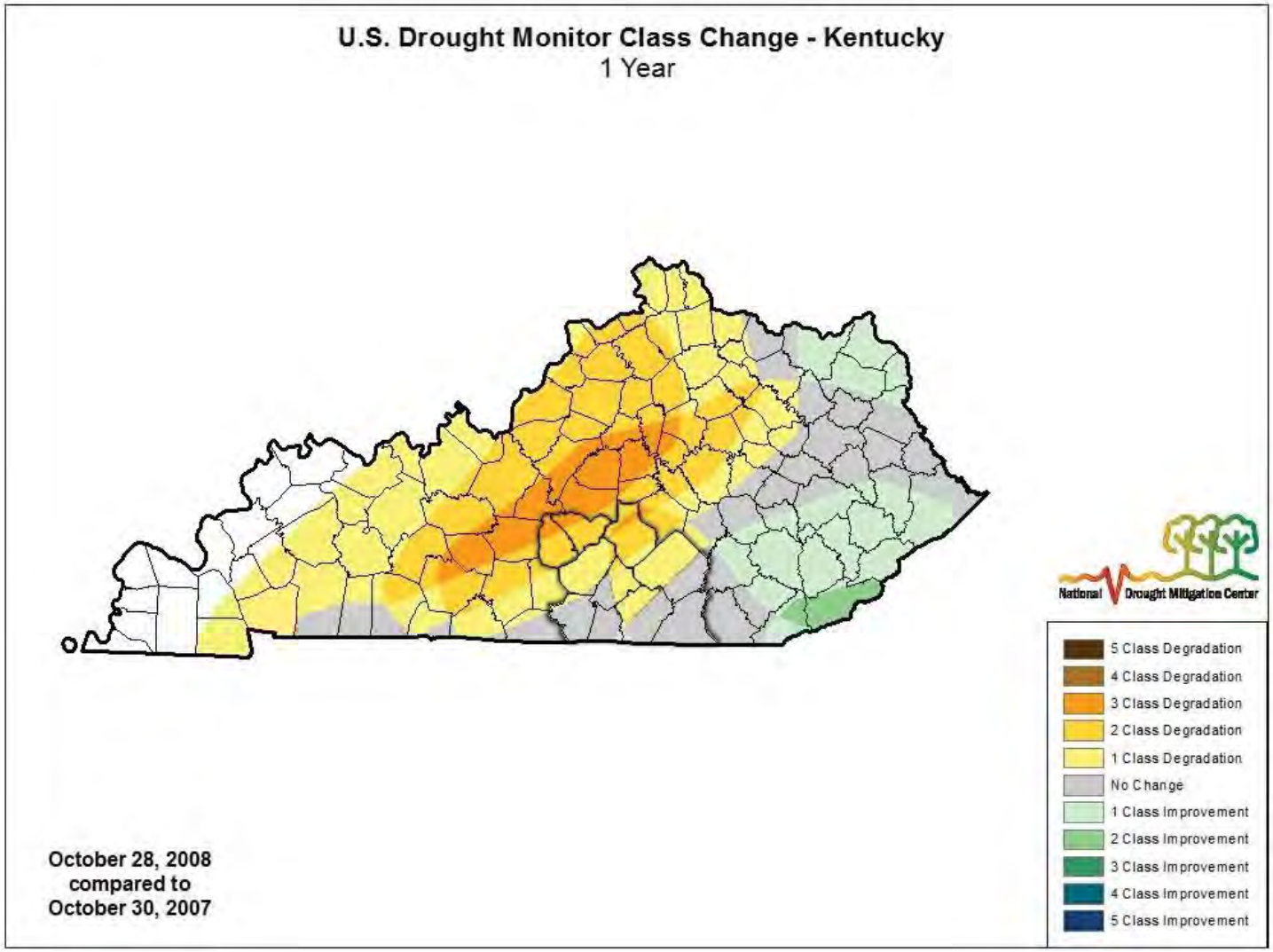
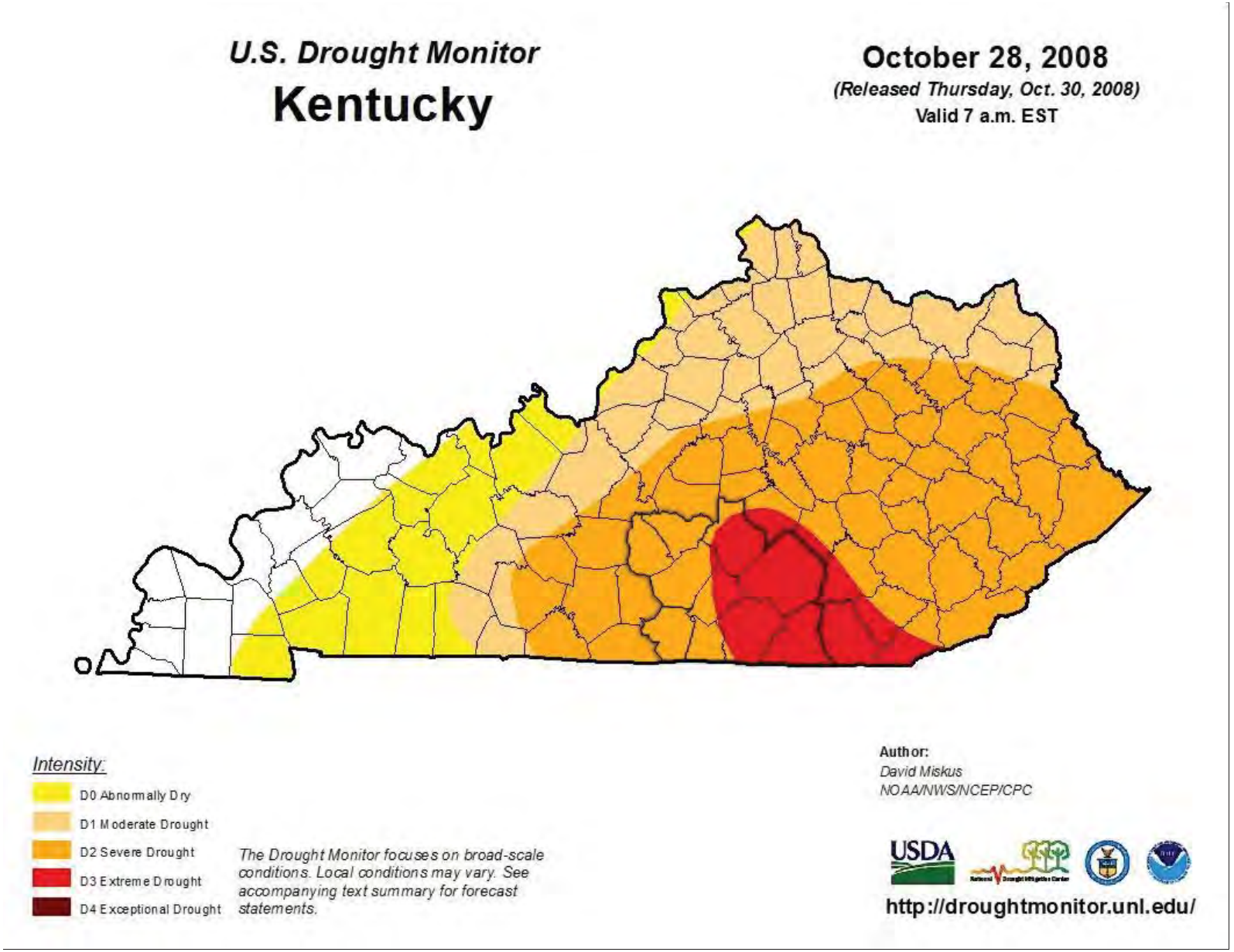
http://droughtmonitor.unl.edu/



http://droughtmonitor.unl.edu


U.S. Drought Monitor
Kentucky
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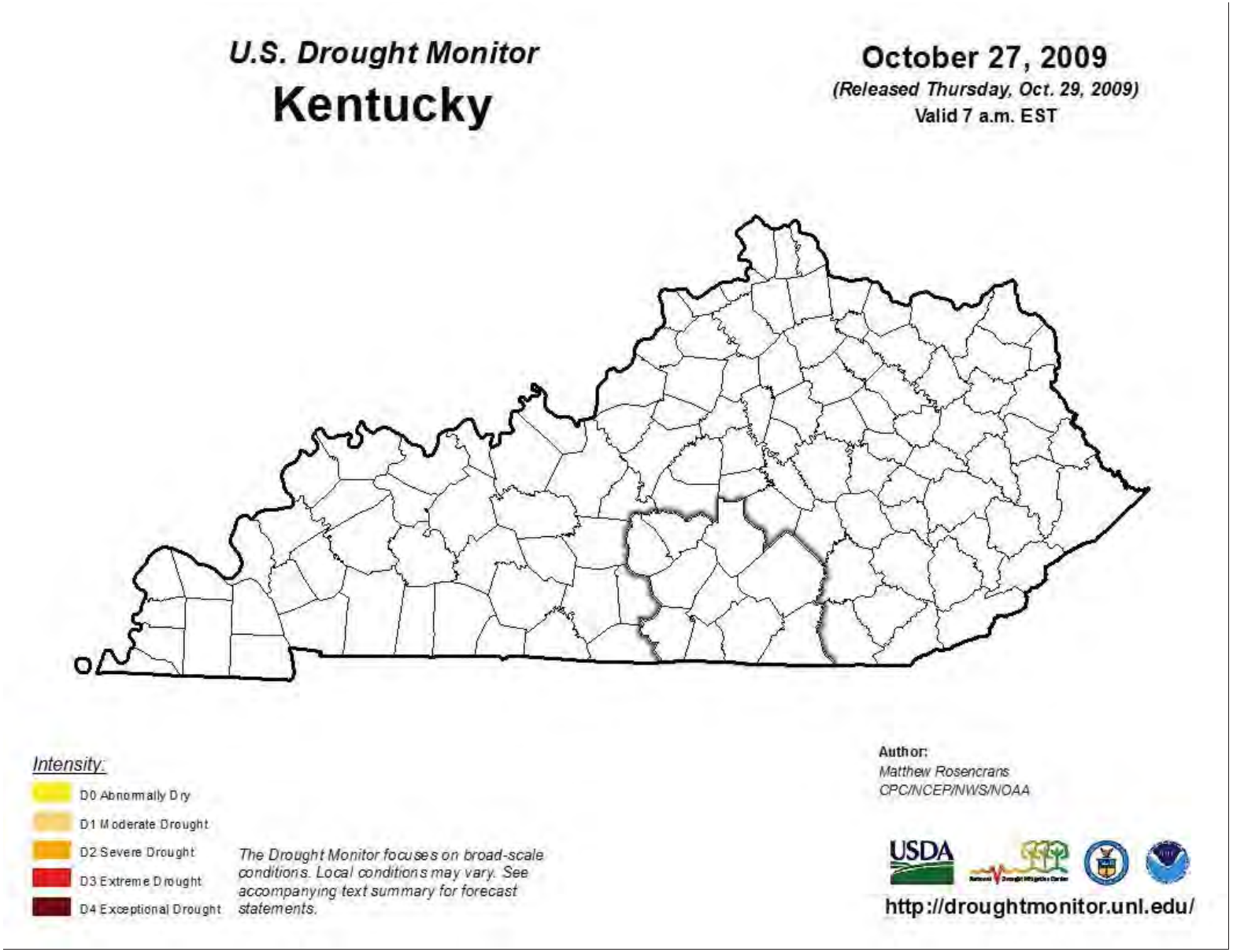
U.S. Drought Monitor
Kentucky
October 27, 2009
(Released Thursday, Oct. 29, 2009)
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Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
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Author:
Matthew Rosencrans
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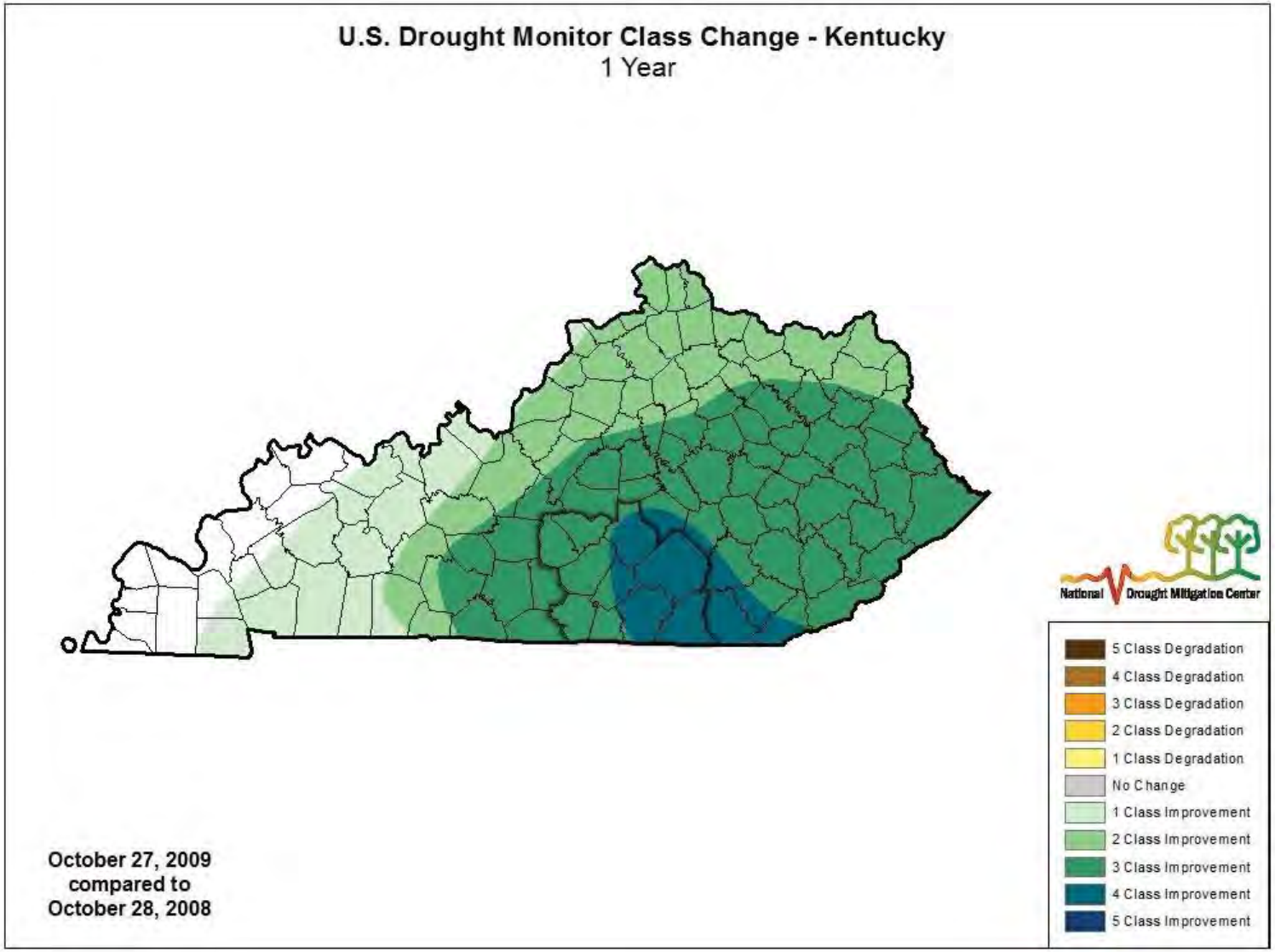
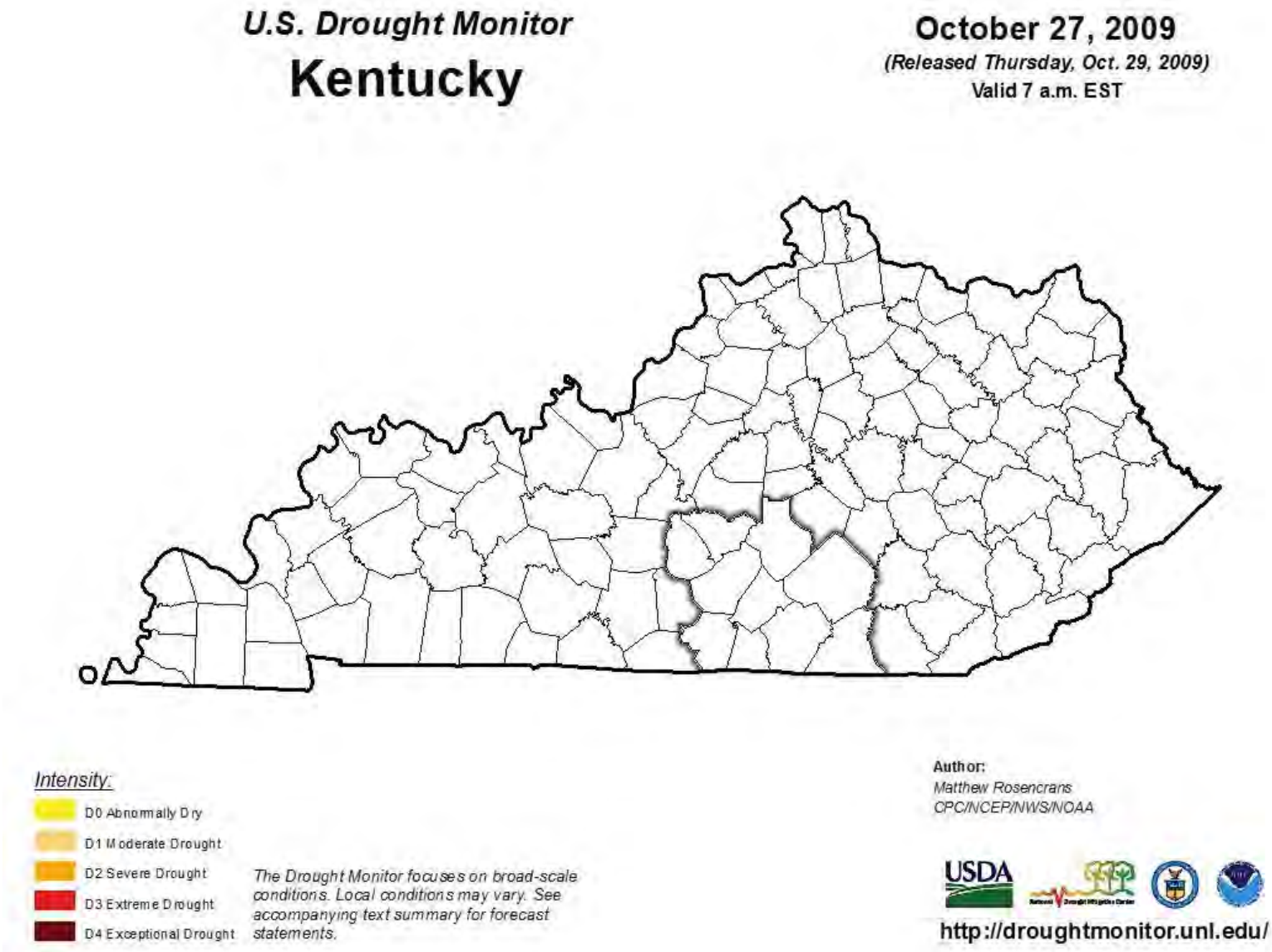
USDA
http://droughtmonitor.unl.edu/


U.S. Drought Monitor Class Change - Kentucky
1 Year
October 27, 2009
compared to
October 28, 2008
National Drought Mitigation Center
5 Class Degradation
4 Class Degradation
3 Class Degradation
2 Class Degradation
1 Class Degradation
No Change
1 Class Improvement
2 Class Improvement
3 Class Improvement
4 Class Improvement
5 Class Improvement
http://droughtmonitor.unl.edu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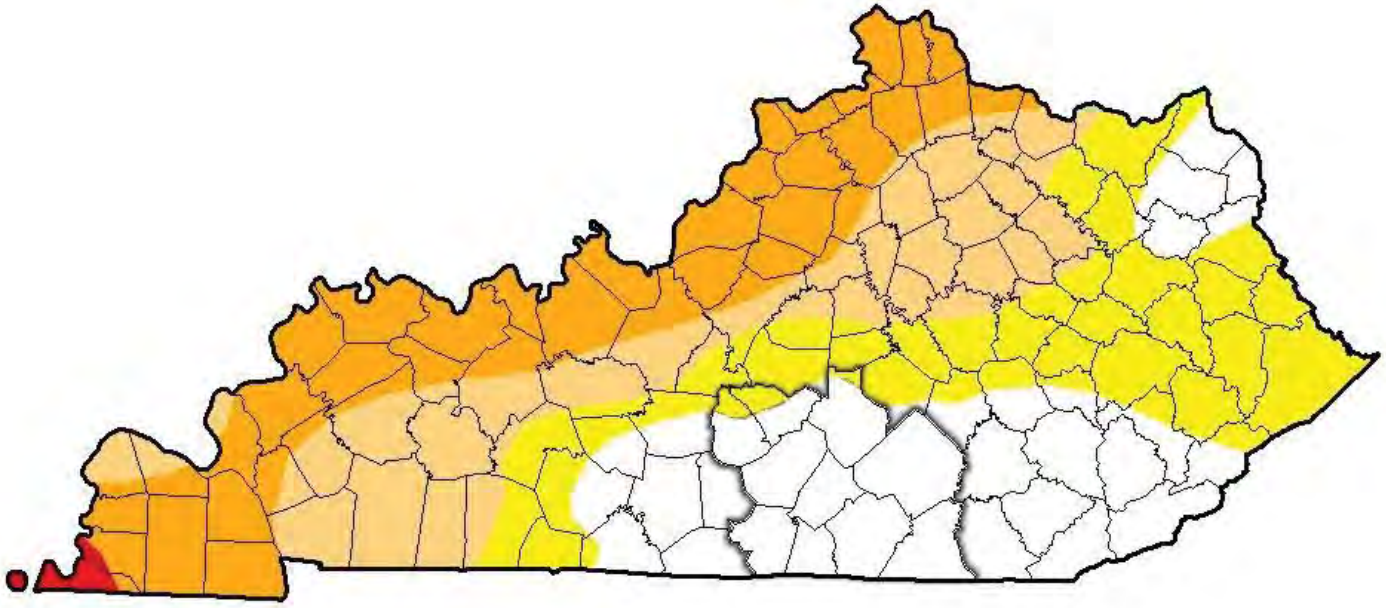
U.S. Drought Monitor
Kentucky
October 26, 2010
(Released Thursday, Oct. 28, 2010)
Valid 7 a.m. EST
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
Eric Luebehusen
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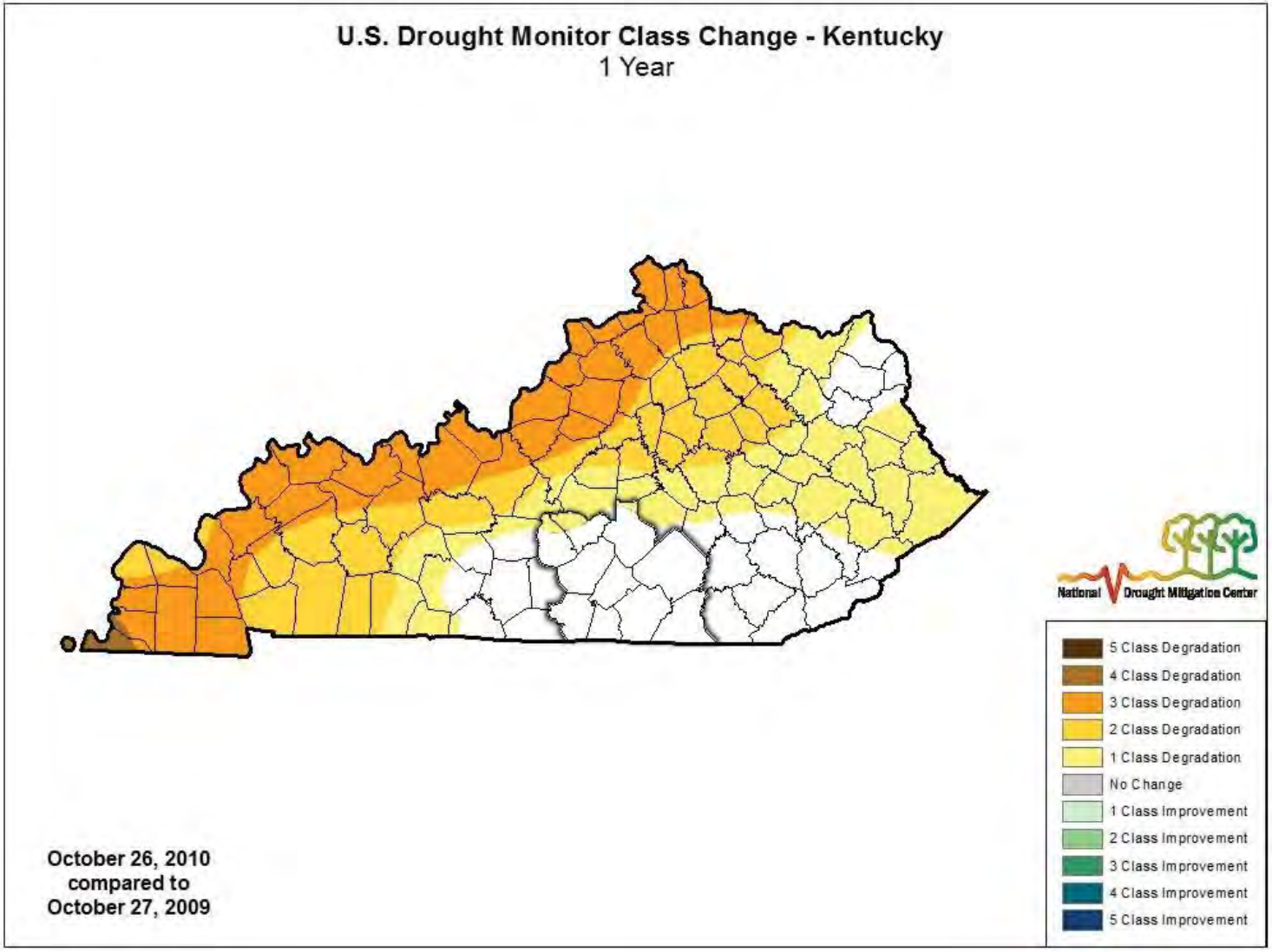
USDA
http://droughtmonitor.unl.edu/



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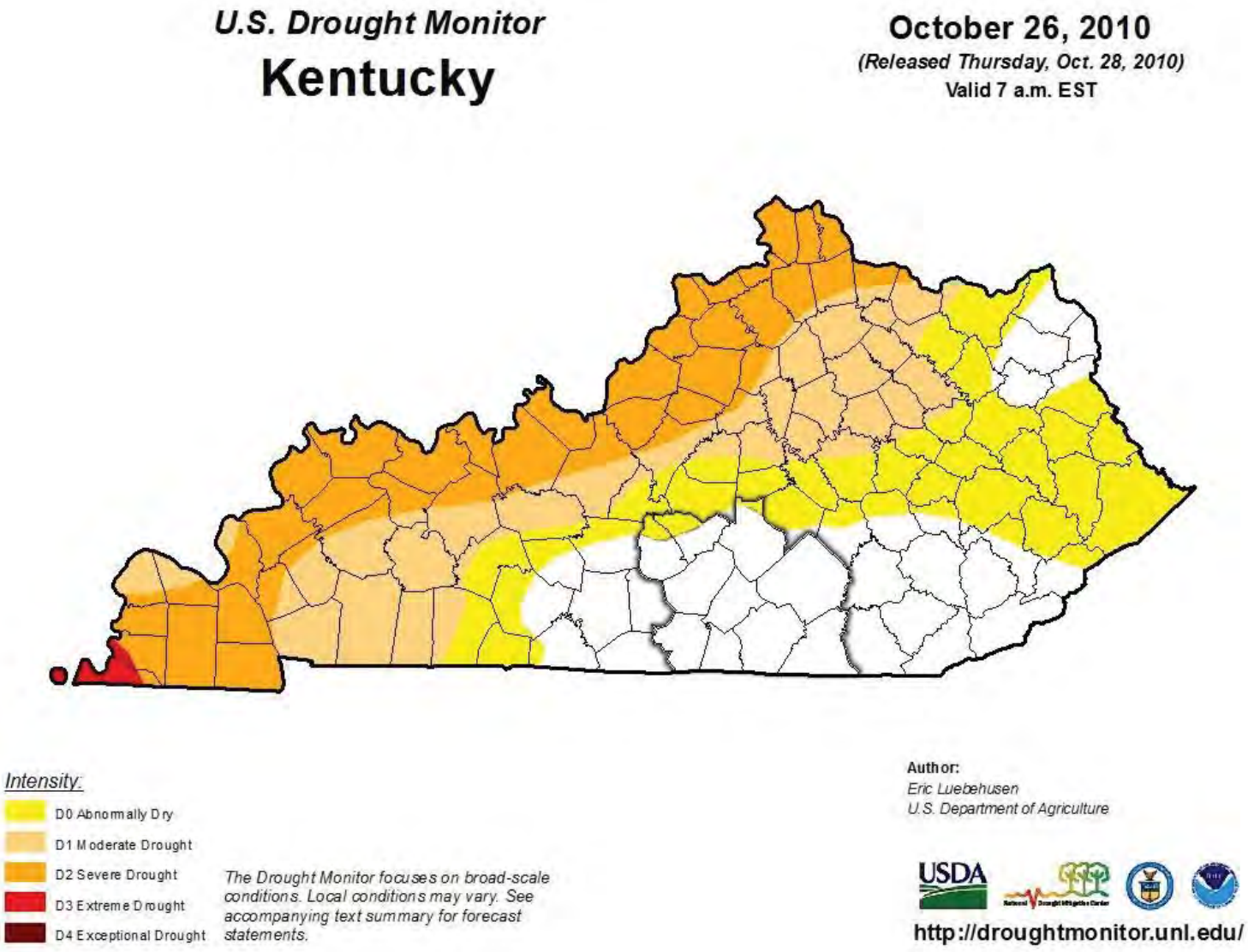
U.S. Drought Monitor
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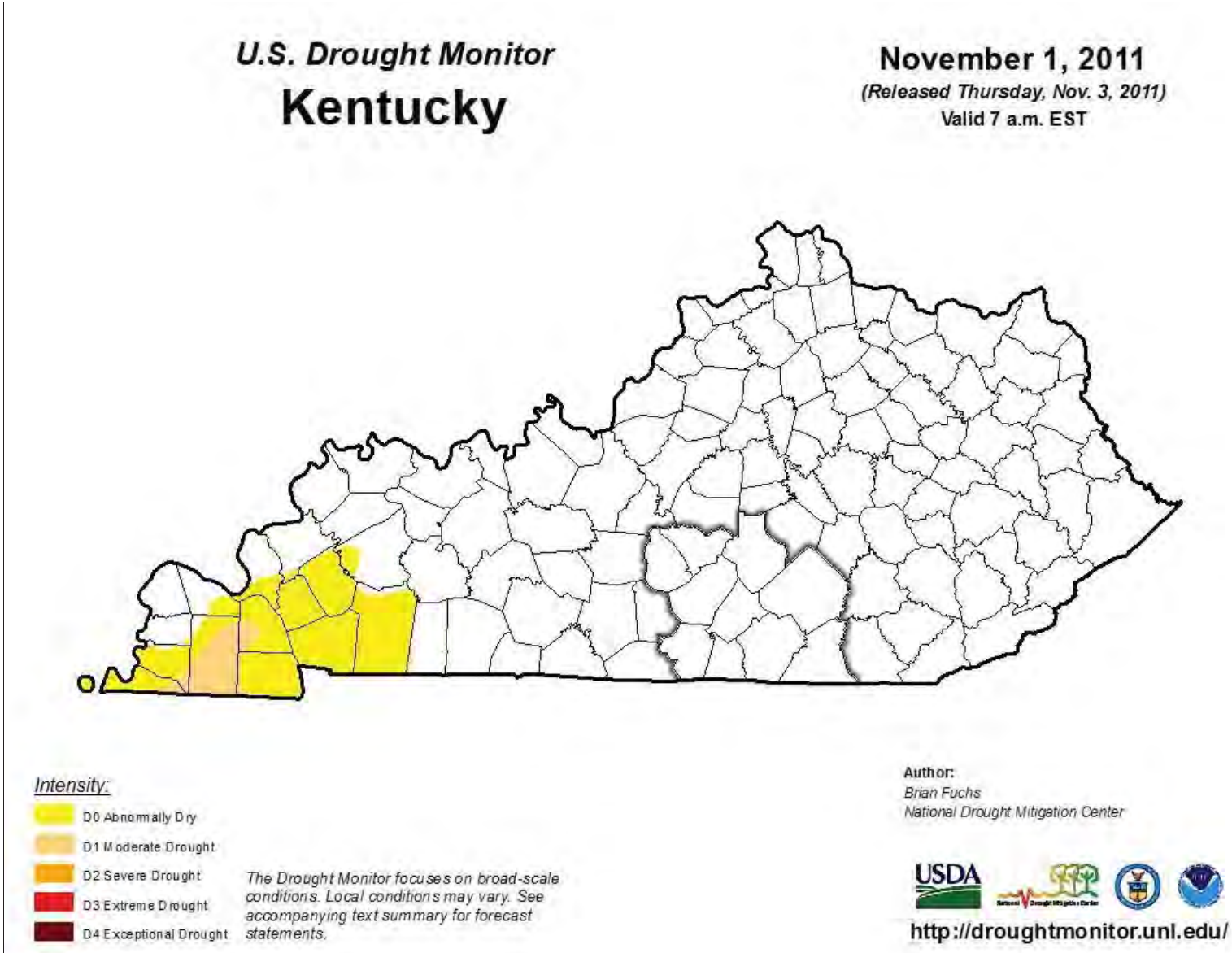
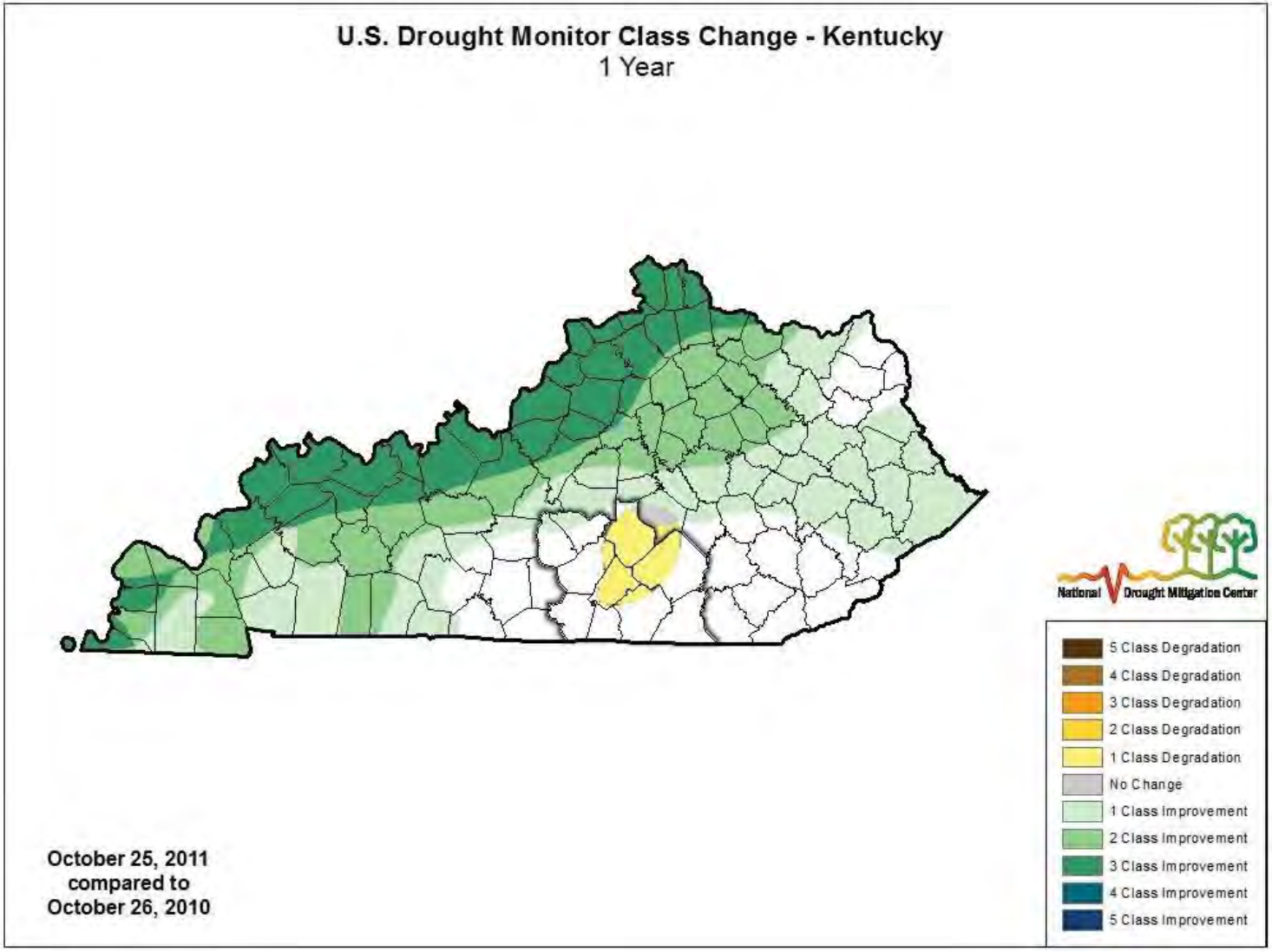

U.S. Drought Monitor
Kentucky
November 1, 2011
(Released Thursday, Nov. 3, 2011)
Valid 7 a.m. EST
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
Brian Fuchs
National Drought Mitigation Center
USDA
http://droughtmonitor.unl.edu/



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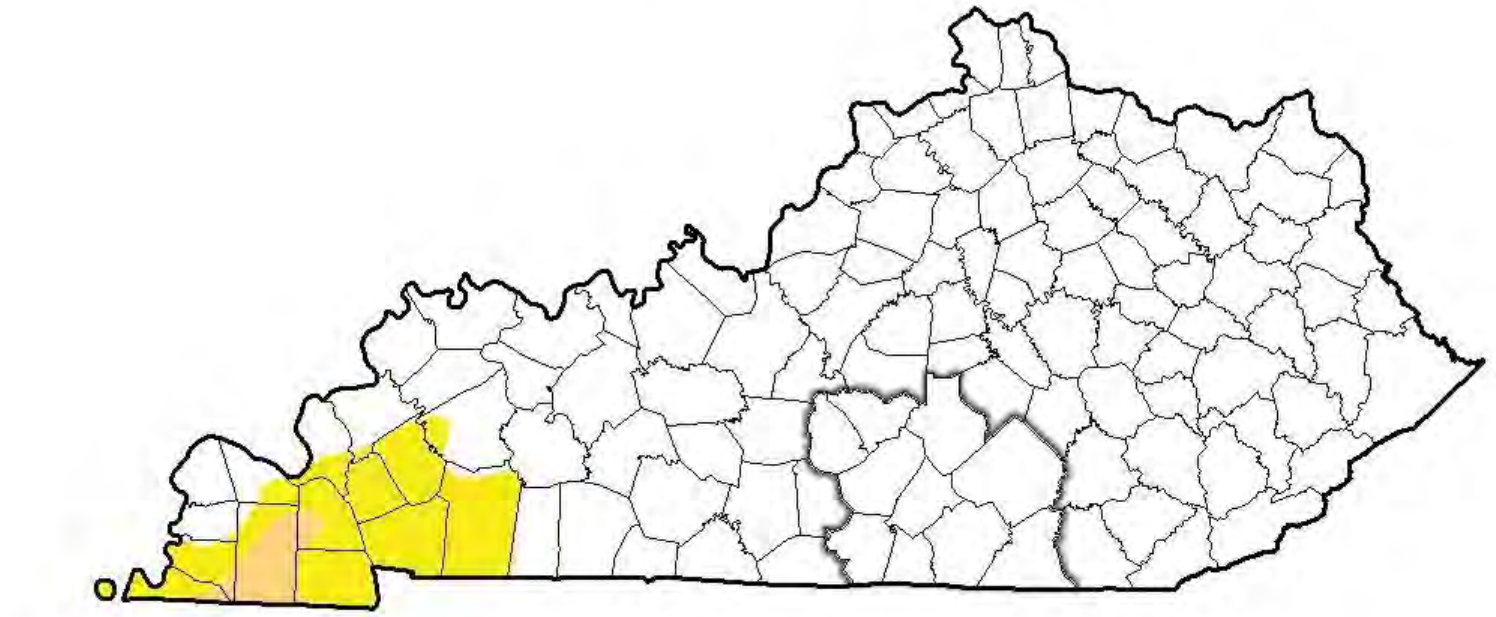
U.S. Drought Monitor
Kentucky
November 1, 2011
(Released Thursday, Nov. 3, 2011)
Valid 7 a.m. EST
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
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D4 Exceptional Drought
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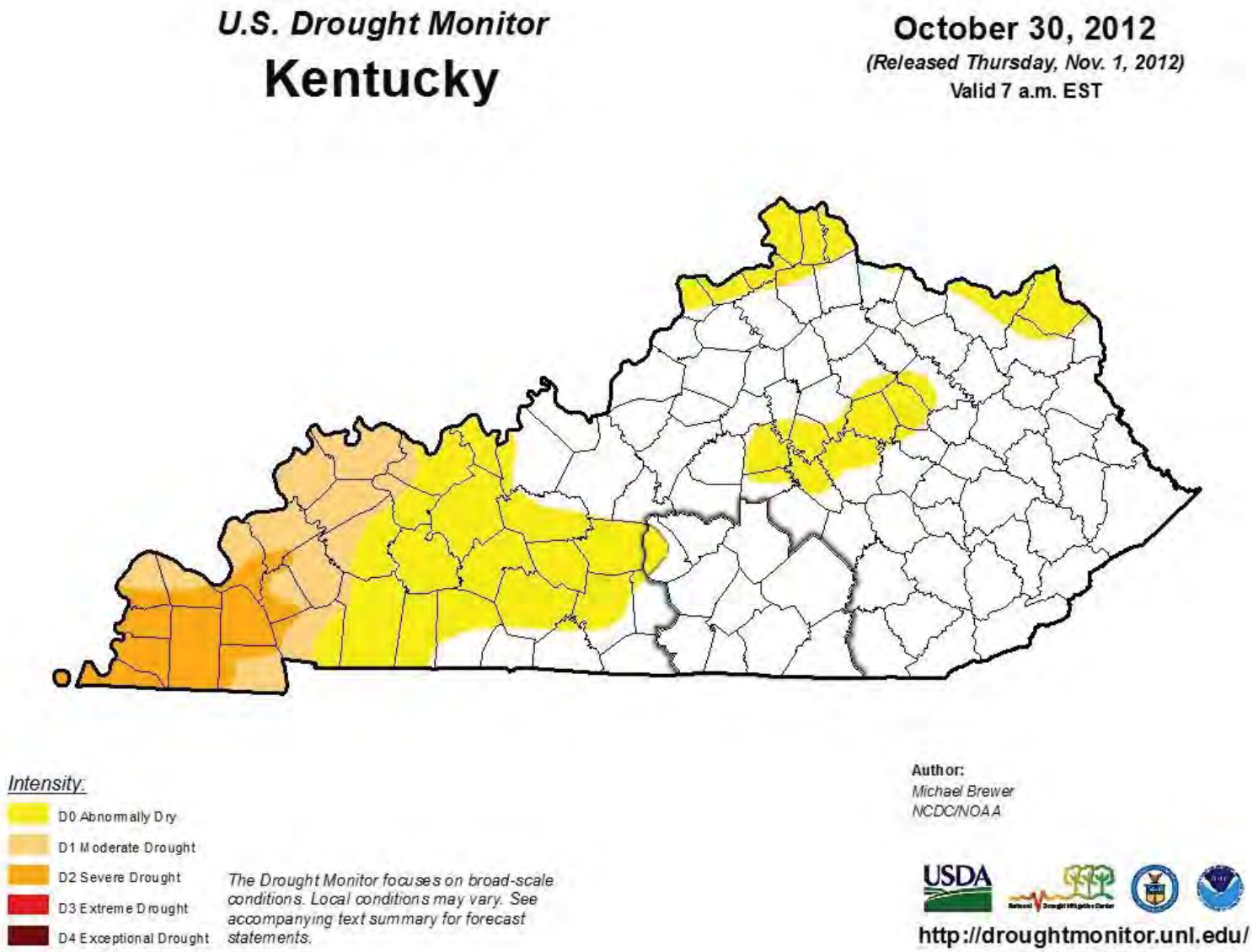
U.S. Drought Monitor
Kentucky
October 30, 2012
(Released Thursday, Nov. 1, 2012)
Valid 7 a.m. EST
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
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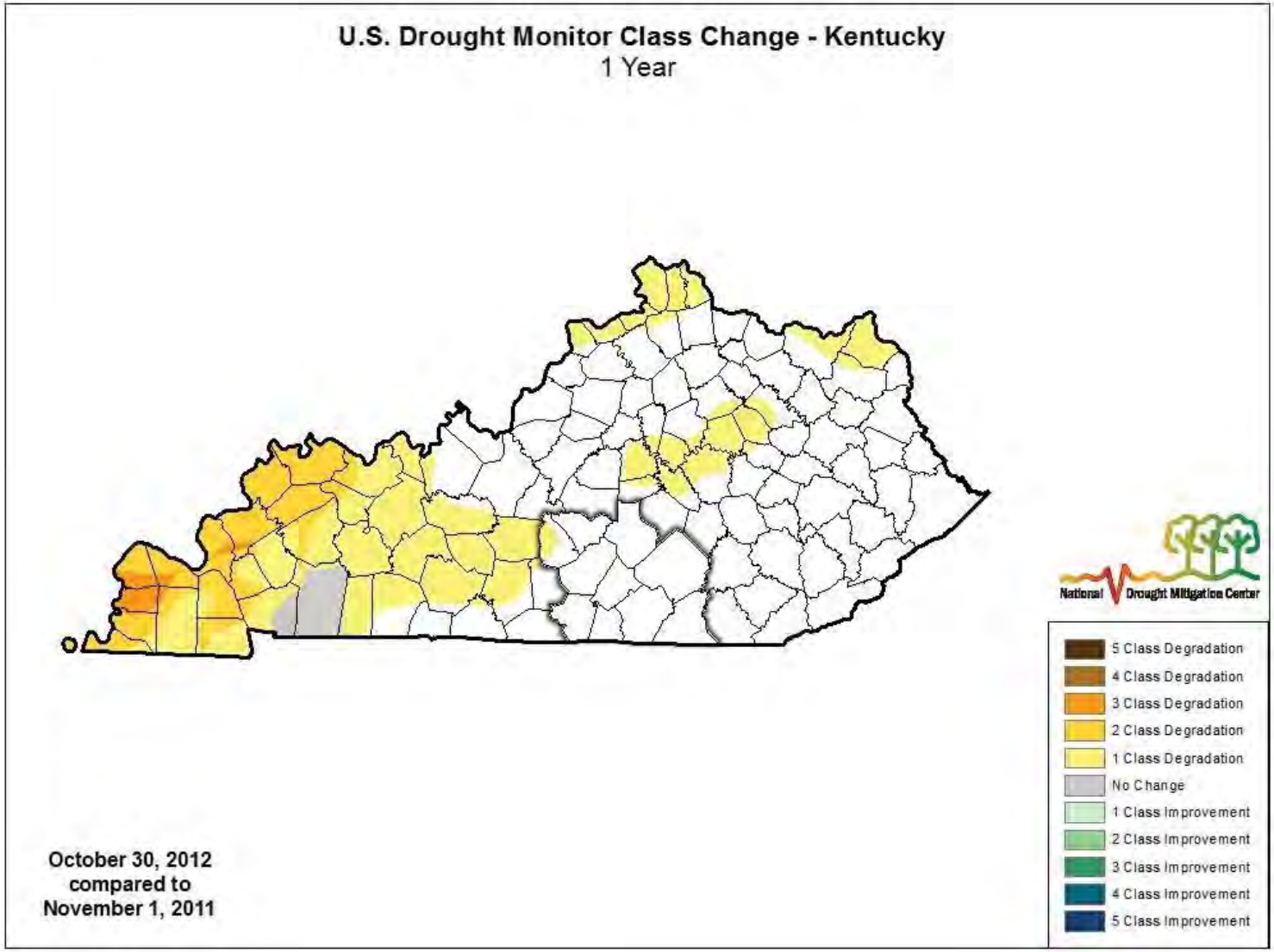
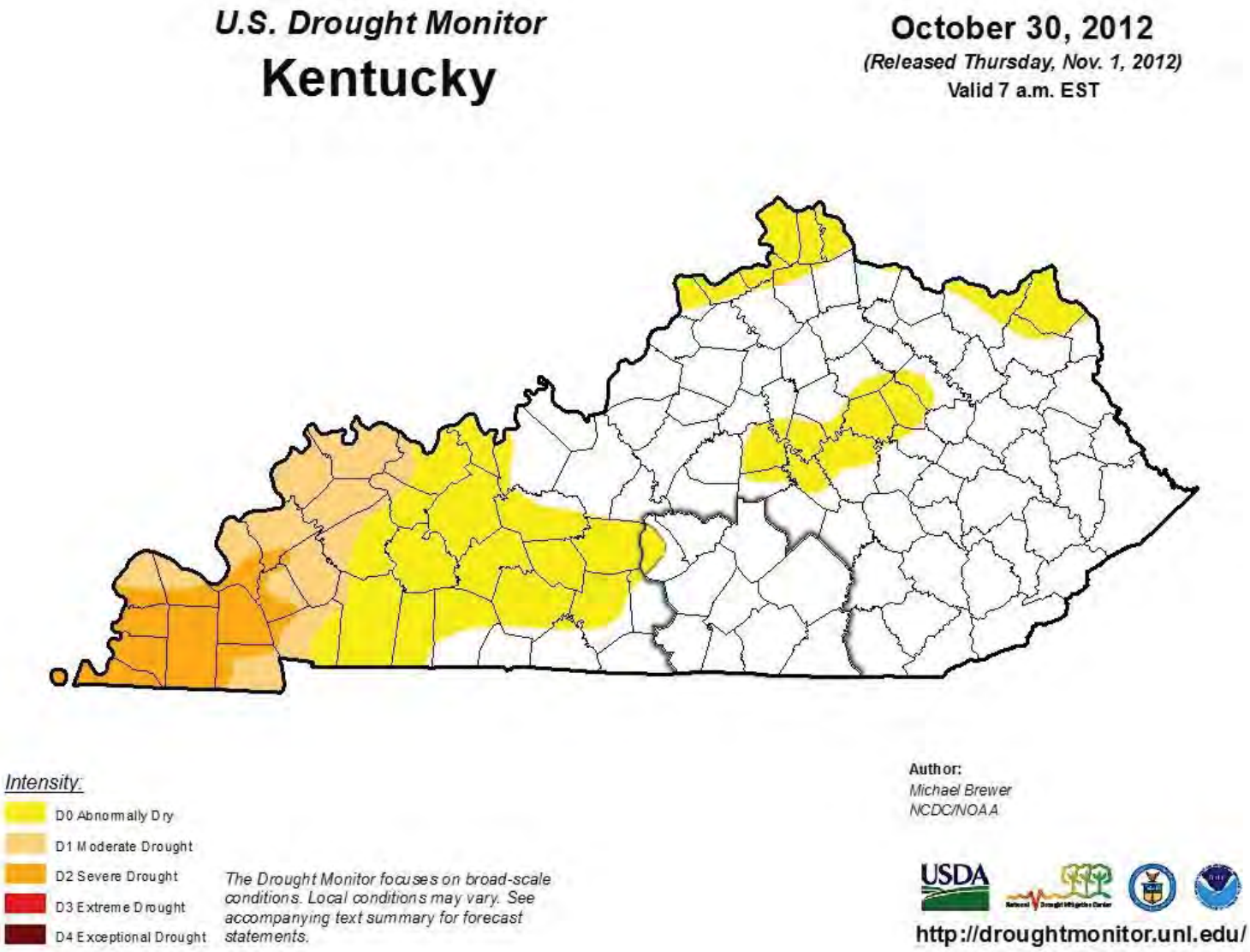
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
Michael Brewer
NCDC/NOAA
USDA
http://droughtmonitor.unl.edu/



http://droughtmonitor.unl.edu


U.S. Drought Monitor
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October 30, 2012
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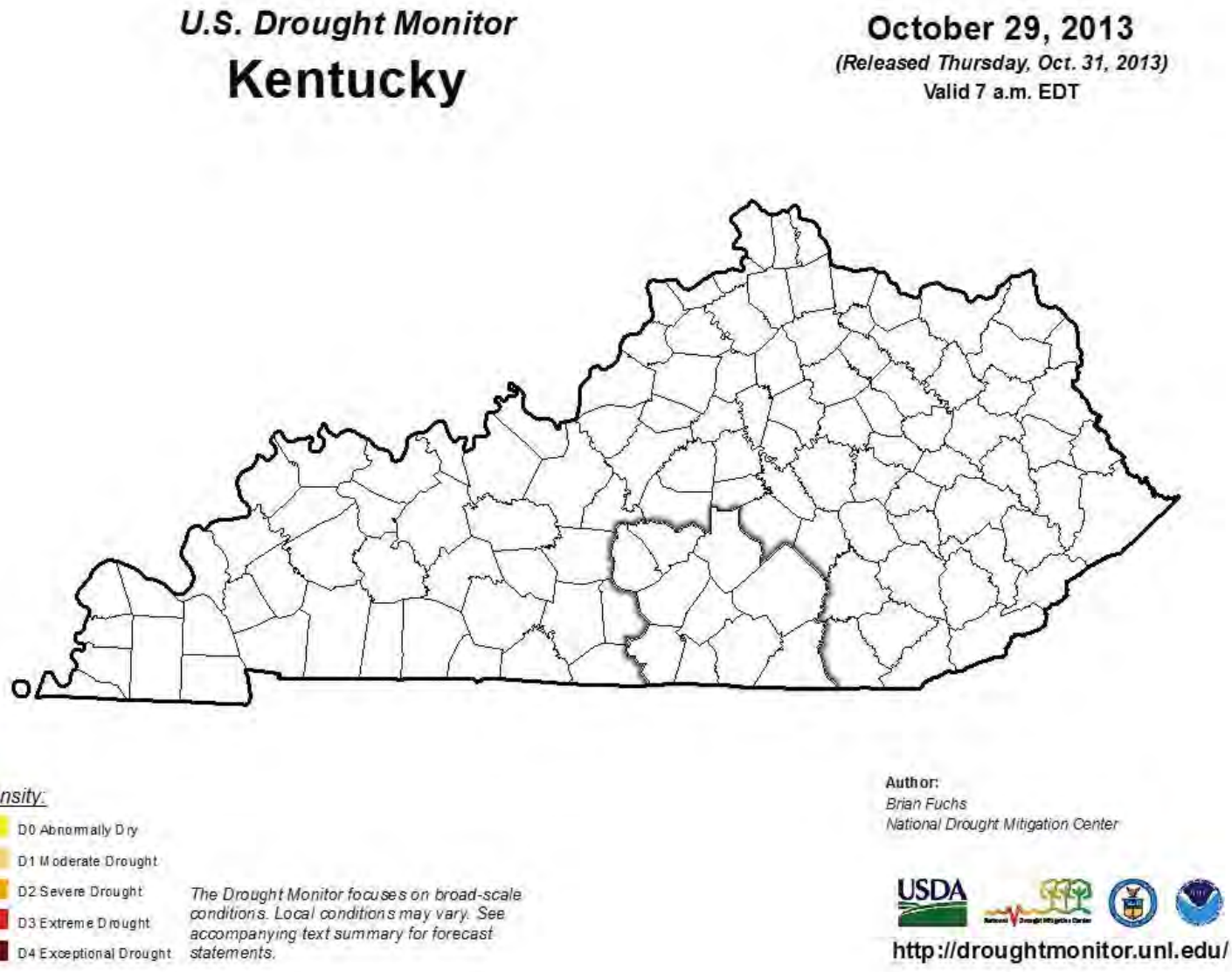
U.S. Drought Monitor
Kentucky
October 29, 2013
(Released Thursday, Oct. 31, 2013)
Valid 7 a.m. EDT
Intensity:
D0 Abnormally Dry
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National Drought Mitigation Center
USDA
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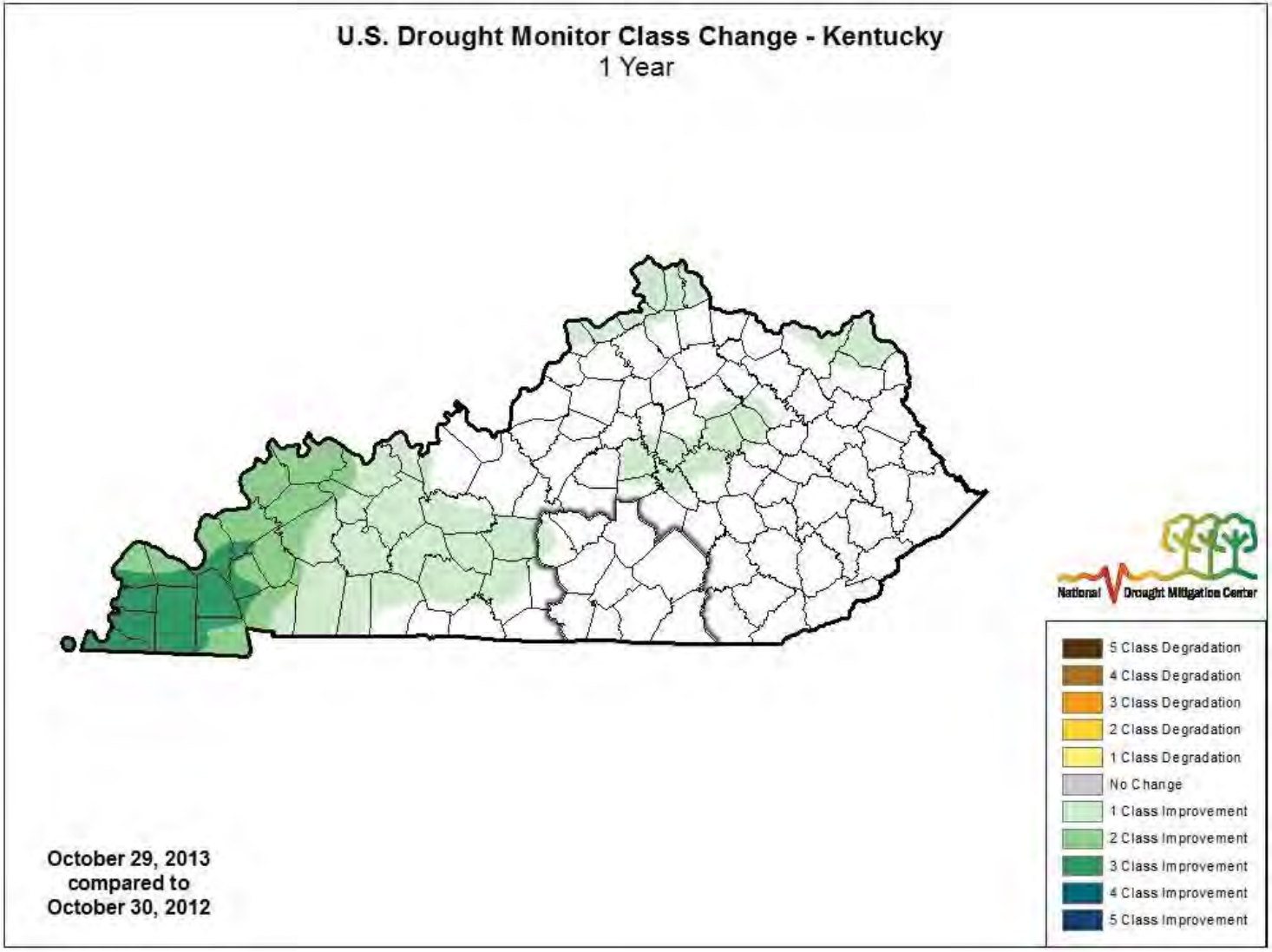
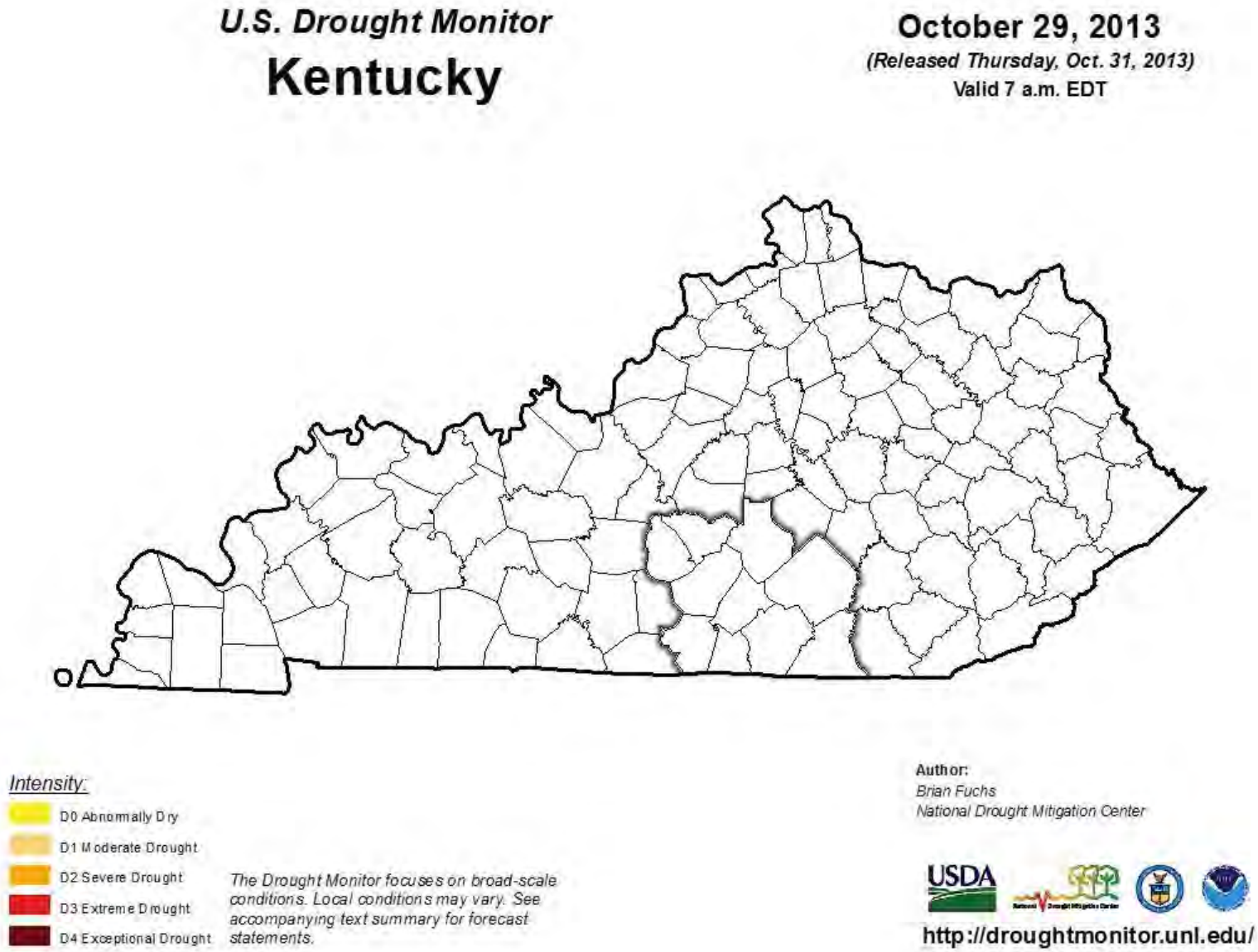

U.S. Drought Monitor Class Change - Kentucky
1 Year
National Drought Mitigation Center
5 Class Degradation
4 Class Degradation
3 Class Degradation
2 Class Degradation
1 Class Degradation
No Change
1 Class Improvement
2 Class Improvement
3 Class Improvement
4 Class Improvement
5 Class Improvement
October 29, 2013
compared to
October 30, 2012
http://droughtmonitor.unl.edu


U.S. Drought Monitor
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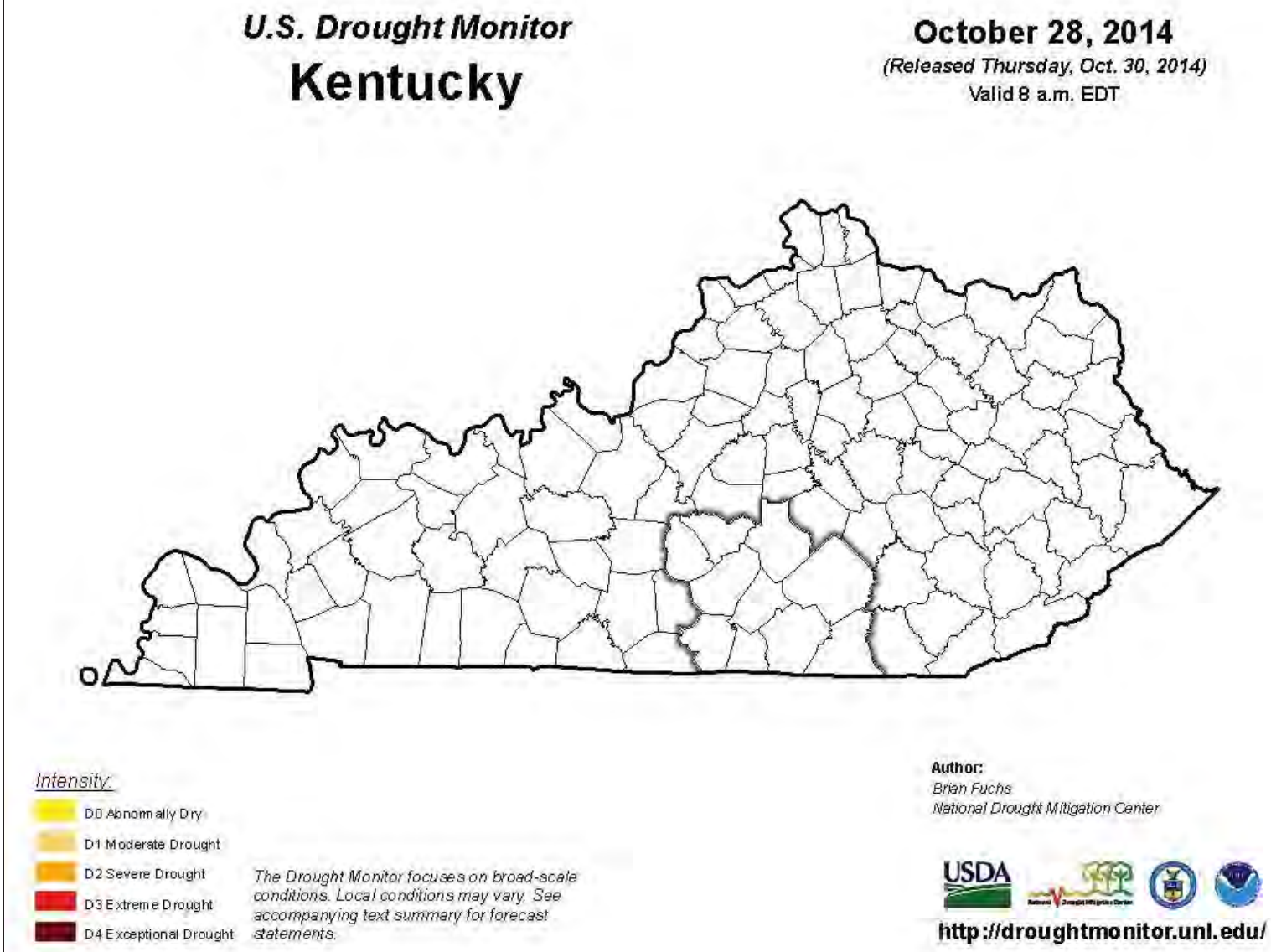
U.S. Drought Monitor
Kentucky
October 28, 2014
(Released Thursday, Oct. 30, 2014)
Valid 8 a.m. EDT
Intensity:
D0 Abnormally Dry
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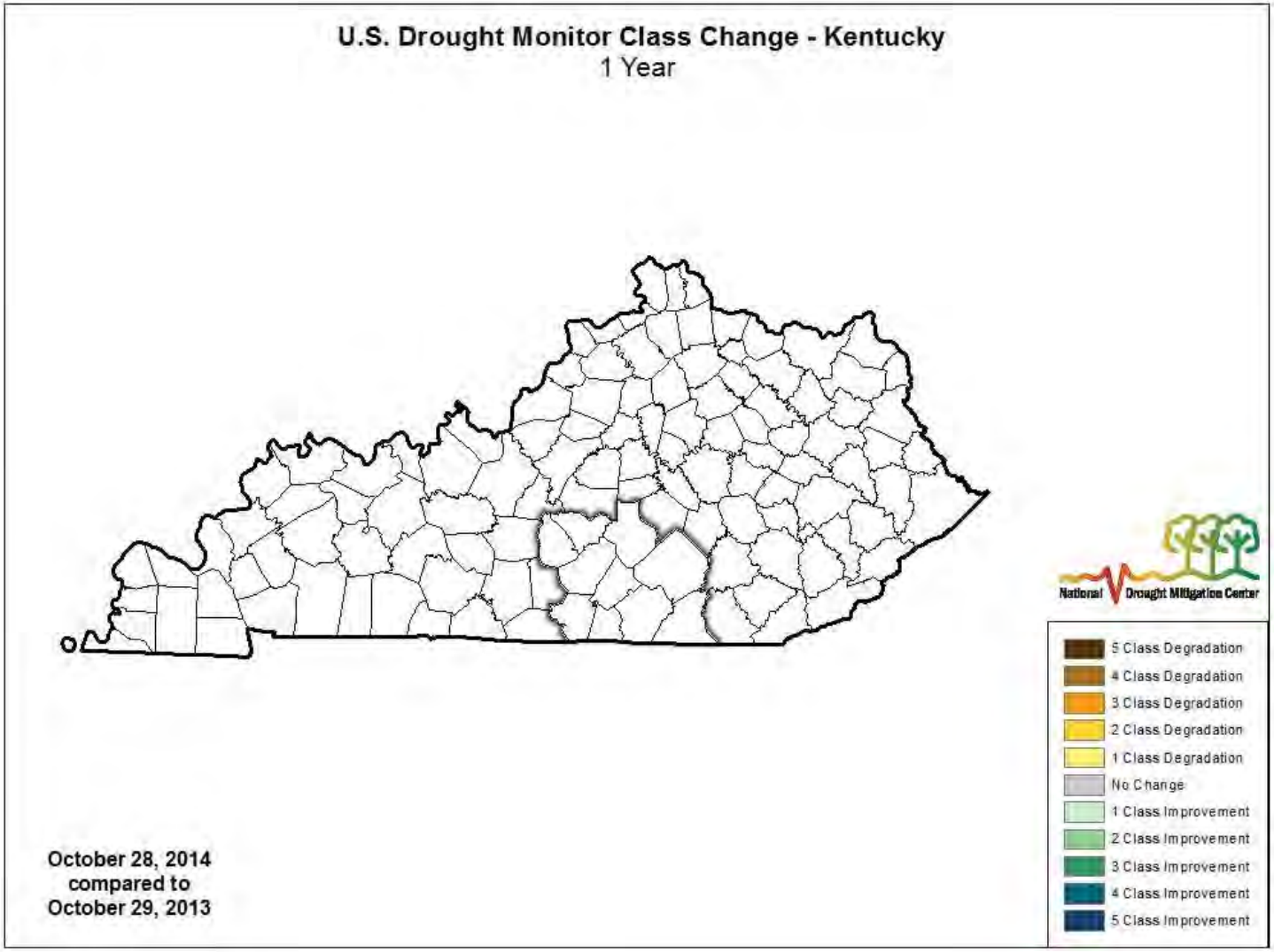

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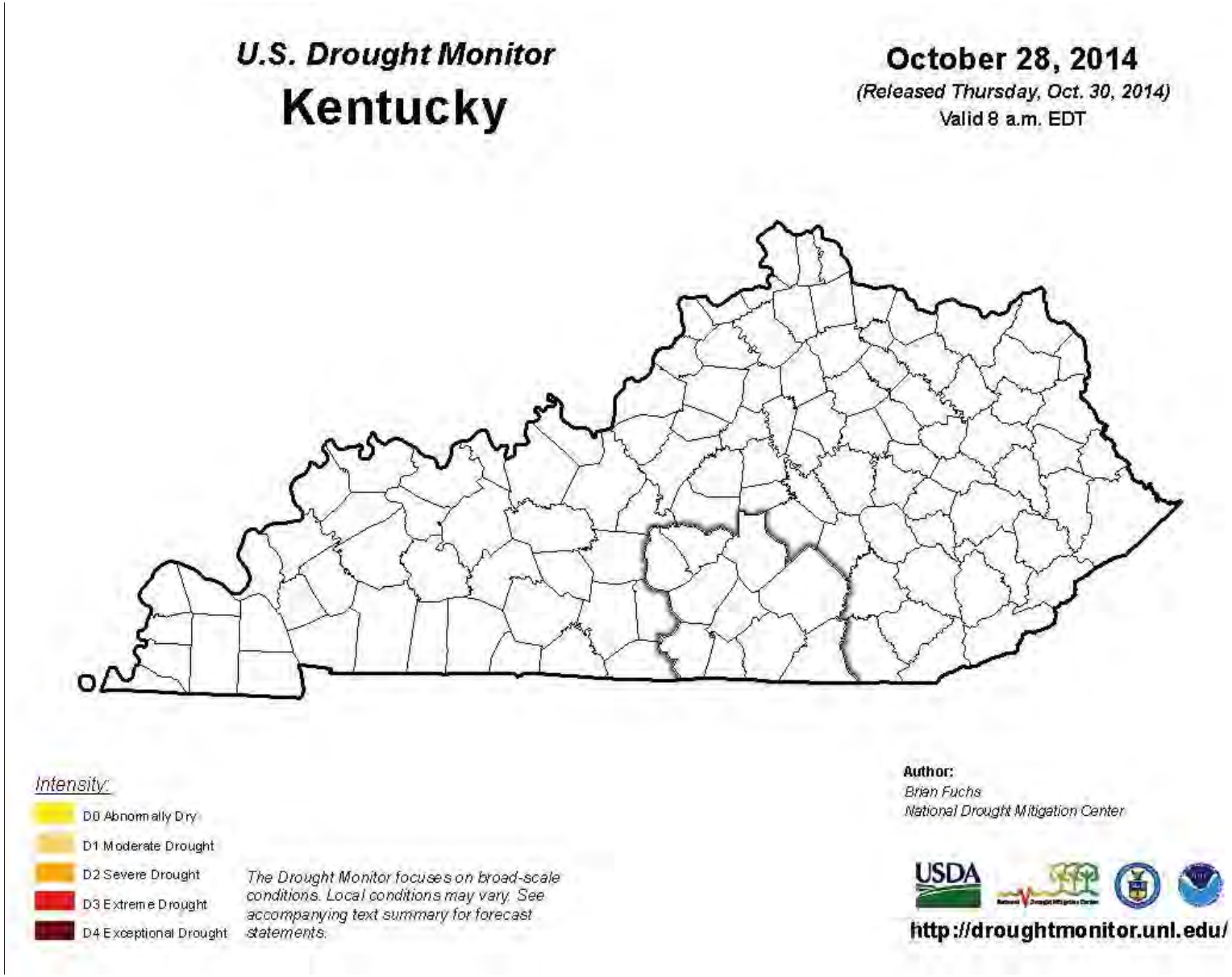
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October 28, 2014
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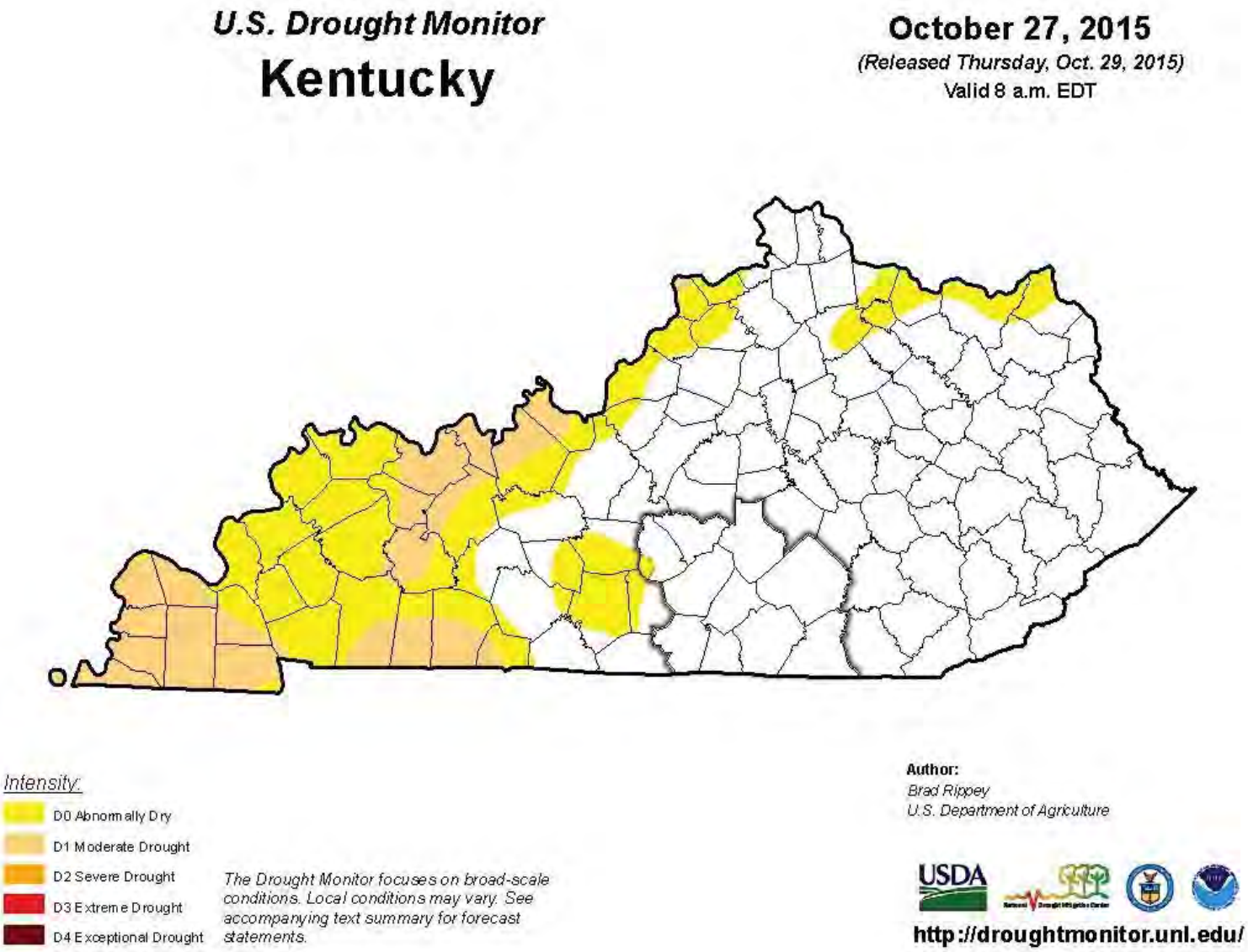
U.S. Drought Monitor
Kentucky
October 27, 2015
(Released Thursday, Oct. 29, 2015)
Valid 8 a.m. EDT
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
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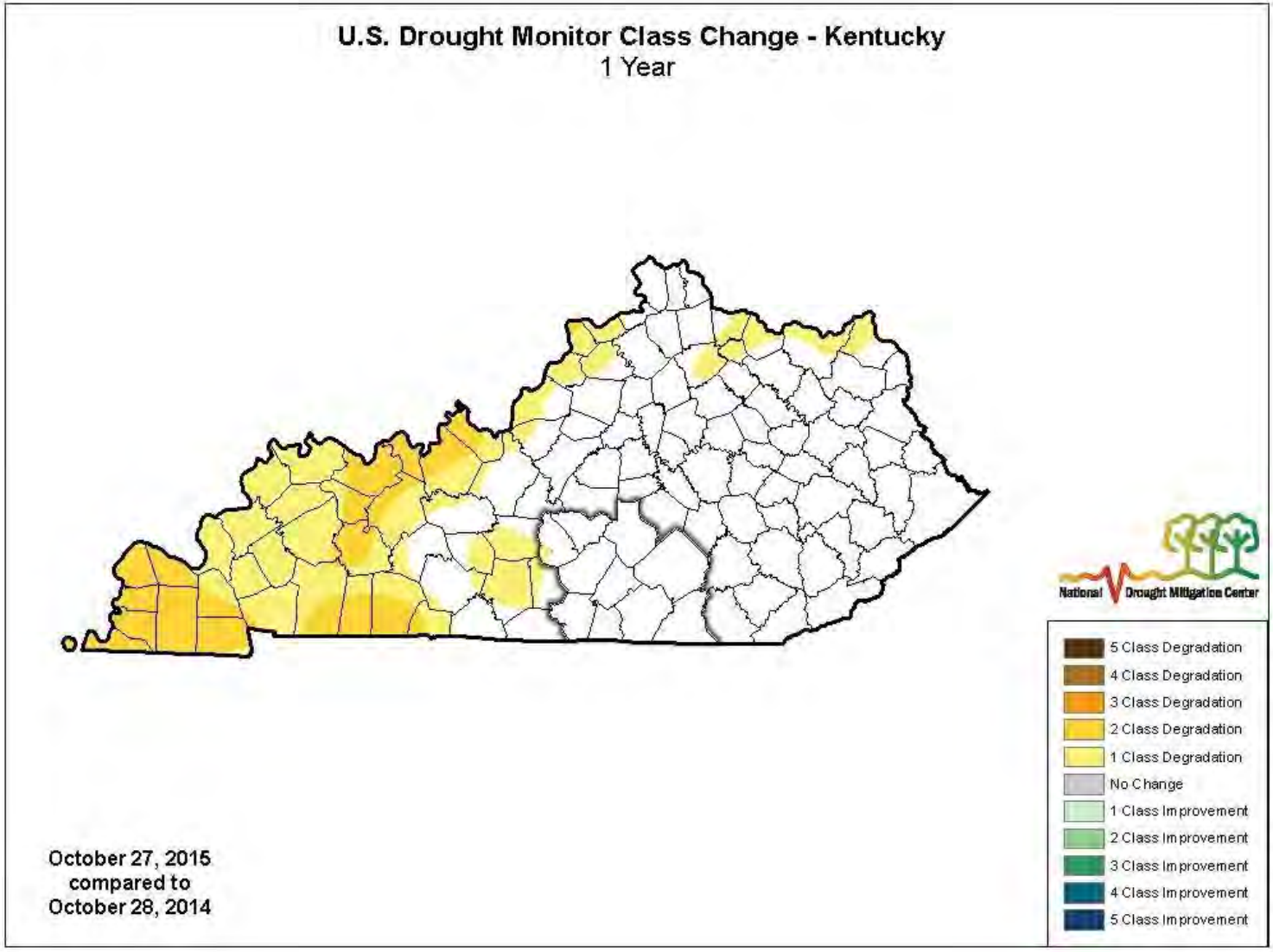
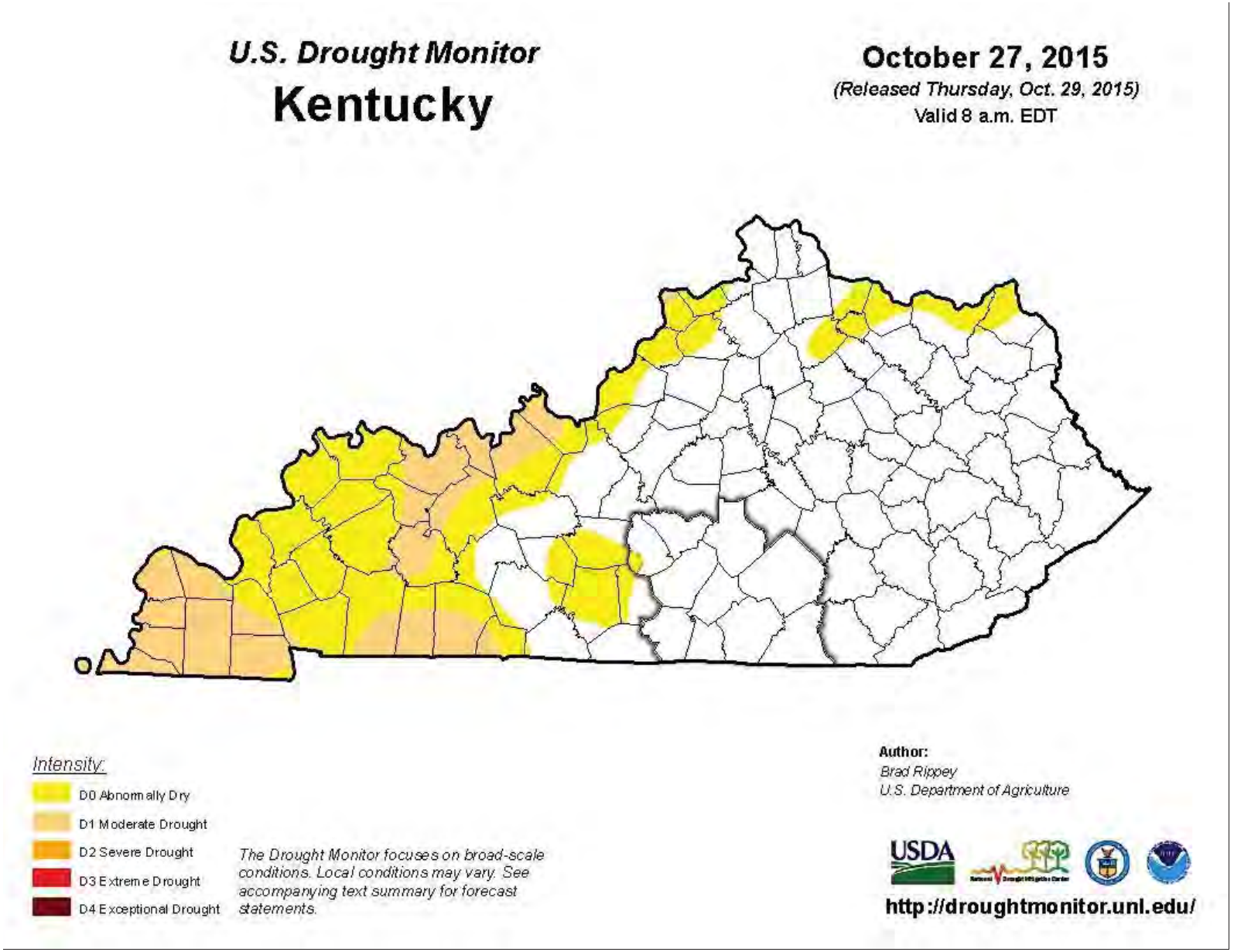
Author:
Brad Rippey
U.S. Department of Agriculture
USDA
http://droughtmonitor.unl.edu/



http://droughtmonitor.unl.edu


U.S. Drought Monitor
Kentucky
October 27, 2015
(Released Thursday, Oct. 29, 2015)
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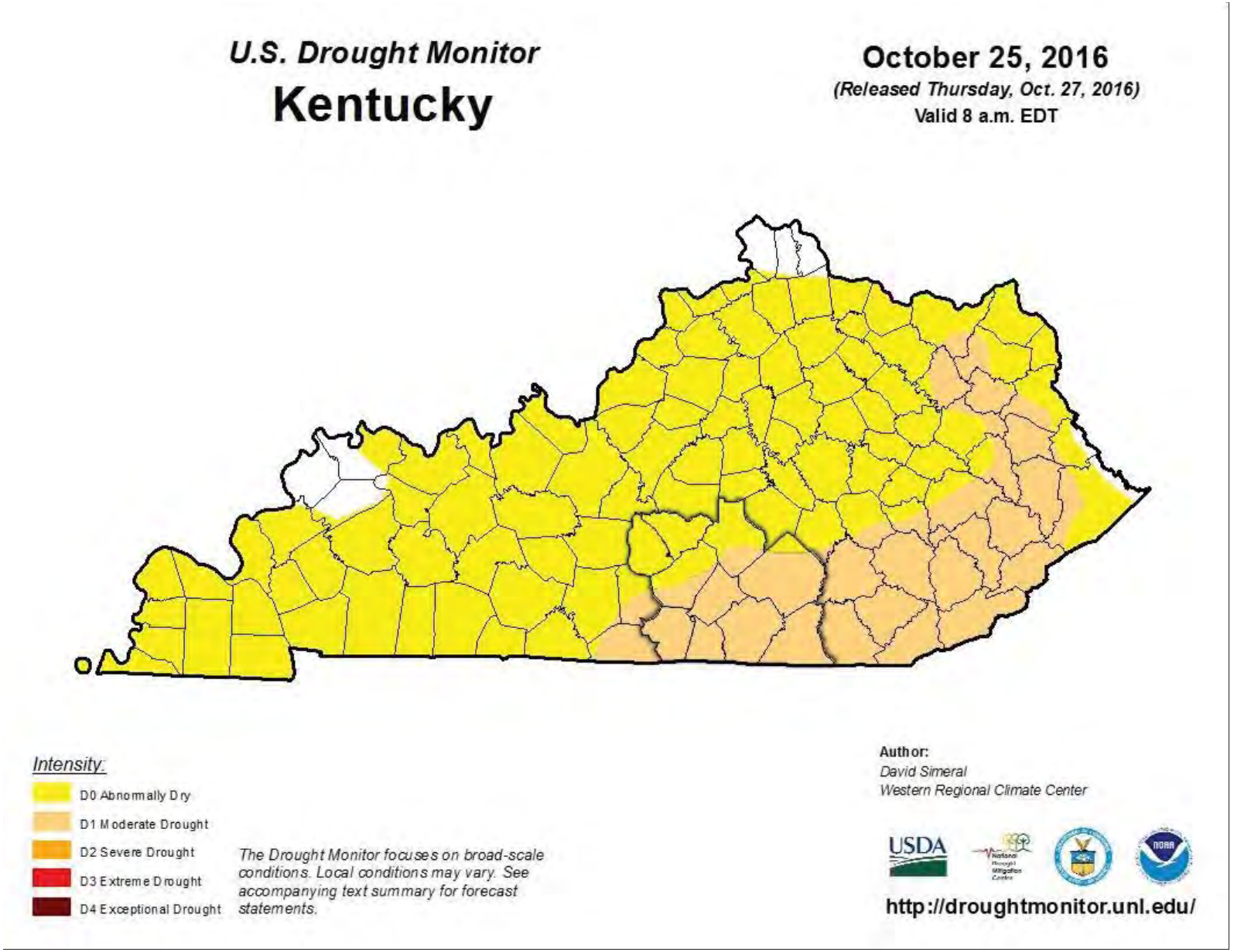
U.S. Drought Monitor
Kentucky
October 25, 2016
(Released Thursday, Oct. 27, 2016)
Valid 8 a.m. EDT
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
David Simeral
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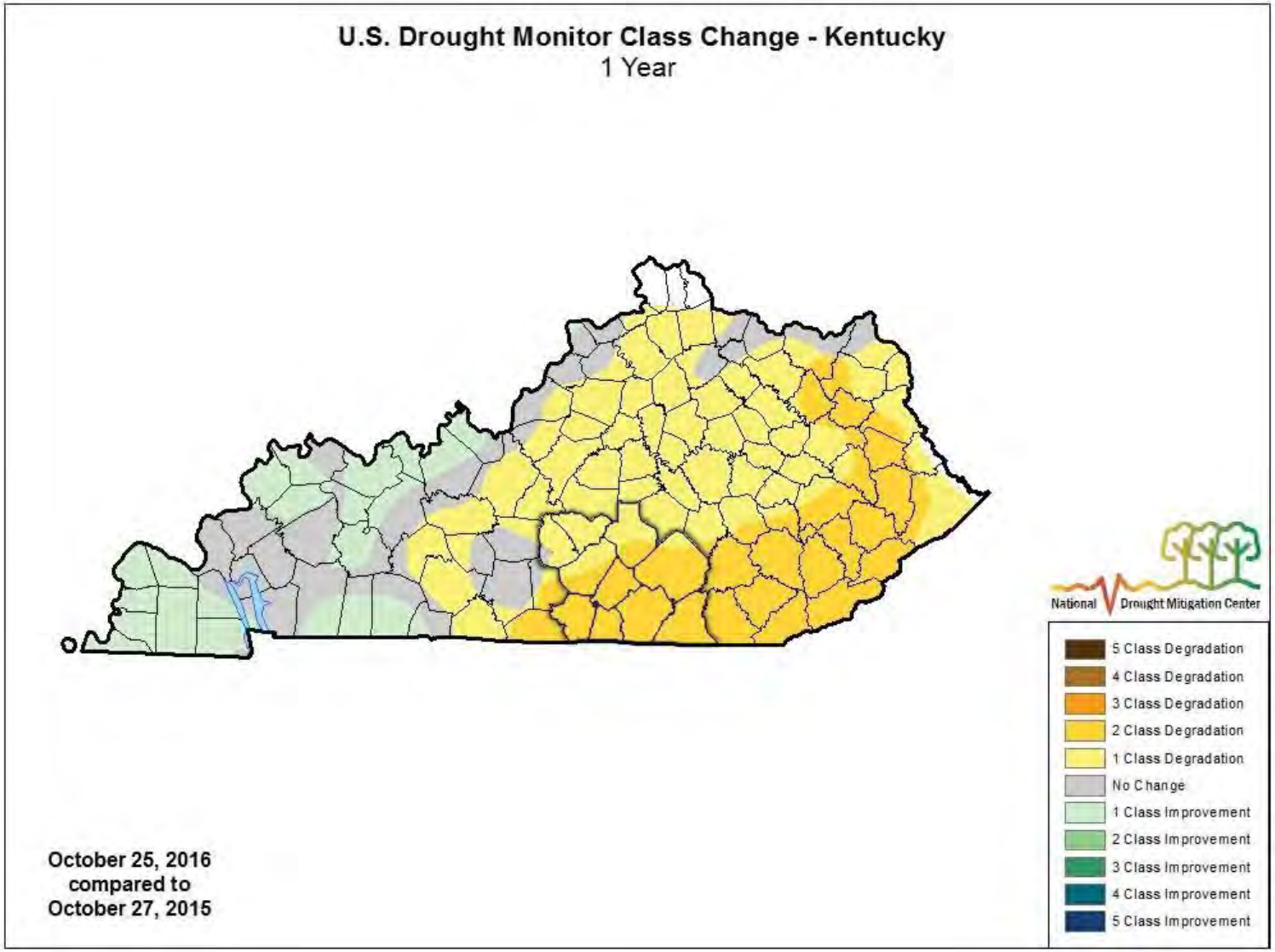

U.S. Drought Monitor Class Change - Kentucky
1 Year
National Drought Mitigation Center
5 Class Degradation
4 Class Degradation
3 Class Degradation
2 Class Degradation
1 Class Degradation
No Change
1 Class Improvement
2 Class Improvement
3 Class Improvement
4 Class Improvement
5 Class Improvement
October 25, 2016
compared to
October 27, 2015
http://droughtmonitor.unl.edu

The National Drought Mitigation Center launched the Drought Impact Reporter (DIR) in July 2005 as the nation's first comprehensive database of drought impacts. This update, released in fall 2011, collects and displays more types of information, providing researchers and interested members of the public with more context and detail, as well as more readily summarized information. The following table, Table 4.6.3, lists the ten county Lake Cumberland Region Drought Impacts for the years 1988 through 2016.

Table 4.6(3) - Drought Impact Reporter

Title	Post Date	Start Date	End Date	Description	Places
Visitors to Daniel Boone National Forest in Kentucky urged to be careful with fire	4/22/2016	4/18/2016		Visitors to the Daniel Boone National Forest were urged to be especially careful with fire, given the warm, dry conditions.WTVQ-TV Lexington (Ky.), April 18, 2016	McCreary County, Pulaski County
USDA Designates 42 Counties in Tennessee as Primary Natural Disaster Areas With Assistance to Producers in Surrounding States	9/17/2012	9/12/2012		The U.S. Department of Agriculture (USDA) Sept. 12 designated 42 counties in Tennessee as primary natural disaster areas due to damages and losses caused by drought and excessive heat that began April 1, 2012, and continues. Farmers in contiguous counties in Tennessee, Alabama, Kentucky, Mississippi, North Carolina and Virginia were also eligible for low-interest loans. USDA Farm Service Agency press release, Sept. 12, 2012	Clinton County, Cumberland County, McCreary County, Wayne County,

USDA Designates 7 Counties in Kentucky as Primary Natural Disaster Areas With Assistance to Producers in Surrounding States	9/10/2012	9/5/2012		The U.S. Department of Agriculture (USDA) has designated seven counties in Kentucky as primary natural disaster areas due to losses caused by excessive heat and drought that began April 1, 2012, and continues. The seven primary counties as well as contiguous counties in Kentucky, Indiana and Tennessee were designated natural disaster areas Sept. 5, 2012, making all qualified farm operators in the designated areas eligible for low interest emergency (EM) loans from USDA Farm Service Agency (FSA), provided eligibility requirements are met. USDA FSA press release, Sept. 5, 2012	Casey County, Cumberland County, Green County, Taylor County
Campgrounds in eastern Kentucky closed briefly as hungry bears seek food	8/9/2012	7/28/2012		The U.S. Forest Service closed the Holly Bay Campground at Laurel River Lake and Great Meadows Campground on July 28 due to hungry bears getting too close to park visitors. At the Holly Bay Campground, a bear broke into a cooler. A bear at the Great Meadows Campground came too close to people. â€œDue to the drought, this yearâ€™s berry crop was lost much earlier than normal in most parts of eastern Kentucky,â€• sai d a bear biologist with Kentucky Department of Fish and Wildlife Resources. â€œBerries are a primary important food source in mid-summer and without them, bears roam widely in search for food.â€• USDA Forest Service, July 30, 2012	McCreary County

List and Map of (Kentucky) Counties with Active Burn Bans	7/3/2012	7/1/2012		The Kentucky Division of Forestry listed 78 counties as having active burn bans as of July 1, 2012.	Clinton County, Cumberland County, McCreary County
June 29-July 1 Wildland Fire Activity (Kentucky Division of Forestry)	7/3/2012	6/29/2012	7/1/2012	Reporting Period: June 29 â€“ July 1, 2012; Number of Fires: 16; Acres Burned: 541. From the Kentucky Division of Forestry, July 2, 2012	Clinton County, Pulaski County

Level 2 Drought Declared in 24 Western Kentucky Counties; Agriculture hardest hit by lack of rainfall	7/3/2012	6/28/2012		The Office of the State Climatologist and the Kentucky Energy and Environment Cabinet, in coordination with the Kentucky Drought Mitigation Team, are issuing a Level 2 drought declaration for 24 counties in three Drought Management Areas (DMAs) in western Kentucky. In addition, a Level 1 drought has been declared for 66 counties in nine DMAs. Counties designated Level 2 can expect severe impacts to water-sensitive enterprises; depletion of water supplies in shallow wells, springs and ponds; increased incidences of wildfires; higher demands placed on water treatment facilities; and the imposition of water conservation advisories. A Level 1 drought indicates moderate to severe drought conditions have developed primarily affecting soil moisture and vegetation. Counties with this designation can expect reduced supplies of agricultural water and heightened risk of wildfires. Press release, June 28, 2012	Adair County, Casey County, Clinton County, Cumberland County, Green County, McCreary County, Pulaski County, Russell County, Taylor County, Wayne County

Small businesses in Tennessee eligible for assistance through the SBA	1/17/2012	5/1/2011	10/31/2011	Small businesses in Tennessee and four Kentucky counties were eligible for low-interest loans from the Small Business Administration for financial loss due to drought and high temperatures from May 1 through October 31, 2011. The primary counties were Anderson, Bledsoe, Blount, Bradley, Campbell, Cannon, Clay, Crockett, Cumberland, Davidson, Dekalb, Fayette, Fentress, Hamilton, Hardeman, Haywood, Jackson, Knox, Lauderdale, Loudon, Macon, Madison, McMinn, Meigs, Monroe, Morgan, Overton, Pickett, Polk, Putnam, Rhea, Roane, Rutherford, Scott, Sevier, Shelby, Smith, Sumner, Tipton, Trousdale, Van Buren, White and Wilson. The neighboring counties also eligible for aid include all counties in Tennessee not named as primary counties; Benton and Marshall counties in Mississippi; Cherokee, Graham and Swain counties in North Carolina; and Allen, McCreary, Monroe and Wayne in Kentucky. The declaration makes small businesses, small agricultural cooperatives, and nurseries eligible for loans through the Economic Injury Disaster Loan program. Farmers and ranchers should not apply. Applications must be received by August 29, 2012. Sacramento Bee (Calif.), Jan. 9, 2012	McCreary County, Wayne County

Natural disaster declarations for 63 Kentucky counties	11/12/2010	11/4/2010		Sixty-three counties in Kentucky were declared to be natural disaster areas by the U.S. Department of Agriculture due to drought since August 1, 2010. The counties affected by the declaration include Anderson, Ballard, Boone, Breckinridge, Bullitt, Butler, Caldwell, Calloway, Campbell, Carlisle, Carroll, Christian, Clark, Crittenden, Daviess, Fayette, Fleming, Franklin, Fulton, Gallatin, Garrard, Grant, Graves, Grayson, Hancock, Hardin, Harrison, Henderson, Henry, Hickman, Hopkins, Jefferson, Jessamine, Kenton, Larue, Lincoln, Livingston, Logan, Lyon, Madison, Marshall, McCracken, McLean, Meade, Muhlenberg, Nelson ,Nicholas, Ohio, Oldham, Owen, Pendleton, Powell, Rowan, Scott, Shelby, Simpson, Spencer, Todd, Trigg, Trimble, Union, Webster and Woodford counties. There are 28 counties that border the primary counties and are also eligible for aid. These contiguous counties are Allen, Bath, Bourbon, Boyle, Bracken, Carter, Casey, Edmonson, Elliott, Estill, Green, Hart, Jackson, Lee, Lewis, Marion, Mason, Menifee, Mercer, Montgomery, Morgan, Pulaski, Robertson, Rockcastle, Taylor, Warren, Washington and Wolfe. This declaration permits affected farmers, ranchers, and other agricultural producers to apply for low-interest emergency loans from the Farm Service Agency. Lexington Herald-Leader (KY), Nov. 5 and the USDA Farm Service Agency website	Casey County, Green County, Taylor County,

Sixty-three Kentucky counties given disaster designation	12/13/2010	8/1/2010	11/21/2010	Sixty-three counties in Kentucky were declared to be natural disaster areas by the U.S. Department of Agriculture due to continuing drought which began August 1, 2010. The counties affected by the declaration include Anderson, Ballard, Boone, Breckinridge, Bullitt, Butler, Caldwell, Calloway, Campbell, Carlisle, Carroll, Christian, Clark, Crittenden, Daviess, Fayette, Fleming, Franklin, Fulton, Gallatin, Garrard, Grant, Graves, Grayson, Hancock, Hardin, Harrison, Henderson, Henry, Hickman, Hopkins, Jefferson, Jessamine, Kenton, Larue, Lincoln, Livingston, Logan, Lyon, Madison, Marshall, McCracken, McLean, Meade, Muhlenberg, Nelson, Nicholas, Ohio, Oldham, Owen, Pendleton, Powell, Rowan, Scott, Shelby, Simpson, Spencer, Todd, Trigg, Trimble, Union, Webster, and Woodford counties. The neighboring counties of Allen, Bath, Bourbon, Boyle, Bracken, Carter, Casey, Edmonson, Elliott, Estill, Green, Hart, Jackson, Lee, Lewis, Marion, Mason, Menifee, Mercer, Montgomery, Morgan, Pulaski, Robertson, Rockcastle, Taylor, Warren, Washington, and Wolfe are also eligible for assistance. This declaration permits affected farmers, ranchers, and other agricultural producers to apply for low-interest emergency loans from the Farm Service Agency. Louisville Courier-Journal (KY), Nov. 21 and the USDA Farm Service Agency website.	Casey County, Green County, Pulaski County, Taylor County

Nearly $5 million loss in Kentucky from frothy bloat	7/12/2010	7/11/2010		An extension beef cattle specialist from the University of Kentucky surveyed extension agents in the state about the occurrence of frothy bloat and found that the north-central and central parts of the state are most affected with losses estimated at nearly $5 million.	Taylor County
Fourteen Kentucky counties eligible for assistance through the Small Business Administration	9/21/2011	6/1/2010	2/17/2011	Small businesses in 14 Kentucky counties were eligible for federal disaster loans from the Small Business Administration for financial loss due to drought and heat since June 1, 2010. The counties include Allen, Calloway, Christian, Clinton, Cumberland, Fulton, Hickman, Logan McCreary, Monroe, Simpson, Todd, Trigg and Wayne. The declaration makes small businesses, small agricultural cooperatives, and nurseries eligible for loans through the Economic Injury Disaster Loan program. Farmers and ranchers should not apply. Applications must be received by October 17, 2011.	Clinton County, Cumberland County, McCreary County, Wayne
Hay production down, peaches small in Cumberland County, Kentucky	12/19/2011	6/1/2010	7/9/2010	Grass is turning brown. Some trees have leaves that are turning brown. Hay production is about half of last year. Hay field after cutting is brown. Runoffs are dry. Gardens need rain badly. Had to water garden to keep it going till it rains. Fruits on peach trees are small from lack of rain. Pattern appears to be like it was during 2008. Fields look like it is late August.	Cumberland County

Dry, warm conditions in Kentucky lead to burning restrictions	4/14/2010	4/14/2010		Twenty-one Kentucky counties have bans on outdoor burning because there has been little rainfall and higher than normal temperatures, leading to increased fire danger. The counties with bans include Bell, Breathitt, Clay, Estill, Fayette, Floyd, Greenup, Harlan, Jackson, Johnson, Knox, Laurel, Lawrence, Leslie, Letcher, Magoffin, McCreary, Perry, Pike, Powell and Rockcastle.	McCreary County
Fire impact from Media submitted on 10/9/2008	10/9/2008	10/8/2008	11/14/2008	Campfires are prohibited except in developed recreation areas in the Daniel Boone National Forest. People must not construct, maintain, or use fire, charcoal, or campfire, except at a developed recreational site. The emergency order is effective for 120 days or sooner if conditions warrant. Impact Source: Media More Information: http://www.thetimestribune.com/local/local_story_282090856.html	McCreary County
Fire impact from Media submitted on 10/7/2008	10/7/2008	10/4/2008	10/4/2008	A burn ban is in effect for Russell County, due to the dry conditions. Burn barrels may not be used. The ban will remain until significant rain falls. Impact Source: Media More Information: http://russellcounty.net/news.php?subaction=showfull&id=1223042446&archive=&start_from=&ucat=3&	Russell County

Fire impact from Government submitted on 10/1/2008	10/1/2008	10/1/2008	10/1/2008	There are 46 counties in Kentucky with burn bans in effect due to dry conditions and elevated fire danger. The most recent additions include Adair, Ballard, Barren, Breckinridge, Caldwell, Calloway, Carlisle, Crittenden, Fulton, Graves, Grayson, Hancock, Hickman, Lyon, Mason, McCracken, Metcalfe, Trigg, Warren and Woodford. Impact Source: Government More Information: http://www.forestry.ky.gov/situationreport/	Adair County
Relief, Response & Restrictions impact from Media submitted on 8/7/2007	8/7/2007	8/7/2007	8/7/2007	The U.S. Department of Agriculture has declared 17 Kentucky counties to be contiguous disaster areas due to drought. These counties are adjacent to counties in Tennessee that were recently declared primary disaster areas due to drought. Farmers in the disaster counties are now allowed to apply to low-interest emergency loans through the Farm Service Agency (FSA).Impact Source: Media More Information: http://www.wkyxwngo.com/local-news-details.asp?NewsID=4499	Clinton County, Cumberland County, McCreary County, Wayne County
Society & Public Health impact from Media submitted on 6/27/2007	6/27/2007	6/27/2007	10/25/2007	Fireworks have been banned in the Daniel Boone National Forest for 120 days due to the fire danger from drought. People lighting fireworks or who simply possess fireworks may be fined $75. Possessing and/or lighting fireworks is already banned in recreational areas, according to the forest service. Since the beginning of the year, there have been 70 fires that have burned over 5,800 acres. Impact Source: Media More Information: http://www.wave3.com/Global/story.asp?S=6715390&nav=menu31_3	McCreary County, Pulaski County

Water Supply & Quality impact from Media submitted on 6/26/2007	6/26/2007	6/26/2007	6/26/2007	An employee for the state Division of Water stated that twelve water systems in ten Kentucky counties were requesting their customers to voluntarily conserve water. The ten counties are Casey, Garrard, Harrison, Pulaski, Russell, Scott, Shelby, Madison, Grant and Warren. One water system, the South Woodford County Water District has mandatory water restrictions. Impact Source: Media More Information: http://www.kentucky.com/179/story/107905.html	Casey County, Pulaski County, Russell County
Trout limited increased on lower Cumberland River as water temperature rises	11/16/2009	6/16/2007		The trout limit on the lower Cumberland River has been increased to ten trout because drought conditions are reducing the amount of the water in the Cumberland River, in addition to the Lake Cumberland drawdown. With less water flowing in the river, the water warms more quickly, which threatens the survival of trout, a cold water species. The limit change is in effect from the Tennessee border to one hundred yards above the Burkesville public boat ramp.	Cumberland County

Water Supply & Quality impact from Media submitted on 6/15/2007	6/15/2007	6/15/2007	6/15/2007	A water shortage watch was issued by the Environmental and Public Protection Cabinet for 61 counties in Kentucky, due to drought conditions and low water supplies. Water shortage watches are declared when drought threatens to deplete a normally adequate water supply. The 61 counties include Muhlenberg, Ohio, Simpson, Adair, Allen, Barren, Butler, Casey, Clinton, Cumberland, Edmonson, Green, Hart, Larue, Marion, Metcalfe, Monroe, Nelson, Russell, Taylor, Warren, Anderson, Bath, Bourbon, Boyle, Clark, Fayette, Franklin, Garrard, Harrison, Jessamine, Lincoln, Madison, Mercer, Montgomery, Nicholas, Owen, Scott, Shelby, Spencer, Washington, Woodford, Bell, Clay, Estill, Harlan, Jackson, Knox, Laurel, Lee, Leslie, Letcher, McCreary, Menifee, Owsley, Powell, Pulaski, Rockcastle, Wayne, Whitley and Wolfe. Residents in these counties should abide by local restrictions on water use. Impact Source: Media More Information: http://www.newschannel5.com/Global/story.asp?S=6663597&nav=menu374_2_9	Adair County, Clinton County, Cumberland County, Green County, McCreary County, Pulaski County, Russell County, Taylor County, Wayne County

Plants & Wildlife impact from Public submitted on 6/16/2007	6/16/2007	6/14/2007	11/14/2007	The following report was submitted. Drought conditions combined with Cumberland Lake drawdown due to leaks in Wolfe Creek Dam have resulted in minimal flow downstream from the dam. This is a popular trout fishing area, and trout are threatened by increasing stream temperatures due to low flow. Fish and wildlife officials announced an increase in the limit of trout that fisherman can take from the river in response to the threat. Impact Source: Public	Russell County
Water Supply & Quality impact from Media submitted on 5/31/2007	5/31/2007	5/30/2007	5/30/2007	Residents of Pulaski are asked to conserve water because demand has been high recently. Lake Cumberland supplies Pulaski with water and is 30 to 40 feet lower than it was last summer. Impact Source: Media More Information: http://www.wkyt.com/home/headlines/7751767.html	Pulaski County
Fire impact from Media submitted on 10/5/2007	10/5/2007	1/1/2007	1/5/2008	Almost 6,500 acres have already burned in the Daniel Boone National Forest in 2007, which is over twice the acreage burned last year. A burning ban is currently in effect for the forest for the next 120 days. Impact Source: Media More Information: http://www.wate.com/Global/story.asp?S=7172844&nav=menu7_2_11	McCreary County, Pulaski County

Society & Public Health impact from Media submitted on 2/2/2006	2/2/2006	1/31/2006	1/31/2006	The U.S. Small Business Association (SBA) declared the entire state of Kentucky except Fulton County a federal drought disaster area. Under the declaration, small non-farm agriculture-dependent businesses and small agricultural cooperatives adversely affected by the droughts effect on agricultural producers are eligible for SBA's Economic Injury Disaster Loan Program. Examples of eligible businesses are farm implement dealers, seed and feed stores, and spraying and irrigation businesses. Farmers and ranchers are not eligible, but nurseries are. Qualifying small businesses may be eligible for loans up to $1.5 million, available at a 4% interest rate with loan terms up to 30 years. The deadline for loan applications is June 26, 2006. Impact Source: Media More Information: http://blackenterprise.yellowbrix.com/pages/blackenterprise/Story.nsp?story_id=88774650&ID=blackenterprise&scategory=Small+Business%3ASmall+Business+Administration&	Adair County, Casey County, Clinton County, Cumberland County, Green County, McCreary County, Pulaski County, Russell County, Taylor County, Wayne County, Webster County

Plants & Wildlife impact from Media submitted on 9/8/2006	9/8/2006	6/28/1988	6/28/1988	Food plots were planted for wildlife along the Green River in Taylor and Adair counties in Kentucky. Due to drought, the plots weren't growing. Statewide, woodland nuts weren't as abundant as in other years, which affect the well-being of animals who feed on them, such as squirrels, chipmunks, woodchucks and some birds, such as blue jays. Rattlesnakes and copperheads have been witnessed near rivers and streams as they seek water, although those snakes normally reside in the woods. (From Daily News, Bowling Green, Kentucky, June 28, 1988, "Man, beast drawn closer by drought", by Wayne Boblitt, p. 1, 3)Impact Source: Media	Adair County, Taylor County
Fire impact from Media submitted on 9/13/2006	9/13/2006	6/21/1988	7/1/1988	Fireworks have been prohibited in the Daniel Boone National Forest until further notice due to extremely dry conditions and fire danger. Normally, spring and fall are the usual fire seasons, but this year fires have burned through the summer also, due to the lack of precipitation. These summer fires are especially detrimental to the forest because the larger trees have become quite dry from the drought and create a fire that burns more thoroughly and for prolonged periods of time. (From Times Tribune, July 1, 1988, "Drought creates serious fire danger in area forests", by Mary Branham)Impact Source: Media	McCreary County, Pulaski County, Wayne County

[61]

[61] The National Drought Mitigation Center, Drought Impact Reporter; http://droughtreporter.unl.edu/advancedsearch/impacts.aspx

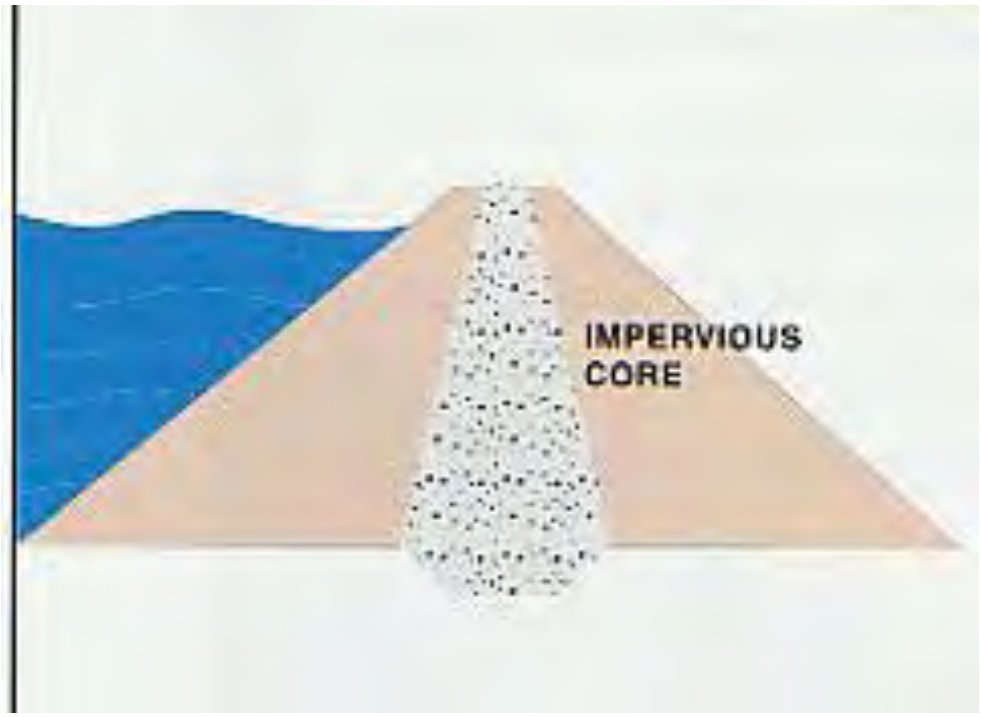
4.7 Dam Failures / Breaches

The purpose of a dam is to impound (store) water, wastewater or liquid borne materials for any of several reasons, e.g. flood control, human water supply, irrigation, livestock water supply, energy generation, containment of mine tailings, recreation, or pollution control. Many dams fulfill a combination of the above functions.

Manmade dams may be classified according to the type of construction material used, the methods used in construction, the slope or cross-section of the dam, the way the dam resists the forces of the water pressure behind it, the means used for controlling seepage and, occasionally, according to the purpose of the dam.

The materials used for construction of dams include earth, rock, tailings from mining or milling, concrete, masonry, steel, timber, miscellaneous materials (such as plastic or rubber) and any combination of these materials.

Embankment dams are the most common type of dam in use today. They have the general shape shown here.



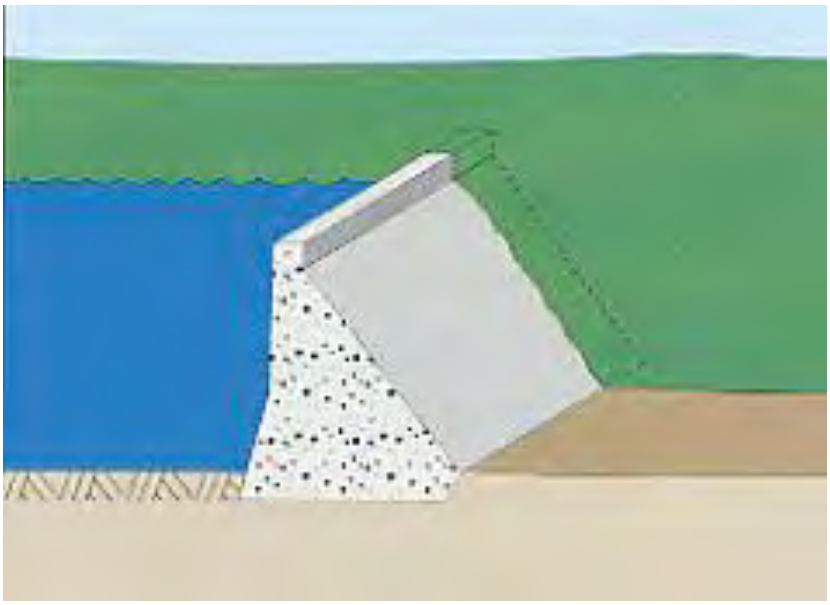
Materials used for embankment dams include natural soil or rock, or waste materials obtained from mining or milling operations. An embankment dam is termed an “earthfill” or “rockfill” dam depending on whether it is comprised of compacted earth or mostly compacted or dumped rock.

The ability of an embankment dam to resist the reservoir water pressure is primarily a result of the mass weight, type and strength of the materials from which the dam is made.

Concrete dams may be categorized into gravity and arch dams according to the designs used to resist the stress due to reservoir water pressure.

Typical concrete gravity dams are shown here and are the most common form of concrete dam. The mass weight of concrete and friction resist the reservoir water pressure.

A buttress dam is a specific type of gravity dam in which the large mass of concrete is reduced, and the forces are diverted to the dam foundation through vertical or sloping buttresses.

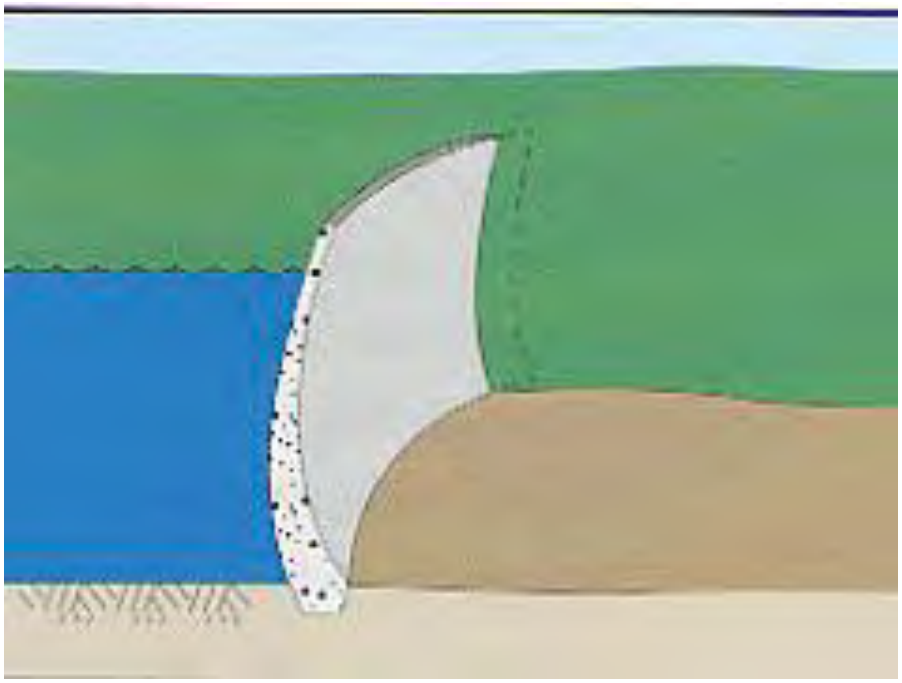


Gravity dams are constructed of vertical blocks of concrete with flexible seals in the joints between the blocks.

Concrete arch dams are typically rather thin in cross-section. The reservoir water forces acting on an arch dam are carried laterally into the abutments.

The shape of the arch may resemble a segment of a circle or an ellipse, and the arch may be curved in the vertical plane as well. Such dams are usually constructed of a series of thin vertical blocks that are keyed together; barriers to stop water from flowing are provided between blocks.

Variations of arch dams include multi-arch dams in which more than one curved section is used, and arch-gravity dams which combine some features of the two types of dams.



All dams have two main jobs, water retention and seepage control. The main purpose of a dam is to retain water effectively and safely. The water retention ability of a dam is of prime importance for dam safety. Water may pass from the reservoir to the downstream side of a dam by:

- ≠ Passing through the main spillway or outlet works
- ≠ Passing over an auxiliary spillway
- ≠ Overtopping the dam
- ≠ Seepage through the abutments
- ≠ Seepage under the dam

Overtopping of an embankment dam is very undesirable because the embankment materials may be eroded away. Additionally, only a small number of concrete dams have been designed to be overtopped. Water normally passes through the main spillway or outlet works; it should pass over an auxiliary spillway only during periods of high reservoir levels and high water inflow. All embankment and most concrete dams have some seepage. However, it is important to control the seepage to prevent internal erosion and instability. Proper dam construction, and maintenance and monitoring of seepage provide this control.

Intentional release of water is confined to water releases through outlet works and spillways. A dam typically has a principal or mechanical spillway and a drawdown facility. Additionally, some dams are equipped with auxiliary spillways to manage extreme floods.

Outlet Works—In addition to spillways that ensure that the reservoir does not overtop the dam, outlet works may be provided so that water can be drawn continuously, or as needed, from the reservoir. They also provide a way to draw down the reservoir for repair or safety concerns. Water withdrawn may be discharged into the river below the dam, run through generators to provide hydroelectric power, or used for irrigation. Dam outlets usually consist of pipes, box culverts or tunnels with intake inverts near minimum reservoir level. Such outlets are provided with gates or valves to regulate the flow rate.

Spillways—The most common type of spillway is an ungated concrete chute. This chute may be located over the dam or through the abutment. To permit maximum use of storage volume, movable gates are sometimes installed above the crest to control discharge. Many smaller dams have a pipe and riser spillway, used to carry most flows, and a vegetated earth or rockcut spillway through an abutment to carry infrequent high flood flows. In dams such as those on the Mississippi River, flood discharges are of such magnitude that the spillway occupies the entire width of the dam and the overall structure appears as a succession of vertical piers supporting movable gates. High arch-type dams in rock canyons usually have downstream faces too steep for an overflow spillway. In Hoover Dam on the Colorado River, for example, a shaft spillway is used. In shaft spillways, a vertical shaft upstream from the dam drains water from the reservoir when the water level becomes high enough to enter the shaft or riser; the vertical shaft connects to a horizontal conduit through the dam or abutment into the river below.
Causes of Dam Failures

Overtopping of a dam is often a precursor of dam failure. National statistics show that overtopping due to inadequate spillway design, debris blockage of spillways, or settlement of the dam crest account for approximately 34% of all U.S. dam failures.

Foundation defects, including settlement and slope instability, cause about 30% of all dam failures.

Another 20% of U.S. dam failures have been caused by piping (internal erosion caused by seepage). Seepage often occurs around hydraulic structures, such as pipes and spillways; through animal burrows; around roots of woody vegetation; and through cracks in dams, dam appurtenances, and dam foundations.

Other causes of dam failures include structural failure of the materials used in dam construction and inadequate maintenance.[62]

Kentucky Dam Safety starts with KRS 151.293, Section 6, that authorizes the Energy and Environment Cabinet to inspect existing structures that meet the definition of a dam. The Dam Safety and Floodplain Compliance Section of the Water Infrastructure Branch maintain a list of these structures in an inventory database. In determining the frequency of inspection of a particular dam, the cabinet takes into consideration the size and type, topography, geology, soil

[62] Association of State Dam Safety Officials, Introduction to Dams; http://www.damsafety.org/news/?p=e4cda171-b510-4a91-aa30-067140346bb2

condition, hydrology, climate, use of the reservoir, the lands lying in the floodplain downstream and the hazard classification of the dam. These factors go into the Dam Classifications of regulated dams.

Table 4.7(1) - KY DOW Dam Safety Classifications

High Hazard (C)	Structures located such that failure may cause loss of life or serious damage to houses, industrial or commercial buildings, important public utilities, main highways or major railroads.
Moderate Hazard (B)	Structures located such that failure may cause significant damage to property and project operation, but loss of human life is not envisioned.
Low Hazard (A)	Structures located such that failure would cause loss of the structure itself but little or no additional damage to other property.
High- and moderate-hazard dams are inspected every two years. Low-hazard dams are inspected every five years. If the structure meets all the necessary requirements as outlined in Engineering Memorandum No. 5, a Certificate of Inspection is issued to the owner. Otherwise, the owner is notified of any deficiencies.	

[63]

[63] Division of Water Dam Safety Downloads, Dam Safety Information; http://water.ky.gov/damsafety/Documents/DamSafety.doc

Table 4.7(2) – Kentucky Regulated Dams - Lake Cumberland Region

Dam Name	Hazard Rating	County
Pinewood Country Club Lake Dam	A	Adair
Larry Legg Lake Dam	A	Adair
David Tarter	C	Adair
Hickory Hills Country Club Dam	A	Casey
Devil Harbor Lake	C	Casey
Liberty Reservoir	C	Casey
Keystone Foods Dam (North)	B	Clinton
Keystone Foods Dam (West)	B	Clinton
Stearns Reservoir Dam	A	Mccreary
Laurel Creek Lake Dam	B	Mccreary
Cooper Dam	A	Mccreary
Drexel Campbell Lake (Old)	A	Mccreary
Drexel Campbell Lake (New)	A	Mccreary
Bridge Fork Dam	B	Mccreary
Worley Lake Dam	A	Mccreary
Walter Baird Dam	A	Mccreary
Eagle Falls Resort & Restaurant	B	Mccreary
Somerset Reservoir Dam	A	Pulaski
East Ky Power Corp Ash Storage Dam No 1	A	Pulaski
Mcclellan Prewitt Dam	A	Pulaski
Eagles Nest Dam (Lower)	A	Pulaski
East Kentucky Power Ash Storage Dam (2)	C	Pulaski
Ikerd Farms Lake	A	Pulaski
Eagles Nest Dam (Upper)	A	Pulaski
Parker Delt Lake Dam	A	Pulaski
Mcclure Dam Farm Dam	A	Russell
Clifton Antle	A	Russell
Leo Reader Dam	A	Russell
Ansel Carrender Dam	A	Russell
Oakland Lake Dam	A	Taylor
Ferrill Reservoir Dam	A	Taylor
Porter Reservoir Dam	A	Taylor
Caulk Lake Dam	A	Taylor
Spurlington Lake Dam	A	Taylor
Campbellsville Reservoir Dam	B	Taylor
Glenn Hawkins Lake (Upper)	A	Taylor
Glenn Hawkins Lake (Lower)	A	Taylor

The National Inventory of Dams (NID) is a database of dams in the United States which was developed and is maintained by the USACE. Congress authorized the USACE to inventory dams as part of the 1972 National Dam Inspection Act. Several subsequent acts have authorized maintenance of the NID and provided funding. The USACE collaborates with FEMA and state regulatory offices to collect data on dams. The goal of the NID is to include all dams in the United States which meet at least one of the following criteria:

Table 4.7(3) – National Inventory of Dams (NID) Dam Safety Classifications

High hazard classification	loss of at least one human life is likely if the dam fails
Significant hazard classification	possible loss of human life and likely significant propert y or environmental destruction
Low hazard classification	Equal or exceed 25 feet in height and exceed 15 acre-feet in storage or Equal or exceed 50 acre-feet storage and exceed 6 feet in height, dams which do not meet the criteria specified are not included in the NID even if they are regulated according to state criteria. In some states, the number of these dams is several times the number of dams included in the NID.

[64]

Table 4.7(4) – Kentucky/LCADD NID Dams Over 50'

Dam Name	NIDID	Hazard	Own Name	Year Completed	County
Liberty Reservoir Dam	ky00820	H	City Of Liberty	1979	Casey
Bridge Fork Dam	ky00568	S	Norfolk Southern Railroad	1930	McCreary
Cumberland Falls Pay Lake Dam	ky00860	S	The Falls Incorporated	1960	McCreary
East Ky. Power Corp Ash Storage Dam (1)	ky00398	L	East Ky Power Coop	1961	Pulaski
Wolf Creek Dam - Lake Cumberland	ky03010	H	Celrn	1951	Russell
Green River Lake Dam	ky03007	H	Celrl	1969	Taylor
Caulk Lake Dam	ky00137	L	Wallace Garrett	1950	Taylor

No record could be found of any previous dam failures in the LCADD region. The only past dam emergency action was taken on Wolf Creek Dam on the Cumberland River. The US Army Corps of Engineers placed Wolf Creek Dam at high risk for failure in 2005-2006.

[64] CorpsMap: The National Inventory of Dams (NID); http://nid.usace.army.mil/cm_apex/f?p=838:1:0::NO

Wolf Creek Dam was designed and constructed during the period 1938-1952, the 5,736 foot-long dam is a combination rolled earth fill and concrete gravity structure. It has a maximum height of 258 feet above founding level. A six- generator-unit power plant, with a capacity of 270,000 KW, is located immediately downstream. US Highway 127 crosses the top of the dam. Lake Cumberland, created by the dam, impounds 6,089,000 acre-feet at its maximum pool elevation of 760. It is the largest reservoir east of the Mississippi and the ninth largest in the United States.

In 1968, muddy flows in the tailrace and two sinkholes near the downstream toe of the embankment signaled serious reservoir seepage problems. Investigations indicated the problems were due to the karst geology of the site characterized by an extensive interconnected network of solution channels in the limestone foundation. Piping of filling materials in these features and collapse of overburden and embankment into the voids caused the problems. The District immediately began an emergency investigation and grouting program between 1968 and 1970 that is generally credited with saving the dam. However, grouting was not a long-term fix and a more permanent solution was sought. After studying numerous alternatives, the District chose to construct a concrete diaphragm wall through the earth embankment into the rock foundation to block the seepage. This wall was constructed between 1975 and 1979.

Since completion of the wall in 1979, Wolf Creek Dam personnel have continued to closely monitor the project. Key instrumentation readings, persistent and increasing wet areas, and investigative borings that encountered soft, wet material at depth in the embankment confirm solution features still exist that have not been cut off. While the original wall interrupted the progression of erosion, seepage has since found new paths under and around the wall and perhaps through defects in the wall itself as erosion of solution features continues.

The U.S. Army Corps of Engineers Nashville District completed a Major Rehabilitation Report to evaluate alternatives to improve the long-term reliability of the Wolf Creek Dam. The recommended alternative will cost about $594 million. The main phase of construction began in March 2006 and was completed in March 2013 when the last concrete was placed for the 4,000-foot-long barrier wall through the dam's earthen embankment.

In January 2007 a decision was made to lower the lake levels to the 680-foot elevation to reduce pressures on the dam. This lake level was maintained until the spring of 2013 when the barrier wall was completed. The lake was partially raised during 2013 as test on the barrier wall and in 2014 the lake levels returned to historic levels after the barrier wall performed as expected to the higher lake levels.[65]

[65] U.S. Army Corps of Engineers Nashville District, Wolf Creek Dam Safety Rehabilitation Project; http://www.lrn.usace.army.mil/Missions/Current-Projects/Construction/Wolf-Creek-Dam-Safety-Rehabilitation-Project/

4.8 Expansive Soil

Expansive soils contain minerals such as smectite clays that are capable of absorbing water. When they absorb water they increase in volume. The more water they absorb the more their volume increases. Expansions of ten percent or more are not uncommon. This change in volume can exert enough force on a building or other structure to cause damage.

Cracked foundations, floors and basement walls are typical types of damage done by swelling soils. Damage to the upper floors of the building can occur when motion in the structure is significant.

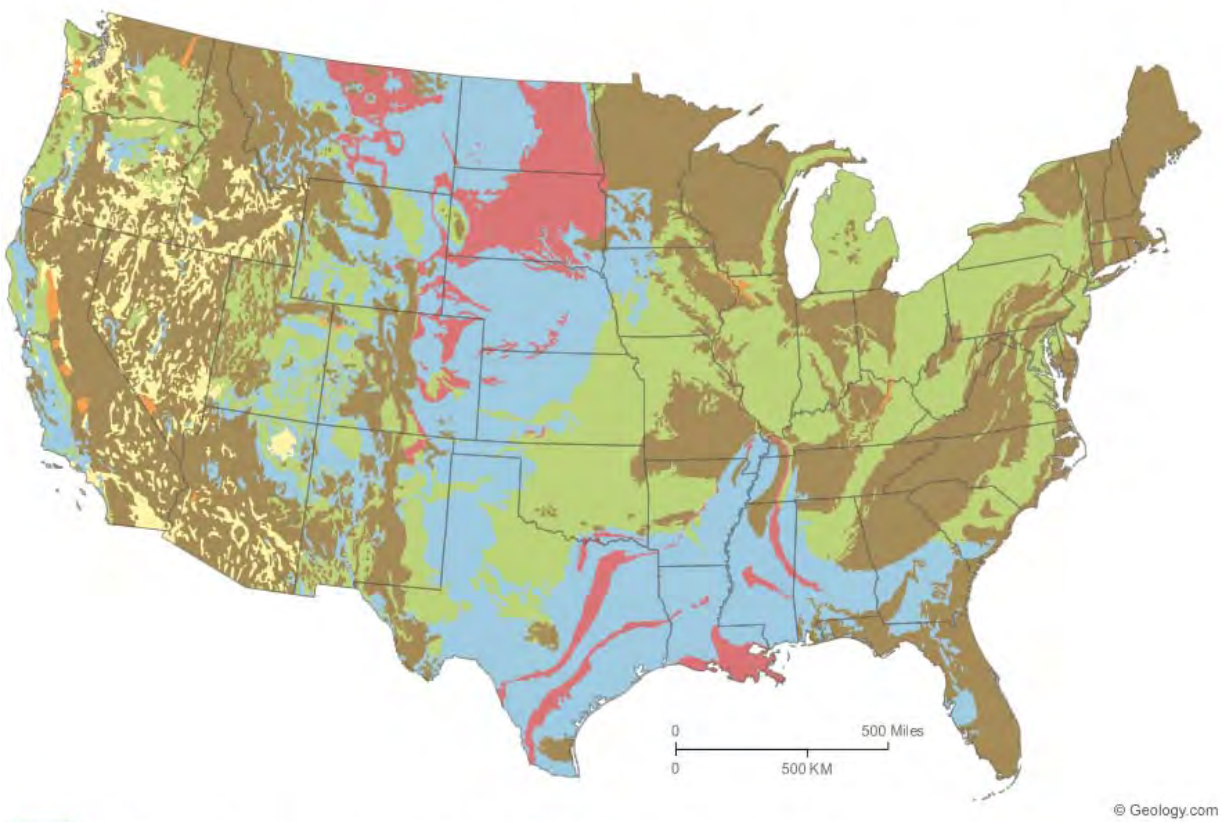
Expansive soils will also shrink when they dry out. This shrinkage can remove support from buildings or other structures and result in damaging subsidence. Fissures in the soil can also develop. These fissures can facilitate the deep penetration of water when moist conditions or runoff occurs. This produces a cycle of shrinkage and swelling that places repetitive stress on structures.

The map, "Swelling Clays Map of the Conterminous United States" below is meant to show general trends in the geographic distribution of expansive soils. It is not meant to be used as a property evaluation tool. It is useful for learning areas where expansive soils underlie a significant portion of the land and where expansive soils might be a localized problem.[66]

RHMP Committee nor any of the county/city hazard mitigation members could find any losses nor had knowledge of any losses due to expansive soil in the region. The risk of losses, from Expansive Soil, was not considered significant enough to be considered for mitigation by the RMPC.

[66] Geology.com, Expansive Soil and Expansive Clay; http://geology.com/articles/expansive-soil.shtml

Swelling Clays Map of the Conterminous United States



Over 50 percent of these areas are underlain by soils with abundant clays of high swelling potential.

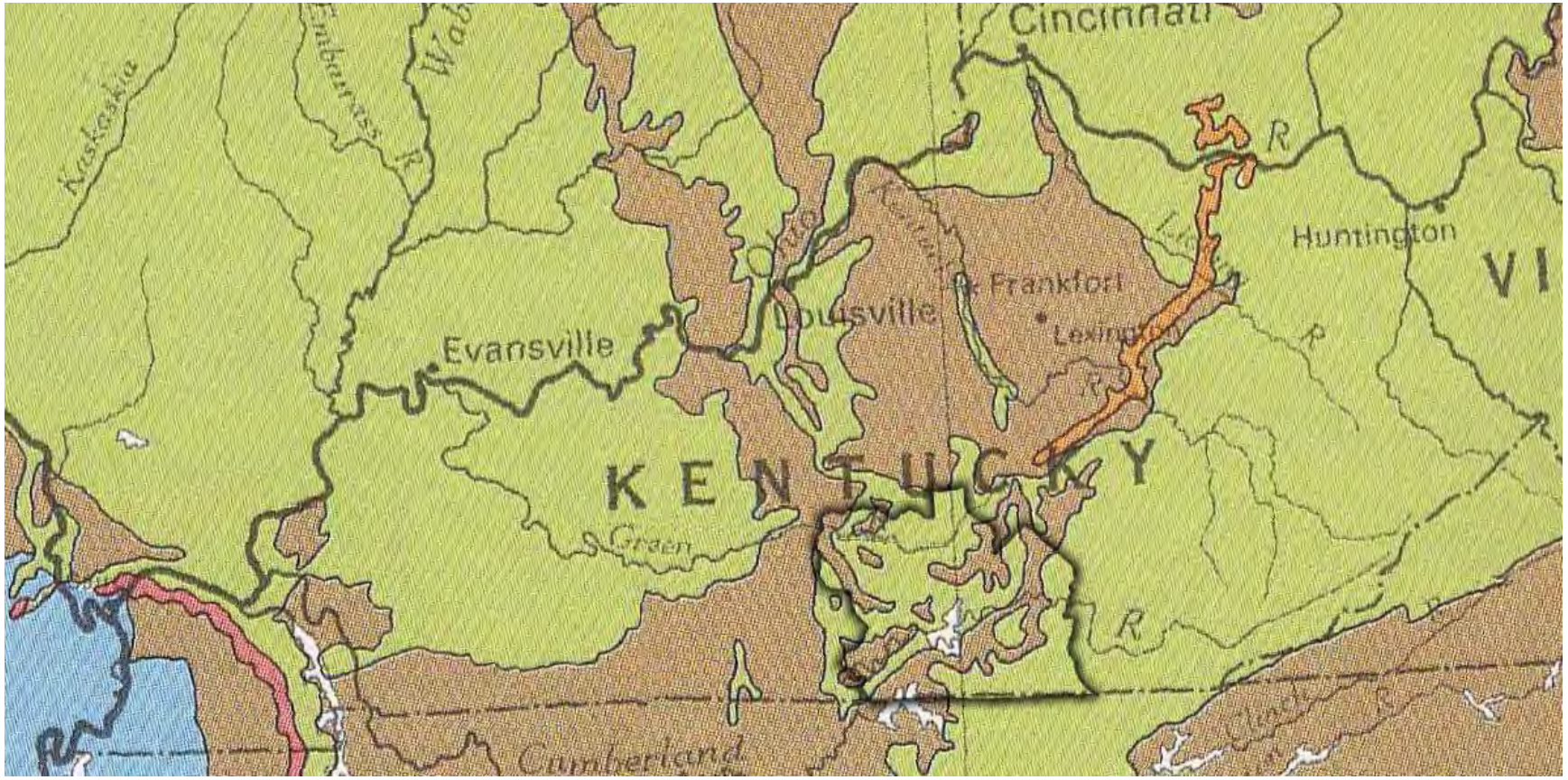
Less than 50 percent of these areas are underlain by soils with clays of high swelling potential.

Over 50 percent of these areas are underlain by soils with abundant clays of slight to moderate swelling potential.

Less than 50 percent of these areas are underlain by soils with abundant clays of slight to moderate swelling potential.

These areas are underlain by soils with little to no clays with swelling potential.

Data insufficient to indicate the clay content or the swelling potential of soils.



67

[67] U.S. Geological Survey, Swelling clays map of the conterminous United States; http://ngmdb.usgs.gov/Prodesc/proddesc_10014.htm

4.9 Extreme Summer Weather

Conditions of extreme heat are defined as summertime temperatures that are substantially hotter and/or more humid than average for location at that time of year. Humid or muggy conditions, which add to the discomfort of high temperatures, occur when a "dome" of high atmospheric pressure traps hazy, damp air near the ground. Extremely dry and hot conditions can provoke dust storms and low visibility. Droughts occur when a long period passes without substantial rainfall. A heat wave combined with a drought is a very dangerous situation.

An extreme heat event or heat wave describes a period of abnormally and uncomfortably hot and unusually humid weather. Typically a heat wave lasts two or more days. Extreme heat events are a leading cause of extreme weather-related deaths in the United States. The number of heat-related deaths is rising. For example, in 1995, 465 heat-related deaths occurred in Chicago. From 1999 to 2010, a total of 7,415 people died of heat-related deaths, an average of about 618 deaths a year.

Heat waves have the potential to cover a large area, exposing a high number of people to a hazardous combination of heat and humidity. In fact, heat is typically the leading cause of weather related fatalities each year. High temperatures and humidity are common in numerous locations across the country. However, when temperatures spike and humidity is on the rise in areas of the U.S. that are not accustomed to these conditions, people don’t necessarily understand that they need to take action to stay safe.

Heat stress is heat-related illness caused by your body's inability to cool down properly. The body normally cools itself by sweating. But under some conditions, sweating just isn't enough. In such cases, a person's body temperature rises rapidly. Very high body temperatures may damage the brain or other vital organs.

Several factors affect the body's ability to cool itself during extremely hot weather. When the humidity is high, sweat will not evaporate as quickly, preventing the body from releasing heat quickly. Other conditions related to risk include age, obesity, fever, dehydration, heart disease, mental illness, poor circulation, sunburn, and prescription drug and alcohol use.

Heat stress ranges from milder conditions like heat rash and heat cramps, to the most common type, heat exhaustion. The most serious heat-related illness is heat stroke. Heat stroke can cause death or permanent disability if emergency treatment is not provided.

Risk Factors: Anyone can develop heat stress. However, the following groups of people have higher risks for experiencing heat stress or heat-related death:

- ≠ Infants and children up to four years of age,
- ≠ People 65 years of age and older,
- ≠ People who are overweight, and
- ≠ People who are ill or on certain medications

Each National Weather Service Forecast Office issues some or all of the following heat-related

products as conditions warrant. NWS local offices often collaborate with local partners to determine when an alert should be issued for a local area.

- ≠ Excessive Heat Warning—Take Action! An Excessive Heat Warning is issued within 12 hours of the onset of extremely dangerous heat conditions. The general rule of thumb for this Warning is when the maximum heat index temperature is expected to be 105° or higher for at least 2 days and night time air temperatures will not drop below 75°; however, these criteria vary across the country, especially for areas not used to extreme heat conditions. If you don't take precautions immediately when conditions are extreme, you may become seriously ill or even die.
- ≠ Excessive Heat Watches—Be Prepared! Heat watches are issued when conditions are favorable for an excessive heat event in the next 24 to 72 hours. A Watch is used when the risk of a heat wave has increased but its occurrence and timing is still uncertain.
- ≠ Heat Advisory—Take Action! A Heat Advisory is issued within 12 hours of the onset of extremely dangerous heat conditions. The general rule of thumb for this Advisory is when the maximum heat index temperature is expected to be 100° or higher for at least 2 days, and night time air temperatures will not drop below 75°; however, these criteria vary across the country, especially for areas that are not used to dangerous heat conditions. Take precautions to avoid heat illness. If you don't take precautions, you may become seriously ill or even die.
- ≠ Excessive Heat Outlooks are issued when the potential exists for an excessive heat event in the next 3-7 days. An Outlook provides information to those who need considerable lead-time to prepare for the event.[68]

Other tools that can be used to protect you is the National Weather Service Heat Index. The Heat Index is a measure of how hot it really feels when relative humidity is factored in with the actual air temperature. As you can see from the chart below, high humidity levels combined with hot conditions can be extremely dangerous. Limit your outdoor activities during these periods.

[68]Centers for Disease Control and Prevention (CDC), Extreme Heat; http://ephtracking.cdc.gov/showClimateChangeExtremeHeat.action

NOAA's National Weather Service

Heat Index

Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution | Extreme Caution | Danger | Extreme Danger

[69]

Storm Events Database

Search Results for Adair, Casey, Clinton, Cumberland, Green, Mccreary, Pulaski, Russell, Taylor and Wayne Counties, Kentucky
Event Types: Excessive Heat, Heat
Adair, Casey, Clinton, Cumberland, Green, Mccreary, Pulaski, Russell, Taylor and Wayne counties contain the following zones:
'Green', 'Taylor', 'Casey', 'Adair', 'Russell', 'Pulaski', 'Cumberland', 'Clinton', 'Wayne', 'McCreary'
17 events were reported between 01/01/1950 and 09/30/2016 (24380 days)

Summary Info:
Number of County/Zone areas affected: 3
Number of Days with Event: 8
Number of Days with Event and Death: 0
Number of Days with Event and Death or Injury: 0
Number of Days with Event and Property Damage: 0
Number of Days with Event and Crop Damage: 0
Number of Event Types reported: 2

[69] NOAA's National Weather Service, Heat Index; http://www.nws.noaa.gov/om/heat/heat_index.shtml

Column Definitions:
'Mag': Magnitude, 'Dth': Deaths, 'Inj': Injuries, 'PrD': Property Damage, 'CrD': Crop Damage

Click on Location below to display details.
Available Event Types have changed over time. Please refer to the Database Details for more information.

Table 4.9(1) – NOAA Storm Events Database

Location	Deaths, Injuries, Property & Crop Damage	Date	Type	Episode/Event Narrative
Pulaski (Zone)	0	7/24/2010	Heat	Strong high pressure both at the surface and aloft brought temperatures in the mid to 90s and incides around 100 for a few locations on July 24th .
Mccreary (Zone)	0	8/4/2010	Excessive Heat	A large area of high pressure, both at the surface and aloft, brought record breaking heat to eastern Kentucky during the afternoon and evening hours of August 4th. High temperatures across the area were between 95 and 100 degrees for numerous locations. All 17 counties in the Excessive Heat Warning for that day met or exceeded warning criteria. In fact, the only county of the 33 counties covered by the Jackson weather office that did not meet heat warning criteria on August 4th was Letcher. Heat indices ran between 105 and 115, with a few areas approaching 120 degrees, on this day. The summer of 2010 will likely rank as one of if not the hottest summer on record in eastern Kentucky. Excessive heat warning criteria were met with highs between 95 and 100 and heat indices between 105 and 115.
Pulaski (Zone)	0	8/4/2010	Excessive Heat	
Wayne (Zone)	0	8/4/2010	Excessive Heat	

Wayne (Zone)	0	8/9/2010	Heat	During the afternoon and early evening hours of August 9th, a numerous locations around eastern Kentucky experienced very hot temperatures. Highs were between 93 and 96 degrees with heat index values around 100 degrees. Heat advisory criteria were met or exceeded.
Pulaski (Zone)	0	8/9/2010	Heat	
Wayne (Zone)	0	8/10/2010	Heat	A very large and strong area of high pressure brought a heat wave to eastern Kentucky on August 10th. During the afternoon and evening hours on this day, high temperatures in numerous locations soared to between 93 and 98 degrees, with heat index values around 100 degrees. High temperatures were between 93 and 98 degrees with heat indices around 100.
Mccreary (Zone)	0	8/10/2010	Heat	
Pulaski (Zone)	0	8/10/2010	Heat	
Pulaski (Zone)	0	8/11/2010	Heat	Numerous locations experienced highs between 93 and 97 and heat indices around 100 degrees during the afternoon and early evening hours of August 11th. High temperatures were between 93 and 97 degrees with heat indices around 100.
Wayne (Zone)	0	8/11/2010	Heat	
Mccreary (Zone)	0	8/12/2010	Excessive Heat	Strong high pressure continued to bring very hot and humid weather to eastern Kentucky during the afternoon and early evening hours of August 12th. High temperatures for numerous counties reached 93 to 98 degrees, with heat index values at or above 100 degrees. This marked the fourth consecutive day with temperatures and heat indices meeting or exceeding advisory criteria. Therefore, an excessive heat warning was issued.
Pulaski (Zone)	0	8/12/2010	Excessive Heat	
Wayne (Zone)	0	8/12/2010	Excessive Heat	
Wayne (Zone)	0	8/13/2010	Excessive Heat	The same ridge of high pressure that brought oppressive heat and humidity to eastern Kentucky most of the week, again brought scorching heat to the coalfields on August 13th. High temperatures were in the low to mid 90s with heat indices once again around 100 degrees. High temperatures were in the low to mid 90s with heat indices once again around 100 degrees.

Wayne (Zone)	0	8/14/2010	Excessive Heat	The residents of eastern Kentucky had to endure one more day of excessive heat and humidity on August 14th. High temperatures were again in the low to mid 90s with a heat index of around 100. Event Narrative High temperatures ranged from 93 to 99 with heat index values of 100 to 110.
Pulaski (Zone)	0	8/14/2010	Excessive Heat	
Lake Cumberland Region Totals:	0			

[70]

[70] NOAA's National Centers for Environmental Information, Storm Events Database; http://www.ncdc.noaa.gov/stormevents/listevents.jsp?eventType=%28Z%29+Excessive+Heat&eventType=%28Z%29+Heat&beginDate_mm=01&beginDate_dd=01&beginDate_yyyy=1950&endDate_mm=09&endDate_dd=30&endDate_yyyy=2016&county=ADAIR%3A1&county=CASEY%3A45&county=CLINTON%3A53&county=CUMBERLAND%3A57&county=GREEN%3A87&county=MCCREARY%3A147&county=PULASKI%3A199&county=RUSSELL%3A207&county=TAYLOR%3A217&county=WAYNE%3A231&hailfilter=0.00&tornfilter=0&windfilter=000&sort=DT&submitbutton=Search&statefips=21%2CKENTUCKY

Summary

Hazard Location:

- ≠ Forrest Fires/Wildfires:
  - o Fires typically occurring in fields and wooded areas, though could spread to developed areas
  - o Most likely to occur in less developed portions of Region
- ≠ Drought.
  - o Widespread, capable of affecting the entire Region and surrounding regions
- ≠ Dam/Levee Failures.
  - o The Lake Cumberland Region has 37 dam sites with two major lakes (Cumberland and Green River Lakes) and the remaining being generally small impoundments
- ≠ Expansive Soil.
  - o The researched data did show that the entire region has the possibility of being affected by this hazard
  - o The Region has two expansive soil zones: Green Highlighted - less than 50 percent of these areas are underlain by soils with abundant clays of slight to moderate swelling potential and Brown Highlighted - these areas are underlain by soils with little to no clays with swelling potential.
- ≠ Extreme Summer Weather.
  - o The researched data did show that the entire region has the possibility of being affected by this hazard

Potential Damage (All Hazards):

- ≠ Forrest Fires/Wildfires.
  - o Damage to trees and other vegetated areas
  - o Limited damage to homes and other infrastructure
  - o Health concerns due to smoke
- ≠ Drought.
  - o Limited mostly to firefighting and moisture/water for crops
- ≠ Dam/Levee Failures.
  - o Low potential with possibility of major damage and flooding below Green River Lake and Lake Cumberland
  - o Low potential of damage and flooding on remaining dams
- ≠ Expansive Soil.
  - o No previous occurrences of Expansive Soil could be located for the LCADD Region
  - o No probability of a future hazard event for Expansive Soil could be projected for with the available data.
- ≠ Extreme Summer Weather.
  - o Heat is one of the leading weather-related killers in the United States, resulting in hundreds of fatalities each year and even more heat-related illnesses

Scale / Extent:

- ≠ Forrest Fires/Wildfires.
  - o Varies from minor (<1 acre consumed) to substantial (>300 acres consumed)
- ≠ Drought.
  - o Varies from somewhat minor to major, depending on how much and when precipitation is received
  - o Can last from a matter of weeks to years
  - o Minor droughts may only require enforcement of outdoor burning restrictions
  - o Major events could cause loss of agricultural crops, water shortages, widespread ecological damage to plants and animals, and increased fire risk
- ≠ Dam/Levee Failures.
  - o Minor Dam failure could release a wall of water up to 1 foot high, typical of privately owned dams in the Lake Cumberland Region
  - o Major Dam failure could release a wall of water greater than 6 feet high, typical of larger high hazard and significant hazard dams in Region
  - o A Major Dam failure could cause flooding along Cumberland and Green Rivers rivers causing large injuries and damage to property in cities as far away as Nashville, Tn and the Ohio River
- ≠ Expansive Soil.
  - o Little or no damage
- ≠ Extreme Summer Weather.
  - o Heat waves have the potential to cover a large area, exposing a high number of people to a hazardous combination of heat and humidity

Previous Occurrences:

- ≠ Forrest Fires/Wildfires.
  - o Information is available specific to Lake Cumberland Region for the years 2000-2015 (Kentucky Agencies) and 1980-2015 (Federal Agencies), however no major fires have been documented within the Region
  - o Minor fires can occur throughout the course of the year, however are quickly extinguished before burning more than 100 acres
- ≠ Drought.
  - o Information is available specific to Lake Cumberland Region, however droughts severe enough to cause significant environmental and financial impacts lack data to determine losses accurately in the Region
  - o Minor droughts, severe enough to enforce outdoor burning restrictions, occur nearly every one to two years
- ≠ Dam/Levee Failures.
  - o A dam failure within Lake Cumberland has never occurred
  - o The repairs to Wolf Creek Dam on Lake Cumberland has caused economic losses to toursim
- ≠ Expansive Soil.
  - o None identified

≠ Extreme Summer Weather.
- 17 events were reported between 01/01/1950 and 09/30/2016 (data events from 2010 only)

Likelihood of Future Occurrences:

≠ Forrest Fires/Wildfires.
- Minor wildfires causing little damage may occur somewhat frequently due to human carelessness
- Lighting is the only listed natural cause of wildfires next to last in all causes. However large, damaging wildfires are rare

≠ Drought.
- Minor droughts are expected to occur often, though major droughts are rare

≠ Dam/Levee Failures.
- Possible, however a damaging failure is unlikely

≠ Expansive Soil.
- Possible but no history to indicate a likely event

≠ Extreme Summer Weather.

≠ Table below shows a query based on the following: Climate Change | Future Projections of Extreme Heat | Projected Number of Future Extreme Heat Days | Kentucky | 2020, 2025, 2030 | Emissions Scenario: Low Emissions (B1) | Absolute Threshold: 90 degrees F

Table 4.5(10) – Future Projections of Extreme Heat Days => 90 Degrees

State	County	2020	2025	2030
Kentucky	Adair	41	42	44
Kentucky	Casey	33	34	36
Kentucky	Clinton	35	36	38
Kentucky	Cumberland	43	44	46
Kentucky	Green	49	51	53
Kentucky	McCreary	28	29	30
Kentucky	Pulaski	33	34	35
Kentucky	Russell	37	38	39
Kentucky	Taylor	42	43	45
Kentucky	Wayne	33	34	35

[143]

[143] Centers for Disease Control and Prevention, Future Projections of Extreme Heat; http://ephtracking.cdc.gov/showIndicatorPages.action?selectedContentAreaAbbreviation=CC&selectedIndicatorId=97&selectedMeasureId=

4.10 Future Climate Change and Global Warming

Climate is an important influence upon our economy and the lifestyles of people in communities throughout Kentucky. However, climate is not constant. Examination of temperature and precipitation data since 1895 shows both periods of warming and cooling, along with periods when precipitation was relatively more and less abundant. Kentucky's climate has been warming since the most recent cool period of the 1960s and 1970s. The average annual temperature in the Western, Central, and Bluegrass divisions now exceeds that of the prior warm period during the 1930s and 1940s. The average temperature in the Eastern division is also rising but remains below the earlier peak. Average annual precipitation has been trending upward in the Western, Central, and Bluegrass divisions and is at or near its highest level since 1895. The historical record includes a dry period commencing in the 1930s and persisting in the early 1960s, followed by a wet period that peaked in the 1970s to early 1980s. In contrast, the Eastern division has experienced a decline in average precipitation since the mid 1990s and is near the minimum reached in the late 1930s.While the focus is on climate change, it should be noted that the annual variability of both temperature and precipitation far outweigh the changes in their respective averages.[144]

Kentucky's climate is changing. Although the average temperature did not change much during the 20th century, most of the commonwealth has warmed in the last
20 years. Average annual rainfall is increasing, and a rising percentage of that rain is falling on the four wettest days of the year. In the coming decades, the changing climate is likely to reduce crop yields and threaten some aquatic ecosystems. Floods may be more frequent, and droughts may be longer, which would increase the difficulty of meeting the competing demands for water in the Ohio, Tennessee, and Cumberland rivers.
Our climate is changing because the earth is warming. People have increased the amount of carbon dioxide in the air by 40 percent since the late 1700s. Other heat- trapping greenhouse gases are also increasing. These gases have warmed the surface and lower atmosphere of our planet about one degree (F) during the last 50 years. Evaporation increases as the atmosphere warms, which increases humidity, average rainfall, and the frequency of heavy rainstorms in many places—but contributes to drought in others.

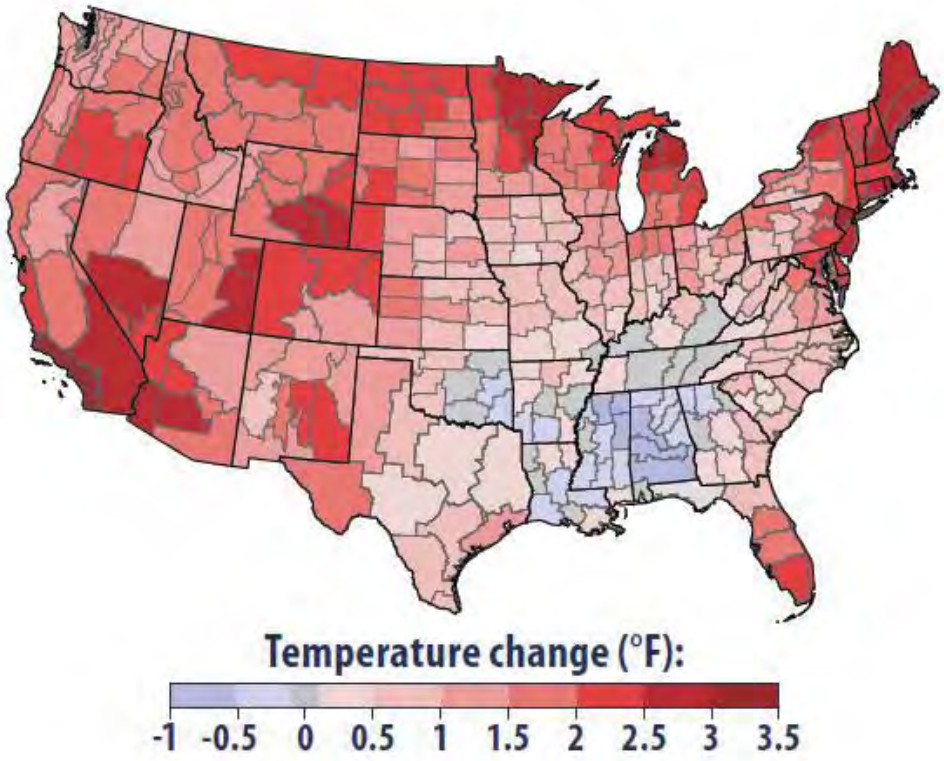
Natural cycles and sulfates in the air prevented much of Kentucky from warming during the last century. Sulfates are air pollutants that reflect sunlight back into space.
Now sulfate emissions are declining, and the factors that once prevented Kentucky from warming are unlikely to persist.

Precipitation and Water Resources: Annual precipitation in Kentucky has increased approximately 5 percent since the first half of the 20th century. But rising tem-
peratures increase evaporation, which dries the soil and decreases the amount of rain that runs off into rivers. Although rainfall during spring is likely to increase during the next 40 to 50 years, the total amount of water running off into rivers or recharging ground water each year is likely to decline 2.5 to 5 percent, as increased evaporation offsets the greater rainfall. Droughts are likely

[144] Kentucky Climate Center, Summary of Kentucky Temperature and Precipitation Trends; http://www.kyclimate.org/graphlets/climatechange.html

to be more severe, because periods without rain will be longer and very hot days will be more frequent.

Flooding, Navigation, and Hydroelectric Power: Flooding is becoming more severe in the Southeast. Since 1958, the amount of precipitation during heavy rainstorms has increased by 27 percent in the Southeast, and the trend toward increasingly heavy rainstorms is likely to continue. The Tennessee Valley Authority (TVA) and the U.S. Army Corps of Engineers operate Kentucky Dam, Wolf Creek Dam, and other dams to prevent serious floods on the Ohio, Tennessee, and Cumberland rivers. The agencies release water from the reservoirs behind these dams before the winter flood season. By lowering water levels, these releases provide greater capacity for the reservoirs behind those dams to prevent flooding. Nevertheless, dams and other flood control structures cannot prevent all floods. The Ohio River has flooded Louisville several times, for example, and flash floods have caused property destruction and deaths throughout Kentucky.



Rising temperatures in the last century. Kentucky has warmed less than most of the United States. Source: EPA, Climate Change Indicators in the United States.

Increasingly severe droughts could pose challenges for river transportation. The drought of 2005

closed portions of the lower Ohio River to commercial navigation, which delayed shipments of crops and other products between Kentucky and the Mississippi River. In 2012, a drought caused navigation restrictions on the lower Mississippi River, which cost the region more than $275 million.

Droughts also affect the amount of electricity from hydroelectric dams. During the 2007 drought, total production from the TVA's hydroelectric plants fell by more than 30 percent, which forced the TVA to meet customer demand by using more expensive fuel-burning power plants.

Aquatic Ecosystems: Changing climate can harm aquatic ecosystems. Warmer water lowers the level of dissolved oxygen in surface water, which can severely limit fish populations. Because fish cannot regulate their body temperatures, warmer water can make a stream uninhabitable for fish that require cooler water. Warmer temperatures can also increase the frequency of algal blooms, which can be toxic and further reduce dissolved oxygen. Summer droughts may amplify these effects, while periods of extreme rainfall can increase the impacts of pollution on streams.

Agriculture: Longer frost-free growing seasons and increased concentrations of atmospheric carbon dioxide tend to increase yields for many crops during an average year. But more severe droughts and more hot days are likely to reduce yields, especially in the western half of Kentucky, which in seventy years is likely to have 15 to 30 more days with temperatures above 95°F than it has today. Even on irrigated fields, higher temperatures are likely to reduce yields of corn, and possibly soybeans. Higher temperatures are also likely to reduce livestock productivity: hot weather causes cows to eat less, grow more slowly, and produce less milk, and it can threaten their health.

Forest Resources: Higher temperatures and changes in rainfall are unlikely to substantially reduce forest cover in Kentucky, but the composition of those forests may change. More droughts would reduce forest productivity, and climate change is also likely to increase the damage that insects and diseases cause to forests. Yet longer growing seasons and increased carbon dioxide concentrations could more than offset the losses from those factors. In central Kentucky, the population of maple, beech, and birch trees is likely to decline, in favor of the oak and hickory trees that dominate forests in most of the state.

Human Health: Hot days can be unhealthy—even dangerous. High air temperatures can cause heat stroke and dehydration, and affect people's cardiovascular and nervous systems. Certain people are especially vulnerable, including children, the elderly, the sick, and the poor. Higher temperatures can also increase the formation of ground-level ozone, a key component of smog. Ozone has a variety of health effects, aggravates lung diseases such as asthma, and increases the risk of premature death from heart or lung disease. EPA and the Kentucky Department for Environmental Protection have been working to reduce ozone concentrations. As the climate changes, continued progress toward clean air will require even more reductions in the air pollutants that contribute to ozone.[145]

[145] US Environmental Protection Agency, What Climate Change Means for Kentucky
https://www3.epa.gov/climatechange/Downloads/impacts-adaptation/climate-change-KY.pdf

Summary

Hazard Location:

≠ State of Kentucky and Lake Cumberland Region

Potential Damage:

≠No Regionalized Damage Estimates are available

Scale / Extent:

≠Possible damage/losses in the Lake Cumberland Region to Aquatic Ecosystems, Agriculture, Forest Resources, and Human Health

Previous Occurrences:

≠Limited data available for Lake Cumberland Region

Likelihood of Future Occurrences:

≠Probable, however damaging outcomes will be over an extended time period measured in decades

4.11 Natural Hazard Indexing Methodology

As discussed previously, Lake Cumberland faces a number of potential natural disasters and hazards. A Hazard Identification matrix was developed that rates natural hazards based on the following three criteria:

- ≠ Likelihood of Occurrence: The probability that a hazard will occur;
- ≠ Geographic Scale: Location and/or size of the area affected; and
- ≠ Impacts: Expected damage and disruptions to be expected.

Specific hazards were then assigned a point value for each of these items based on the expected severity of the hazard. This information was then used to establish a Hazard Index for each type of natural hazard and an associated risk level based on the total score. Hazards associated with the highest index value were determined to have the greatest potential impact to the Lake Cumberland Region.

It is relevant to note that the below analysis of hazard identification according to the above three criteria derive from Lake Cumberland Regional Hazard Mitigation Committee and plan participant input and, thus, ultimately represents subjective and local expert analysis. However, the subjective and expert analysis is justified by historical and anecdotal data.

Lake Cumberland Regional Hazard Risk Levels

Specific hazards are assigned a point value for each item based on the expected severity of the hazard. Point values and descriptions for each category are shown in the **Hazard Identification Criteria** table (Table 4.11(1a)). This information was then used to establish a Hazard Index for each type of natural hazard and the associated risk level based on the total score as shown in the **Risk Level** table (Table 4.11(1b)). Hazards associated with the highest index value were determined to have the greatest potential impact to the Lake Cumberland region. The entire scoring matrix is provided as the **Natural Hazard Index by County** table (Table 4.11(1c)) and **Manmade Hazard Index by County** table (Table 4.11 (1d)).

Table 4.11 (1a) – Hazard Identification Criteria

Score	Category	Description
Likelihood of Occurrence		
3	Highly Likely	50% to 100% probability in the next year
2	Likely	Between 10% and 50% probability in the next year
1	Possible	Between 1% and 10% probability in the next year
0	Unlikely	Less than 1% probability in the next year
Geographic Scale		
3	Large	More than 50% of the jurisdiction affected
2	Medium	10% to 50% of the jurisdiction affected
1	Small	Less than 10% of the jurisdiction affected
Impacts		
3	Catastrophic	Multiple deaths & injuries possible; >50% property severely damaged; complete shutdown of critical facilities for 30+ days
2	Critical	Multiple injuries possible; <50% to >25% property severely damaged; complete shutdown of critical facilities for at least 1 week
1	Limited	Minor injuries only; <25% to >10% property severely damaged; complete shutdown of critical facilities for more than 1 day
0	Minor	Very few injuries, if any; only minor property damage; shutdown of critical facilities and services for 24 hours or less

Table 4.11 (1b) – Risk Level

Hazard Index Score	Risk Level
8-9	Extremely High
6-7	Very High
5	High
4	Moderate
3	Low
1-2	Very Low

(For Table 4.11 (1c): County and city risk levels were derived and scored jointly. The scores are listed numerically and apply to the counties in the following order: Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell, Taylor, and Wayne. As discussed above, scores represent subjective and expert committee input justified with historical and anecdotal data.)

Table 4.11 (1c) – Natural Hazard Index Scoring by County

Natural Hazard	Likelihood of Occurrence	Geographic Scale	Impacts	Hazard Index Regional Average Score	Risk Level
Floods					
Flash Flooding	3,3,2,2,3,2,1,3,3,3	2,2,2,1,3,1,1,2,2,2	1,2,1,0,1,0,0,1,1,0	**50/10=5**	**High**
Riverine Flooding	2,3,0,1,2,1,0,1,1,3	2,2,0,1,2,1,0,0,1,2	0,2,0,0,2,0,0,1,1,0	**31/10=3**	**Low**
Flooding from Storm Runoff	3,3,1,2,2,1,1,3,3,3	2,2,1,1,2,1,1,2,2,2	0,2,1,0,2,0,0,1,2,0	**46/10=5**	**High**
Erosion	3,3,1,1,1,2,1,1,1,1	1,2,1,1,1,2,0,1,1,2	1,2,0,0,1,0,0,0,1,0	**32/10=3**	**Low**
Winter Storm Events					
Snowstorms and Blizzards	2,2,2,2,3,3,1,2,3,3	3,3,1,3,3,3,2,2,3,3	2,2,1,1,2,2,1,1,3,2	**66/10=7**	**Very High**
Ice Storm	2,2,1,2,2,3,1,1,2,2	3,3,1,3,3,3,2,1,1,3	2,2,1,1,2,1,1,1,3,2	**57/10=6**	**Very High**
Tornadoes and Thunderstorms					
Tornadoes	3,2,2,2,2,2,2,3,1,2	3,2,1,2,3,2,2,2,1,2	3,3,1,1,3,2,1,2,3,2	**62/10=6**	**Very High**
Thunderstorms/Lighting	3,3,2,2,3,3,3,3,3,3	3,2,1,2,3,2,1,2,3,2	1,1,0,1,2,0,0,2,1,1	**58/10=6**	**Very High**
Windstorm (Straight Line Winds)	3,3,1,2,3,3,3,3,3,3	3,2,1,2,3,1,2,2,3,2	2,1,0,1,2,0,1,2,1,1	**59/10=6**	**Very High**
Hailstorm	3,2,1,2,2,2,2,3,1,2	3,1,1,2,3,1,1,2,1,2	2,1,0,1,1,0,0,2,3,1	**48/10=5**	**High**
Geologic Hazards					
Earthquakes	1,0,1,1,1,1,1,1,0,0	3,1,1,2,3,1,2,2,2,1	3,1,0,2,3,1,1,2,1,0	**38/10 = 4**	**Moderate**
Land Subsidence (Landslides)	1,0,1,2,1,3,1,0,1,1	1,0,0,1,2,1,1,0,1,1	0,0,0,1,0,1,0,0,1,0	**22/10 = 2**	**Very Low**
Sinkholes	1,1,2,1,2,1,1,1,0,1	1,1,1,1,3,1,1,1,0,1	0,1,1,1,0,0,0,1,0,0	**26/10 = 3**	**Low**

Natural Hazard	Likelihood of Occurrence	Geographic Scale	Impacts	Hazard Index Regional Average Score	Risk Level
Other Hazards					
Drought	1,1,1,1,2,2,1,1,1,1	2,1,2,2,3,2,0,3,3,1	0,0,1,1,1,2,0,1,0,1	**38/10 = 4**	**Moderate**
Forest Fires/Wildfires	2,1,1,1,1,2,1,1,1,3	1,1,1,2,2,2,0,2,2,1	0,1,0,1,1,2,1,1,1,1	**37/10 = 4**	**Moderate**
Dam/Levee Failures	0,1,1,1,0,1,0,1,1,0	1,1,1,2,3,1,0,1,0,1	0,1,1,1,3,1,1,1,0,1	**27/10 = 3**	**Low**
Expansive Soil	0,0,1,1,0,1,0,0,0,0	1,0,1,2,1,0,0,1,0,0	0,0,0,1,0,0,0,0,0,0	**10/10 = 1**	**Very Low**
Extreme Summer Weather	2,1,1,1,2,1,1,2,1,2	2,1,1,2,2,3,1,3,3,1	1,0,0,1,1,2,1,0,0,1	**40/10 = 4**	**Moderate**

Table 4.11 (1d) – Manmade Hazard Index Scoring by County

Manmade Hazard	Likelihood of Occurrence	Geographic Scale	Impacts	Hazard Index Regional Average Score	Risk Level
Technological and Other Hazards (Although not required by FEMA, manmade hazards such as hazardous materials release, nuclear materials release, and terrorism also were reviewed by the Lake Cumberland Regional Hazard Mitigation Committee. Dashes ("-") indicate that the respective counties provided no information regarding the below manmade hazard types.					
Natural Biohazard	1,-,-,0,1,1,-,2,-,0	3,-,-,0,3,1,-,2,-,1	2,-,-,0,3,2,-,1,-,0	**23/6 = 4**	**Moderate**
Nuclear Facilities	0,-,-,0,0,1,-,0,-,0	0,-,-,0,0,2,-,0,-,0	0,-,-,0,0,2,-,0,-,0	**5/6 = 1**	**Very Low**
Hazardous Materials Sites	1,-,-,1,1,1,-,1,-,0	3,-,-,1,1,1,-,1,-,1	2,-,-,1,1,1,-,0,-,0	**18/6 = 3**	**Low**

5.0 VULNERABILITY ASSESSMENT

The following sections provide an overview of the Lake Cumberland Region's vulnerability to the various natural hazards outlined previously. Based on these hazards, the following sections outline the most likely source of damage and provide an estimate of damage in dollars that may result from each natural hazard. Where possible, guidance published by FEMA, such as FEMA's *Understanding Your Risks: Identifying Hazards and Estimating Losses*, was used to estimate dollar amounts. The impact and frequency of each hazard is identified in each hazard profile in the previous section through impact and frequency tables and graphs. Impact is addressed further in the charts and narrative discussions found in the following asset vulnerability sections of this plan.

This section of the plan identifies what can be affected in each jurisdiction by the different hazard events that affect the Lake Cumberland region. The information to complete this section was collected from a variety of sources including the Lake Cumberland Area Development District, the HAZUS Data CD, the National Climatic Data Center, and the Kentucky Revenue Cabinet. The information was collected, mapped and summarized by the Lake Cumberland Area Development District staff and reviewed and analyzed by the Lake Cumberland Hazard Mitigation Regional Planning Committee for inclusion in the plan. This section was prepared using the best available data for identifying the number of buildings, infrastructure and critical facilities and costs associated with each structure. The Lake Cumberland Area Development District staff used local structure point data that was available to identify the types and numbers of structures in each hazard area. This data, where available, allowed the Lake Cumberland Area Development District staff to map the structures in the hazard area. The following chart represents the jurisdictions that have local structure point data that was used by the Lake Cumberland Area Development District staff.

Damage Assessment Methodologies:
The following methodologies were used in the development of damage cost estimated for buildings and contents for hazard events in the Lake Cumberland Regional Hazard Mitigation Plan. The data available for use in assessing vulnerability is very limited.

Best Available Data: Best available data was used for all assessments. Data sources investigated and considered for use by the RMPC were as follows:

≠ County PVA Office Records: Most PVA offices were reluctant to provide individual information and basically provided total structures and total values. Only two of the ten counties made available these records. The best available records were 2010-2015 Census Data. No cost information is available for critical structures by cost or available for structures by area.

≠ E911 GIS Databases: All ten counties in the LCADD region have enhanced 911 dispatch systems at the time of this update. All make available their GIS data with structure locations where available. Most of these contained only structure designations and no structure value information.

≠ Census 2010 -2015 Data: The Census data provided the best available data on structures by type and median values. These were from Census data estimates from 2015 and are closer to current market value than current PVA values that are historically undervalued.

≠ Historical Damage Values: No local data sources on hazard event loss totals were located. Two other sources, the National Climatic Data Center (NCDC) and Spatial Hazard Events and Losses Database for the United States were examined. SHELDUS is a county -level hazard data set for the U.S. for 18 different natural hazard events types such thunderstorms, hurricanes, floods, wildfires, and tornadoes. The NCDC Storm Events Database is a county/community-level hazard data set. NCDC receives Storm Data from the National Weather Service. The National Weather service receives their information from a variety of sources, which include but are not limited to: county, state and federal emergency management officials, local law enforcement officials, skywarn spotters, NWS damage surveys, newspaper clipping services, the insurance industry and the general public. A comparison of several hazard events showed that most but not all of the events were in both data sources. The NCDC Storm Events Database was used for the LCADD Region Mitigation Risk Assessment. In compiling the NCDC Storm Events Database the National Weather Service makes a best guess using all available data at the time of the publication. The damage amounts are received from a variety of sources, including those listed above in the "Data Sources" section. Property and Crop damage should be considered as a broad estimate. An Episode is an entire storm system and can

contain many different types of events. An Event is an individual type of storm event (thunderstorm wind, hail, tornado and flood are events). When listing wind speed values under Magnitude, Ex. 81 kts., the value listed is can be either estimated by damage caused, or measured by official NWS approved calibrated anemometers. 1 kt. = 1.152 mph. When listing hail size under Magnitude, ex. 2.25 in, the hail size is given in inches and hundredths of inches. These values are assigned a size in inches from their appearance.

≠ Kentucky State Data Center Data: The Kentucky State Data Center is located in the Urban Studies Institute at 426 W. Bloom Street, Louisville, KY on the University of Louisville's main campus. Since 1980, KSDC and its 78-member affiliate network has provided training and technical assistance in accessing and using Census data for research, administration, planning, and decision making by the government, the business community, university researchers, and other interested data users. The State Data Center Program is a cooperative effort among the University of Louisville, the Commonwealth of Kentucky and the U.S. Census Bureau.

≠ Quick Stats: Agricultural Statistics Data Base: NASS publishes U.S., State, and County level agricultural statistics for many commodities and data series. Quick Stats offers the ability to query by commodity, state(s) and year(s).

≠ Other Data Sources: A variety of data sources were used for individual assessments. Each source was documented in the section of the plan in which the data was applied.

≠ Individual Hazard Vulnerability Assessment of Potential Losses
≠ Individual hazard vulnerability is based on current and projected risk values as developed in Section 5.0 Vulnerability Assessment. The assessment methodology, for each hazard, is described with each individual Hazard Risk Exposure Assessment.

Cost estimates were obtained from county/city insurance coverage records, HAZUS-MH cost data averages and from local public school systems and private sources for hospital, nursing home, etc. Where no cost estimate was possible "none available" notes it.

Table 5.0(1) - Data Sources for Identifying Assets

Facility Or Infrastructure Type	Data Source	Online Linkage	Title Of Content:	Type Of Content	Publication Date
Hospital & Nursing Homes	Lake Cumberland ADD GIS Databases And Committee Input	None	LCADD GIS Databases	Mapping And Committee Personal Knowledge	None

Police Stations	Lake Cumberland ADD GIS Databases And Committee Input	None	LCADD GIS Databases	Mapping And Committee Personal Knowledge	None
Fire Stations	Lake Cumberland ADD GIS Databases, Census 2010 Data And Committee Input	None	LCADD GIS Databases, Census 2010	GIS Mapping And Committee Personal Knowledge	Various With Updates Where Possible
Emergency Dispatch Centers, Rescue Squads, Emergency Medical Services	Lake Cumberland ADD GIS Databases, Census 2010 Data And Committee Input	None	LCADD GIS Databases, Census 2010	GIS Mapping And Committee Personal Knowledge	Various With Updates Where Possible
LCADD Schools, LCADD Camps	Lake Cumberland ADD GIS Databases And Committee Input	None	LCADD GIS Databases	Mapping And Committee Personal Knowledge	None
Jails	Lake Cumberland ADD GIS Databases And Committee Input	None	LCADD GIS Databases	Mapping And Committee Personal Knowledge	None

Airway, Railway, Tourism Waterways	Lake Cumberland ADD GIS Databases, HAZUS MH Database, And Committee Input	None	LCADD GIS Databases	Mapping And Committee Personal Knowledge	HAZUS MH 2010, LCADD GIS Latest Updates (Varies Depending On Data File)
KYTC Truck Roadway Network, KYTC Bridge Locations	Lake Cumberland ADD GIS Databases, KYTC Centerline Maps, HAZUS-MH Database(Comparison)	Http://Www.Kytc.State.Ky.Us/	LCADD GIS Databases	Mapping And Committee Personal Knowledge	KYTC Maps - 2010 & 2011, LCADD GIS Latest Updates (Varies Depending On Data File)
Water	Lake Cumberland ADD KIA GIS Databases, HAZUS-MH Database (Comparison)	None	LCADD KIA GIS Databases	Mapping And Committee Personal Knowledge	Updated 2010 LCADD KIS GIS Current Facilities And Infrastructure
Waste Water	Lake Cumberland ADD KIA GIS Databases, HAZUS-MH Database(Comparison)	None	LCADD KIA GIS Databases	Mapping And Committee Personal Knowledge	Updated 2010 LCADD KIS GIS Current Facilities And Infrastructure

Energy	Lake Cumberland ADD KIA GIS Databases, HAZUS-MH Database(Comparison), HAZUS-MH Database, Kentucky Public Service Commission (PSC)	Http://Kygeonet.Ky.Gov/Metadataexplorer/	LCADD KIA GIS Databases, Municipally Owned Gas Distribution Systems, Counties With Gas Distribution Companies	Mapping And Committee Personal Knowledge	Updated 2010 LCADD KIS GIS Current Facilities And Infrastructure
Dams	HAZUS-MH	None	National Inventory Of Dams	Mapping And Committee Personal Knowledge	Updated 2010
Hazardous Material Locations And Facilities	LCADD's Source Water Assessment And Protection Program Database, HAZUS-MH Database Hazmat Locations	None	Kentucky Source Water Assessment And Protection Program Database	SWAPP Mapping And Committee Personal Knowledge	LCADD SWAPP Updates Dec. 2003 (latest update)
The SWAPP Database contains records of all locations of hazardous materials that could affect the source water intakes from all public/private water systems within the protection zones of each water intake. The database contains data from state, federal, and local sources of businesses, land use, roadways, etc., that are potential sources of drinking water contamination. Hazardous material transportation routes include all roadways within the LCADD area. However the major highways and rail line are the main transportation routes for vehicles transporting hazardous material in the region.					
Vulnerable Populations	Lake Cumberland ADD GIS Databases And Committee Input	None	LCADD GIS Databases	Mapping And Committee Personal Knowledge	None

Key Assets: Economic, Historical	Lake Cumberland ADD CEDS GIS Databases, National Register Of Historic Places, US Works Survey 2004/Cumberlands Region And Committee Input	Http://Www.Cr.Nps.Gov/NR/Research/	LCADD GIS Databases	Mapping And Committee Personal Knowledge	CEDS Updates 2010, Current Available Downloadable Data US Works 2010
LCADD Region Key Assets: Natural Resources	Lake Cumberland ADD GIS Databases, Kentucky Geological Survey, U.S. Geological Survey And Committee Input	Http://Www.Uky.Edu/KGS/Gis/Geology.Html, Http://Pubs.Usgs.Gov/Of/1996/Of96-092/Index.Htm, Http://Kygeonet.Ky.Gov/Metadataexplorer	LCADD GIS Databases, Geospatial Data Library, Kentucky GAP Land Stewardship	Geologic Coverages Of The State's Public Lands And Personal Knowledge	Current Available Downloadable Data, Current LCADD Databases

To determine potential damages, the Lake Cumberland Hazard Mitigation Regional Planning Committee was unable to obtain property value information from most Property Valuation Administrator's Offices and lacking this information utilized the latest U.S. Census data. For those hazards affecting a limited area of the Lake Cumberland Region such as flooding, only those structures located within hazard-prone areas were evaluated. For hazards capable of affecting the entire Region, such as earthquakes and thunderstorms, an assessment was made based on an assumed percentage of buildings damaged within the entire Region. Table 5.0(1c) provides a summary of property values in The Lake Cumberland Region, by county, based on the Census data.

Mapping data for structures is available for all ten counties through their 911Geographic Information Systems (GIS), Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell, Taylor, and Wayne in the LCADD region. No specific structure type information is available for these counties. Structures are mapped in Essential Facilities section only. The table below shows the available mapping information for map creation for any of the following hazards for Assessing Vulnerability: Identifying Assets.

Table 5.0 (2) - Assessing Vulnerability: Identifying Assets.

Hazard	Available Mapping Information
Expansive Soil	No historical mapping location or future specific area location data is available to allow for future risk exposure map creation for these hazards.
Hailstorm	
Land Subsidence	
Drought	
Wildfire	
Extreme Summer Weather	
Severe Winter Storm/Ice Storm	
Earthquake	
Tornado	
Thunderstorm, Lightning, and Windstorm	
Hazardous Material	
Landslide	Committee identified areas are mapped where structure point locations are available; these are mapped with flood locations.
Flood	Approved or pending FEMA DFIRM flood maps are available for map creation for the flooding hazards in all counties. DFIRM maps, pending final approval were available and used for Adair, Clinton, Cumberland, Green, Pulaski, Russell, and Taylor counties. No facilities were identified in committee identified flood areas in any counties/cities.
Natural Biohazard	No locations in the LCADD Region.
Nuclear Facilities	
Dams and Levees	No risk mapping data available for risk exposure from dam failure for map creation for this hazard. Wolf Creek Dam, on the Cumberland River, failure flood inundation mapping was reviewed, but could not be included in the updated plan due to security restrictions of the U.S. Army Corps of Engineers.

Table 5.0(3) – Housing Property Values within The Lake Cumberland Region

Regional Housing (Census July 1, 2015)	Number of Properties	Total Building Value	Average Building Replacement Cost
Adair Housing units	8500	$700,400,000.00	$82,400.00
Casey Housing units	7401	$566,176,500.00	$76,500.00
Clinton Housing units	5238	$342,041,400.00	$65,300.00
Cumberland Housing units	3650	$231,775,000.00	$63,500.00
Green Housing units	5275	$391,405,000.00	$74,200.00
McCreary Housing units	7415	$461,954,500.00	$62,300.00
Pulaski Housing units	31151	$3,326,926,800.00	$106,800.00
Russell Housing units	9928	$873,664,000.00	$88,000.00
Taylor Housing units	10968	$1,027,701,600.00	$93,700.00
Wayne Housing units	10810	$868,043,000.00	$80,300.00
TOTAL	**100336**	**$8,790,087,800.00**	

[146]Note: dollar amounts based on property values obtained from Census database for fiscal year 2015.

Note that the above values do not account for the value of personal property (cars, boats etc.) or infrastructure (roads, bridges, electrical lines, etc.) that can be damaged during a disaster event. As such, values and percentages assumed in the following sections are adjusted higher to account for this additional damage potential. The majority of disasters affect either the entire Region (earthquakes, snowstorms, thunderstorms, etc.), or a small yet difficult to determine section (tornadoes, fires, landslides, sinkholes, etc.) Due to the unpredictability of some hazards, inability to protect the location and/or severity of the hazard, or inability to quantify impacts in a reliable manner, vulnerability dollar amounts may range substantially.

The vulnerability assessments represent a worst-case scenario, as it is likely that a portion(s) of the building would remain usable, most notable being the foundation. Additionally costs do not include the replacement cost of land, as it is assumed that all structures may be rebuilt at the same location. Assessment methodology and base risk exposure for the property and assets of each jurisdiction was developed using best available data. The asset base from the 2011 Regional Hazard Plan Update and any new available data was used to set estimated risk exposure asset values for five-year periods (2015-2030). The estimated risk exposure values established were used as a base for further individual hazard vulnerability risk exposure assessment.

[146] Census,2015; http://www.census.gov/quickfacts/

Table 5.0(3) – LCADD Region Vulnerability Risk Exposure Assessment

Jurisdictions	Current Assets	Projected Assets		
	2015	2020	2025	2030
Adair Co.	$1,603,720,925	$1,656,162,599	$1,698,725,978	$1,733,379,988
Columbia	$844,846,855	$872,473,347	$894,895,912	$913,151,789
Casey Co.	$1,182,017,179	$1,216,413,879	$1,246,824,226	$1,271,760,710
Liberty	$515,407,153	$530,405,501	$543,665,639	$554,538,951
Clinton Co.	$981,646,147	$996,959,827	$1,008,225,473	$1,014,980,583
Albany	$334,470,615	$339,688,357	$343,526,835	$345,828,465
Cumberland Co.	$727,101,993	$736,917,870	$744,581,815	$749,719,430
Burkesville	$240,186,676	$243,429,196	$245,960,859	$247,657,989
Green Co.	$934,919,954	$960,256,284	$979,557,436	$989,255,054
Greensburg	$414,000,156	$425,219,561	$433,766,474	$438,060,762
McCreary	$507,509,854	$517,964,557	$525,889,415	$530,675,008
Pine Knot	$208,731,649	$213,031,521	$216,290,903	$218,259,150
Stearns	$211,819,034	$216,182,506	$219,490,098	$221,487,458
Whitley City	$211,819,034	$216,182,506	$219,490,098	$221,487,458
Pulaski Co.	$1,891,014,577	$1,945,097,594	$1,990,029,349	$2,024,257,853
Burnside	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Eubank	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Ferguson	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Science Hill	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Somerset	$1,629,483,719	$1,676,086,953	$1,714,804,562	$1,744,299,200
Russell Co.	$896,300,969	$917,184,782	$935,895,351	$952,086,341
Jamestown	$358,362,729	$366,712,580	$374,193,517	$380,667,065
Russell Springs	$359,257,008	$367,627,696	$375,127,301	$381,617,004
Taylor Co.	$1,300,807,875	$1,333,588,234	$1,360,126,639	$1,380,936,577
Campbellsville	$1,394,095,243	$1,429,226,443	$1,457,668,049	$1,479,970,370
Wayne Co.	$990,434,345	$1,029,754,588	$1,062,809,711	$1,089,167,391
Monticello	$677,945,008	$704,859,425	$727,485,412	$745,527,051
LCADD Region Total	**$19,944,671,749**	**$20,483,921,768**	**$20,927,851,672**	**$21,265,263,984**

Note:
All types of facilities are combined into a "Total Risk Exposure for each "County/City" for the following asset categories:

1) Essential Facilities
2) Critical Transportation, Utility, and Communications
3) High Potential Loss Facilities
4) Hazardous Material Facilities
5) Vulnerable Populations
6) Key Assets - Agricultural
7) Key Assets – Residential
8) Key Assets – Commercial

Because categories share equally the exposure to individual hazard vulnerability and the need to include other types of losses to non-facilities we have estimated total potential dollar losses for each hazard using a "Total Risk Exposure for All Categories".

5.1 FLOODS

Riverine Flooding

Flooding is associated with high water levels and may impact inland streams and rivers. Flooding may be caused by a number of factors, including heavy rainfall, excessive snowmelt, storms such as hurricanes or other major storms as they move inland, or any number of other factors.

To quantify the number and type of each structure vulnerable to flood damage, areas potentially subject to flooding (i.e. FEMA maps and flood zones, etc.) were overlain with other map layers obtained from The Lake Cumberland Area Development District and other Regional Agencies. The Census Databases also provided building and property values for each potentially affected city/county location.

Table 5.1(1) – Property Values within Flood-Prone Areas

Location	Zone A Structures	Zone AE Structures	Total Building Value	Average Building Replacement Cost
Adair Flood Zone Housing units	226	18	$20,105,600	$82,400.00
Casey Flood Zone Housing units	621	109	$55,845,000	$76,500.00
Clinton Flood Zone Housing units	86	16	$6,660,600	$65,300.00
Cumberland Flood Zone Housing units	72	24	$6,096,000	$63,500.00
Green Flood Zone Housing units	98	0	$7,271,600	$74,200.00

McCreary Flood Zone Housing units	36	3	$2,429,700	$62,300.00
Pulaski Flood Zone Housing units	174	21	$20,826,000	$106,800.00
Russell Flood Zone Housing units	25	12	$3,256,000	$88,000.00
Taylor Flood Zone Housing units	124	24	$13,867,600	$93,700.00
Wayne Flood Zone Housing units	129	6	$10,840,500	$80,300.00
Total	**1591**	**233**	**$147,198,600**	

[147]Note: dollar amounts based on property values obtained from the Census database for fiscal year 2015.

The total building values of $147,198,600 within flood-prone areas represent approximately 1.63% of the total building value of the Region. Flash flooding or riverine flooding may cause damage to the above structures in varying amounts depending on flooding severity. Minor floods will likely cause minimal to no damage, while severe floods could damage or destroy a large number of these structures, particularly those located near a stream or river. Table 5.1(2) provides a vulnerability assessment of flooding based on severity of the hazard.

[147]Census,2015; http://www.census.gov/quickfacts/

Table 5.1(2) – Flooding Vulnerability Assessment

Flooding Depth	Typical Expected Damage	% of Property Damaged
<1’	Minimal. No property damage	0%
1’ to 4’	Moderate. Some flooding of structures and roads	10%
4’ to 8’	Major. Heavy damage to flood-prone areas	25%
>8’	Severe. Extensive inundation likely	50%

Table 5.1(3) – Flooding Vulnerability within Flood-Prone Areas (Housing)

Location	Zone A Structures	Zone AE Structures	Total Building Value	Loss - 0%	Loss - 10.00%	Loss - 25.00%	Loss - 50.00%
Adair	226	18	$20,105,600	<$100,000	$2,010,560	$5,026,400	$10,052,800
Casey	621	109	$55,845,000	<$100,000	$5,584,500	$13,961,250	$27,922,500
Clinton	86	16	$6,660,600	<$100,000	$666,060	$1,665,150	$3,330,300
Cumberland	72	24	$6,096,000	<$100,000	$609,600	$1,524,000	$3,048,000
Green	98	0	$7,271,600	<$100,000	$727,160	$1,817,900	$3,635,800
McCreary	36	3	$2,429,700	<$100,000	$242,970	$607,425	$1,214,850
Pulaski	174	21	$20,826,000	<$100,000	$2,082,600	$5,206,500	$10,413,000
Russell	25	12	$3,256,000	<$100,000	$325,600	$814,000	$1,628,000
Taylor	124	24	$13,867,600	<$100,000	$1,386,760	$3,466,900	$6,933,800
Wayne	129	6	$10,840,500	<$100,000	$1,084,050	$2,710,125	$5,420,250

Region Totals	**1591**	**233**	**$147,198,600**	**<$1,000,000**	**$14,719,860**	**$36,799,650**	**$73,599,300**

Table 5.1(4) – LCADD Table 5.1(3) – Flooding Vulnerability(All Assets) Risk Exposure Assessment

Assets by Jurisdictions		Total Risk Exposure All Asset Categories			
Jurisdictions Affected		Current Assets	Projected Assets		
		2015	2020	2025	2030
Adair Co.	Yes	$1,603,720,925	$1,656,162,599	$1,698,725,978	$1,733,379,988
Columbia	Yes	$844,846,855	$872,473,347	$894,895,912	$913,151,789
Casey Co.	Yes	$1,182,017,179	$1,216,413,879	$1,246,824,226	$1,271,760,710
Liberty	Yes	$515,407,153	$530,405,501	$543,665,639	$554,538,951
Clinton Co.	Yes	$981,646,147	$996,959,827	$1,008,225,473	$1,014,980,583
Albany	Yes	$334,470,615	$339,688,357	$343,526,835	$345,828,465
Cumberland Co.	Yes	$727,101,993	$736,917,870	$744,581,815	$749,719,430
Burkesville	Yes	$240,186,676	$243,429,196	$245,960,859	$247,657,989
Green Co.	Yes	$934,919,954	$960,256,284	$979,557,436	$989,255,054
Greensburg	Yes	$414,000,156	$425,219,561	$433,766,474	$438,060,762
McCreary	Yes	$507,509,854	$517,964,557	$525,889,415	$530,675,008
Pine Knot	Yes	$208,731,649	$213,031,521	$216,290,903	$218,259,150
Stearns	Yes	$211,819,034	$216,182,506	$219,490,098	$221,487,458
Whitley City	Yes	$211,819,034	$216,182,506	$219,490,098	$221,487,458
Pulaski Co.	Yes	$1,891,014,577	$1,945,097,594	$1,990,029,349	$2,024,257,853
Burnside	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Eubank	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Ferguson	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Science Hill	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Somerset	Yes	$1,629,483,719	$1,676,086,953	$1,714,804,562	$1,744,299,200
Russell Co.	Yes	$896,300,969	$917,184,782	$935,895,351	$952,086,341
Jamestown	Yes	$358,362,729	$366,712,580	$374,193,517	$380,667,065
Russell Springs	Yes	$359,257,008	$367,627,696	$375,127,301	$381,617,004
Taylor Co.	Yes	$1,300,807,875	$1,333,588,234	$1,360,126,639	$1,380,936,577
Campbellsville	Yes	$1,394,095,243	$1,429,226,443	$1,457,668,049	$1,479,970,370

Wayne Co.	Yes	$990,434,345	$1,029,754,588	$1,062,809,711	$1,089,167,391
Monticello	Yes	$677,945,008	$704,859,425	$727,485,412	$745,527,051
LCADD Region Total	**Yes**	**$19,944,671,749**	**$20,483,921,768**	**$20,927,851,672**	**$21,265,263,984**

Note: dollar amounts based on property values obtained from the Census database for fiscal year 2015.
Per FEMA's *Understanding Your Risks: Identifying Hazards and Estimating Losses*, two story buildings with basements as typical to The Lake Cumberland Region have an approximate 50% damage rate for any flood event over 8 feet. Infrastructure damage could also be extensive, and include damage to roads, utilities, bridges, culverts, etc. Total damages could exceed estimated exposure in the event of an extreme flood event, particularly when adding in damages to structure contents and downtime during repairs. Smaller events have a correspondingly smaller damage percentage, however even a relatively moderate flood can inflict substantial financial damages to affected properties.

Flooding from Storm Water Runoff
Flooding due to storm water runoff will likely occur in conjunction with riverine flooding as a result of heavy precipitation. Typically, storm water flooding affects a centralized or regionalized area associated with a single outfall or culvert, and as such damages are generally minimal in comparison to other major disasters. A worst-case scenario may involve flooding of several major businesses, typically causing less than $1 million in damages, but potentially up to $5 million depending on the extent of damage and which business(s) are affected.

Erosion
Erosion is also typically associated with other flood events, including coastal, riverine, or storm water. Impacts are often limited to Regionalized areas and typically do not affect structures. E rosion damage is typically minimal in comparison to other hazards, generally less than $0.1 million, however may exceed $1 million should a major roadway, bridge or culvert be washed out.

5.2 Winter Storm Events

Snowstorms and Blizzards
Damage from snowstorms is typically caused by heavy snowfall loads on roofs, utility lines, and trees, causing damage from resultant collapse. Most "damage" will be from economic impacts as a result of residents being unable to get to work and region expenditures for snow removal. Blizzards, however, have the added impacts of high winds. Corresponding damages can be much more severe, and closer to the monetary damages associated with ice storms. As with many other hazards, damage from snowstorms varies with intensity. Minor snow storms occur quite regularly, with little damage apart from the occasional vehicle accident. Table 5.2(1) outlines the potential damage expected during snow storms of varying intensity.

Table 5.2(1) – Snowstorm Vulnerability Assessment

Snowstorm Severity	Typical Expected Damage	Total Damage
Notable	Light snow, travel unaffected, virtually no damage	$100,000
Significant	Moderate snow, travel lightly affected, little damage	$500,000
Major	Heavy snow, travel impacted, light damage	$1,000,000
Crippling	Very heavy snow, travel difficult, light damage	$2,000,000
Extreme	Substantial snow, travel impossible, moderate damage	$4,000,000

Note: dollar amounts based on property values obtained from the Census database for fiscal year 2015 and committee members estimated vulnerability for the region.

The table above refers to damages caused by snow alone, as well as costs of snow removal. The vast majority of snow storms cause less than $2 million in damages. Note that damage from very intense blizzards may be closer in dollars to that assumed for ice storms, as evidenced by damage caused from high winds causing tree damage to utility lines and utility outages. In general, high winds and ice damage cause far more damage than snow alone.

Ice Storms

Damage inflicted by ice storms can vary greatly, depending on the intensity and timing. Minor ice storms with ice buildup of less than a quarter inch will likely result in little damage. Alternatively, ice storms with buildup greater than one-half inch can result in substantial damage from tree limbs falling onto structures, vehicles, power lines, and other infrastructure. FEMA's *Understanding Your Risks: Identifying Hazards and Estimating Losses* does not include any standard loss estimation models for estimated ice storm damage, however Table 5.2(2) outlines the potential damage expected during ice storms of varying intensity.

Table Table 5.2(2) – Ice Storm Vulnerability Assessment

Ice Buildup	Typical Expected Damage	Total Damage
<¼"	Minimal damage expected, travel dangerous	<$100,000
¼" to 1"	Some tree branches downed, power outages likely, some roadways blocked	$10,000,000
>1"	Substantial trees and tree limbs downed, major extended power outages, blocked roadways	$20,000,000

Note: dollar amounts based on property values obtained from the Census database for fiscal year 2015 and committee members estimated vulnerability for the region.

The Lake Cumberland Region has not experienced a damaging ice storm in recent history; however a worst-case scenario could exceed $20 million in damages.

Ice Jams

Damage from ice storms will result from large pieces of ice damaging structures or infrastructure such as roadways and culverts. Alternatively, ice jams could force water to backup and cause flooding, however this would be covered under flooding damages. To date, no ice jams have occurred within The Lake Cumberland Region and expected damages are essentially $0.00, however a worst-case scenario could involve damages of up to $1 million, should a roadway culvert or bridge be destroyed.

5.3 Tornadoes/Thunderstorms/Wind/Hail

Tornadoes

Damage from tornadoes is due almost exclusively to high winds in a localized or regionalized area, although minor damage may also result from hail, heavy rains and lightning. As with other disasters, damage ranges depending on the severity of the occurrence. However, unlike

other hazards that typically affect a large area of Region (blizzard, ice storm, etc.) a tornado is limited to a relatively narrow swath. As such, the location of occurrence is also important, as a potentially minor tornado occurring in a heavily developed area can cause far more damage than a major tornado occurring in a sparsely developed location.

Per FEMA's *Understanding Your Risks: Identifying Hazards and Estimating Losses*, tornado losses should be estimated based on past occurrences as there are no standard loss estimation models. As outlined earlier, According to NOAA, the Lake Cumberland Region is located in an area of low probability of occurrence, with less than 2.0 tornados expected to occur every year. Unlike large scale disasters such as winter storms, hurricanes and earthquakes, tornadoes typically produce damage on a very limited, albeit intense scale. Although tornadoes have the capability to develop to over a mile wide and decimate an entire Region, damage paths are typically limited to several hundred feet wide, causing somewhat limited destruction. However, it is not uncommon for structures suffering a direct hit to be completely destroyed.

A tornado capable of significant damage (over $1M) has occurred in Lake Cumberland Region nine times, based upon available records since 1950. The data on tornadoes indicate that this type of hazard event causes the most deaths and injuries in the Lake Cumberland Region. The Lake Cumberland Region has not experienced a damage-causing tornado, with most storms in region consisting of F0 or F1 tornadoes. Therefore, damage estimates from larger tornadoes are difficult to determine, however Table 5.3(1) provides a worst-case dollar estimate for each potential storm.

Table 5.3(1) – Tornado Vulnerability Assessment

Tornado Category	Typical Expected Damage	% of Property Damaged	Total Damage
F0-F1	Light damage. Some roof and garage damage, mobile homes moved	1%	Un-estimated
F2-F3	Significant damage. Roofs torn off, mobile homes demolished, large trees snapped or uprooted	5%	Un-estimated
F4-F5	Devastating damage. Houses leveled, damage to well-constructed buildings, cars thrown	15%	Un-estimated

Note: dollar amounts based on property values obtained from the Census database for fiscal year 2015 and committee members estimated vulnerability for the region.

As shown above, even a minor tornado can cause substantial financial damage should it occur in a heavily developed area. However, tornadoes rarely occur within The Lake Cumberland Region and the vast majorities that occur in the area do very little damage. Due to rarity of occurrence and inability to determine where a tornado will occur, vulnerability to a "typical" tornado is impossible to determine. Percentages and dollar values are based on a worst-case scenario, with a tornado affecting the most densely developed areas of Region.

The Fujita-Pearson Tornado Scale (FPP scale) has been used since 1971 to rate intensity by examining the damage caused by a tornado after it has passed over a man-made structure and by measuring approximate path length and width. The following is the approximate damage area for each FPP scale tornado:

Table 5.3(2) – Fujita-Pearson Tornado Scale (FPP scale) Estimated Median Damage Area

# Fujita-Pearson Tornado Scale	# Sq. Mile
# F0 - *Gale Tornado* (40 - 72 mph) # P0 PATH length: 0.3-0.9 miles / P0 PATH width: 6-17 yards	# 0.0042
# F1 - *Moderate Tornado* (73 - 112 mph) # P1 PATH length: 1.0-3.1 miles / P1 PATH width: 18-55 yards	# 0.0414
# F2 - *Significant Tornado* (113 - 157 mph) # P2 PATH length: 3.2-9.9 miles / P2 PATH width: 56-175 yards	# 0.429
# F3 - *Severe Tornado* (158 - 206 mph) # P3 PATH length: 10-31 miles / P3 PATH width: 176-566 yards	# 4.3
# F4 - *Devastating Tornado* (207 - 260 mph) # P4 PATH length: 32-99 miles / P4 PATH width: 0.3-0.9 miles	# 39.3
# F5 - *Incredible Tornado* (261 - 318 mph) # P5 PATH length: 100-315 miles / P5 PATH width: 1.0-3.1 miles	# 517.5

Note: The LCADD Region has no record of an F5 tornado. No projections for damage or losses at that level will be included in the future loss projections. It should be noted also that no effort has been made to estimate damages in each county or city based on the width of the jurisdiction, as it would relate to tornado PATH length. Only estimated damage based on total area of the tornado path is used for comparison to total area of risk exposure in each jurisdiction. Total area and asset value will exceed jurisdiction total Asset Risk Exposure of some F3 and F4 tornados.[148]

[148] STORMFAX® Weather Services: Fujita-Pearson Tornado Scale; http://www.stormfax.com

Table 5.3(3) - LCADD Region Tornado Event Vulnerability Risk Exposure Assessment

Jurisdictions Affected		Total Risk Exposure All Asset Categories			
		Current Assets	Projected Assets		
		2015	2020	2025	2030
Adair Co.	Yes	$1,603,720,925	$1,656,162,599	$1,698,725,978	$1,733,379,988
Columbia	Yes	$844,846,855	$872,473,347	$894,895,912	$913,151,789
Casey Co.	Yes	$1,182,017,179	$1,216,413,879	$1,246,824,226	$1,271,760,710
Liberty	Yes	$515,407,153	$530,405,501	$543,665,639	$554,538,951
Clinton Co.	Yes	$981,646,147	$996,959,827	$1,008,225,473	$1,014,980,583
Albany	Yes	$334,470,615	$339,688,357	$343,526,835	$345,828,465
Cumberland Co.	Yes	$727,101,993	$736,917,870	$744,581,815	$749,719,430
Burkesville	Yes	$240,186,676	$243,429,196	$245,960,859	$247,657,989
Green Co.	Yes	$934,919,954	$960,256,284	$979,557,436	$989,255,054
Greensburg	Yes	$414,000,156	$425,219,561	$433,766,474	$438,060,762
McCreary	Yes	$507,509,854	$517,964,557	$525,889,415	$530,675,008
Pine Knot	Yes	$208,731,649	$213,031,521	$216,290,903	$218,259,150
Stearns	Yes	$211,819,034	$216,182,506	$219,490,098	$221,487,458
Whitley City	Yes	$211,819,034	$216,182,506	$219,490,098	$221,487,458
Pulaski Co.	Yes	$1,891,014,577	$1,945,097,594	$1,990,029,349	$2,024,257,853
Burnside	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Eubank	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Ferguson	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Science Hill	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Somerset	Yes	$1,629,483,719	$1,676,086,953	$1,714,804,562	$1,744,299,200
Russell Co.	Yes	$896,300,969	$917,184,782	$935,895,351	$952,086,341
Jamestown	Yes	$358,362,729	$366,712,580	$374,193,517	$380,667,065
Russell Springs	Yes	$359,257,008	$367,627,696	$375,127,301	$381,617,004
Taylor Co.	Yes	$1,300,807,875	$1,333,588,234	$1,360,126,639	$1,380,936,577
Campbellsville	Yes	$1,394,095,243	$1,429,226,443	$1,457,668,049	$1,479,970,370
Wayne Co.	Yes	$990,434,345	$1,029,754,588	$1,062,809,711	$1,089,167,391
Monticello	Yes	$677,945,008	$704,859,425	$727,485,412	$745,527,051
LCADD Region Total	**Yes**	**$19,944,671,749**	**$20,483,921,768**	**$20,927,851,672**	**$21,265,263,984**

Table 5.3(4) – Fujita-Pearson Tornado Scale (FPP scale) Estimated Median Damage Area Projected Risk Exposure 2015

Assets Affected: All		County/City Area Square Mile	Projected Risk Exposure 2015	Total Risk Exposure Projection By FPP Scale				
				FPP Median Damage Area (Square Mile)				
Jurisdictions Affected			Per Square Mile	F0	F1	F2	F3	F4
				0.0042	0.0414	0.429	4.3214	39.3
Adair Co.	Yes	403.6	$3,973,540	$16,689	$164,505	$1,704,649	$17,171,258	$156,160,140
Columbia	Yes	3.4	$248,484,369	$1,043,634	$10,287,253	$106,599,794	$1,073,800,353	$9,765,435,706
Casey Co.	Yes	444.3	$2,660,403	$11,174	$110,141	$1,141,313	$11,496,667	$104,553,849
Liberty	Yes	1.7	$303,180,678	$1,273,359	$12,551,680	$130,064,511	$1,310,164,983	$11,915,000,655
Clinton Co.	Yes	194.7	$5,041,839	$21,176	$208,732	$2,162,949	$21,787,805	$198,144,292
Albany	Yes	2.3	$145,422,007	$610,772	$6,020,471	$62,386,041	$628,426,659	$5,715,084,856
Cumberland Co.	Yes	303.2	$2,398,094	$10,072	$99,281	$1,028,782	$10,363,122	$94,245,080
Burkesville	Yes	2.8	$85,780,956	$360,280	$3,551,332	$36,800,030	$370,693,822	$3,371,191,560
Green Co.	Yes	287.6	$3,250,765	$13,653	$134,582	$1,394,578	$14,047,855	$127,755,056
Greensburg	Yes	1.4	$295,714,397	$1,242,000	$12,242,576	$126,861,476	$1,277,900,196	$11,621,575,808
McCreary	Yes	415.2	$1,222,326	$5,134	$50,604	$524,378	$5,282,161	$48,037,421
Pine Knot	Yes	6.4	$32,614,320	$136,980	$1,350,233	$13,991,543	$140,939,523	$1,281,742,782
Stearns	Yes	4	$52,954,759	$222,410	$2,192,327	$22,717,591	$228,838,693	$2,081,122,009
Whitley City	Yes	2.3	$92,095,232	$386,800	$3,812,743	$39,508,855	$397,980,336	$3,619,342,624
Pulaski Co.	Yes	647	$2,922,743	$12,276	$121,002	$1,253,857	$12,630,341	$114,863,791
Burnside	Yes	2.1	$181,996,792	$764,387	$7,534,667	$78,076,624	$786,480,937	$7,152,473,922
Eubank	Yes	0.9	$424,659,181	$1,783,569	$17,580,890	$182,178,789	$1,835,122,185	$16,689,105,818
Ferguson	Yes	1.8	$212,329,591	$891,784	$8,790,445	$91,089,394	$917,561,093	$8,344,552,909
Science Hill	Yes	0.5	$764,386,526	$3,210,423	$31,645,602	$327,921,820	$3,303,219,933	$30,040,390,472
Somerset	Yes	9.7	$167,988,012	$705,550	$6,954,704	$72,066,857	$725,943,396	$6,601,928,882
Russell Co.	Yes	247.1	$3,627,280	$15,235	$150,169	$1,556,103	$15,674,929	$142,552,117
Jamestown	Yes	2.3	$155,809,882	$654,402	$6,450,529	$66,842,439	$673,316,825	$6,123,328,369
Russell Springs	Yes	4.6	$78,099,350	$328,017	$3,233,313	$33,504,621	$337,498,529	$3,069,304,438
Taylor Co.	Yes	265.3	$4,903,158	$20,593	$202,991	$2,103,455	$21,188,508	$192,694,118
Campbellsville	Yes	4.7	$296,616,009	$1,245,787	$12,279,903	$127,248,268	$1,281,796,422	$11,657,009,160
Wayne Co.	Yes	453.8	$2,182,535	$9,167	$90,357	$936,307	$9,431,606	$85,773,622
Monticello	Yes	5.2	$130,374,040	$547,571	$5,397,485	$55,930,463	$563,398,376	$5,123,699,772
LCADD Region Total	**Yes**	**3718**	**$5,364,355**	**$22,530**	**$222,084**	**$2,301,308**	**$23,181,524**	**$210,819,150**

Table 5.3(5) – Fujita-Pearson Tornado Scale (FPP scale) Estimated Median Damage Area Projected Risk Exposure 2020

Assets Affected: All		County/City Area Square Mile	Projected Risk Exposure 2020	Total Risk Exposure Projection By FPP Scale				
				FPP Median Damage Area (Square Mile)				
Jurisdictions Affected			Per Square Mile	F0	F1	F2	F3	F4
				0.0042	0.0414	0.429	4.3214	39.3
Adair Co.	Yes	403.6	$4,103,475	$17,235	$169,884	$1,760,391	$17,732,758	$161,266,576
Columbia	Yes	3.4	$256,609,808	$1,077,761	$10,623,646	$110,085,608	$1,108,913,624	$10,084,765,452
Casey Co.	Yes	444.3	$2,737,821	$11,499	$113,346	$1,174,525	$11,831,220	$107,596,366
Liberty	Yes	1.7	$312,003,236	$1,310,414	$12,916,934	$133,849,388	$1,348,290,784	$12,261,727,170
Clinton Co.	Yes	194.7	$5,120,492	$21,506	$211,988	$2,196,691	$22,127,695	$201,235,343
Albany	Yes	2.3	$147,690,590	$620,300	$6,114,390	$63,359,263	$638,230,116	$5,804,240,187
Cumberland Co.	Yes	303.2	$2,430,468	$10,208	$100,621	$1,042,671	$10,503,024	$95,517,389
Burkesville	Yes	2.8	$86,938,999	$365,144	$3,599,275	$37,296,830	$375,698,188	$3,416,702,644
Green Co.	Yes	287.6	$3,338,861	$14,023	$138,229	$1,432,371	$14,428,552	$131,217,218
Greensburg	Yes	1.4	$303,728,258	$1,275,659	$12,574,350	$130,299,423	$1,312,531,294	$11,936,520,534
McCreary	Yes	415.2	$1,247,506	$5,240	$51,647	$535,180	$5,390,973	$49,026,992
Pine Knot	Yes	6.4	$33,286,175	$139,802	$1,378,048	$14,279,769	$143,842,877	$1,308,146,684
Stearns	Yes	4	$54,045,627	$226,992	$2,237,489	$23,185,574	$233,552,770	$2,123,993,121
Whitley City	Yes	2.3	$93,992,394	$394,768	$3,891,285	$40,322,737	$406,178,731	$3,693,901,081
Pulaski Co.	Yes	647	$3,006,333	$12,627	$124,462	$1,289,717	$12,991,568	$118,148,896
Burnside	Yes	2.1	$187,201,900	$786,248	$7,750,159	$80,309,615	$808,974,293	$7,357,034,689
Eubank	Yes	0.9	$436,804,434	$1,834,579	$18,083,704	$187,389,102	$1,887,606,683	$17,166,414,274
Ferguson	Yes	1.8	$218,402,217	$917,289	$9,041,852	$93,694,551	$943,803,342	$8,583,207,137
Science Hill	Yes	0.5	$786,247,982	$3,302,242	$32,550,666	$337,300,384	$3,397,692,029	$30,899,545,693
Somerset	Yes	9.7	$172,792,469	$725,728	$7,153,608	$74,127,969	$746,705,377	$6,790,744,047
Russell Co.	Yes	247.1	$3,711,796	$15,590	$153,668	$1,592,360	$16,040,155	$145,873,581
Jamestown	Yes	2.3	$159,440,252	$669,649	$6,600,826	$68,399,868	$689,005,106	$6,266,001,910
Russell Springs	Yes	4.6	$79,919,064	$335,660	$3,308,649	$34,285,279	$345,362,245	$3,140,819,229
Taylor Co.	Yes	265.3	$5,026,718	$21,112	$208,106	$2,156,462	$21,722,458	$197,550,010
Campbellsville	Yes	4.7	$304,090,733	$1,277,181	$12,589,356	$130,454,924	$1,314,097,692	$11,950,765,789
Wayne Co.	Yes	453.8	$2,269,182	$9,531	$93,944	$973,479	$9,806,041	$89,178,835
Monticello	Yes	5.2	$135,549,889	$569,310	$5,611,765	$58,150,903	$585,765,292	$5,327,110,654
LCADD Region Total	**Yes**	**3718**	**$5,509,393**	**$23,139**	**$228,089**	**$2,363,529**	**$23,808,289**	**$216,519,130**

Table 5.3(6) – Fujita-Pearson Tornado Scale (FPP scale) Estimated Median Damage Area Projected Risk Exposure 2025

Assets Affected: All		County/City Area Square Mile	Projected Risk Exposure 2025	Total Risk Exposure Projection By FPP Scale				
				FPP Median Damage Area (Square Mile)				
Jurisdictions Affected			Per Square Mile	F0	F1	F2	F3	F4
				0.0042	0.0414	0.429	4.3214	39.3
Adair Co.	Yes	403.6	$4,208,935	$17,678	$174,250	$1,805,633	$18,188,490	$165,411,127
Columbia	Yes	3.4	$263,204,680	$1,105,460	$10,896,674	$112,914,808	$1,137,412,704	$10,343,943,924
Casey Co.	Yes	444.3	$2,806,267	$11,786	$116,179	$1,203,888	$12,127,000	$110,286,275
Liberty	Yes	1.7	$319,803,317	$1,343,174	$13,239,857	$137,195,623	$1,381,998,054	$12,568,270,360
Clinton Co.	Yes	194.7	$5,178,354	$21,749	$214,384	$2,221,514	$22,377,738	$203,509,302
Albany	Yes	2.3	$149,359,493	$627,310	$6,183,483	$64,075,223	$645,442,115	$5,869,828,094
Cumberland Co.	Yes	303.2	$2,455,745	$10,314	$101,668	$1,053,515	$10,612,255	$96,510,770
Burkesville	Yes	2.8	$87,843,164	$368,941	$3,636,707	$37,684,717	$379,605,449	$3,452,236,342
Green Co.	Yes	287.6	$3,405,972	$14,305	$141,007	$1,461,162	$14,718,566	$133,854,684
Greensburg	Yes	1.4	$309,833,196	$1,301,299	$12,827,094	$132,918,441	$1,338,913,172	$12,176,444,592
McCreary	Yes	415.2	$1,266,593	$5,320	$52,437	$543,368	$5,473,455	$49,777,105
Pine Knot	Yes	6.4	$33,795,454	$141,941	$1,399,132	$14,498,250	$146,043,673	$1,328,161,326
Stearns	Yes	4	$54,872,525	$230,465	$2,271,723	$23,540,313	$237,126,127	$2,156,490,213
Whitley City	Yes	2.3	$95,430,477	$400,808	$3,950,822	$40,939,675	$412,393,265	$3,750,417,761
Pulaski Co.	Yes	647	$3,075,780	$12,918	$127,337	$1,319,509	$13,291,674	$120,878,135
Burnside	Yes	2.1	$191,526,264	$804,410	$7,929,187	$82,164,767	$827,661,598	$7,526,982,186
Eubank	Yes	0.9	$446,894,617	$1,876,957	$18,501,437	$191,717,791	$1,931,210,396	$17,562,958,435
Ferguson	Yes	1.8	$223,447,308	$938,479	$9,250,719	$95,858,895	$965,605,198	$8,781,479,218
Science Hill	Yes	0.5	$804,410,310	$3,378,523	$33,302,587	$345,092,023	$3,476,178,714	$31,613,325,183
Somerset	Yes	9.7	$176,783,975	$742,493	$7,318,857	$75,840,325	$763,954,272	$6,947,610,236
Russell Co.	Yes	247.1	$3,787,517	$15,908	$156,803	$1,624,845	$16,367,374	$148,849,402
Jamestown	Yes	2.3	$162,692,833	$683,310	$6,735,483	$69,795,226	$703,060,811	$6,393,828,356
Russell Springs	Yes	4.6	$81,549,413	$342,508	$3,376,146	$34,984,698	$352,407,634	$3,204,891,941
Taylor Co.	Yes	265.3	$5,126,749	$21,532	$212,247	$2,199,376	$22,154,735	$201,481,255
Campbellsville	Yes	4.7	$310,142,138	$1,302,597	$12,839,885	$133,050,977	$1,340,248,236	$12,188,586,027
Wayne Co.	Yes	453.8	$2,342,022	$9,836	$96,960	$1,004,728	$10,120,815	$92,041,476
Monticello	Yes	5.2	$139,901,041	$587,584	$5,791,903	$60,017,546	$604,568,358	$5,498,110,902
LCADD Region Total	**Yes**	**3718**	**$5,628,793**	**$23,641**	**$233,032**	**$2,414,752**	**$24,324,265**	**$221,211,557**

Table 5.3(7) – Fujita-Pearson Tornado Scale (FPP scale) Estimated Median Damage Area Projected Risk Exposure 2030

Assets Affected: All		County/City Area Square Mile	Projected Risk Exposure 2025	Total Risk Exposure Projection By FPP Scale				
				FPP Median Damage Area (Square Mile)				
Jurisdictions Affected			Per Square Mile	F0	F1	F2	F3	F4
				0.0042	0.0414	0.429	4.3214	39.3
Adair Co.	Yes	403.6	$4,294,797	$18,038	$177,805	$1,842,468	$18,559,535	$168,785,514
Columbia	Yes	3.4	$268,574,056	$1,128,011	$11,118,966	$115,218,270	$1,160,615,924	$10,554,960,385
Casey Co.	Yes	444.3	$2,862,392	$12,022	$118,503	$1,227,966	$12,369,540	$112,492,001
Liberty	Yes	1.7	$326,199,383	$1,370,037	$13,504,654	$139,939,535	$1,409,638,013	$12,819,635,750
Clinton Co.	Yes	194.7	$5,213,049	$21,895	$215,820	$2,236,398	$22,527,669	$204,872,814
Albany	Yes	2.3	$150,360,202	$631,513	$6,224,912	$64,504,527	$649,766,578	$5,909,155,945
Cumberland Co.	Yes	303.2	$2,472,689	$10,385	$102,369	$1,060,784	$10,685,480	$97,176,694
Burkesville	Yes	2.8	$88,449,282	$371,487	$3,661,800	$37,944,742	$382,224,726	$3,476,056,774
Green Co.	Yes	287.6	$3,439,691	$14,447	$142,403	$1,475,627	$14,864,280	$135,179,846
Greensburg	Yes	1.4	$312,900,544	$1,314,182	$12,954,083	$134,234,333	$1,352,168,412	$12,296,991,390
McCreary	Yes	415.2	$1,278,119	$5,368	$52,914	$548,313	$5,523,263	$50,230,077
Pine Knot	Yes	6.4	$34,102,992	$143,233	$1,411,864	$14,630,184	$147,372,670	$1,340,247,593
Stearns	Yes	4	$55,371,865	$232,562	$2,292,395	$23,754,530	$239,283,975	$2,176,114,275
Whitley City	Yes	2.3	$96,298,895	$404,455	$3,986,774	$41,312,226	$416,146,044	$3,784,546,565
Pulaski Co.	Yes	647	$3,128,683	$13,140	$129,527	$1,342,205	$13,520,290	$122,957,239
Burnside	Yes	2.1	$194,820,516	$818,246	$8,065,569	$83,578,001	$841,897,379	$7,656,446,286
Eubank	Yes	0.9	$454,581,204	$1,909,241	$18,819,662	$195,015,337	$1,964,427,217	$17,865,041,335
Ferguson	Yes	1.8	$227,290,602	$954,621	$9,409,831	$97,507,668	$982,213,608	$8,932,520,667
Science Hill	Yes	0.5	$818,246,168	$3,436,634	$33,875,391	$351,027,606	$3,535,968,990	$32,157,074,402
Somerset	Yes	9.7	$179,824,660	$755,264	$7,444,741	$77,144,779	$777,094,285	$7,067,109,130
Russell Co.	Yes	247.1	$3,853,041	$16,183	$159,516	$1,652,954	$16,650,530	$151,424,497
Jamestown	Yes	2.3	$165,507,420	$695,131	$6,852,007	$71,002,683	$715,223,763	$6,504,441,589
Russell Springs	Yes	4.6	$82,960,218	$348,433	$3,434,553	$35,589,934	$358,504,287	$3,260,336,578
Taylor Co.	Yes	265.3	$5,205,189	$21,862	$215,495	$2,233,026	$22,493,703	$204,563,918
Campbellsville	Yes	4.7	$314,887,313	$1,322,527	$13,036,335	$135,086,657	$1,360,754,033	$12,375,071,392
Wayne Co.	Yes	453.8	$2,400,104	$10,080	$99,364	$1,029,645	$10,371,811	$94,324,104
Monticello	Yes	5.2	$143,370,587	$602,156	$5,935,542	$61,505,982	$619,561,653	$5,634,464,059
LCADD Region Total	**Yes**	**3718**	**$5,719,544**	**$24,022**	**$236,789**	**$2,453,684**	**$24,716,437**	**$224,778,073**

Thunderstorms/Wind/Hail

Similar to tornadoes, thunderstorm damage is typically caused by high winds, with lesser damage caused by heavy precipitation and hail. Damage is typically less than that inflicted by a tornado; however thunderstorms generally affect a much larger area than a tornado. Thunderstorm damage is typically similar to the damages inflicted by a very weak tornado, with damages estimated at less than $1 million. Additional damages may also result from flooding as outlined earlier in this section.

Table 5.0(8) – LCADD Region Vulnerability Risk Exposure Assessment

Jurisdictions Affected		Total Risk Exposure All Asset Categories			
		Current Assets	Projected Assets		
		2015	2020	2025	2030
Adair Co.	Yes	$1,603,720,925	$1,656,162,599	$1,698,725,978	$1,733,379,988
Columbia	Yes	$844,846,855	$872,473,347	$894,895,912	$913,151,789
Casey Co.	Yes	$1,182,017,179	$1,216,413,879	$1,246,824,226	$1,271,760,710
Liberty	Yes	$515,407,153	$530,405,501	$543,665,639	$554,538,951
Clinton Co.	Yes	$981,646,147	$996,959,827	$1,008,225,473	$1,014,980,583
Albany	Yes	$334,470,615	$339,688,357	$343,526,835	$345,828,465
Cumberland Co.	Yes	$727,101,993	$736,917,870	$744,581,815	$749,719,430
Burkesville	Yes	$240,186,676	$243,429,196	$245,960,859	$247,657,989
Green Co.	Yes	$934,919,954	$960,256,284	$979,557,436	$989,255,054
Greensburg	Yes	$414,000,156	$425,219,561	$433,766,474	$438,060,762
McCreary	Yes	$507,509,854	$517,964,557	$525,889,415	$530,675,008
Pine Knot	Yes	$208,731,649	$213,031,521	$216,290,903	$218,259,150
Stearns	Yes	$211,819,034	$216,182,506	$219,490,098	$221,487,458
Whitley City	Yes	$211,819,034	$216,182,506	$219,490,098	$221,487,458
Pulaski Co.	Yes	$1,891,014,577	$1,945,097,594	$1,990,029,349	$2,024,257,853
Burnside	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Eubank	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Ferguson	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Science Hill	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Somerset	Yes	$1,629,483,719	$1,676,086,953	$1,714,804,562	$1,744,299,200
Russell Co.	Yes	$896,300,969	$917,184,782	$935,895,351	$952,086,341
Jamestown	Yes	$358,362,729	$366,712,580	$374,193,517	$380,667,065
Russell Springs	Yes	$359,257,008	$367,627,696	$375,127,301	$381,617,004
Taylor Co.	Yes	$1,300,807,875	$1,333,588,234	$1,360,126,639	$1,380,936,577
Campbellsville	Yes	$1,394,095,243	$1,429,226,443	$1,457,668,049	$1,479,970,370
Wayne Co.	Yes	$990,434,345	$1,029,754,588	$1,062,809,711	$1,089,167,391
Monticello	Yes	$677,945,008	$704,859,425	$727,485,412	$745,527,051
LCADD Region Total	**Yes**	**$19,944,671,749**	**$20,483,921,768**	**$20,927,851,672**	**$21,265,263,984**

Table 5.0(9) - LCADD Thunderstorms/Wind/Hail Vulnerability Risk Exposure Assessment

Assets Affected: All		Annual Percentage of Loss Estimate for Total Risk Exposure All Asset Categories (Region Average)			
Jurisdictions Affected	**Percentage Risk**	2015	2020	2025	2030
Adair Co.	0.000007%	$11,593.14	$11,593.14	$11,891.08	$12,133.66
Columbia	0.000007%	$5,913.93	$6,107.31	$6,264.27	$6,392.06
Casey Co.	0.000007%	$8,274.12	$8,514.90	$8,727.77	$8,902.32
Liberty	0.000007%	$3,607.85	$3,712.84	$3,805.66	$3,881.77
Clinton Co.	0.000007%	$6,871.52	$6,978.72	$7,057.58	$7,104.86
Albany	0.000007%	$2,341.29	$2,377.82	$2,404.69	$2,420.80
Cumberland Co.	0.000007%	$5,089.71	$5,158.43	$5,212.07	$5,248.04
Burkesville	0.000007%	$1,681.31	$1,704.00	$1,721.73	$1,733.61
Green Co.	0.000007%	$6,544.44	$6,721.79	$6,856.90	$6,924.79
Greensburg	0.000007%	$2,898.00	$2,976.54	$3,036.37	$3,066.43
McCreary	0.000007%	$3,552.57	$3,625.75	$3,681.23	$3,714.73
Pine Knot	0.000007%	$1,461.12	$1,491.22	$1,514.04	$1,527.81
Stearns	0.000007%	$1,482.73	$1,513.28	$1,536.43	$1,550.41
Whitley City	0.000007%	$1,482.73	$1,513.28	$1,536.43	$1,550.41
Pulaski Co.	0.000007%	$13,237.10	$13,615.68	$13,930.21	$14,169.80
Burnside	0.000007%	$2,675.35	$2,751.87	$2,815.44	$2,863.86
Eubank	0.000007%	$2,675.35	$2,751.87	$2,815.44	$2,863.86
Ferguson	0.000007%	$2,675.35	$2,751.87	$2,815.44	$2,863.86
Science Hill	0.000007%	$2,675.35	$2,751.87	$2,815.44	$2,863.86
Somerset	0.000007%	$11,406.39	$11,732.61	$12,003.63	$12,210.09
Russell Co.	0.000007%	$6,274.11	$6,420.29	$6,551.27	$6,664.60
Jamestown	0.000007%	$2,508.54	$2,566.99	$2,619.35	$2,664.67
Russell Springs	0.000007%	$2,514.80	$2,573.39	$2,625.89	$2,671.32
Taylor Co.	0.000007%	$9,105.66	$9,335.12	$9,520.89	$9,666.56
Campbellsville	0.000007%	$9,758.67	$10,004.59	$10,203.68	$10,359.79
Wayne Co.	0.000007%	$6,933.04	$7,208.28	$7,439.67	$7,624.17
Monticello	0.000007%	$4,745.62	$4,934.02	$5,092.40	$5,218.69
LCADD Region Total		$139,612.70	$143,387.45	$146,494.96	$148,856.85

5.4 Geologic Hazards

Earthquake

Damage from earthquakes is caused by moderate to severe shaking of the ground. As with other disasters, damage ranges depending on the severity of the occurrence. Due to the rarity of a major earthquake occurrence, most structures within Region are not constructed to a high seismic design level. Therefore, an earthquake occurrence of a damaging level has the potential to inflict substantial damage across the community.

As outlined earlier, The Lake Cumberland Region has never experienced a damage-causing earthquake, with virtually all earthquakes occurring in the area of barely detectable magnitude. Although the risk of a damaging earthquake is low, only the two following recorded earthquakes have occurred in or near our region:

Magnitude 2.3 - 20km NNE of Whitley City, Kentucky
Time - 2014-09-09 03:16:07 (UTC-05:00)
Location - 36.904°N 84.406°W
Depth - 9.5 km

Magnitude 2.4 - 4km NNW of Byrdstown, Tennessee

Time - 2011-01-18 05:08:47 (UTC-05:00)
Location - 36.615°N 85.142°W
Depth - 7.0 km [149]

Even an earthquake of less than 4.0 is rare, and will typically cause $0 in damage. For planning purposes, an earthquake of 0.10g with a reoccurrence interval of once every 2,476 years may be considered a "typical" worst-case scenario. Damage for this earthquake is estimated to affect 2% of buildings, assumed to be a worst-case scenario for unreinforced masonry construction as outlined in FEMA's *Understanding Your Risks: Identifying Hazards and Estimating Losses* totaling up to $54.7 million. Larger earthquakes will affect more structures and have a correspondingly higher damage total, however are considered extremely rare, occurring less than once every several thousand years.

[149] USGS, Online Earthquake Mapping; https://earthquake.usgs.gov/earthquakes/map/#%7B%22autoUpdate%22%3A%5B%5D%2C%22basemap%22%3A%22grayscale%22%2C%22feed%22%3A%221476808496534%22%2C%22listFormat%22%3A%22default%22%2C%22mapposition%22%3A%5B%5B36.13787471840729%2C-87.09136962890625%5D%2C%5B37.97884504049713%2C-83.07037353515625%5D%5D%2C%22overlays%22%3A%5B%22plates%22%5D%2C%22restrictListToMap%22%3A%5B%22restrictListToMap%22%5D%2C%22search%22%3A%7B%22id%22%3A%221476808496534%22%2C%22name%22%3A%22Search%20Results%22%2C%22isSearch%22%3Atrue%2C%22params%22%3A%7B%22starttime%22%3A%221900-01-01%2000%3A00%3A00%22%2C%22endtime%22%3A%222016-10-18%2023%3A59%3A59%22%2C%22maxlatitude%22%3A37.571%2C%22minlatitude%22%3A36.558%2C%22maxlongitude%22%3A-84.298%2C%22minlongitude%22%3A-85.869%2C%22minmagnitude%22%3A2%2C%22orderby%22%3A%22time%22%7D%7D%2C%22sort%22%3A%22newest%22%2C%22timezone%22%3A%22local%22%2C%22viewModes%22%3A%5B%22map%22%5D%2C%22event%22%3A%22se609170%22%7D

Landslide

The Lake Cumberland Region has had small landslides occur in all counties. Per FEMA's *Understanding Your Risks: Identifying Hazards and Estimating Losses*, there are no standard loss estimation models. Landslide damages will depend on the location of occurrence, and will typically be minimal. Should one occur, damages will likely be less than $1 million.

No locations or data was identified for any incorporated areas. Road-cut locations were the primary landslide event identified in each county. The RHMP Committee identified on average four or five past road cut landslide locations of in each county. The general discussion of this problem indicated that most landslide damage to roadways was repaired, but the repairs tended to last a few years and gradually degraded over time.

Committee members, non-scientific conclusions based on their knowledge, was that two-landslide events occurred within each county annually with a cost of $2500.00 per event. The random nature of past locations of landslide vulnerability in all jurisdictions makes mapping of future events impossible, for this hazard.

Regional Mitigation Planning Committee (RMPC) member's, non-scientific conclusions, on previous occurrences was that two-landslide events occurred within each county on average annually over a ten year period and none within any city limits. An estimated cost of $2500 was assigned to each hazard event because no loss data was available. Committee's estimates are based on personal knowledge only. This probability of future Hazard events has assigned to this hazard. This is supplemented with the Map 4.4(2) and Map 4.4(3), which shows the Landslide Susceptibility/Incidence and Potential/Incidence for the Lake Cumberland Region.

Table 5.4(1) - Landslide*

Event Probability Basis				Probable Future Events		
Jurisdiction	**Number of Events**	**Total # of Events**	**Total # Data Reporting Years**	**Yearly Average Events Per County**	**Countywide Average Loss Per Event**	**Countywide Average Loss Per Year**
Adair County*	2	2	7	2	$2500.00	$5,000.00
City of Columbia*	0	0				
Casey County*	2	2	7	2	$2500.00	$5,000.00
City of Liberty	0	0				
Clinton County*	2	2	7	2	$2500.00	$5,000.00
City of Albany	0	0				
Cumberland County*	2	2	7	2	$2500.00	$5,000.00
City of Burkesville	0	0				
Green County*	2	2	7	2	$2500.00	$5,000.00
City of Greensburg	0	0				
McCreary County*	2	2	7	2	$2500.00	$5,000.00
Pulaski County*	2	2	7	2	$2500.00	$5,000.00
City of Burnside*	0	0				
City of Eubank*	0	0				
City of Ferguson*	0	0				
City of Science Hill*	0	0				
City of Somerset						
Russell County*	2	2	7	2	$2500.00	$5,000.00
City of Jamestown	0					
City of Russell Springs*						
Taylor County*	2	2	7	2	$2500.00	$5,000.00
City of Campbellsville						
Wayne County*	2	2	7	2	$2500.00	$5,000.00
City of Monticello	0					
Lake Cumberland Regional Averages	20	20	7	20	$2500.00	$50,000.00

Note: No cities identified any Landslide Susceptibility so no mapping was developed for city jurisdictions.

Table 5.4(2) - LCADD Region Landslide Vulnerability Risk Exposure Assessment

Assets by Jurisdictions		Total Risk Exposure All Asset Categories			
Jurisdictions Affected		Current Assets	Projected Assets		
		2015	2020	2025	2030
Adair Co.	Yes	$1,603,720,925	$1,656,162,599	$1,698,725,978	$1,733,379,988
Columbia	Yes	$844,846,855	$872,473,347	$894,895,912	$913,151,789
Casey Co.	Yes	$1,182,017,179	$1,216,413,879	$1,246,824,226	$1,271,760,710
Liberty	Yes	$515,407,153	$530,405,501	$543,665,639	$554,538,951
Clinton Co.	Yes	$981,646,147	$996,959,827	$1,008,225,473	$1,014,980,583
Albany	Yes	$334,470,615	$339,688,357	$343,526,835	$345,828,465
Cumberland Co.	Yes	$727,101,993	$736,917,870	$744,581,815	$749,719,430
Burkesville	Yes	$240,186,676	$243,429,196	$245,960,859	$247,657,989
Green Co.	Yes	$934,919,954	$960,256,284	$979,557,436	$989,255,054
Greensburg	Yes	$414,000,156	$425,219,561	$433,766,474	$438,060,762
McCreary	Yes	$507,509,854	$517,964,557	$525,889,415	$530,675,008
Pine Knot	Yes	$208,731,649	$213,031,521	$216,290,903	$218,259,150
Stearns	Yes	$211,819,034	$216,182,506	$219,490,098	$221,487,458
Whitley City	Yes	$211,819,034	$216,182,506	$219,490,098	$221,487,458
Pulaski Co.	Yes	$1,891,014,577	$1,945,097,594	$1,990,029,349	$2,024,257,853
Burnside	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Eubank	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Ferguson	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Science Hill	Yes	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Somerset	Yes	$1,629,483,719	$1,676,086,953	$1,714,804,562	$1,744,299,200
Russell Co.	Yes	$896,300,969	$917,184,782	$935,895,351	$952,086,341
Jamestown	Yes	$358,362,729	$366,712,580	$374,193,517	$380,667,065
Russell Springs	Yes	$359,257,008	$367,627,696	$375,127,301	$381,617,004
Taylor Co.	Yes	$1,300,807,875	$1,333,588,234	$1,360,126,639	$1,380,936,577
Campbellsville	Yes	$1,394,095,243	$1,429,226,443	$1,457,668,049	$1,479,970,370

Wayne Co.	Yes	$990,434,345	$1,029,754,588	$1,062,809,711	$1,089,167,391
Monticello	Yes	$677,945,008	$704,859,425	$727,485,412	$745,527,051
LCADD Region Total	**Yes**	**$19,944,671,749**	**$20,483,921,768**	**$20,927,851,672**	**$21,265,263,984**

Table 5.4(3) - LCADD Region Landslide Vulnerability Risk Exposure Assessment

Assets Affected: All		Annual Percentage of Loss Estimate **for Total Risk Exposure All Asset Categories**			
Jurisdictions Affected	**Percentage Risk**	2015	2020	2025	2030
Adair Co.	0.001559%	$25,000	$25,818	$26,481	$27,021
Columbia	0.000000%	$0	$0	$0	$0
Casey Co.	0.002115%	$25,000	$25,728	$26,371	$26,898
Liberty	0.000000%	$0	$0	$0	$0
Clinton Co.	0.002547%	$25,000	$25,390	$25,677	$25,849
Albany	0.000000%	$0	$0	$0	$0
Cumberland Co.	0.003438%	$25,000	$25,338	$25,601	$25,778
Burkesville	0.000000%	$0	$0	$0	$0
Green Co.	0.002674%	$25,000	$25,678	$26,194	$26,453
Greensburg	0.000000%	$0	$0	$0	$0
McCreary	0.004926%	$25,000	$25,515	$25,905	$26,141
Pine Knot	0.000000%	$0	$0	$0	$0
Stearns	0.000000%	$0	$0	$0	$0
Whitley City	0.000000%	$0	$0	$0	$0
Pulaski Co.	0.001322%	$25,000	$25,715	$26,309	$26,762
Burnside	0.000000%	$0	$0	$0	$0
Eubank	0.000000%	$0	$0	$0	$0
Ferguson	0.000000%	$0	$0	$0	$0
Science Hill	0.000000%	$0	$0	$0	$0
Somerset	0.000000%	$0	$0	$0	$0
Russell Co.	0.002789%	$25,000	$25,583	$26,104	$26,556

Jamestown	0.000000%	$0	$0	$0	$0
Russell Springs	0.000000%	$0	$0	$0	$0
Taylor Co.	0.001922%	$25,000	$25,630	$26,140	$26,540
Campbellsville	0.000000%	$0	$0	$0	$0
Wayne Co.	0.002524%	$25,000	$25,993	$26,827	$27,492
Monticello	0.000000%	$0	$0	$0	$0
LCADD Region Total		**$250,000**	**$256,385**	**$261,609**	**$265,490**

Land Subsidence (Karst/Sinkhole)

As with landslides, The Lake Cumberland Region has had only one substantially damaging karst event. The infrastructure damage from karst involved Wolf Creek Dam on Lake Cumberland in southeastern Kentucky. Three events occurred during a period from 1968 through 2014. No Cost was available for the first two. (In 1968, muddy flows in the tailrace and two sinkholes near the downstream toe of the embankment immediately began an emergency investigation and grouting program between 1968 and 1970 that is generally credited with saving the dam. However, grouting was not a long-term fix and a more permanent solution was sought. The District chose to construct a concrete diaphragm wall through the earth embankment into the rock foundation to block the seepage. This wall was constructed between 1975 and 1979. While the original wall interrupted the progression of erosion, seepage has since found new paths under and around the wall and perhaps through defects in the wall itself as erosion of solution repair features continued. The alternative selected is a new concrete diaphragm wall constructed using newer technology that will reinforce the purpose of the original wall. This solution was completed in 2014 at a cost of $317.1 million.)

Neither the RHMP Committee nor any of the county/city hazard mitigation committee members could find any other major incident of loss from Land Subsidence. All counties had examples of sinkholes collapsing mostly on farms however only four, resulting in damage or losses, could be identified. However damage/repair costs were not available. Normal annual karst damages will likely be less than $1 million region wide.

5.5 Forest Fires / Wildfires

RMPC determined that Wildfire does affect all areas of the LCADD region. Both historical information and personal knowledge of subcommittee members revealed small wildfires occur in each county annually. No Loss of life/injuries or signification property damage (excluding forest damage) was identified.

Per FEMA's *Understanding Your Risks: Identifying Hazards and Estimating Losses*, there are no standard loss estimation models for wildfires. As wildfires typically occur in Regionalized, sparsely developed areas, damages are typically light compared with those that take place in either highly developed areas or over a large area.

Examination of suburban wildfire danger revealed no committee knowledge of any past hazard. The Subcommittees reviewed the study Wildland Fire Risk to Flammable Structures, v2000 (this is still the latest study available)[150]. The report deals with the threat of wildland fire burning flammable structures. The LCADD Region has a low to very low rating for Wildland Fire Risk to Flammable Structures. The subcommittees placed very low risk of loss for each of the cities and set the Risk Exposure to Assets at no risk within the Region and placed the risk equal to the average yearly amount of loss from the available data for wildfire. No risk mapping data available for map creation for this hazard due to the random location of future wildfire events.

[150] Wildland Fire Risk to Flammable Structures, v2000, Mapping Wildland Fire Risk to Flammable Structures for the Conterminous United States; https://www.firelab.org/document/wildland-fire-risk-flammable-structures-v2000

The members of the subcommittees felt that no estimated loss to city areas would be assigned since no past loss data was available. The members of the subcommittees felt that an estimated loss to county areas would equal to the average yearly amount of loss from the available data for wildfire as Total Risk Exposure of each jurisdiction for each five year period for losses. Loss was calculated using the Kentucky Division of Forestry (KDF) wildland fire loss of $82.52 per acre of burn. No standard loss estimation models for wildfires were used for future vulnerability projections.

Table 5.5(1) - LCADD Region Wildfire Vulnerability Risk Exposure Assessment (State Data)

County	Total Acre	Fire Date	Loss Per Acre
Adair Totals	975.6	2000-2015	$80,502.39
Casey Totals	3,290.5	2000-2015	$271,532.06
Clinton Totals	4,952.4	2000-2015	$408,672.05
Cumberland Totals	4,629.5	2000-2015	$382,026.34
Green Totals	556.9	2000-2015	$45,955.39
McCreary Totals	3,000.0	2000-2015	$247,560.00
Pulaski Totals	2,877.0	2000-2015	$237,410.04
Russell Totals	714.8	2000-2015	$58,985.30
Taylor Totals	399.1	2000-2015	$32,933.73
Wayne Totals	11,715.6	2000-2015	$966,767.19
LCADD Totals	**33,111.3**	2000-2015	**$2,732,344.48**

Table 5.5(2) - LCADD Region Wildfire Vulnerability Risk Exposure Assessment (Federal Data)

County	Total Acres	Fire Date	Loss Per Acre
Adair	1.1	1980-2015	Data Unknown
Casey	2.1	1980-2015	Data Unknown
McCreary	34,298.6	1980-2015	Data Unknown
Pulaski	3,903.0	1980-2015	Data Unknown
Taylor	5.0	1980-2015	Data Unknown
Wayne	194.8	1980-2015	Data Unknown
LCADD Totals	**38,404.6**	1980-2015	

The members of the RHMPC felt that no estimated loss to city areas would be assigned since no past loss data was available. The members of the subcommittees felt that an estimated loss to county areas would be equal to the average yearly amount of loss from the available data for wildfire as Total Risk Exposure of each jurisdiction for each five year period for losses. Loss was calculated using the Kentucky Division of Forestry (KDF) wildland fire loss of $82.52 per acre of burn.

Table 5.5(3) - LCADD Region Wildfire Vulnerability Risk Exposure Assessment

Assets by Jurisdictions		Total Risk Exposure All Asset Categories			
Jurisdictions Affected		Current Assets	Projected Assets		
		2015	2020	2025	2030
Adair Co.	Yes	$1,603,720,925	$1,656,162,599	$1,698,725,978	$1,733,379,988
Columbia	No	$844,846,855	$872,473,347	$894,895,912	$913,151,789
Casey Co.	Yes	$1,182,017,179	$1,216,413,879	$1,246,824,226	$1,271,760,710
Liberty	No	$515,407,153	$530,405,501	$543,665,639	$554,538,951
Clinton Co.	Yes	$981,646,147	$996,959,827	$1,008,225,473	$1,014,980,583
Albany	No	$334,470,615	$339,688,357	$343,526,835	$345,828,465
Cumberland Co.	Yes	$727,101,993	$736,917,870	$744,581,815	$749,719,430
Burkesville	No	$240,186,676	$243,429,196	$245,960,859	$247,657,989
Green Co.	Yes	$934,919,954	$960,256,284	$979,557,436	$989,255,054
Greensburg	No	$414,000,156	$425,219,561	$433,766,474	$438,060,762
McCreary	Yes	$507,509,854	$517,964,557	$525,889,415	$530,675,008
Pine Knot	No	$208,731,649	$213,031,521	$216,290,903	$218,259,150
Stearns	No	$211,819,034	$216,182,506	$219,490,098	$221,487,458
Whitley City	No	$211,819,034	$216,182,506	$219,490,098	$221,487,458
Pulaski Co.	Yes	$1,891,014,577	$1,945,097,594	$1,990,029,349	$2,024,257,853
Burnside	No	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Eubank	No	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Ferguson	No	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Science Hill	No	$382,193,263	$393,123,991	$402,205,155	$409,123,084
Somerset	No	$1,629,483,719	$1,676,086,953	$1,714,804,562	$1,744,299,200
Russell Co.	Yes	$896,300,969	$917,184,782	$935,895,351	$952,086,341
Jamestown	No	$358,362,729	$366,712,580	$374,193,517	$380,667,065
Russell Springs	No	$359,257,008	$367,627,696	$375,127,301	$381,617,004
Taylor Co.	Yes	$1,300,807,875	$1,333,588,234	$1,360,126,639	$1,380,936,577
Campbellsville	No	$1,394,095,243	$1,429,226,443	$1,457,668,049	$1,479,970,370
Wayne Co.	Yes	$990,434,345	$1,029,754,588	$1,062,809,711	$1,089,167,391
Monticello	No	$677,945,008	$704,859,425	$727,485,412	$745,527,051
LCADD Region Total	**Yes**	**$19,944,671,749**	**$20,483,921,768**	**$20,927,851,672**	**$21,265,263,984**

Table 5.5(4) - LCADD Region Wildfire Vulnerability Risk Exposure Assessment (State Data Only)

Assets by Jurisdictions	Jurisdictions Affected	Annual Percentage of Loss Estimate for Total Risk Exposure All Asset Categories				
		Percentage	2015	2020	2025	2030
Adair Co.	Yes	0.00000837	$13,417.06	$13,855.80	$14,211.90	$14,501.82
Columbia	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Casey Co.	Yes	0.00003829	$45,255.34	$46,572.27	$47,736.58	$48,691.31
Liberty	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Clinton Co.	Yes	0.00006939	$68,112.01	$69,174.56	$69,956.23	$70,424.93
Albany	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Cumberland Co.	Yes	0.00008757	$63,671.06	$64,530.62	$65,201.73	$65,651.63
Burkesville	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Green Co.	Yes	0.00000819	$7,659.23	$7,866.80	$8,024.92	$8,104.37
Greensburg	No	0.00000000	$0.00	$0.00	$0.00	$0.00
McCreary	Yes	0.00008130	$41,260.00	$42,109.96	$42,754.24	$43,143.30
Pine Knot	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Stearns	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Whitley City	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Pulaski Co.	Yes	0.00002092	$39,568.34	$40,699.99	$41,640.16	$42,356.38
Burnside	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Eubank	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Ferguson	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Science Hill	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Somerset	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Russell Co.	Yes	0.00001097	$9,830.88	$10,059.94	$10,265.17	$10,442.75
Jamestown	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Russell Springs	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Taylor Co.	Yes	0.00000422	$5,488.96	$5,627.28	$5,739.26	$5,827.07
Campbellsville	No	0.00000000	$0.00	$0.00	$0.00	$0.00
Wayne Co.	Yes	0.00016268	$161,127.86	$167,524.64	$172,902.18	$177,190.16
Monticello	No	0.00000000	$0.00	$0.00	$0.00	$0.00
LCADD Region Total	**Yes**	**0.00002283**	**$455,390.75**	**$467,703.28**	**$477,839.40**	**$485,543.44**

5.6 Drought

Damages due to drought are difficult to determine, and actual damage to structures and infrastructure is typically minimal. However, damage to crops and other water-sensitive features can be extensive depending on drought timing and duration. Unlike most other disasters that are over in days at most, droughts can last years. Should an extended drought occur, droughts lasting years can have substantial financial consequences. Although extended droughts are possible, most droughts are fairly brief with little to no damaging impacts.

All cities and counties in the LCADD Region are affected equally by this hazard with only slight differences in severity. Extreme drought on the Palmer Drought Severity Index occurs for extended periods (6-18 months) every 10-15 years. Moderate to Severe Drought ranges happen more frequently, but for shorter periods (6 months or less) on average every 4-5 years. There is no way to predict Drought Events beyond the historical average. No risk mapping data available for map creation for this hazard. However the risk of a severe drought and resulting economic losses were not considered significant enough to be considered for mitigation by all counties/cities in the RMPC.

The assessment methodology reasoning is as follows:

- ≠ Drought impacts large areas and crosses jurisdictional boundaries. All existing and future buildings, facilities and populations are exposed to this hazard and could potentially be impacted.
- ≠ Drought impacts are mostly experienced in water shortages and crop/livestock losses on agricultural lands and typically have no impact on buildings.

The economic impact of droughts can be significant as they produce a complex web of impacts that spans many sectors of the economy and reach well beyond the area experiencing physical drought. This complexity exists because water is integral to our ability to produce goods and provide services. If droughts extend over a number of years, the direct and indirect economic impact can be significant. Risk Exposure Assessment was limited to income producing agricultural commodities. The projected exposure is based on the projected increased agricultural farm incomes.

USDA Agricultural Projections for 2011-20, released in February 2011, provide long run projections for the farm sector for the next 10 years. These annual projections cover agricultural commodities, agricultural trade, and aggregate indicators of the sector, such as farm income and food prices. After near-term reductions from projected 2011 records, the value of U.S. agricultural exports and net farm income each rise through the rest of the decade.[151]

[151] USDA Agricultural Projections for 2011-20, released in February 2011, accessed May 2011 at http://www.ers.usda.gov/Briefing/Baseline/#highlights

Table 5.6(1) - LCADD Region Key Agricultural Crop Assets

Assets by Jurisdictions		Total Risk Exposure Agricultural Crops Sold				
Jurisdictions Affected		Current Assets		Projected Assets (Increased by Region Average of 23%)		
		2012 (last available)	% Change 2007	2020	2025	2030
Adair Co.	Yes	$47,426,000	13.00%	$58,333,980	$71,750,795.40	$88,253,478.34
Casey Co.	Yes	$29,594,000	15.00%	$36,400,620	$44,772,762.60	$55,070,498.00
Clinton Co.	Yes	$29,785,000	-2.00%	$36,635,550	$45,061,726.50	$55,425,923.60
Cumberland Co.	Yes	$8,003,000	60.00%	$9,843,690	$12,107,738.70	$14,892,518.60
Green Co.	Yes	$39,169,000	26.00%	$48,177,870	$59,258,780.10	$72,888,299.52
McCreary	Yes	$1,034,000	13.00%	$1,271,820	$1,564,338.60	$1,924,136.48
Pulaski Co.	Yes	$63,505,000	60.00%	$78,111,150	$96,076,714.50	$118,174,358.84
Russell Co.	Yes	44,526,000	2.00%	$54,766,980	$67,363,385.40	$82,856,964.04
Taylor Co.	Yes	37,898,000	44.00%	$46,614,540	$57,335,884.20	$70,523,137.57
Wayne Co.	Yes	$68,072,000	-1.00%	$83,728,560	$102,986,128.80	$126,672,938.42
LCADD Region Total	**Yes**	**$369,012,000**	**23.00%**	**$453,884,760**	**$558,278,254.80**	**$686,682,253.40**

[152]

Note: The members of the RHMC felt that an estimated loss to all areas would equal one percent (1%) of the Total Risk Exposure of each jurisdiction for each five year period for losses from both severe and moderate drought ranges. This is based on the consensus of the subcommittees since there was no past loss data. Risk Exposure Assessment was limited to income producing agricultural commodities.

[152] USDA 2012 Census Publications, State and County Profiles, Kentucky; https://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/Kentucky/

Table 5.6(2) - LCADD Region Drought Vulnerability Risk Exposure Assessment

Jurisdictions Affected		Percentage Risk	Estimated Risk Exposure All Asset Categories for County			
			2015	2020	2025	2030
Adair Co.	Yes	1.00%	$474,260	$583,340	$717,508	$882,535
Casey Co.	Yes	1.00%	$295,940	$364,006	$447,728	$550,705
Clinton Co.	Yes	1.00%	$297,850	$366,356	$450,617	$554,259
Cumberland Co.	Yes	1.00%	$80,030	$98,437	$121,077	$148,925
Green Co.	Yes	1.00%	$391,690	$481,779	$592,588	$728,883
McCreary	Yes	1.00%	$10,340	$12,718	$15,643	$19,241
Pulaski Co.	Yes	1.00%	$635,050	$781,112	$960,767	$1,181,744
Russell Co.	Yes	1.00%	$445,260	$547,670	$673,634	$828,570
Taylor Co.	Yes	1.00%	$378,980	$466,145	$573,359	$705,231
Wayne Co.	Yes	1.00%	$680,720	$837,286	$1,029,861	$1,266,729
LCADD Region Total	**Yes**	**1.00%**	$3,690,120	$4,538,848	$5,582,783	$6,866,823

5.7 Dam Failures / Breaches

Damages, from dam failures will be caused by a sudden release of water along an inland waterway, are likely to roadway infrastructure or buildings in close proximity to the affected stream. Damages will directly relate to the size and location of the dam that failed. Many dams in The Lake Cumberland Region are small and located in remote areas. Damages from the failure of one of these will be minimal, potentially $0 to several thousand dollars, other than the cost of replacing the dam if desired. However, failure of a major dam, such as those listed as High Hazard or Significant Hazard can cause substantial damages comparable to Regionalized inland flooding. Damages from a dam failure are difficult to quantify, however could exceed $25 million, similar to a minor to moderate flood event. The failure of Green River Dam could cause > $25 million (including inundation areas along the Green River in Kentucky) and upward of over $1 Billion (including inundation areas along the Cumberland River in both Kentucky and Tennessee) for a failure of Lake Cumberland's Wolf Creek Dam.

5.8 Vulnerability Summary

The following table provides a summary of the above vulnerability assessment for The Lake Cumberland Region's estimated individual (combined) City(s) & County. Note that the following dollar amounts are for planning purposes only and should not be used as a comprehensive assessment in the event of a natural disaster.

Table 5.8(1) – Vulnerability Summary
LCADD Region Vulnerability Risk Exposure Assessment Analysis/Summary

Hazard	Region Effected	2015	2020	2025	2030
Expansive Soil (Unknown no history of loss)	Yes	$0.00	$0.00	$0.00	$0.00
Hailstorm (Unknown)	Yes	$0.00	$0.00	$0.00	$0.00
Land Subsidence (Unknown)	Yes	$0.00	$0.00	$0.00	$0.00
Landslide	Yes	$250,000.00	$256,385.00	$261,609.00	$265,490.00
Drought	Yes	$3,690,120.00	$4,538,848.00	$5,582,783.00	$6,866,823.00
Wildfire	Yes	$455,390.75	$467,703.28	$477,839.40	$485,543.44
Extreme Summer Weather	Yes	$1,641,175.00	$1,821,704.00	$2,003,875.00	$2,204,262.00
Flood	Yes	$19,944,671,749.00	$20,483,921,768.00	$20,927,851,672.00	$21,265,263,984.00
Severe Winter Storm/Ice Storm (Unknown)	Yes	$0.00	$0.00	$0.00	$0.00
Thunderstorm, Lightning, and Windstorm	Yes	$141,461.00	$145,066.00	$147,966.00	$150,056.00
Earthquake (Unknown)	Yes	$0.00	$0.00	$0.00	$0.00
Hazardous Material	Yes	unk	unk	unk	unk
Dams and Levees (Wolf Creek Dam)	Yes	$128,952,064.00	$130,792,516.00	$132,251,681.00	$133,264,530.00
Tornados	All	F0	F1	F2	F3	F4
		$24,022	**$236,789**	**$2,453,684**	**$24,716,437**	**$224,778,073**

6.0 HIGH HAZARD AREAS AND IDENTIFYING CRITICAL ASSETS

The Lake Cumberland Hazard Mitigation Regional Planning Committee has evaluated areas of the Region that are particularly vulnerable to the hazards associated with a natural disaster as discussed in Section 4.0. The following sections outline areas at the highest risk of adverse impacts from hazards, as well as the potential impacts at each location. As many hazards such as earthquakes and winter storm events can affect the entire Region, this section has been tailored to Regionalized events, particularly those associated with flooding and severe storms.

This section also assesses vulnerability of types and numbers of existing buildings and critical facilities (including infrastructure) located within each identified hazard area. The only identified hazard, which is area specific within the region, is flooding. Newly available flood mapping and GIS critical structure locations show all structures located within 100-year flood plain in each county. All remaining buildings and critical facilities are exposed to all remaining natural hazards. Effort is made to estimate both Total Risk Exposure and Actual Risk Exposure for each hazard. See Section 5 for details on methodology used in determining Total and Actual Risk Exposure.

Presentation maps using LCADD's Geographical Information System (GIS) have been prepared for critical facilities. Each map location is referenced throughout this report. The maps were produced with the best available data from local, state, and national databases.

6.1 Critical Infrastructure

Critical infrastructure is essential to the health and welfare of the Region and is especially important following hazard events. Critical infrastructure includes buildings and infrastructure such as emergency operations centers and shelters, critical municipal buildings, transportation features, utilities and communications infrastructure, water and wastewater facilities, etc. The Lake Cumberland Hazard Mitigation Regional Planning Committee developed a list of critical infrastructure and facilities. Only a portion of critical infrastructure facilities are located within high hazard areas such as floodplains, however due to the importance of these facilities, special care must be taken to ensure continued operation even during disaster events.

During the planning process, it became apparent that the list of critical infrastructure was extensive, making it impractical to respond to the needs of all facilities during or immediately after an emergency. Therefore, the LCHMRPC prioritized critical infrastructure into the following "tiers" based on priority of importance, and shown on the respective figure:

- ≠ Tier 1 – Emergency Response and Utilities;
- ≠ Tier 2 – Municipal and Community Centers; and
- ≠ Tier 3 – Other.

Tier 1 facilities are the most critical and include facilities such as police, fire and medical services, water and sewer infrastructure, department of public works facilities, and other important utilities. This infrastructure is necessary to maintain a minimal level of service to provide necessary utilities and emergency services to residents. Every feasible opportunity should be taken to ensure that these facilities remain functional and accessible at all times.

Tier 2 facilities are also important and include large municipal, public, semi-public and other gathering places servicing a proportionally large group of people. Infrastructure includes Region offices and other municipal buildings, schools, nursing homes, and other miscellaneous buildings such as the post office and local and Federal Corrections facilities.

Tier 3 facilities are generally less critical, however still important to the community as a whole. Infrastructure includes smaller preschool and kindergarten facilities, daycare facilities, animal shelters, historic properties, parks and cemeteries.

Mapping data for structures is available for all ten counties (using their 911Geographic Information Systems (GIS)), of Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell, Taylor and Wayne in the LCADD region. No specific structure type information is available for these counties. Structures locations, where available, are mapped in Essential Facilities section only. The table below shows the available mapping information for map creation for any of the following hazards for Assessing Vulnerability: Identifying Assets.

Table 6.1(1) Tier 1 Mapping Information

Hazard	Available Mapping Information
Expansive Soil	No historical mapping location or future specific area location data is available to allow for future risk exposure map creation for these hazards as they relate to critical infrastructure.
Hailstorm	
Land Subsidence	
Drought	
Wildfire	
Extreme Summer Weather	
Severe Winter Storm/Ice Storm	
Earthquake	
Tornado	
Thunderstorm, Lightning, and Windstorm	
Hazardous Material	
Landslide	Committee identified areas are mapped where critical infrastructure point locations are available; these are mapped with 100 year flood zone locations and landslide potential maps.
Flood	Approved FEMA DFIRM flood maps are available for map creation for the flooding hazards in all counties. No critical facilities were identified by the RHMPC located in identified flood areas in any counties/cities.
Natural Biohazard	No locations in the LCADD Region.
Nuclear Facilities	

Dams and Levees	No risk mapping data available for risk exposure from dam failure for map creation for this hazard. Wolf Creek Dam, on the Cumberland River, failure flood inundation mapping was reviewed, but could not be included in the updated plan due to security restrictions of the U.S. Army Corps of Engineers.

Tier 1 Facilities
Table 6.1(2) - Tier 1 Facilities

Adair Co. 911 Dispatch	911	$294,800.00	Adair
Columbia Utilities Commission	City Natural Gas System	$1,068,200.00	Adair
Adair Co. Ambulance Service	Ems	$300,000.00	Adair
Adair Co. Volunteer Fire Dept.	Fire Station	$244,100.00	Adair
Breeding Area Vol. Fire Dept.	Fire Station	$200,000.00	Adair
Knifley Volunteer Fire Dept.	Fire Station	$200,000.00	Adair
Pellyton Volunteer Fire Dept.	Fire Station	$200,000.00	Adair
Westlake Regional Hospital	Hospital	$10,860,000.00	Adair
Columbia/Adair Utilities District	Lift Station	$75,000.00	Adair
Columbia/Adair Utilities District	Lift Station	$75,000.00	Adair
Columbia/Adair Utilities District	Lift Station	$75,000.00	Adair
Columbia/Adair Utilities District	Lift Station	$75,000.00	Adair
Columbia/Adair Utilities District	Lift Station	$75,000.00	Adair
Columbia/Adair Utilities District	Lift Station	$75,000.00	Adair
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Columbia/Adair Utilities District	Lift Station	$75,000.00	Adair
Columbia/Adair Utilities District	Lift Station	$75,000.00	Adair
Columbia/Adair Utilities District	Lift Station	$75,000.00	Adair
Columbia/Adair Utilities District	Lift Station	$75,000.00	Adair
Columbia/Adair Utilities District	Lift Station	$75,000.00	Adair
Columbia/Adair Utilities District	Lift Station	$75,000.00	Adair
Mp 388.05 Adair County	Natural Gas	$1,068,200.00	Adair
Columbia City Police Dept.	Police Station	$90,000.00	Adair
Adair County Sheriff (Same Building As Courthouse)	Police Station	*$0.00	Adair
Ky. State Police, Post #15	Police Station	$1,372,000.00	Adair
Adair County Rescue Squad	Rescue	$250,000.00	Adair
Columbia/Adair Utilities District	Waste Water Treatment Plant	$6,526,800.00	Adair

Columbia/Adair County Water Commission	Water Pump Station	$50,000.00	Adair
Columbia/Adair County Water Commission	Water Pump Station	$50,000.00	Adair
Columbia/Adair County Water Commission	Water Pump Station	$50,000.00	Adair
Columbia/Adair County Water Commission	Water Pump Station	$50,000.00	Adair
Columbia/Adair Utilities District	Water Pump Station	$50,000.00	Adair
Columbia/Adair Utilities District	Water Pump Station	$50,000.00	Adair
Columbia/Adair Utilities District	Water Pump Station	$50,000.00	Adair
Columbia/Adair Utilities District	Water Pump Station	$50,000.00	Adair
Columbia/Adair Utilities District	Water Pump Station	$50,000.00	Adair
Cumberland County Water District	Water Pump Station	$50,000.00	Adair
Cumberland County Water District	Water Pump Station	$50,000.00	Adair
Columbia/Adair Utilities District	Water Tanks	$500,000.00	Adair
Columbia/Adair Utilities District	Water Tanks	$500,000.00	Adair
Columbia/Adair Utilities District	Water Tanks	$500,000.00	Adair
Columbia/Adair Utilities District	Water Tanks	$500,000.00	Adair
Columbia/Adair Utilities District	Water Tanks	$500,000.00	Adair
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Columbia/Adair Utilities District	Water Tanks	$500,000.00	Adair
Columbia/Adair Utilities District	Water Tanks	$500,000.00	Adair
Columbia/Adair Utilities District	Water Tanks	$500,000.00	Adair
Columbia/Adair Utilities District	Water Tanks	$500,000.00	Adair
Columbia/Adair County Water Commission	Water Treatment Plant	$3,263,400.00	Adair
Casey Co. 911 Dispatch (Same Building As Jail)	911	*$0.00	Casey
Liberty Gas	City Natural Gas System	$1,068,200.00	Casey
Casey Co. Ambulance Service	Ems	$42,438.00	Casey
Liberty City Fire Department	Fire Station	$165,485.00	Casey
Brush Creek Vol. Fire Dept.	Fire Station	$200,000.00	Casey
Clementsville Vol. Fire Dept.	Fire Station	$200,000.00	Casey
South Fork Vol. Fire Dept.	Fire Station	$200,000.00	Casey
East Casey Vol. Fire Dept.	Fire Station	$200,000.00	Casey

Southeast Volunteer Fire Dept.	Fire Station	$200,000.00	Casey
Dunnville Volunteer Fire Dept.	Fire Station	$200,000.00	Casey
Casey County Hospital	Hospital	$3,430,000.00	Casey
Liberty Water & Gas	Lift Station	$75,000.00	Casey
Liberty Water & Gas	Lift Station	$75,000.00	Casey
Liberty Water & Gas	Lift Station	$75,000.00	Casey
Columbia Gulf Transmission Co	Natural Gas	$1,068,200.00	Casey
Columbia Gulf Transmission Co	Natural Gas	$1,068,200.00	Casey
Mp 397.67 Casey County	Natural Gas	$1,068,200.00	Casey
Mp 408.48 Casey County	Natural Gas	$1,068,200.00	Casey
Casey County Sheriff	Police Station	*$0.00	Casey
Liberty City Police Dept.	Police Station	$165,485.00	Casey
Casey Co. Rescue Squad (Same Building Fire)	Rescue	*$0.00	Casey
Jones Park Elem	Small Sewage	$25,000.00	Casey
Liberty Water & Gas	Waste Water Treatment Plant	$6,526,800.00	Casey
East Casey County Water District	Water Pump Station	$50,000.00	Casey
East Casey County Water District	Water Pump Station	$50,000.00	Casey
East Casey County Water District	Water Pump Station	$50,000.00	Casey
East Casey County Water District	Water Pump Station	$50,000.00	Casey
East Casey County Water District	Water Pump Station	$50,000.00	Casey
East Casey County Water District	Water Pump Station	$50,000.00	Casey
East Casey County Water District	Water Pump Station	$50,000.00	Casey
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East Casey County Water District	Water Tanks	$500,000.00	Casey
East Casey County Water District	Water Tanks	$500,000.00	Casey
East Casey County Water District	Water Tanks	$500,000.00	Casey
East Casey County Water District	Water Tanks	$500,000.00	Casey
East Casey County Water District	Water Tanks	$500,000.00	Casey
East Casey County Water District	Water Tanks	$500,000.00	Casey

East Casey County Water District	Water Tanks	$500,000.00	Casey
Liberty Water & Gas	Water Tanks	$500,000.00	Casey
Liberty Water & Gas	Water Tanks	$500,000.00	Casey
Liberty Water & Gas	Water Tanks	$500,000.00	Casey
Liberty Water & Gas	Water Tanks	$500,000.00	Casey
Liberty Water & Gas	Water Treatment Plant	$3,263,400.00	Casey
Clinton Co 911 Dispatch (Same Building As EMS)	911	$600,000.00	Clinton
Gasco Distribution Systems, Inc.	County Natural Gas System	$1,068,200.00	Clinton
Clinton Co. Ambulance Service (Same Building As 911)	EMS	*$0.00	Clinton
Albany Fire Station (Old)	Fire Station	$150,000.00	Clinton
Albany Fire Station (New)	Fire Station	$600,000.00	Clinton
Clinton County War Memorial Hospital	Hospital	$11,500,000.00	Clinton
Albany Municipal Water & Sewer	Lift Station	$75,000.00	Clinton
Albany Municipal Water & Sewer	Lift Station	$75,000.00	Clinton
Albany Municipal Water & Sewer	Lift Station	$75,000.00	Clinton
Albany Municipal Water & Sewer	Lift Station	$75,000.00	Clinton
Albany Municipal Water & Sewer	Lift Station	$75,000.00	Clinton
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Albany Municipal Water & Sewer	Lift Station	$75,000.00	Clinton
Albany Municipal Water & Sewer	Lift Station	$75,000.00	Clinton
Albany Municipal Water & Sewer	Lift Station	$75,000.00	Clinton
Albany Municipal Water & Sewer	Lift Station	$75,000.00	Clinton
Dale Hollow Lake State Resort Park	Lift Station	$75,000.00	Clinton
Dale Hollow Lake State Resort Park	Lift Station	$75,000.00	Clinton
Dale Hollow Lake State Resort Park	Lift Station	$75,000.00	Clinton

Dale Hollow Lake State Resort Park	Lift Station	$75,000.00	Clinton
Dale Hollow Lake State Resort Park	Lift Station	$75,000.00	Clinton
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Dale Hollow Lake State Resort Park	Lift Station	$75,000.00	Clinton
Dale Hollow Lake State Resort Park	Lift Station	$75,000.00	Clinton
Dale Hollow Lake State Resort Park	Lift Station	$75,000.00	Clinton
Wilco Refining Llc	Oil Refinery	$980,000.00	Clinton
Clinton County Sheriff's Dept (Same Building As Courthouse)	Police Station	*$0.00	Clinton
Albany Police Department (Same Building As City Hall)	Police Station	$100,000.00	Clinton
Clinton Co. Rescue Squad	Rescue	$100,000.00	Clinton
Dale Hollow Lake State Resort Park	Small Sewage	$25,000.00	Clinton
Mountain View Baptist Camp	Small Sewage	$25,000.00	Clinton
Trooper Island Inc	Small Sewage	$25,000.00	Clinton
Albany Municipal Water & Sewer	Waste Water Treatment Plant	$6,526,800.00	Clinton
Albany Municipal Water & Sewer	Water Pump Station	$50,000.00	Clinton
Albany Municipal Water & Sewer	Water Pump Station	$50,000.00	Clinton
Albany Municipal Water & Sewer	Water Pump Station	$50,000.00	Clinton
Albany Municipal Water & Sewer	Water Tanks	$500,000.00	Clinton
Albany Municipal Water & Sewer	Water Tanks	$500,000.00	Clinton
Albany Municipal Water & Sewer	Water Tanks	$500,000.00	Clinton
Albany Municipal Water & Sewer	Water Tanks	$500,000.00	Clinton

Albany Municipal Water & Sewer	Water Tanks	$500,000.00	Clinton
Albany Municipal Water & Sewer	Water Tanks	$500,000.00	Clinton
Albany Municipal Water & Sewer	Water Tanks	$500,000.00	Clinton
Albany Municipal Water & Sewer	Water Treatment Plant	$3,263,400.00	Clinton
Albany Municipal Water & Sewer	Water Treatment Plant	$3,263,400.00	Clinton
Cumberland Co. 911 Dispatch (Same Building As EMS)	911	*$0.00	Cumberland
Burkesville Gas Company	County Natural Gas System	$1,068,200.00	Cumberland
Cumberland Co. Ambulance Service	Ems	$71,710.00	Cumberland
Marrowbone Volunteer Fire Department	Fire Station	$50,000.00	Cumberland
Burkesville Fire Training Center	Fire Station	$66,194.00	Cumberland
Burkesville Fire Department	Fire Station	$110,323.00	Cumberland
Cumberland County Hospital	Hospital	$8,343,000.00	Cumberland
Burkesville Wastewater	Lift Station	$75,000.00	Cumberland
Burkesville Wastewater	Lift Station	$75,000.00	Cumberland
Burkesville Wastewater	Lift Station	$75,000.00	Cumberland
Burkesville Wastewater	Lift Station	$75,000.00	Cumberland
Burkesville Wastewater	Lift Station	$75,000.00	Cumberland
Burkesville Wastewater	Lift Station	$75,000.00	Cumberland
Cumberland County Sheriff (Same Building As Courthouse)	Police Station	*$0.00	Cumberland
Burkesville Police Department (Same Building As City Hall)	Police Station	*$0.00	Cumberland
Cumberland Co. Rescue Squad	Rescue	$50,000.00	Cumberland
Cumberland County Rescue Squad	Rescue Squad	$70,000.00	Cumberland

Sulphur Creek Resort Inc	Small Sewage	$25,000.00	Cumberland
Burkesville Wastewater	Waste Water Treatment Plant	$6,526,800.00	Cumberland
Burkesville Municipal Water Works	Water Pump Station	$50,000.00	Cumberland
Burkesville Municipal Water Works	Water Pump Station	$50,000.00	Cumberland
Burkesville Municipal Water Works	Water Pump Station	$50,000.00	Cumberland
Burkesville Municipal Water Works	Water Pump Station	$50,000.00	Cumberland
Burnside Municipal Water Works	Water Pump Station	$50,000.00	Cumberland
Cumberland County Water District	Water Pump Station	$50,000.00	Cumberland
Cumberland County Water District	Water Pump Station	$50,000.00	Cumberland
Cumberland County Water District	Water Pump Station	$50,000.00	Cumberland
Cumberland County Water District	Water Pump Station	$50,000.00	Cumberland
Burkesville Municipal Water Works	Water Tanks	$500,000.00	Cumberland
Burkesville Municipal Water Works	Water Tanks	$500,000.00	Cumberland
Burkesville Municipal Water Works	Water Tanks	$500,000.00	Cumberland
Cumberland County Water District	Water Tanks	$500,000.00	Cumberland
Cumberland County Water District	Water Tanks	$500,000.00	Cumberland
Cumberland County Water District	Water Tanks	$500,000.00	Cumberland
Cumberland County Water District	Water Tanks	$500,000.00	Cumberland
Cumberland County Water District	Water Tanks	$500,000.00	Cumberland
Burkesville Municipal Water Works	Water Treatment Plant	$3,263,400.00	Cumberland
Cumberland County Water District	Water Treatment Plant	$3,263,400.00	Cumberland
Greensburg-Green Co. Dispatch (Same Building As City Hall)	911	*$0.00	Green

Atmos Energy Corporation	County Natural Gas System	$1,068,200.00	Green
Greensburg-Green Co. Ambulance	Ems	$11,865.00	Green
Greensburg-Green County Fire Dept.	Fire Station	$730,000.00	Green
Exie Fire Department	Fire Station	$150,000.00	Green
Grab Fire Department	Fire Station	$150,000.00	Green
Summersville Fire Department	Fire Station	$150,000.00	Green
Jane Todd Crawford Memorial Hospital	Hospital	$6,860,000.00	Green
Greensburg Sewer Department	Lift Station	$75,000.00	Green
Greensburg Sewer Department	Lift Station	$75,000.00	Green
Greensburg Sewer Department	Lift Station	$75,000.00	Green
Greensburg Sewer Department	Lift Station	$75,000.00	Green
Greensburg Sewer Department	Lift Station	$75,000.00	Green
Greensburg Sewer Department	Lift Station	$75,000.00	Green
Greensburg Sewer Department	Lift Station	$75,000.00	Green
Greensburg Sewer Department	Lift Station	$75,000.00	Green
Greensburg Sewer Department	Lift Station	$75,000.00	Green
Sanitation District #1 Of Green County	Lift Station	$75,000.00	Green
Sanitation District #1 Of Green County	Lift Station	$75,000.00	Green
Sanitation District #1 Of Green County	Lift Station	$75,000.00	Green
Sanitation District #1 Of Green County	Lift Station	$75,000.00	Green
Tn Gas Pipeline Compr Sta 95	Natural Gas	$1,068,200.00	Green
Greensburg Police Department (Same Building As City Hall)	Police Station	*$0.00	Green
Green County Sheriff	Police Station	*$0.00	Green
Green Co. Rescue Squad	Rescue	$50,000.00	Green
Greensburg Sewer Department	Waste Water Treatment Plant	$6,526,800.00	Green
Sanitation District #1 Of Green County	Waste Water Treatment Plant	$6,526,800.00	Green
Greensburg Water Department	Water Pump Station	$50,000.00	Green
Green-Taylor Water District	Water Pump Station	$50,000.00	Green
Green-Taylor Water District	Water Pump Station	$50,000.00	Green

Green-Taylor Water District	Water Pump Station	$50,000.00	Green
Green-Taylor Water District	Water Pump Station	$50,000.00	Green
Green-Taylor Water District	Water Pump Station	$50,000.00	Green
Green-Taylor Water District	Water Pump Station	$50,000.00	Green
Green-Taylor Water District	Water Pump Station	$50,000.00	Green
Green-Taylor Water District	Water Pump Station	$50,000.00	Green
Russell Springs Sewer & Water Works	Water Pump Station	$50,000.00	Green
Greensburg Water Department	Water Tanks	$500,000.00	Green
Greensburg Water Department	Water Tanks	$500,000.00	Green
Greensburg Water Department	Water Tanks	$500,000.00	Green
Greensburg Water Department	Water Tanks	$500,000.00	Green
Green-Taylor Water District	Water Tanks	$500,000.00	Green
Green-Taylor Water District	Water Tanks	$500,000.00	Green
Green-Taylor Water District	Water Tanks	$500,000.00	Green
Green-Taylor Water District	Water Tanks	$500,000.00	Green
Green-Taylor Water District	Water Tanks	$500,000.00	Green
Green-Taylor Water District	Water Tanks	$500,000.00	Green
Greensburg Water Department	Water Treatment Plant	$3,263,400.00	Green
Mccreary Co. 911 Dispatch	911	$76,600.00	Mccreary
Citipower, L.L.C.	County Natural Gas System	$1,068,200.00	Mccreary
Mccreary Co. Ambulance Service	EMS	$351,500.00	Mccreary
Wolfe Ridge Fire Station	Fire Station	$150,000.00	Mccreary
Rattlesnake Ridge Fire Station	Fire Station	$150,000.00	Mccreary
Sawyer Fire Station	Fire Station	$150,000.00	Mccreary
Cumberland Falls Fire Station	Fire Station	$150,000.00	Mccreary
Wiborg Fire Station	Fire Station	$150,000.00	Mccreary
Holly Hill Fire Station	Fire Station	$150,000.00	Mccreary
Pine Knot Fire Station	Fire Station	$150,000.00	Mccreary
Whitley City Fire Station	Fire Station	$500,000.00	Mccreary
Mccreary County Water District	Lift Station	$75,000.00	Mccreary
Mccreary County Water District	Lift Station	$75,000.00	Mccreary
Mccreary County Water District	Lift Station	$75,000.00	Mccreary
Mccreary County Water District	Lift Station	$75,000.00	Mccreary
Mccreary County Water District	Lift Station	$75,000.00	Mccreary
Mccreary County Water District	Lift Station	$75,000.00	Mccreary

Mccreary County Water District	Lift Station	$75,000.00	Mccreary
Mccreary County Water District	Lift Station	$75,000.00	Mccreary
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Mccreary County Water District	Lift Station	$75,000.00	Mccreary
Mccreary County Water District	Lift Station	$75,000.00	Mccreary
Mccreary County Water District	Lift Station	$75,000.00	Mccreary
Mccreary County Water District	Lift Station	$75,000.00	Mccreary
Mccreary County Sheriffs Depart.	Police Station	*$0.00	Mccreary
Mccreary Co. Rescue Squad	Rescue	$88,600.00	Mccreary
Cumberland Manor Rest Home	Small Sewage	$25,000.00	Mccreary
Eagle Falls Resort	Small Sewage	$25,000.00	Mccreary
Mccreary County Water District	Waste Water Treatment Plant	$6,526,800.00	Mccreary
Mccreary County Water District	Water Pump Station	$50,000.00	Mccreary
Mccreary County Water District	Water Pump Station	$50,000.00	Mccreary
Mccreary County Water District	Water Pump Station	$50,000.00	Mccreary
Mccreary County Water District	Water Pump Station	$50,000.00	Mccreary
Mccreary County Water District	Water Pump Station	$50,000.00	Mccreary
Mccreary County Water District	Water Tanks	$500,000.00	Mccreary
Mccreary County Water District	Water Tanks	$500,000.00	Mccreary
Mccreary County Water District	Water Tanks	$500,000.00	Mccreary
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Mccreary County Water District	Water Tanks	$500,000.00	Mccreary
Mccreary County Water District	Water Tanks	$500,000.00	Mccreary
Mccreary County Water District	Water Tanks	$500,000.00	Mccreary
Mccreary County Water District	Water Treatment Plant	$3,263,400.00	Mccreary
Mccreary County Water District	Water Treatment Plant	$3,263,400.00	Mccreary
Somerset-Pulaski Co. 911	911	$100,000.00	Pulaski
Ferguson Gas	City Natural Gas System	$1,068,200.00	Pulaski

Somerset Gas Service	City Natural Gas System	$1,068,200.00	Pulaski
East Kentucky Power Cooperative Cooper Power Plant	Electric Power	$3,699,806,000.00	Pulaski
Somerset-Pulaski Co. Ems	Ems	$386,256.00	Pulaski
Somerset Fire Department	Fire Station	$328,432.00	Pulaski
Somerset Fire Department	Fire Station	*$0.00	Pulaski
Eubank Fire Department	Fire Station	$171,000.00	Pulaski
Science Hill Fire Department	Fire Station	$325,000.00	Pulaski
Nancy Fire Department	Fire Station	$252,000.00	Pulaski
Stab Fire Department	Fire Station	$265,410.00	Pulaski
Pulaski Rescue Squad-2012 North Hwy 1247	Fire Station	$216,000.00	Pulaski
Rescue Squad-108 Enterprise Drive	Fire Station	$220,000.00	Pulaski
White Lily Fire Department	Fire Station	$223,000.00	Pulaski
Mt. Victory Fire Department	Fire Station	$200,000.00	Pulaski
Mt. Victory Fire Department	Fire Station	$200,000.00	Pulaski
Parkers Mill Fire Department	Fire Station	$150,000.00	Pulaski
Hayes Knob Fire Department	Fire Station	$200,000.00	Pulaski
Hayes Knob Substation	Fire Station	$41,000.00	Pulaski
Faubush Fire Department	Fire Station	$205,000.00	Pulaski
Woodstock Fire Department	Fire Station	$189,000.00	Pulaski
Tateville Fire Department	Fire Station	$165,000.00	Pulaski
Bronston Fire Department	Fire Station	$300,000.00	Pulaski
Ferguson Fire Department	Fire Station	$205,000.00	Pulaski
Dabney Fire Station	Fire Station	$190,000.00	Pulaski
Firebrook Fire Department	Fire Station	$180,000.00	Pulaski
Eubank Fire Station	Fire Station	$230,000.00	Pulaski
Woodstock Satellite Fire Department	Fire Station	$65,000.00	Pulaski
Shopville Satellite Fire Department	Fire Station	$65,000.00	Pulaski
Hayes Knob Satellite Fire Department	Fire Station	$65,000.00	Pulaski
Mt. Victory Satellite Fire Department	Fire Station	$65,000.00	Pulaski
Special Response Team	Fire Station	$175,000.00	Pulaski
Hal Rogers Fire Training Station	Fire Station	$1,000,000.00	Pulaski
Lake Cumberland Area Hospital	Hospital	$223,720,000.00	Pulaski
Burnside Municipal Water Works	Lift Station	$75,000.00	Pulaski
Burnside Municipal Water Works	Lift Station	$75,000.00	Pulaski

Science Hill Sewer	Lift Station	$75,000.00	Pulaski
Science Hill Sewer	Lift Station	$75,000.00	Pulaski
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Somerset Utilities	Lift Station	$75,000.00	Pulaski
Somerset Utilities	Lift Station	$75,000.00	Pulaski
Somerset Environmental Services Inc	Oil Refinery	$980,000.00	Pulaski
Somerset Refinery	Oil Refinery	$980,000.00	Pulaski
Somerset Refinery Incorporated	Oil Refinery	$980,000.00	Pulaski
Pulaski County Sheriff's Office	Police Station	*$0.00	Pulaski
Somerset Police Department (Same Building As City Hall)	Police Station	$79,000.00	Pulaski
Ferguson Police Department (Same Building As City Hall)	Police Station	*$0.00	Pulaski
Science Hill Police Department (Same Building As City Hall)	Police Station	*$0.00	Pulaski
Eubank Police Department (Same Building As City Hall)	Police Station	*$0.00	Pulaski
Burnside Police Department (Same Building As City Hall)	Police Station	*$0.00	Pulaski
Somerset-Pulaski Co. Rescue	Rescue	$500,000.00	Pulaski
Eubank Elem School	Small Sewage	$25,000.00	Pulaski
Nancy Elem School	Small Sewage	$25,000.00	Pulaski
Shopville Elem School	Small Sewage	$25,000.00	Pulaski
Woodstock Elem School	Small Sewage	$25,000.00	Pulaski
Lee's Ford Resort Marina Lodge	Small Sewage	$25,000.00	Pulaski

Uscoe Lake Cumberland Fish Creek	Small Sewage	$25,000.00	Pulaski
Apple Valley Resort	Subdivision	$25,000.00	Pulaski
Green Tee Townhouses	Subdivision	$75,000.00	Pulaski
Rainbow Terrace Mobile Village	Subdivision	$75,000.00	Pulaski
Science Hill Sewer	Waste Water Treatment Plant	$6,526,800.00	Pulaski
Somerset Utilities	Waste Water Treatment Plant	$6,526,800.00	Pulaski
Somerset Utilities	Waste Water Treatment Plant	$6,526,800.00	Pulaski
Bronston Water Association	Water Pump Station	$50,000.00	Pulaski
Bronston Water Association	Water Pump Station	$50,000.00	Pulaski
Eubank Water System	Water Pump Station	$50,000.00	Pulaski
Eubank Water System	Water Pump Station	$50,000.00	Pulaski
Eubank Water System	Water Pump Station	$50,000.00	Pulaski
Science Hill Water Works	Water Pump Station	$50,000.00	Pulaski
Science Hill Water Works	Water Pump Station	$50,000.00	Pulaski
Southeastern Water Association	Water Pump Station	$50,000.00	Pulaski
Southeastern Water Association	Water Pump Station	$50,000.00	Pulaski
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Western Pulaski County Water District	Water Pump Station	$50,000.00	Pulaski
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Bronston Water Association	Water Tanks	$500,000.00	Pulaski
Bronston Water Association	Water Tanks	$500,000.00	Pulaski
Bronston Water Association	Water Tanks	$500,000.00	Pulaski
Burnside Municipal Water Works	Water Tanks	$500,000.00	Pulaski
Eubank Water System	Water Tanks	$500,000.00	Pulaski
Eubank Water System	Water Tanks	$500,000.00	Pulaski
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Eubank Water System	Water Tanks	$500,000.00	Pulaski
Eubank Water System	Water Tanks	$500,000.00	Pulaski
General Burnside Island State Park	Water Tanks	$500,000.00	Pulaski
Science Hill Water Works	Water Tanks	$500,000.00	Pulaski
Science Hill Water Works	Water Tanks	$500,000.00	Pulaski
Science Hill Water Works	Water Tanks	$500,000.00	Pulaski
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Somerset Utilities	Water Tanks	$500,000.00	Pulaski
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Western Pulaski County Water District	Water Tanks	$500,000.00	Pulaski
Western Pulaski County Water District	Water Tanks	$500,000.00	Pulaski
Woodson Bend Property Owners Association	Water Tanks	$500,000.00	Pulaski
Burnside Municipal Water Works	Water Treatment Plant	$3,263,400.00	Pulaski
Somerset Utilities	Water Treatment Plant	$3,263,400.00	Pulaski
Woodson Bend Property Owners Association	Water Treatment Plant	$3,263,400.00	Pulaski
Russell Co. 911 Dispatch (Same Building As EMS)	911	*$0.00	Russell
Southeastern Power Administration Wolf Creek Dam	Electric Power	$1,200,000,000.00	Russell
Russell Co. Ambulance Service	Ems	$1,500,000.00	Russell
Russell Springs City Fire Dept.	Fire Station	$175,000.00	Russell
Jamestown City Fire Dept.	Fire Station	$265,000.00	Russell
Jamestown City Fire Dept. - New Station	Fire Station	$164,320.00	Russell
Eli Volunteer Fire Department	Fire Station	$100,000.00	Russell
South Russell Vol. Fire Dept.	Fire Station	$100,000.00	Russell

Russell County Hospital	Hospital	$13,430,000.00	Russell
Jamestown Utilities	Lift Station	$75,000.00	Russell
Jamestown Utilities	Lift Station	$75,000.00	Russell
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Russell Springs Sewer & Water Works	Lift Station	$75,000.00	Russell
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Russell Springs Sewer & Water Works	Lift Station	$75,000.00	Russell
Russell Springs Sewer & Water Works	Lift Station	$75,000.00	Russell
Russell Springs City Police Dept	Police Station	$101,352.00	Russell

Jamestown City Police Dept. (Same Building As City Hall)	Police Station	*$0.00	Russell
Russell County Sheriff (Same Building As Courthouse)	Police Station	*$0.00	Russell
Russell Co. Rescue Squad	Rescue	$50,000.00	Russell
Lake Cumberland State Resort Park	Small Sewage	$25,000.00	Russell
Pine Crest Park	Small Sewage	$25,000.00	Russell
Uscoe Wolf Creek Power Plant	Small Sewage	$25,000.00	Russell
Wolf Creek National Fish Hatchery	Small Sewage	$25,000.00	Russell
Jamestown Utilities	Waste Water Treatment Plant	$6,526,800.00	Russell
Jamestown Utilities	Water Pump Station	$50,000.00	Russell
Russell Springs Sewer & Water Works	Water Pump Station	$50,000.00	Russell
Jamestown Utilities	Water Tanks	$500,000.00	Russell
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Russell Springs Sewer & Water Works	Water Tanks	$500,000.00	Russell
Russell Springs Sewer & Water Works	Water Tanks	$500,000.00	Russell
Jamestown Utilities	Water Treatment Plant	$3,263,400.00	Russell
Campbellsville City - 911 Center	911	$225,000.00	Taylor

Atmos Energy Corporation	County Natural Gas System	$1,068,200.00	Taylor
Campbellsville-Taylor Co. Ems	Ems	$789,935.00	Taylor
Ky Tech Fire Rescue Training	Fire	$2,000,000.00	Taylor
Campbellsville City Fire Dept. (Same Building As Police)	Fire Station	*$0.00	Taylor
Taylor County Vol. Fire Dept.	Fire Station	$1,600,000.00	Taylor
Taylor County Hospital	Hospital	$25,860,000.00	Taylor
Campbellsville Municipal Water & Sewer System	Lift Station	$75,000.00	Taylor
Campbellsville Municipal Water & Sewer System	Lift Station	$75,000.00	Taylor
Campbellsville Municipal Water & Sewer System	Lift Station	$75,000.00	Taylor
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Campbellsville Municipal Water & Sewer System	Lift Station	$75,000.00	Taylor
Campbellsville Municipal Water & Sewer System	Lift Station	$75,000.00	Taylor
Campbellsville Municipal Water & Sewer System	Lift Station	$75,000.00	Taylor
Mp 370.58 Adair County	Natural Gas	$1,068,200.00	Taylor
Tennessee Gas Pipeline Number 96	Natural Gas	$1,068,200.00	Taylor
Tn Gas Pipeline Compr Sta 871	Natural Gas	$1,068,200.00	Taylor

Campbellsville City Police Dept. (Same Building As City Hall)	Police Station	$2,515,462.00	Taylor
Taylor County Sheriff	Police Station	*$0.00	Taylor
Campbellsville-Taylor Co. Rescue (Same Building As EMS)	Rescue	*$0.00	Taylor
Indian Ridge Campground	Small Sewage	$25,000.00	Taylor
Campbellsville Municipal Water & Sewer System	Waste Water Treatment Plant	$6,526,800.00	Taylor
Campbellsville Municipal Water & Sewer System	Water Pump Station	$50,000.00	Taylor
Campbellsville Municipal Water & Sewer System	Water Pump Station	$50,000.00	Taylor
Campbellsville Municipal Water & Sewer System	Water Pump Station	$50,000.00	Taylor
Campbellsville Municipal Water & Sewer System	Water Pump Station	$50,000.00	Taylor
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Campbellsville Municipal Water & Sewer System	Water Tanks	$500,000.00	Taylor
Campbellsville Municipal Water & Sewer System	Water Tanks	$500,000.00	Taylor
Campbellsville Municipal Water & Sewer System	Water Treatment Plant	$3,263,400.00	Taylor
Monticello-Wayne Co. Dispatch	911	*$0.00	Wayne
Wayne Co. Ems	Ems	$983,000.00	Wayne
Monticello Fire Department	Fire Station	$370,240.00	Wayne
Susie Fire Department	Fire Station	$91,242.00	Wayne
Wayne County Hospital	Hospital	$9,650,000.00	Wayne
Monticello Utility Commission	Lift Station	$75,000.00	Wayne
Monticello Utility Commission	Lift Station	$75,000.00	Wayne
Monticello Utility Commission	Lift Station	$75,000.00	Wayne
Monticello Utility Commission	Lift Station	$75,000.00	Wayne
Monticello Utility Commission	Lift Station	$75,000.00	Wayne

Monticello Utility Commission	Lift Station	$75,000.00	Wayne
Monticello Utility Commission	Lift Station	$75,000.00	Wayne
Monticello Utility Commission	Lift Station	$75,000.00	Wayne
Wayne County Sheriff	Police Station	*$0.00	Wayne
Monticello Police Department	Police Station	$598,000.00	Wayne
Wayne County Rescue Squad	Rescue	$75,000.00	Wayne
Djj Lake Cumberland Youth Development Center	Small Sewage	$25,000.00	Wayne
Kentucky Fish & Wildlife Research Camp Earl Wallace	Small Sewage	$25,000.00	Wayne
University Of Kentucky Lake Cumberland 4h Educational Center	Small Sewage	$25,000.00	Wayne
Monticello Utility Commission	Waste Water Treatment Plant	$6,526,800.00	Wayne
Monticello Utility Commission	Water Tanks	$500,000.00	Wayne
Monticello Utility Commission	Water Tanks	$500,000.00	Wayne
Monticello Utility Commission	Water Tanks	$500,000.00	Wayne
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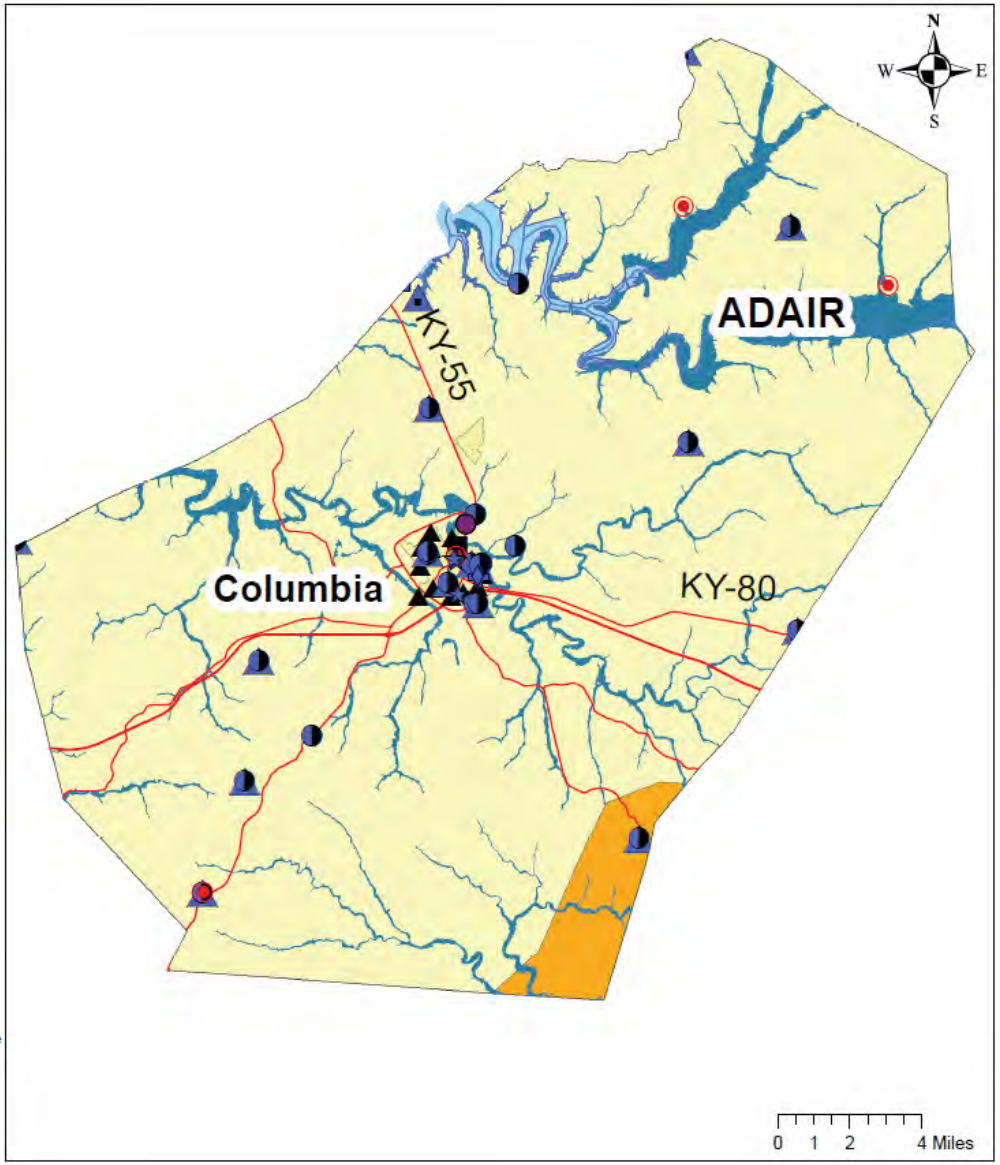
Monticello Utility Commission	Water Tanks	$500,000.00	Wayne
Monticello Utility Commission	Water Tanks	$500,000.00	Wayne
Monticello Utility Commission	Water Tanks	$500,000.00	Wayne
Monticello Utility Commission	Water Treatment Plant	$3,263,400.00	Wayne

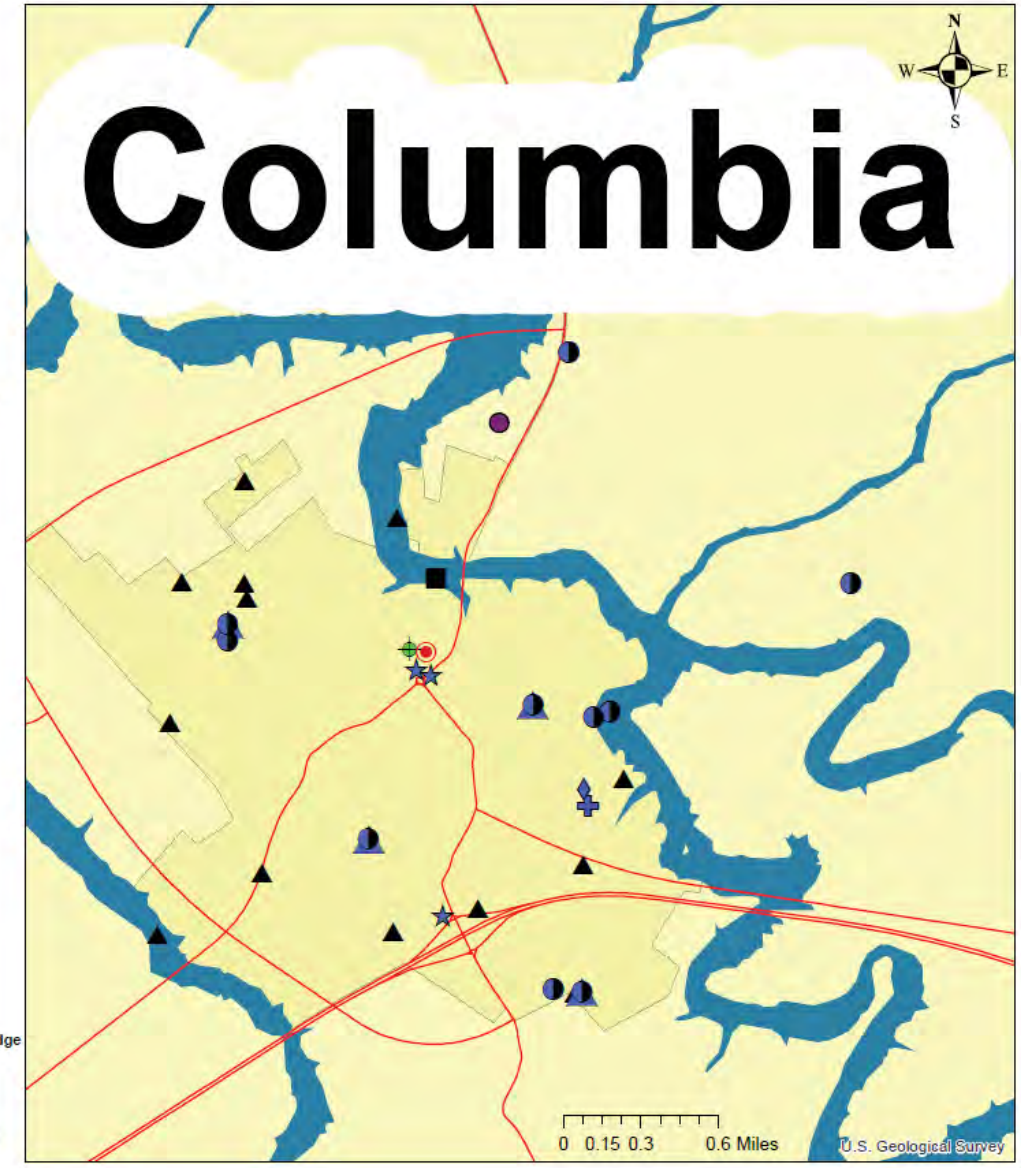
Map 6.1(1)
LCADD Region
Tier 1 Essential Facilities
Adair County



Data Source: Lake Cumberland ADD GIS Databases,
Census 2000 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2000
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

Map 6.1(1a)
LCADD Region
Tier 1 Essential Facilities
Adair County/Columbia



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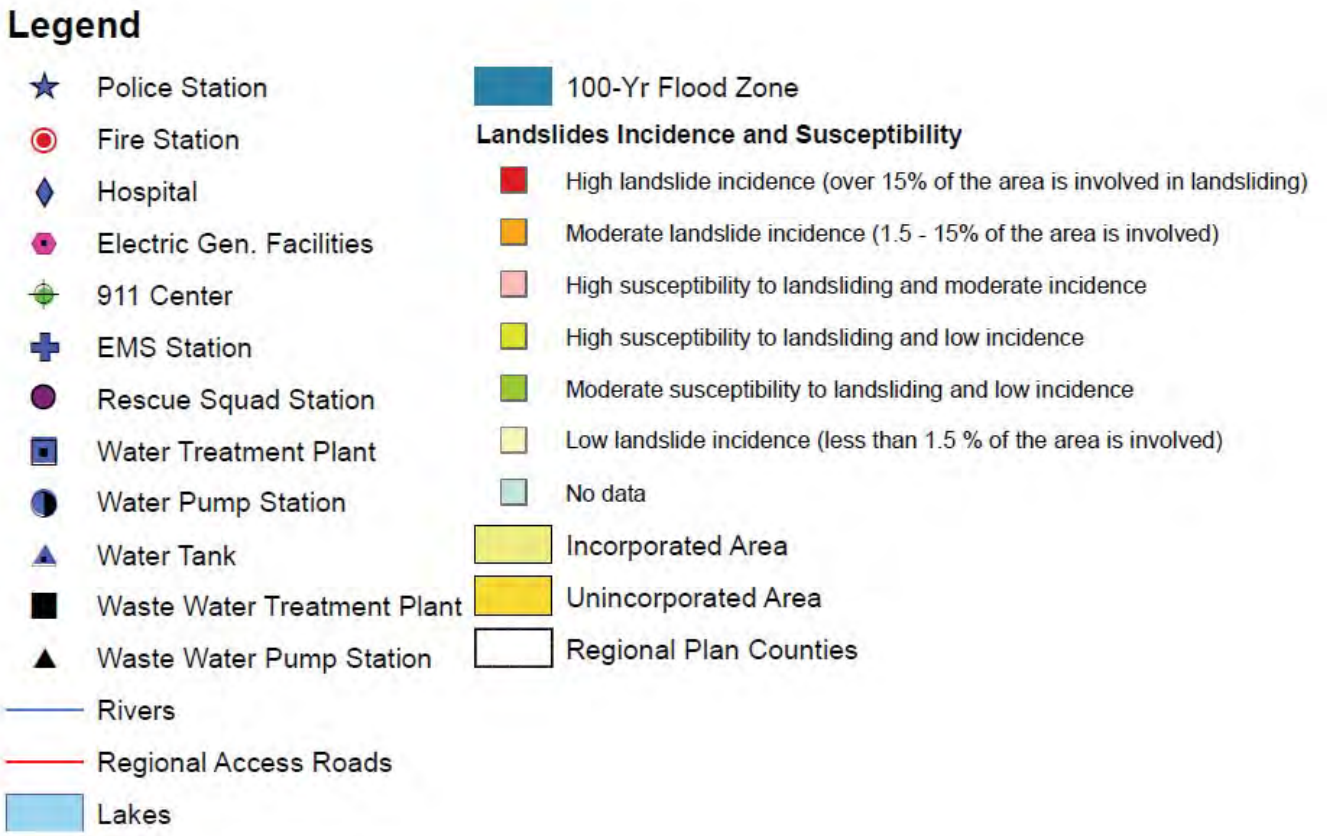
Prepared By:
Lake Cumberland Area Development District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Fire Station
Hospital
Electric Gen. Facilities
911 Center
EMS Station
Rescue Squad Station
Water Treatment Plant
Water Pump Station
Water Tank
Waste Water Treatment Plant
Waste Water Pump Station
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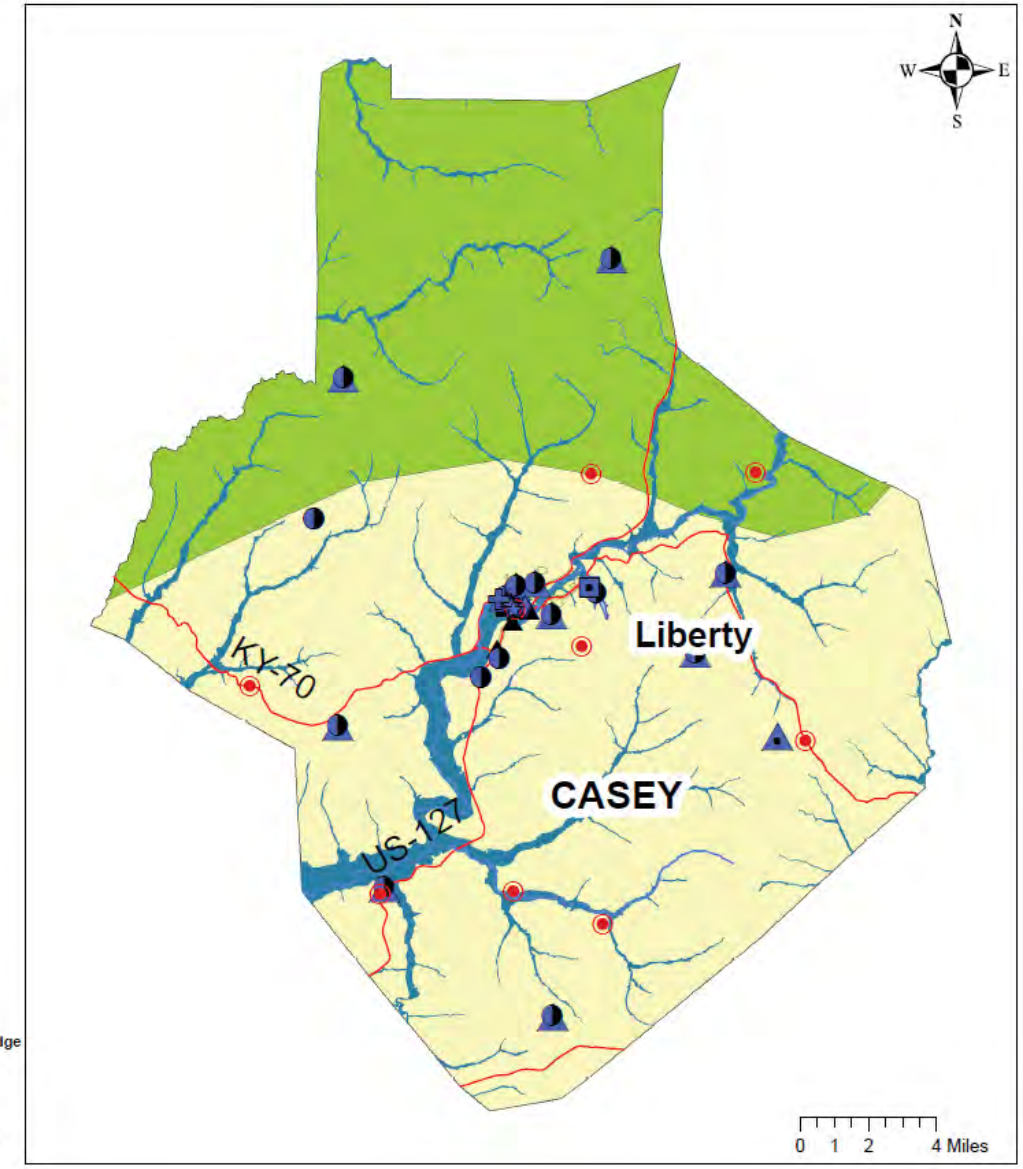
High susceptibility to landsliding and low incidence
Moderate susceptibility to landsliding and low incidence
Low landslide incidence (less than 1.5 % of the area is involved)
No data
Incorporated Area
Unincorporated Area
Regional Plan Counties

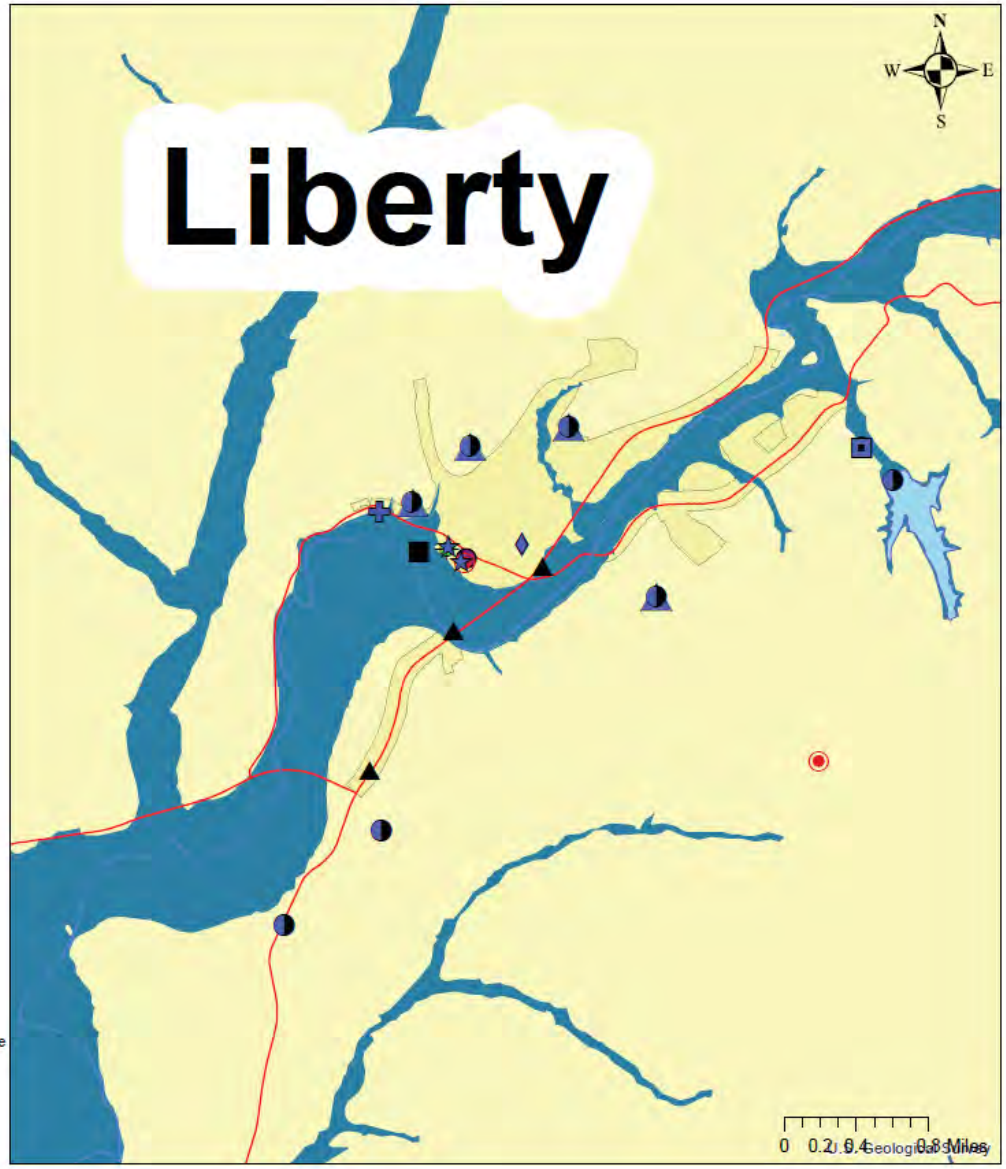
Map 6.1(2)
LCADD Region
Tier 1 Essential Facilities
Casey County



Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

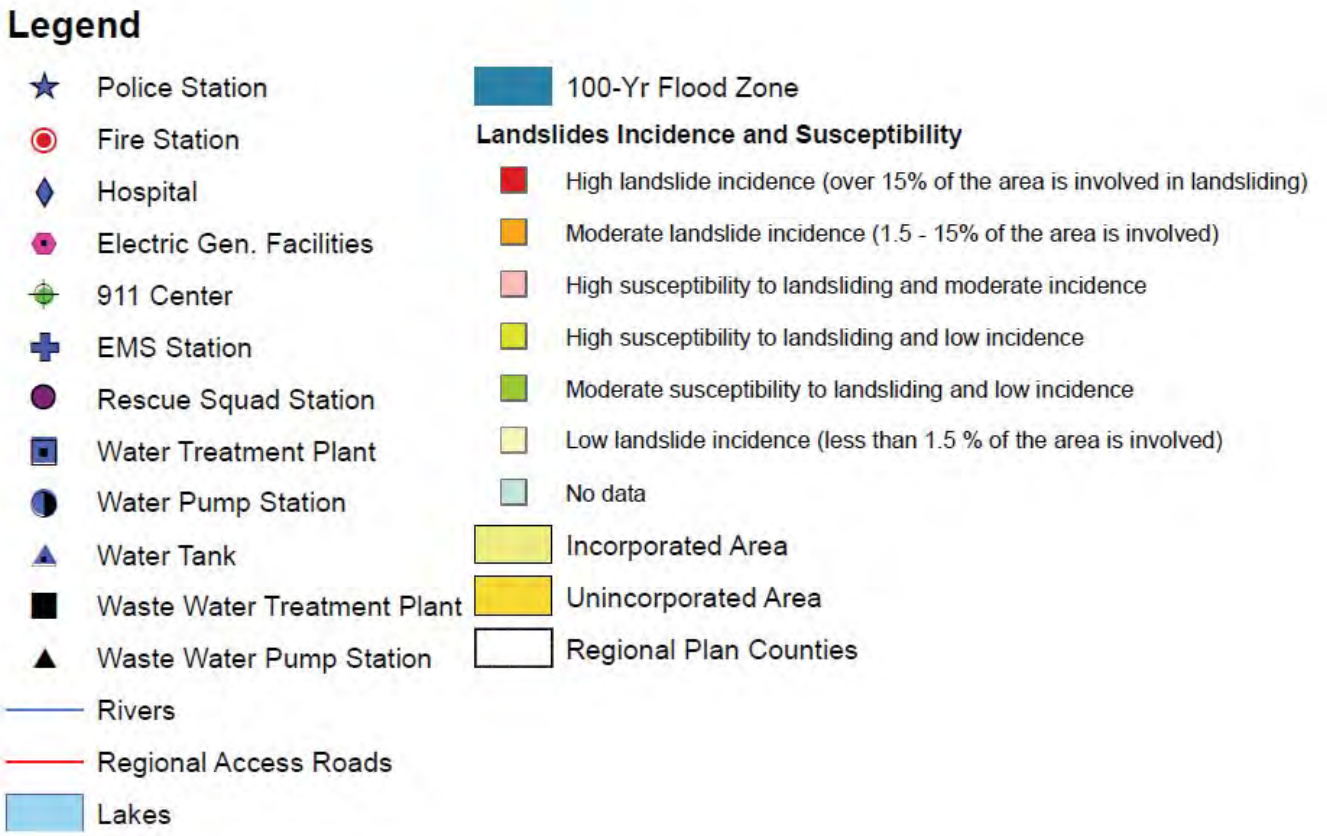
Prepared By:
Lake Cumberland Area Development District

Map 6.1(2a)
LCADD Region
Tier 1 Essential Facilities
Casey County/Liberty



Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District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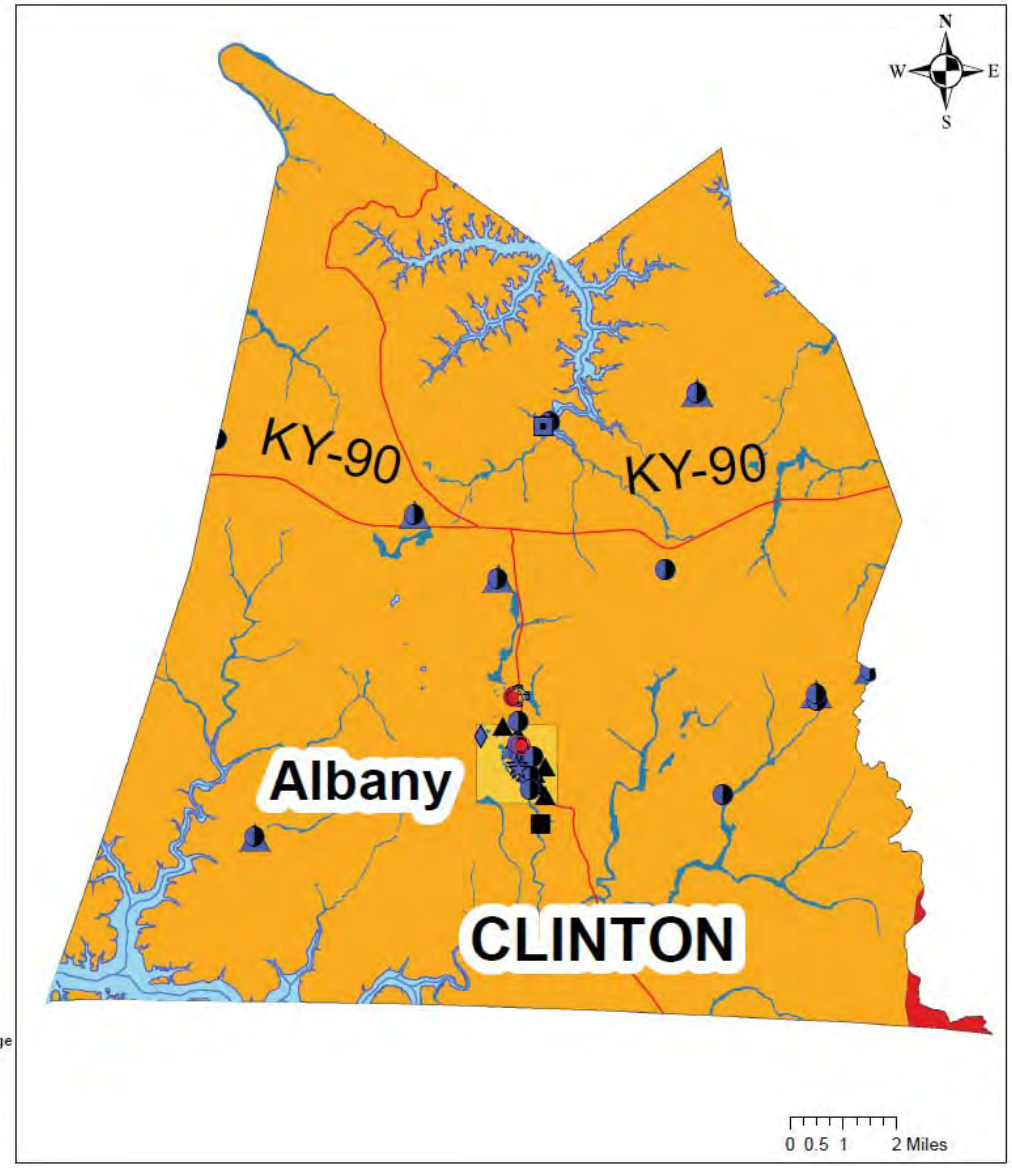
Low landslide incidence (less than 1.5 % of the area is involved)
No data
Incorporated Area
Unincorporated Area
Regional Plan Counties

Map 6.1(3)
LCADD Region
Tier 1 Essential Facilities
Clinton County



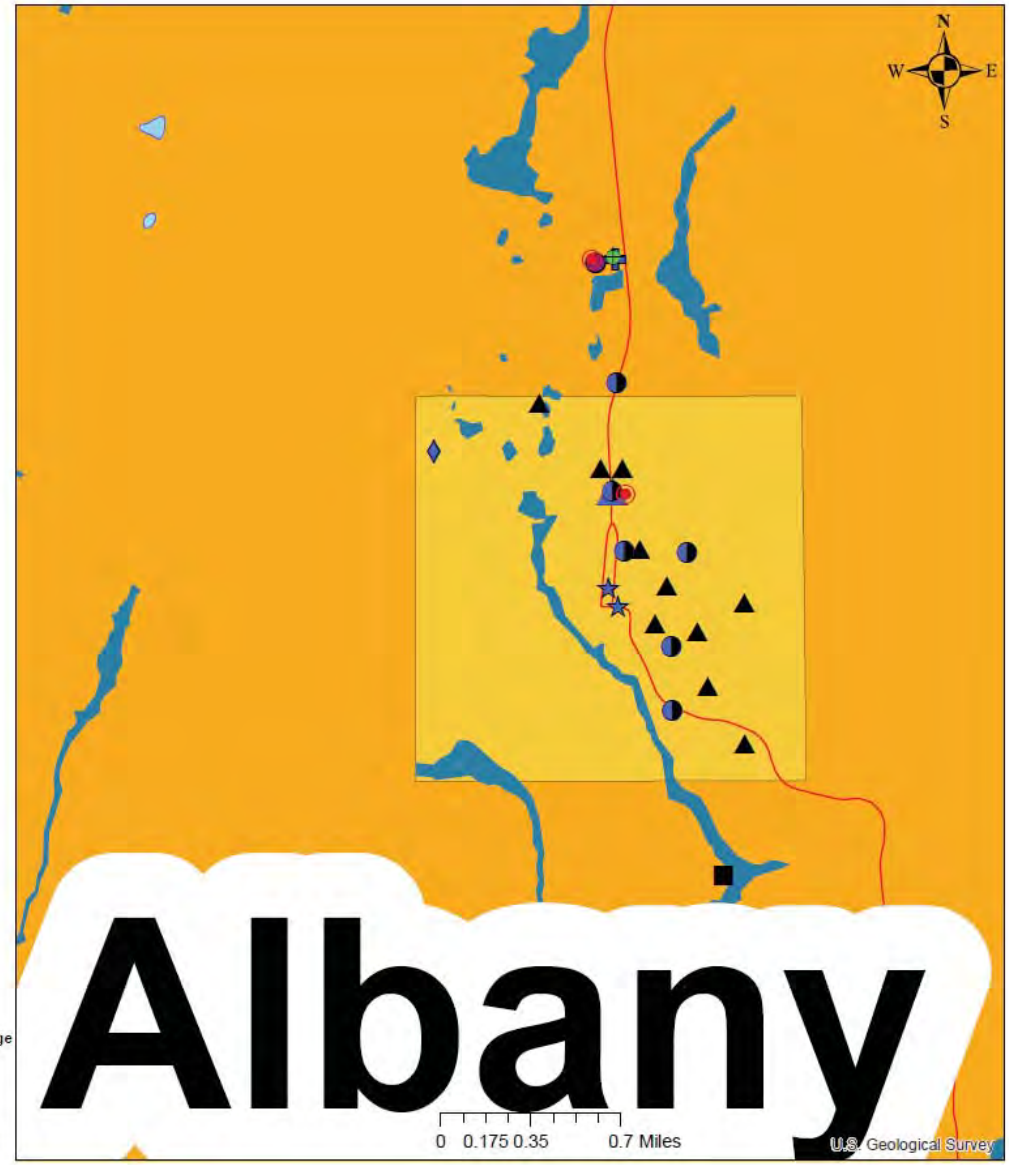
Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

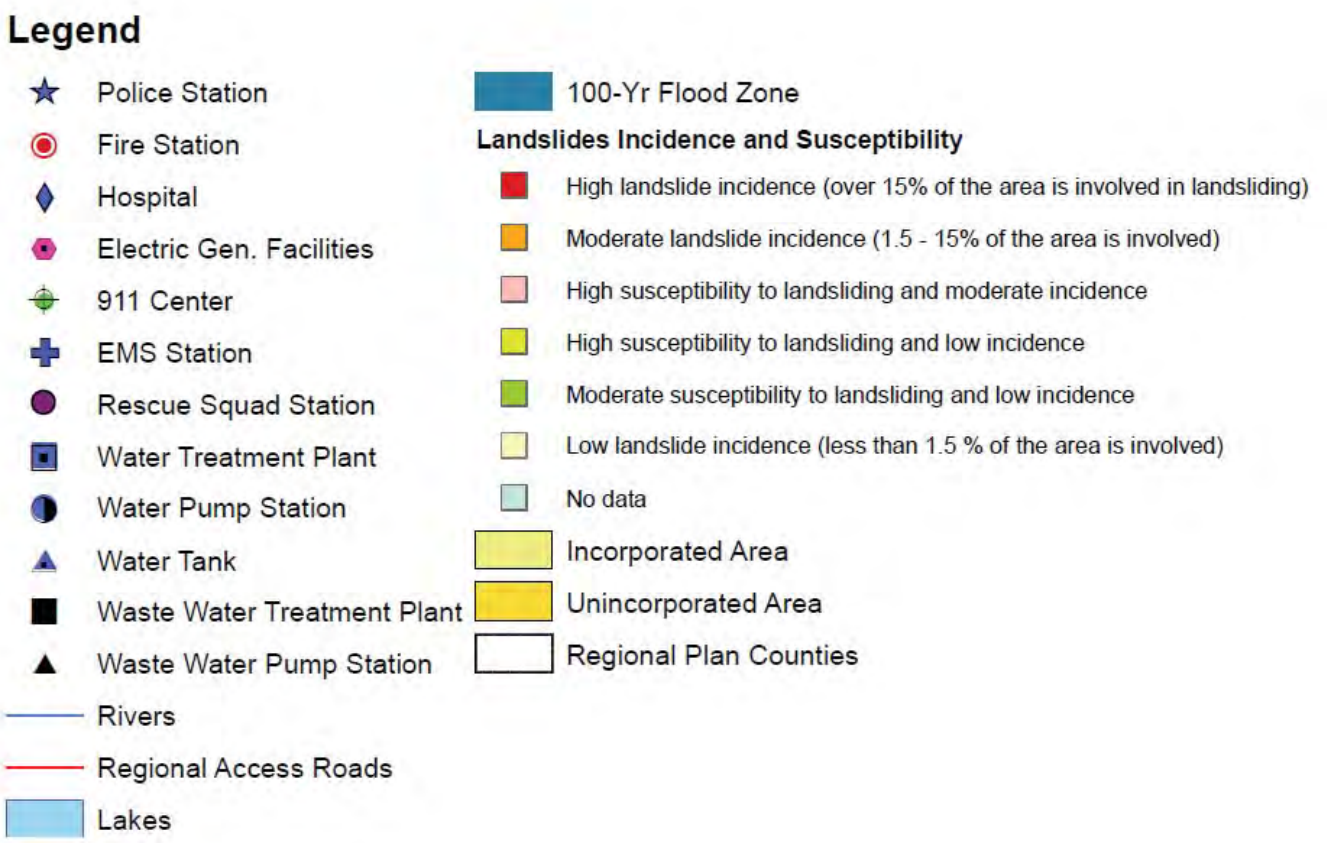
Prepared By:
Lake Cumberland Area Development District

Map 6.1(3a)
LCADD Region
Tier 1 Essential Facilities
Clinton County/Albany

Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

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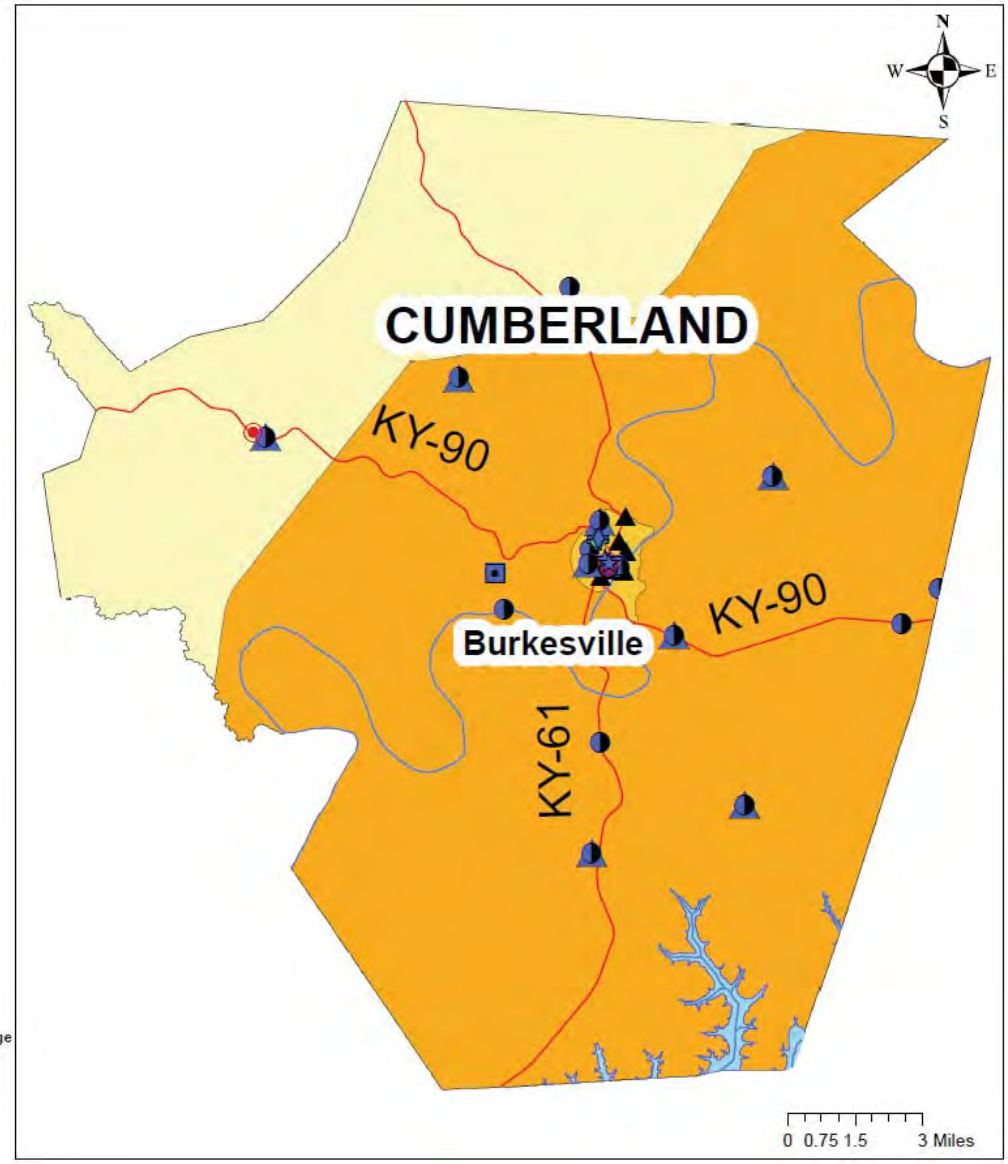
Low landslide incidence (less than 1.5 % of the area is involved)
No data
Incorporated Area
Unincorporated Area
Regional Plan Counties

Map 6.1(4)
LCADD Region
Tier 1 Essential Facilities
Cumberland County



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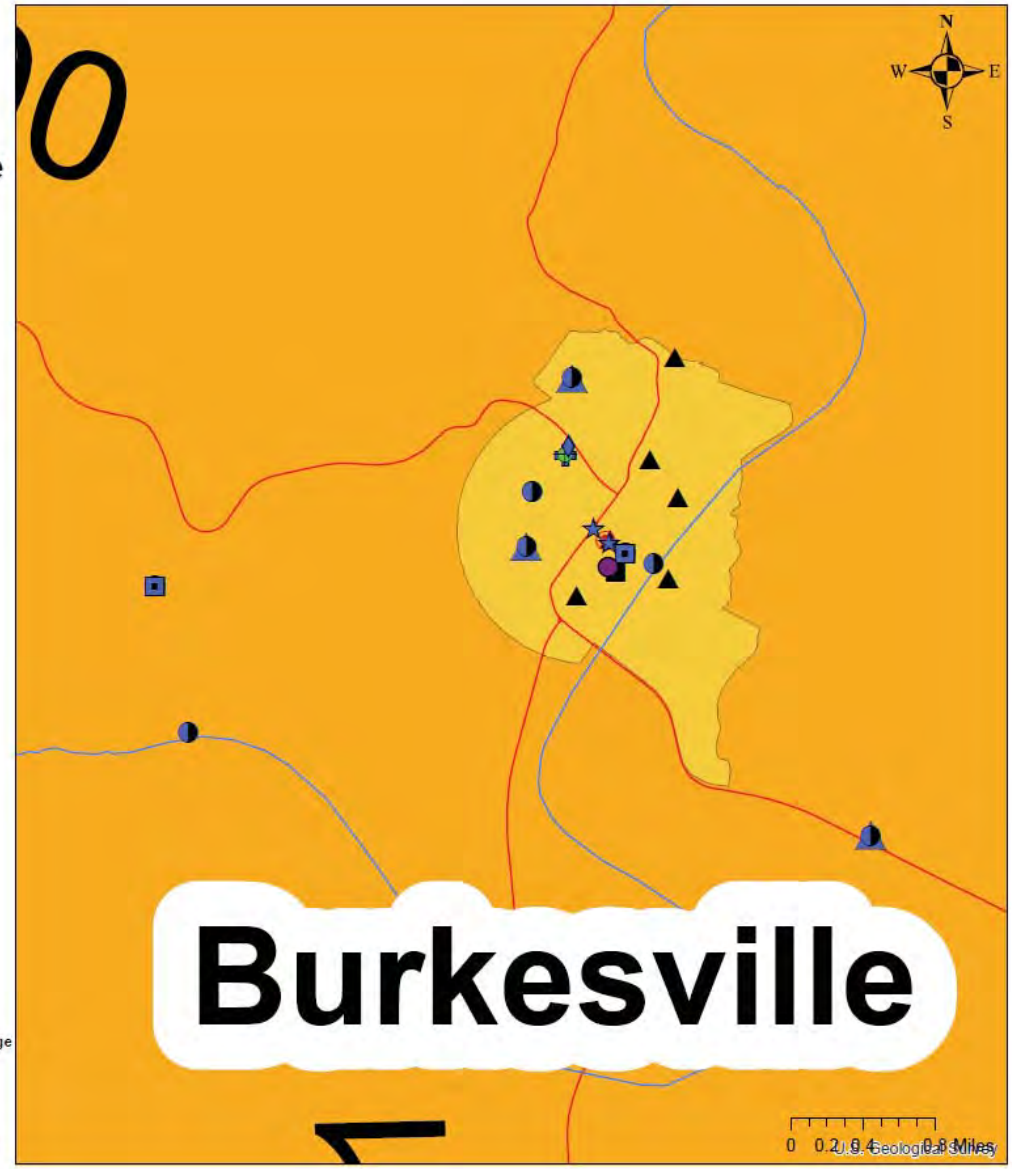
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

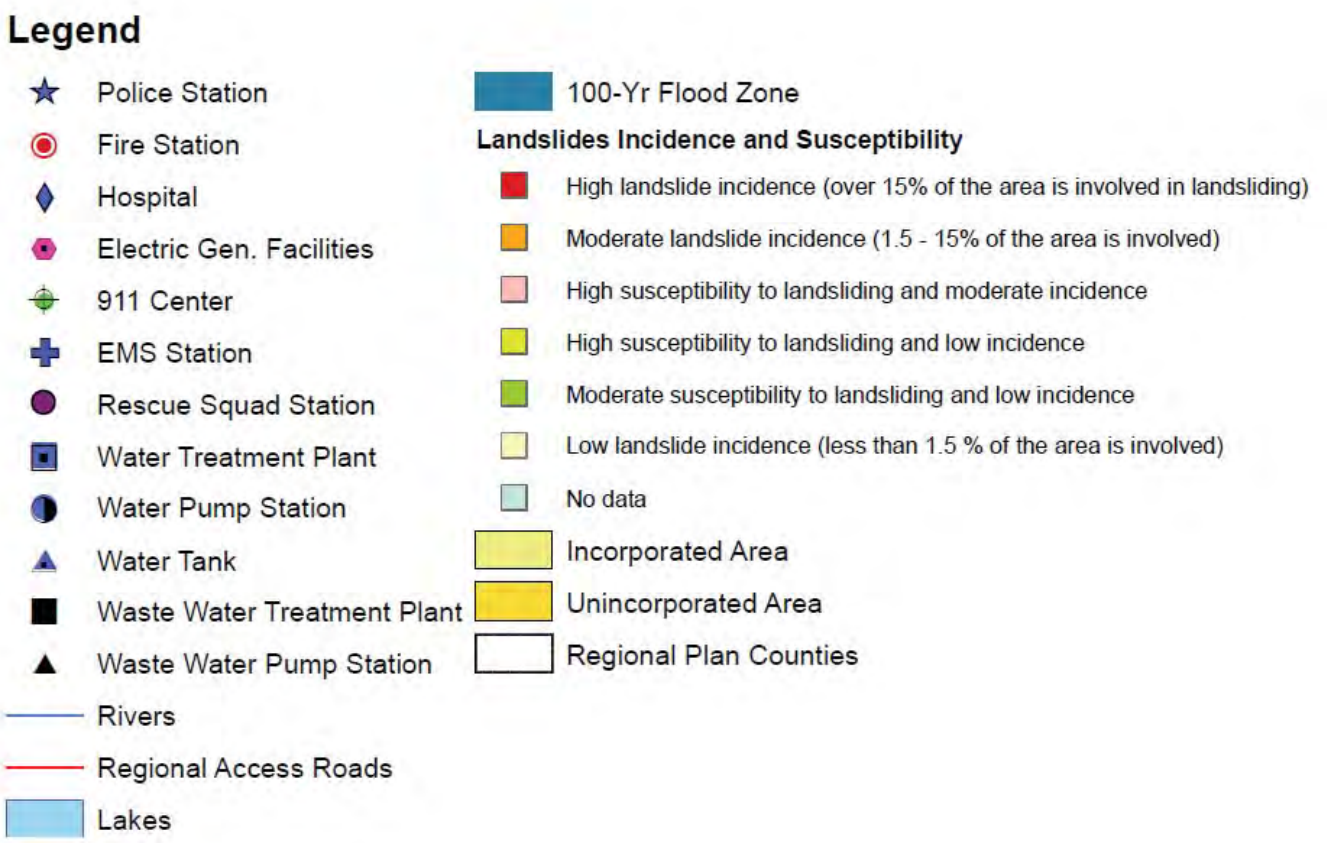
Prepared By:
Lake Cumberland Area Development District

Map 6.1(4a)
LCADD Region
Tier 1 Essential Facilities
Cumberland County/Burkesville

Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

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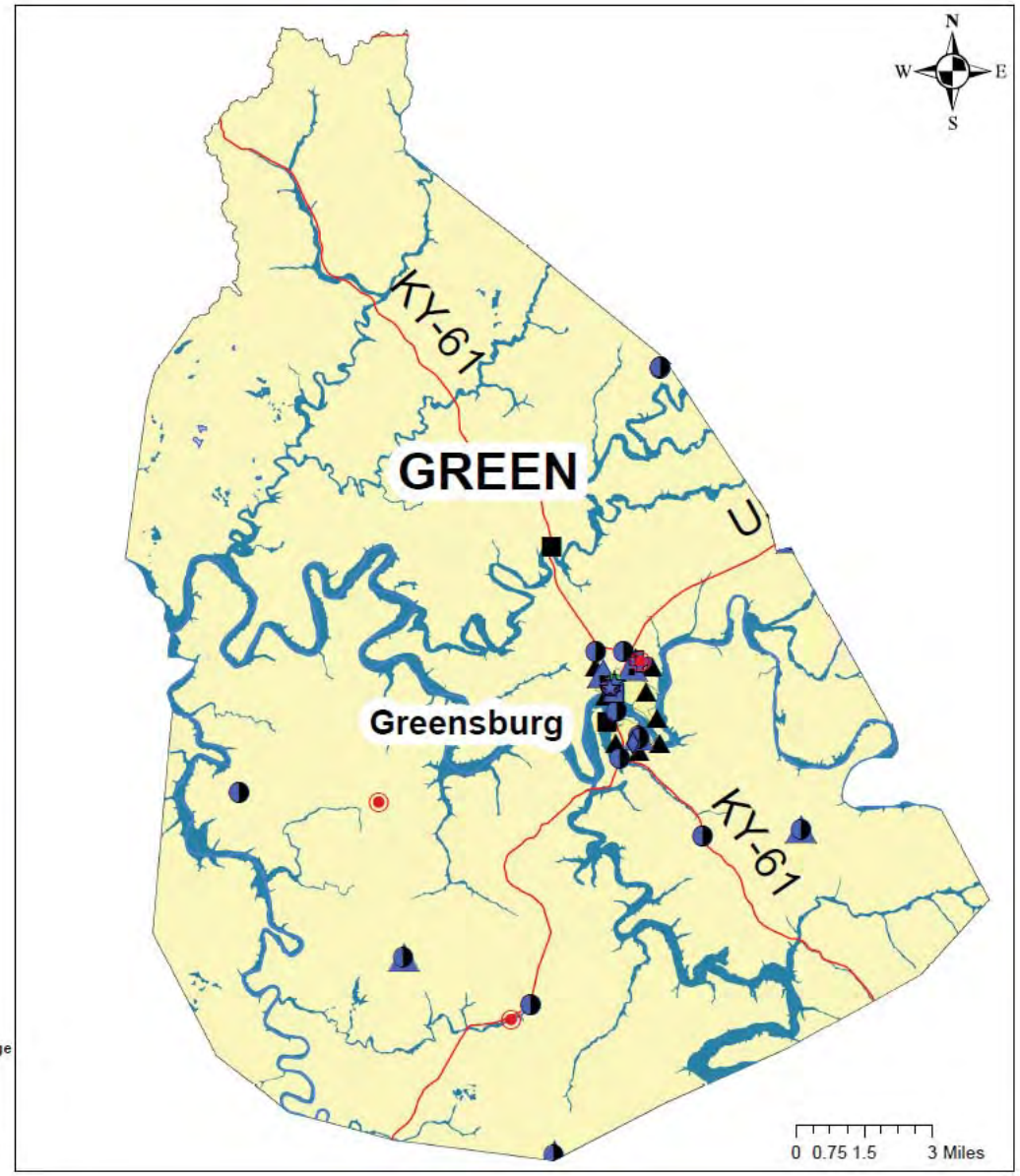
Low landslide incidence (less than 1.5 % of the area is involved)
No data
Incorporated Area
Unincorporated Area
Regional Plan Counties

Map 6.1(5)
LCADD Region
Tier 1 Essential Facilities
Green County



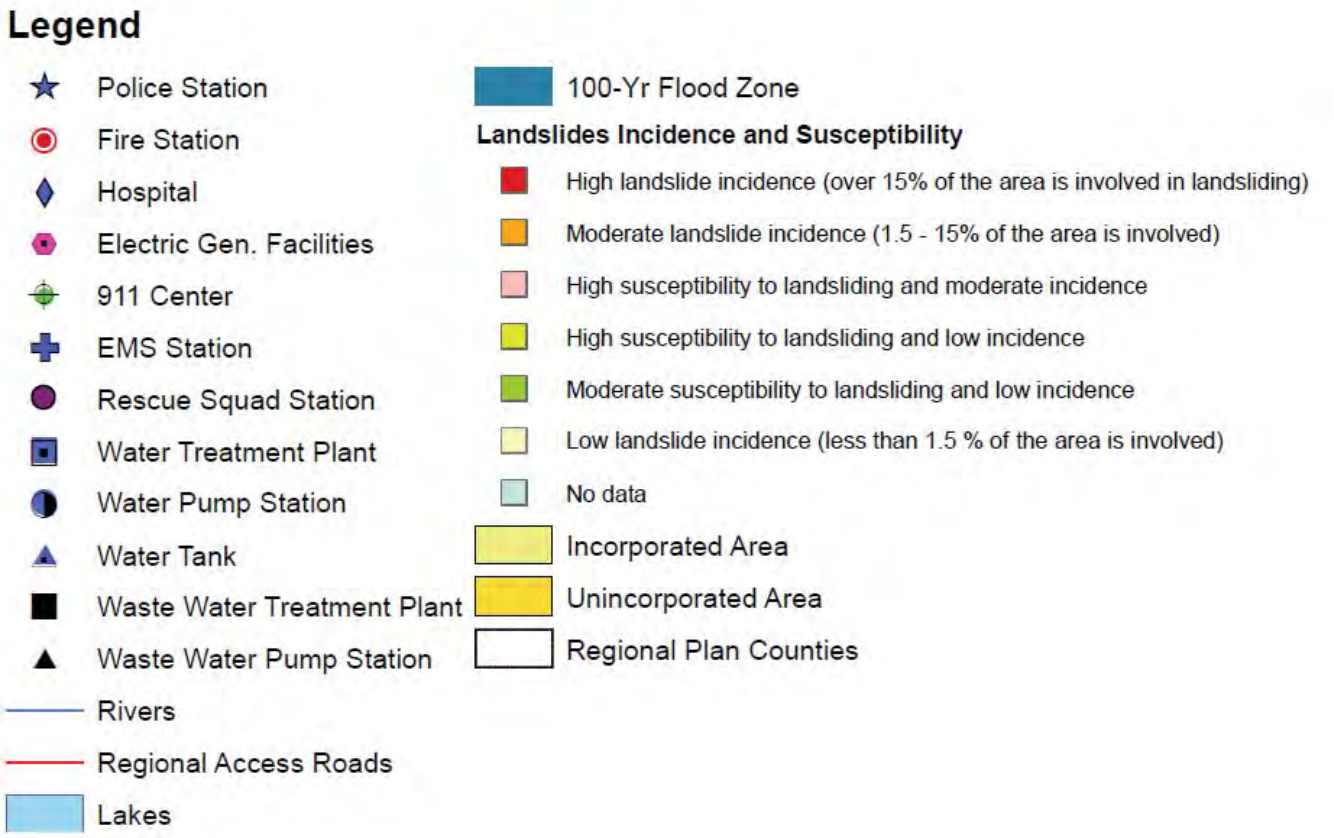
Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

Map 6.1(5a)
LCADD Region
Tier 1 Essential Facilities
Green County/Greensburg

Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District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No data
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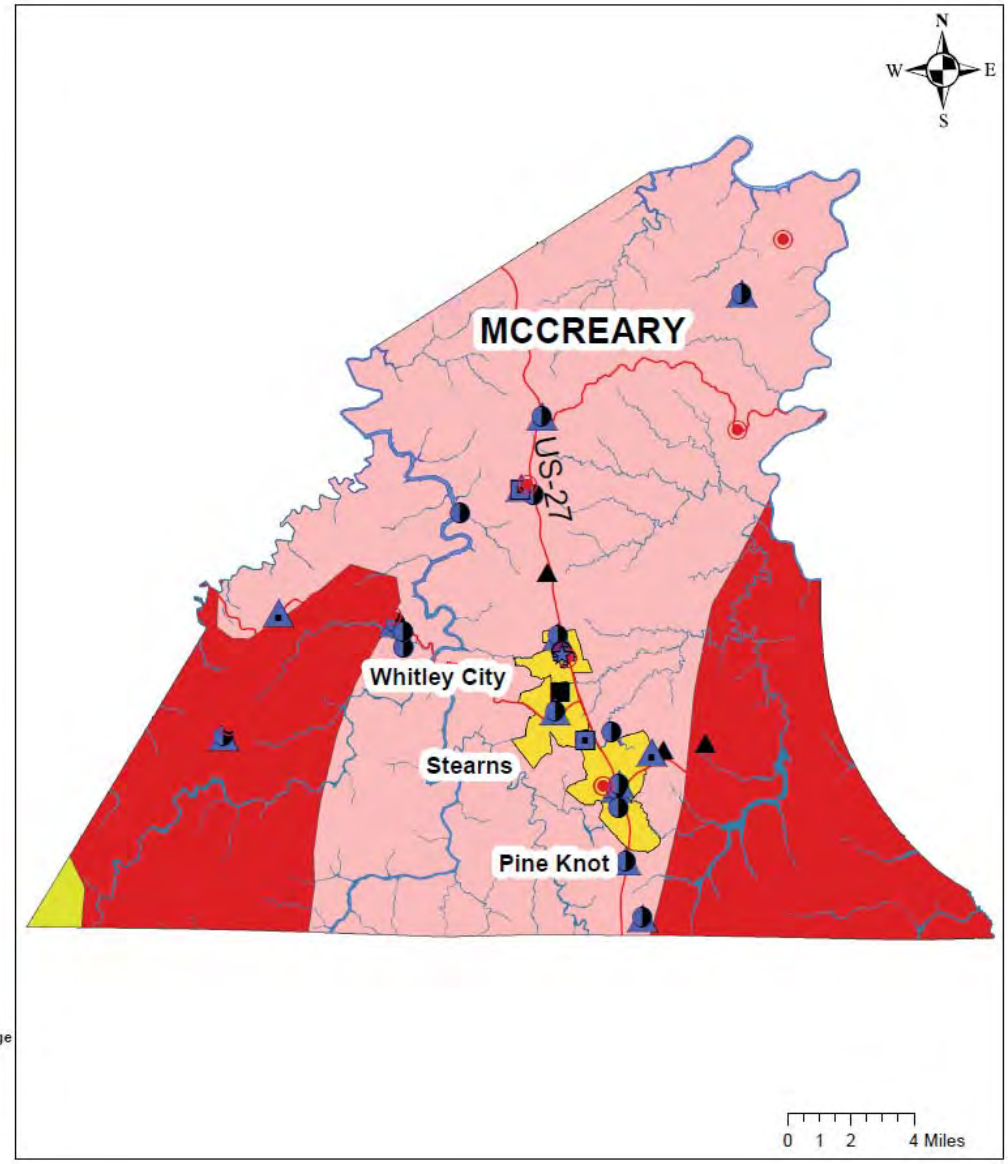
Unincorporated Area
Regional Plan Counties

Map 6.1(6)
LCADD Region
Tier 1 Essential Facilities
McCreary County



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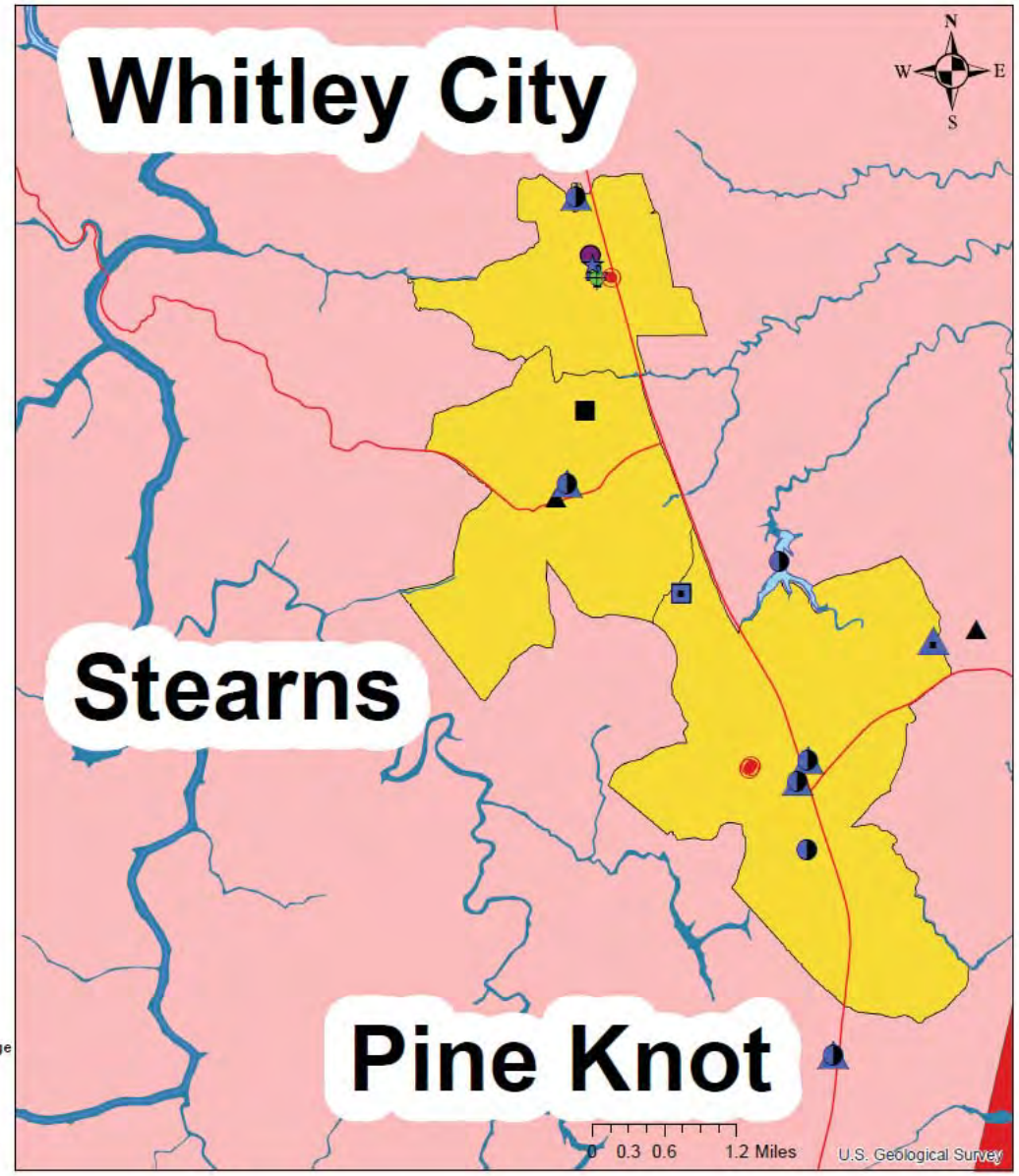
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

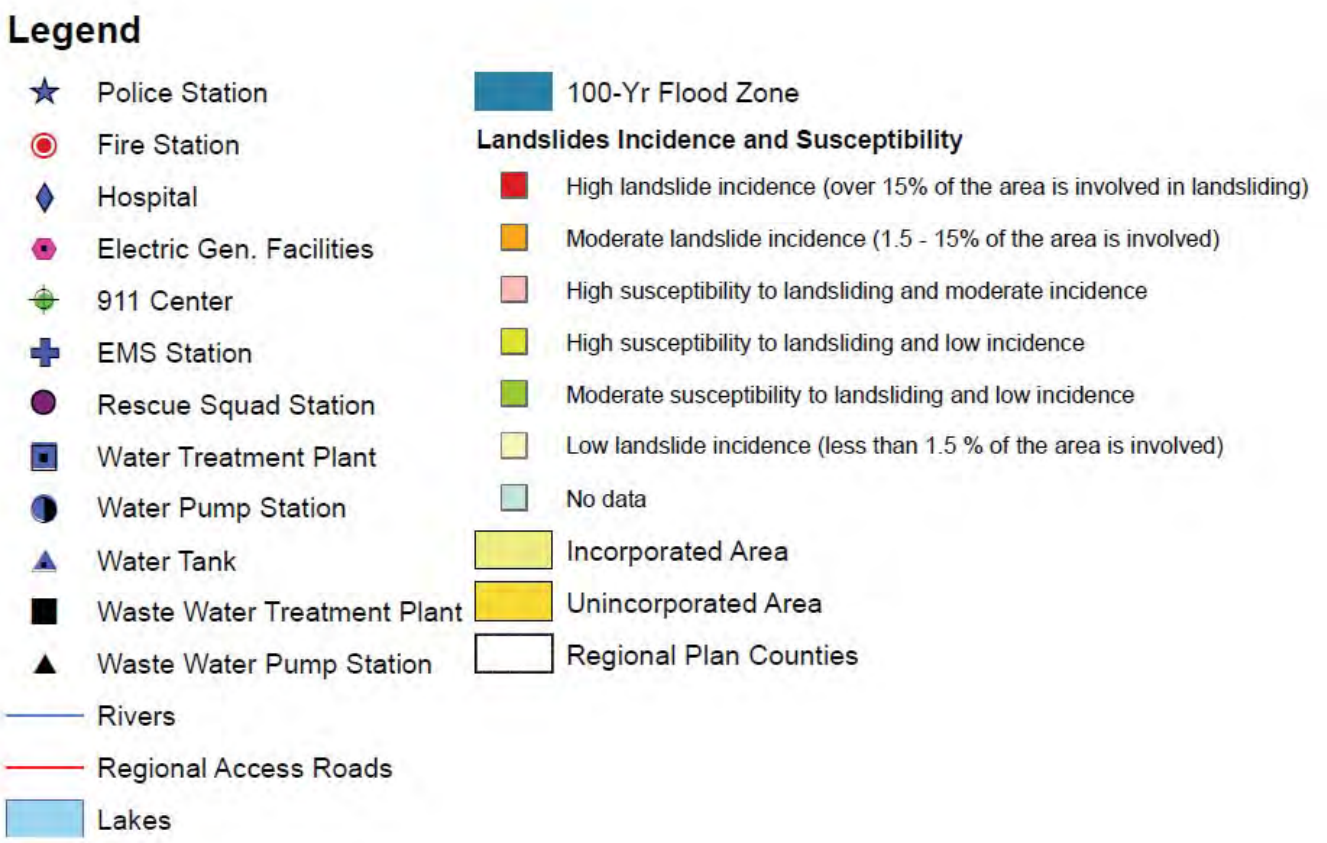
Prepared By:
Lake Cumberland Area Development District

Map 6.1(6a)
LCADD Region
Tier 1 Essential Facilities
McCreary County/Whitley City
Stearns/Pine Knot

Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

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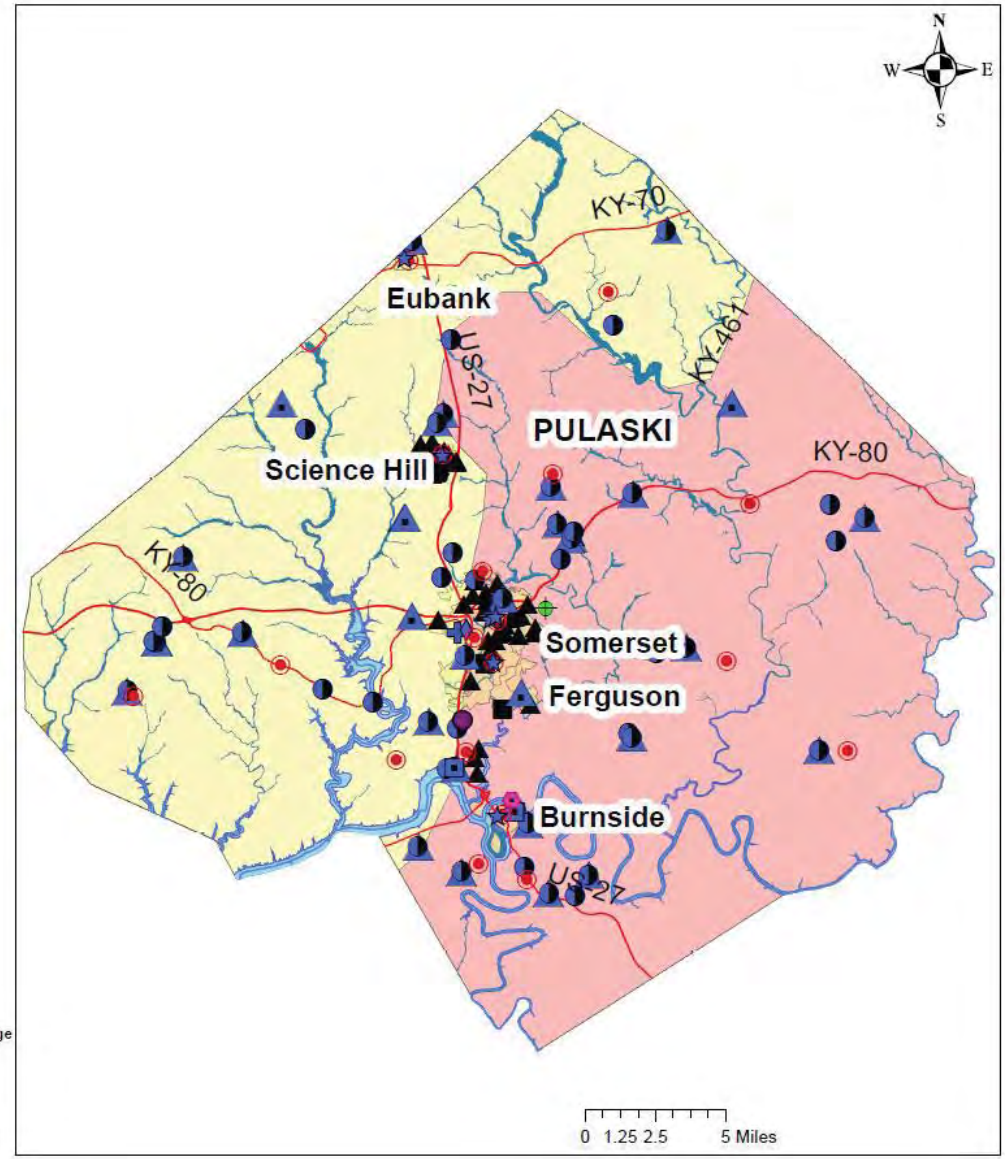
No data
Incorporated Area
Unincorporated Area
Regional Plan Counties

Map 6.1(7)
LCADD Region
Tier 1 Essential Facilities
Pulaski County



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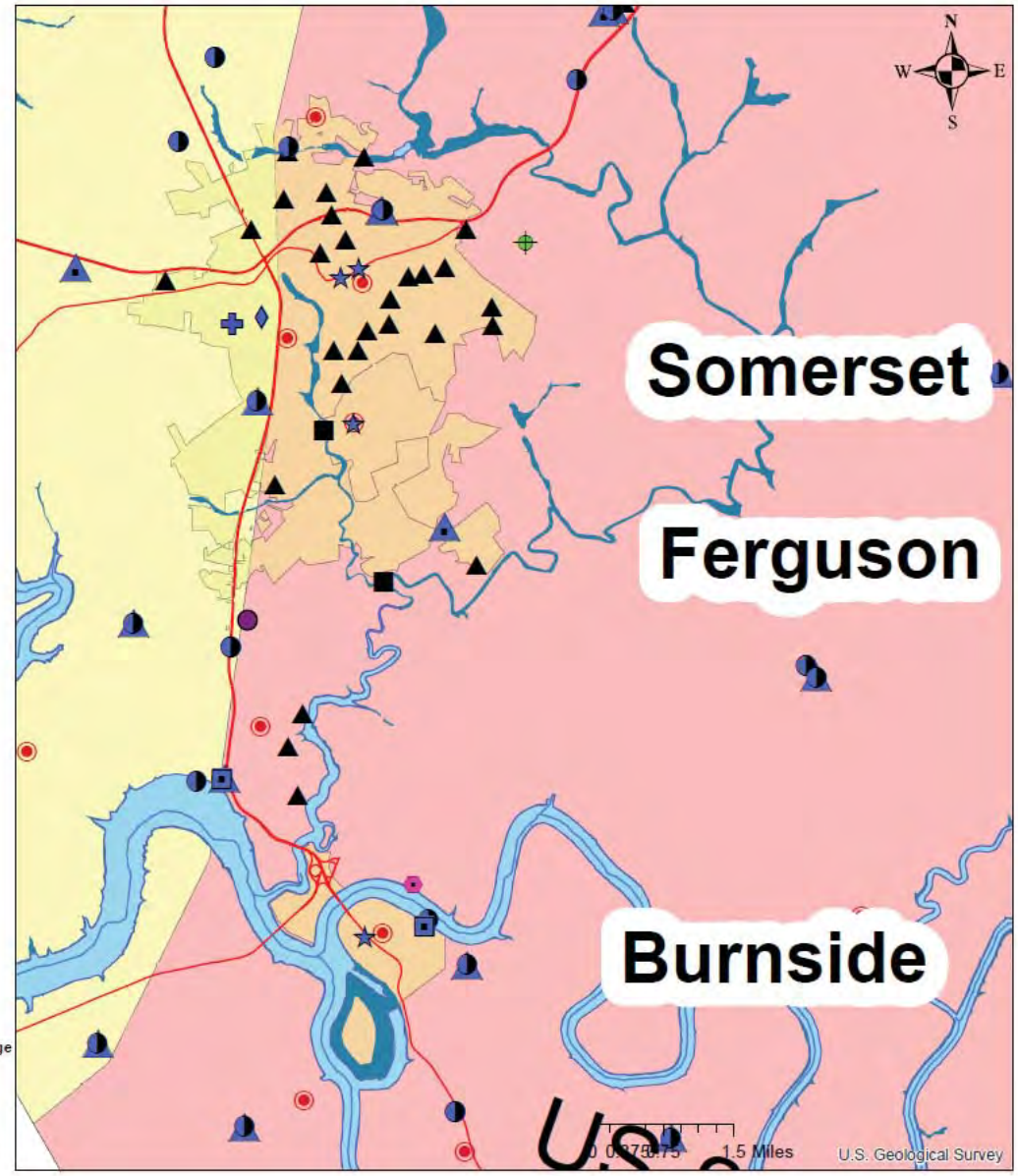
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

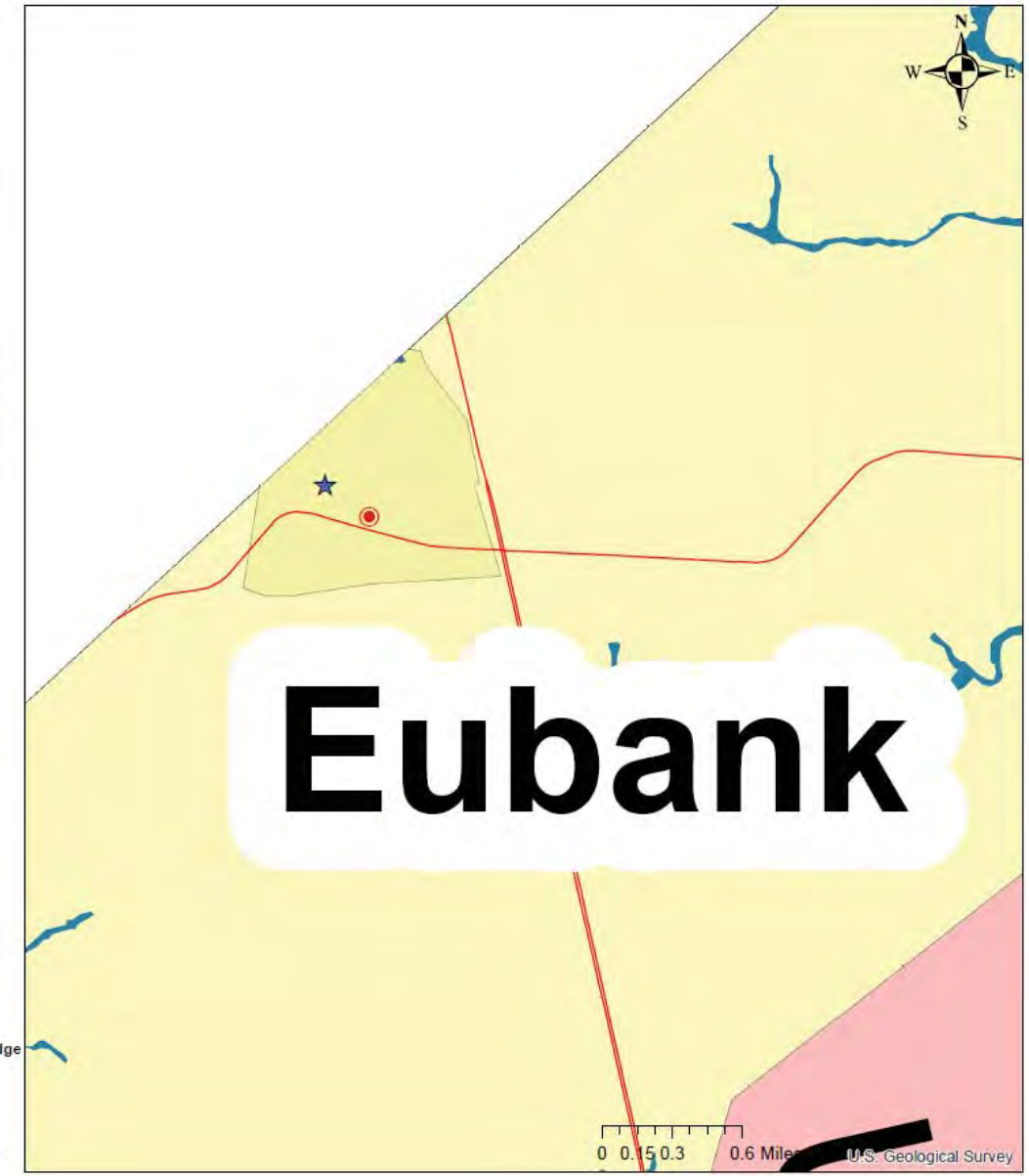
Map 6.1(7a)
LCADD Region
Tier 1 Essential Facilities
Pulaski County/Somerset
Ferguson/Burnside

Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District



Map 6.1(7b)
LCADD Region
Tier 1 Essential Facilities
Pulaski County/Eubank



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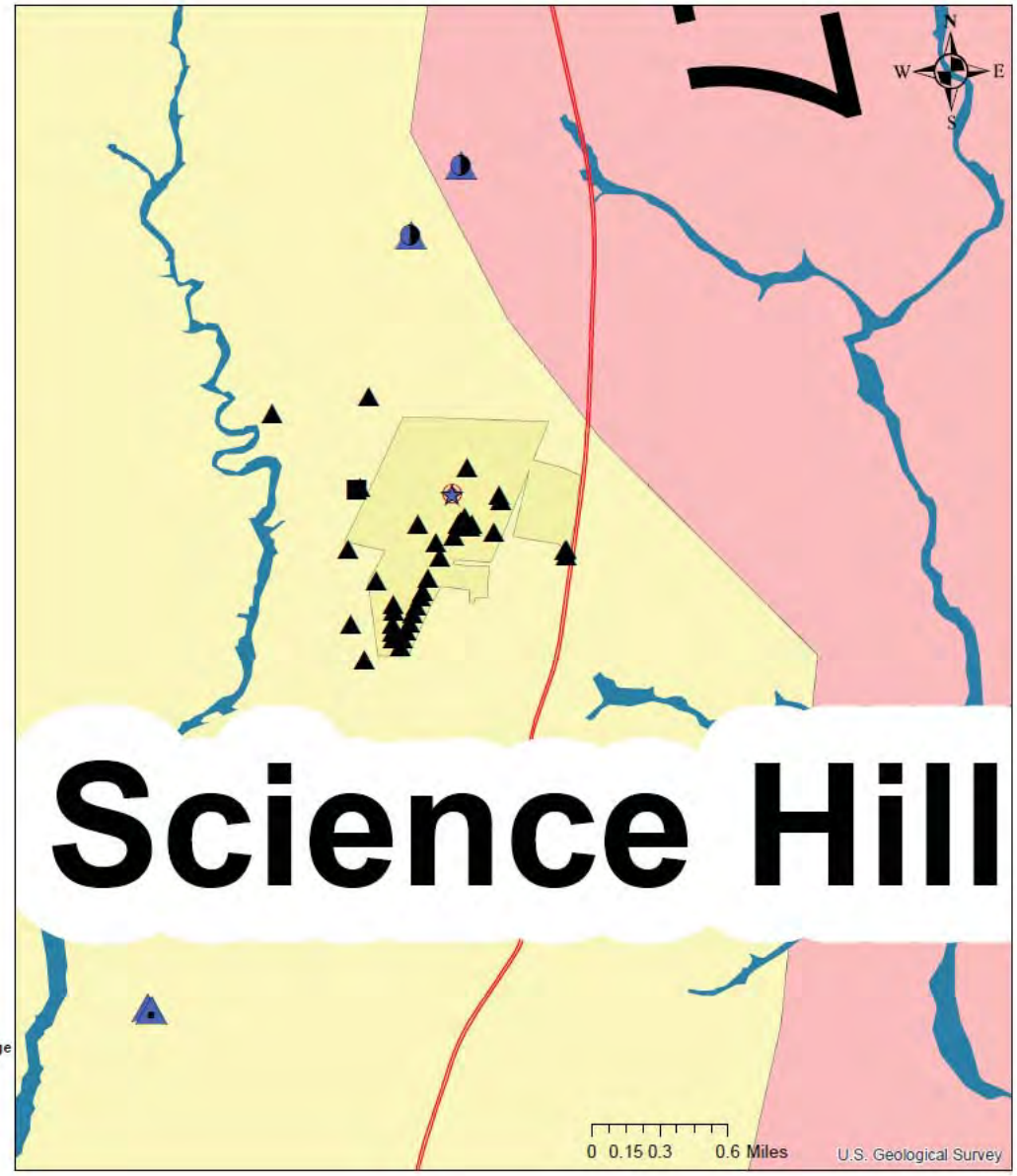
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

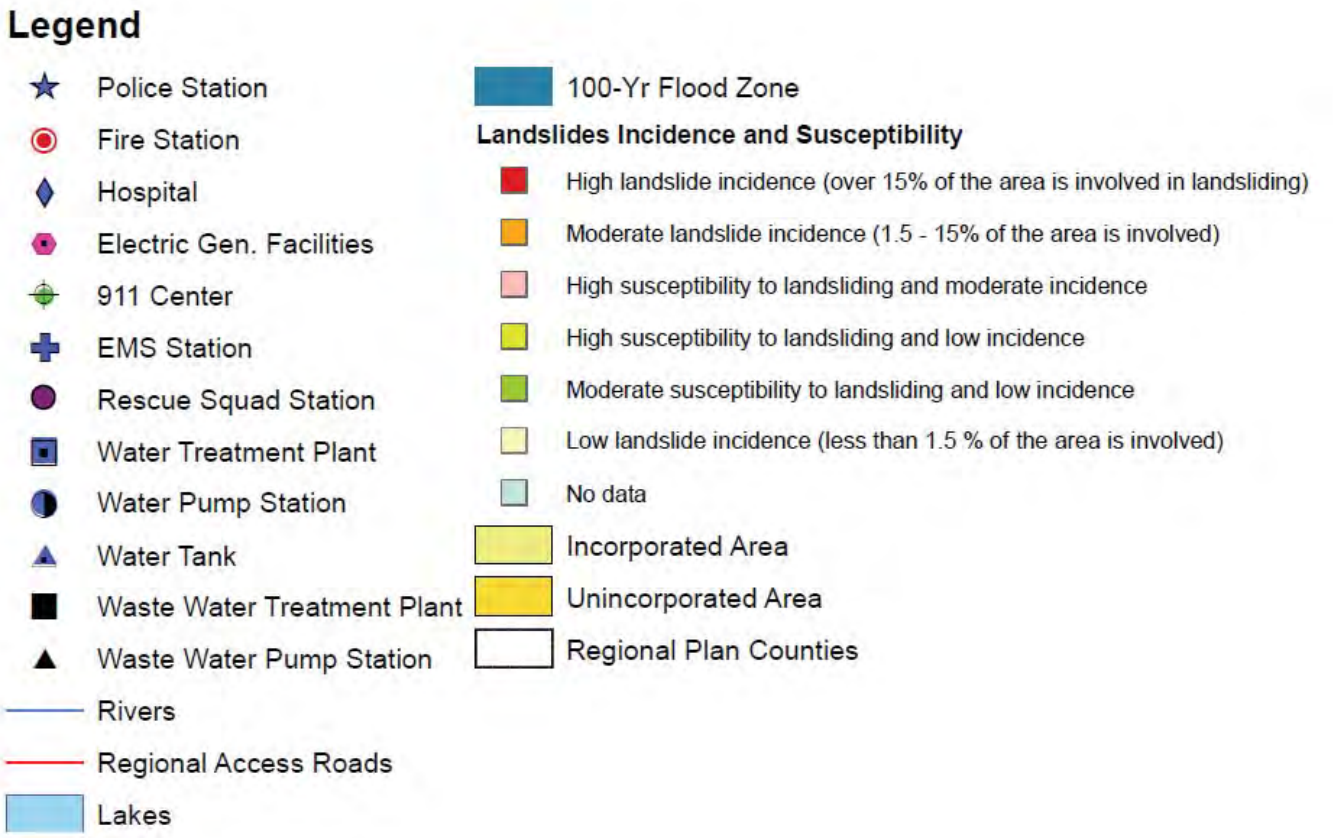
Prepared By:
Lake Cumberland Area Development District

Map 6.1(7c)
LCADD Region
Tier 1 Essential Facilities
Pulaski County/Science Hill

Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

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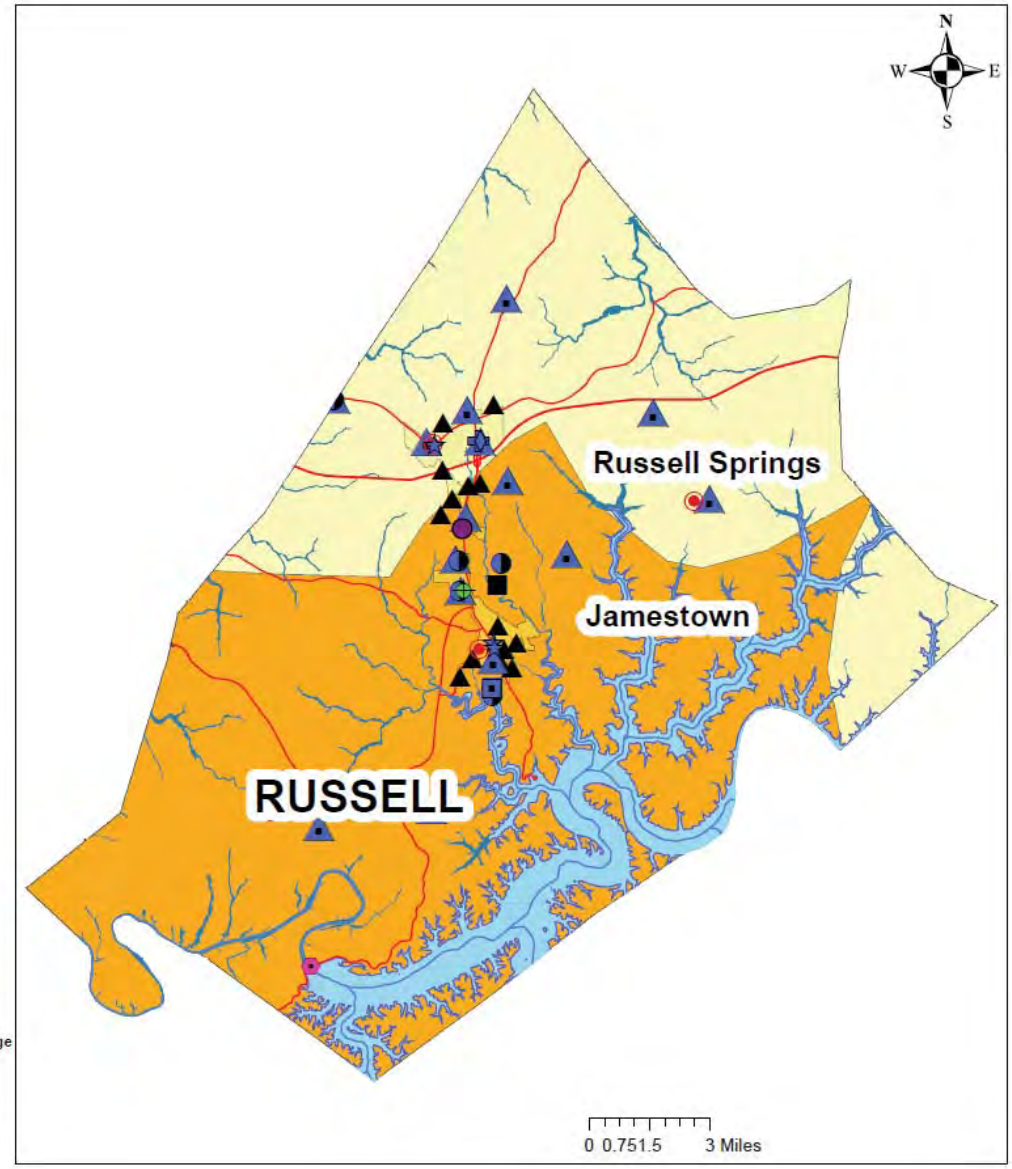
No data
Incorporated Area
Unincorporated Area
Regional Plan Counties

Map 6.1(8)
LCADD Region
Tier 1 Essential Facilities
Russell County



Data Source: Lake Cumberland ADD GIS Databases,
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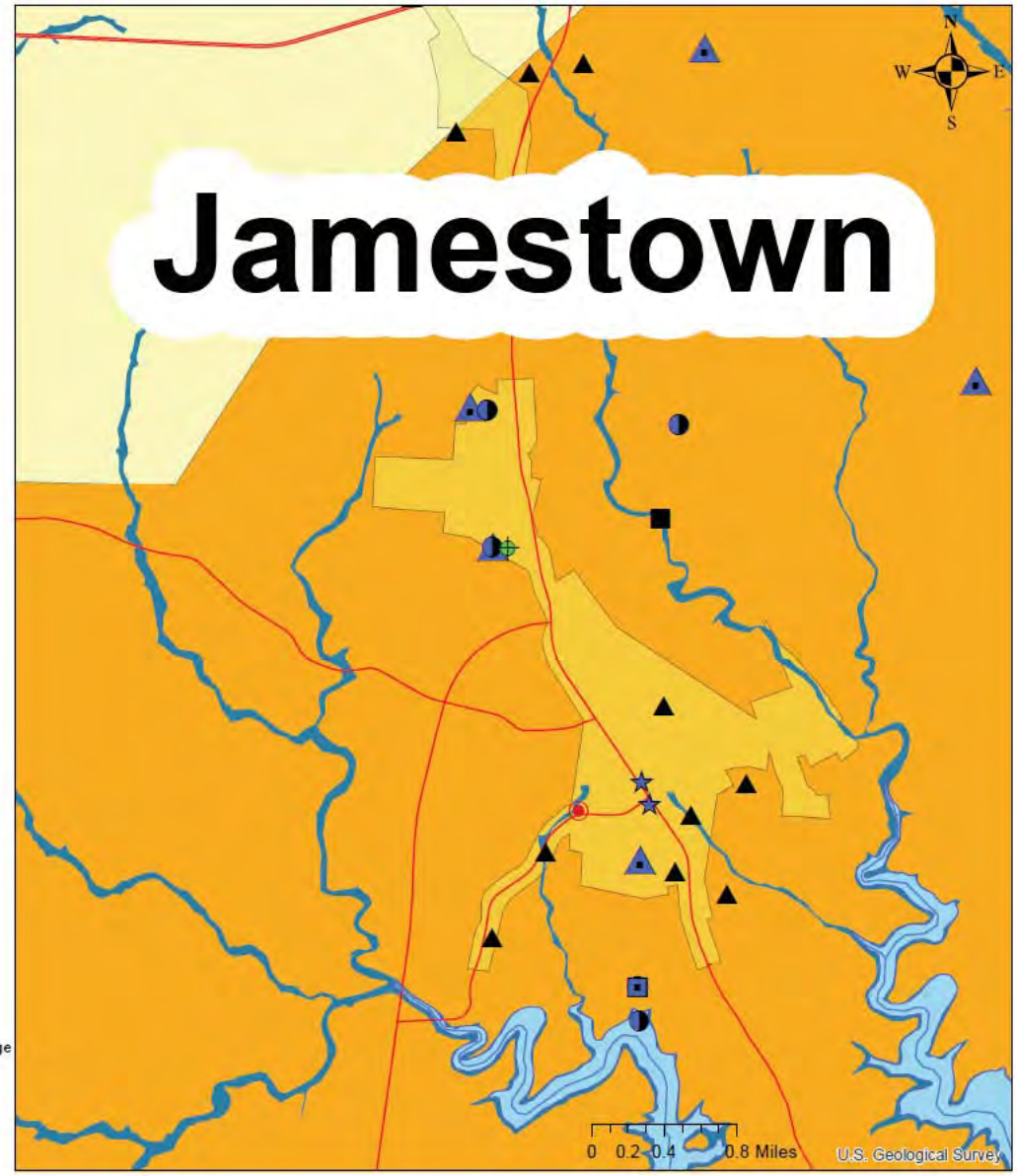
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

Map 6.1(8a)
LCADD Region
Tier 1 Essential Facilities
Russell County/Jamestown



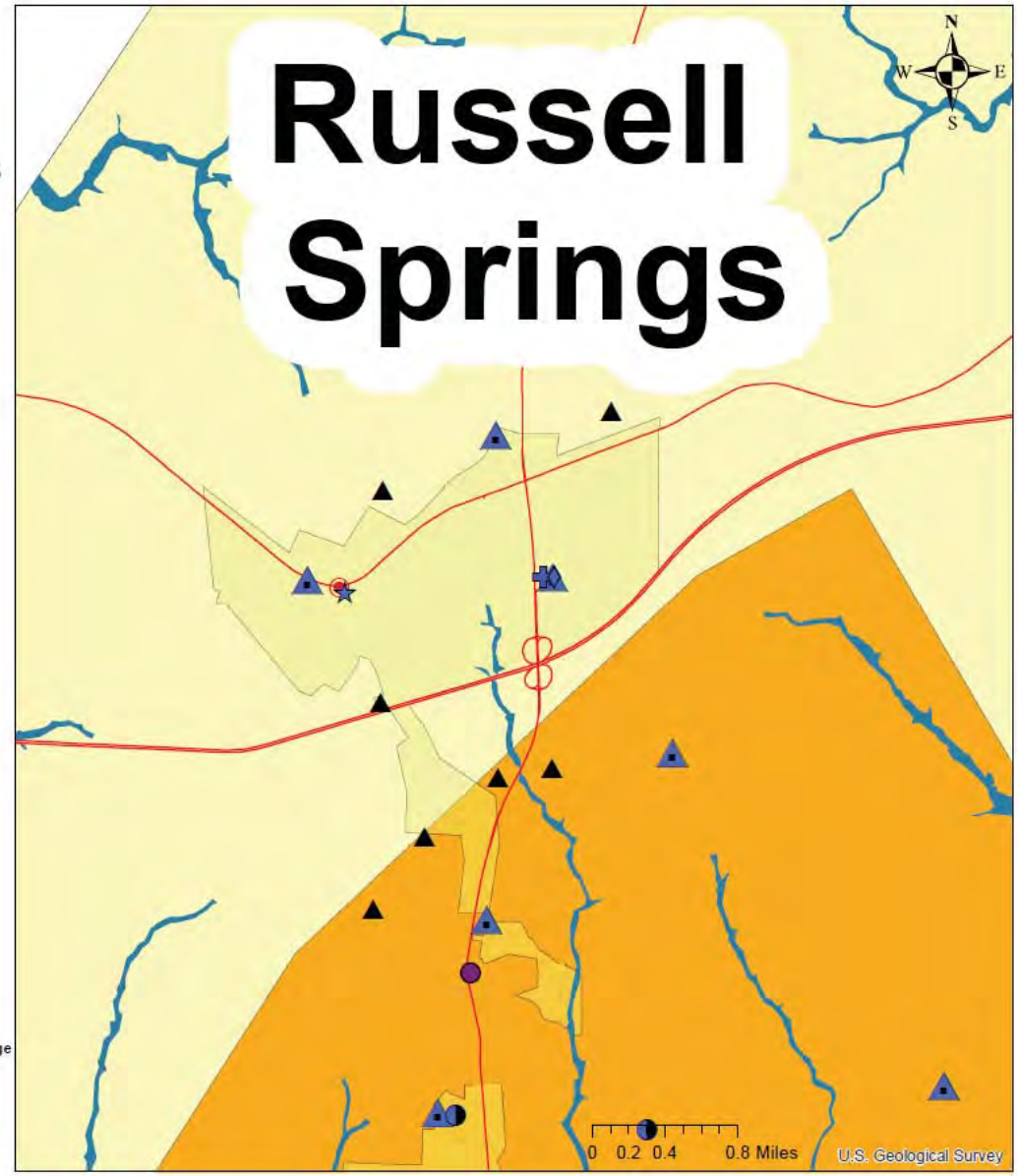
Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

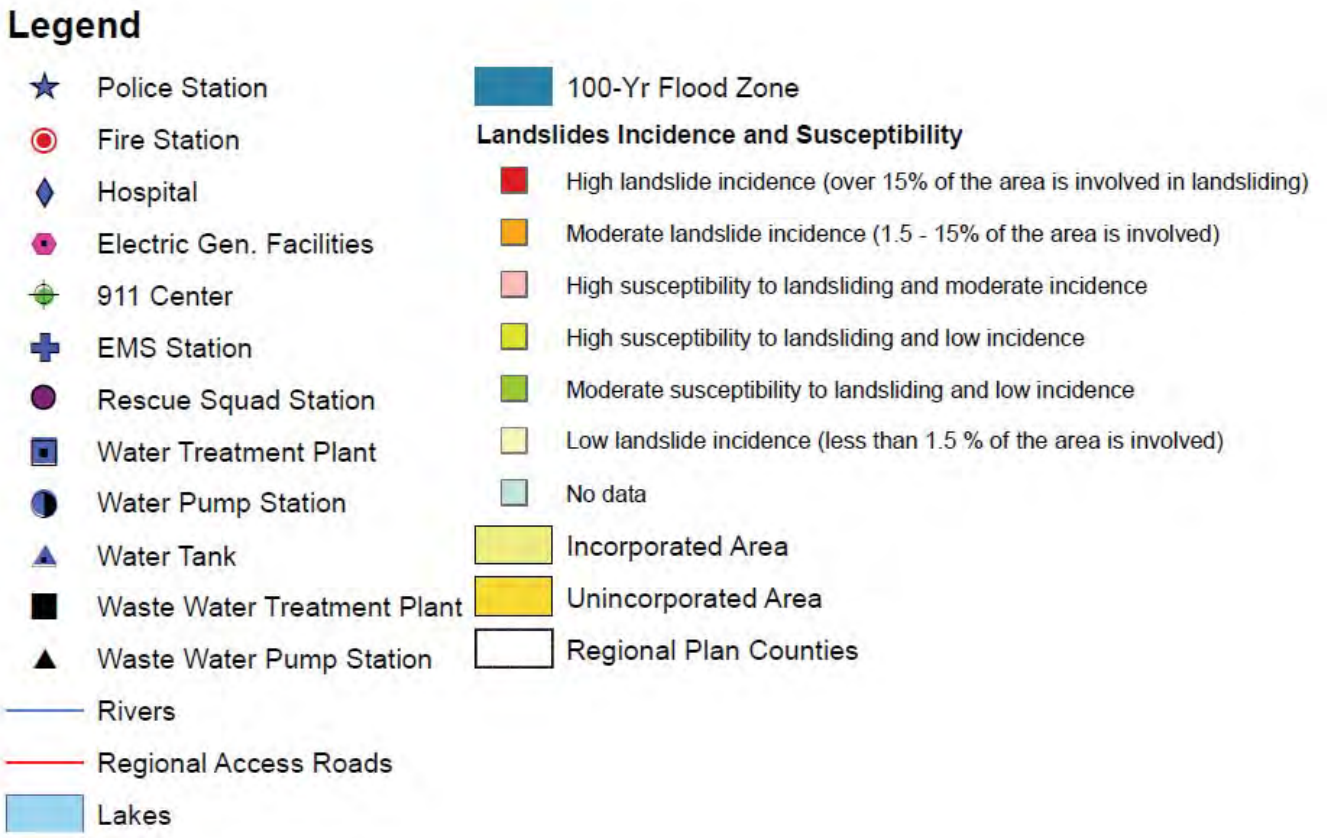
Prepared By:
Lake Cumberland Area Development District

Map 6.1(8b)
LCADD Region
Tier 1 Essential Facilities
Russell County/Russell Springs

Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

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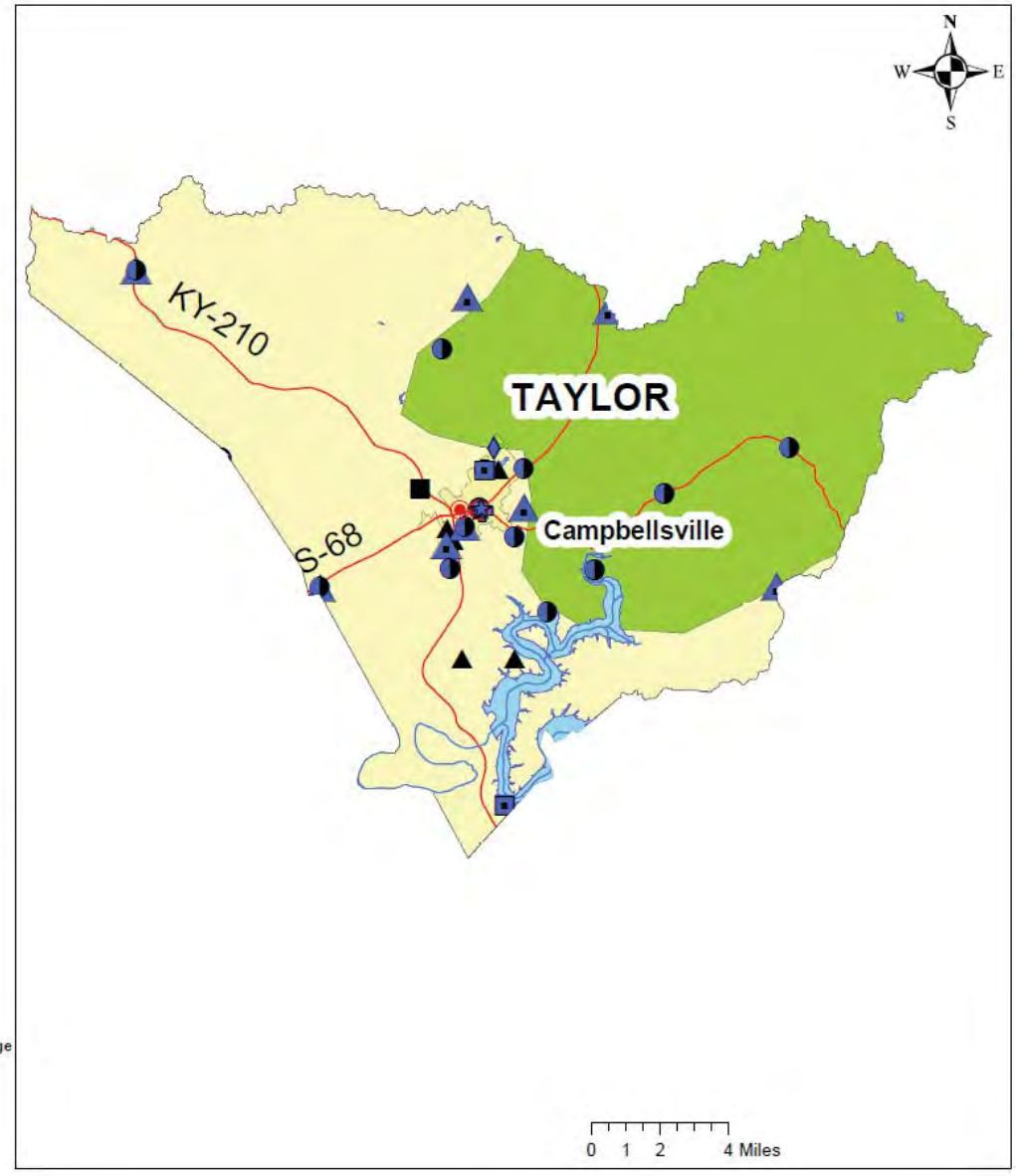
No data
Incorporated Area
Unincorporated Area
Regional Plan Counties

Map 6.1(9)
LCADD Region
Tier 1 Essential Facilities
Taylor County



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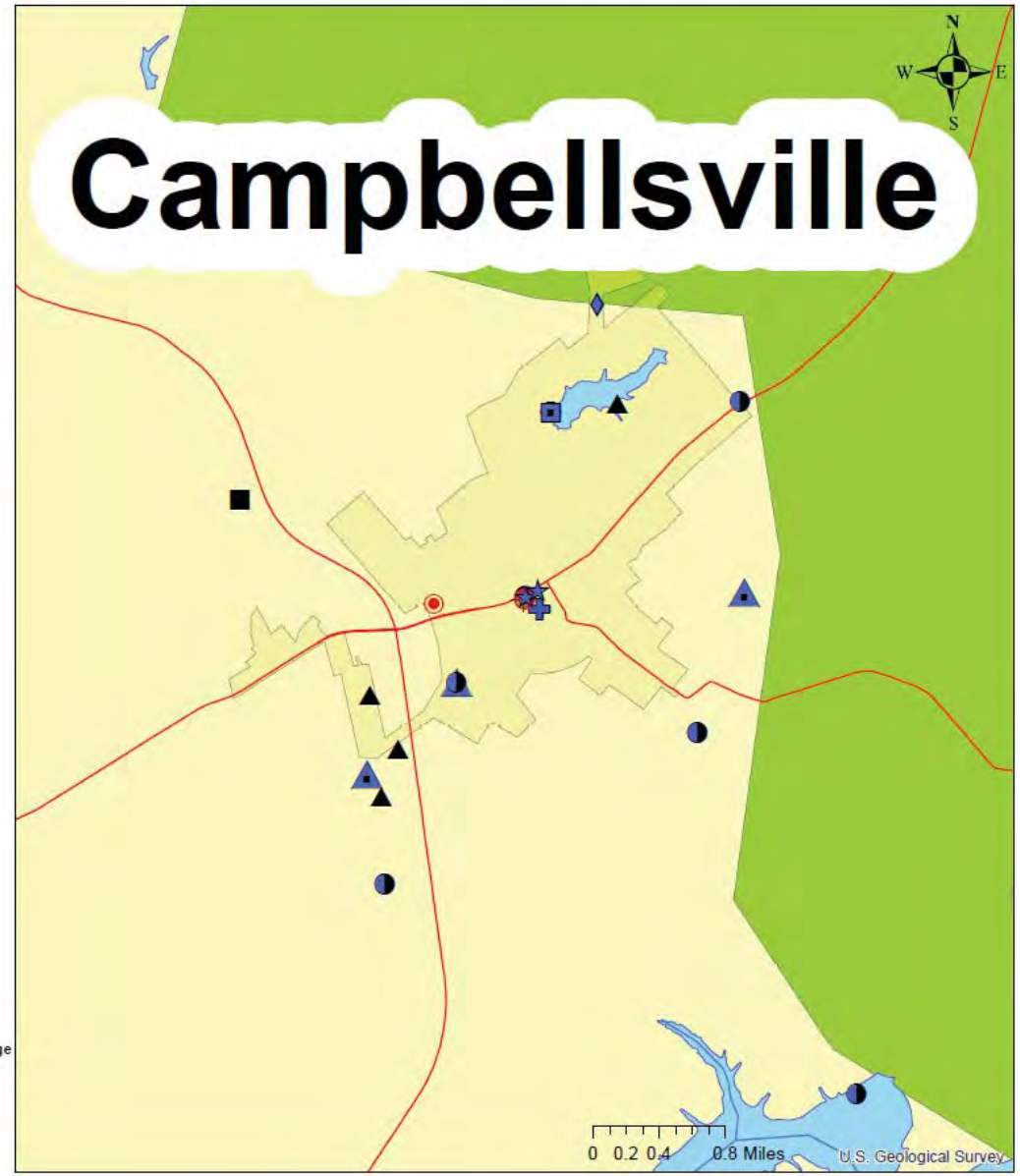
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

Map 6.1(9a)
LCADD Region
Tier 1 Essential Facilities
Taylor County/Campbellsville



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Census 2010 Data and Subcommittee Input
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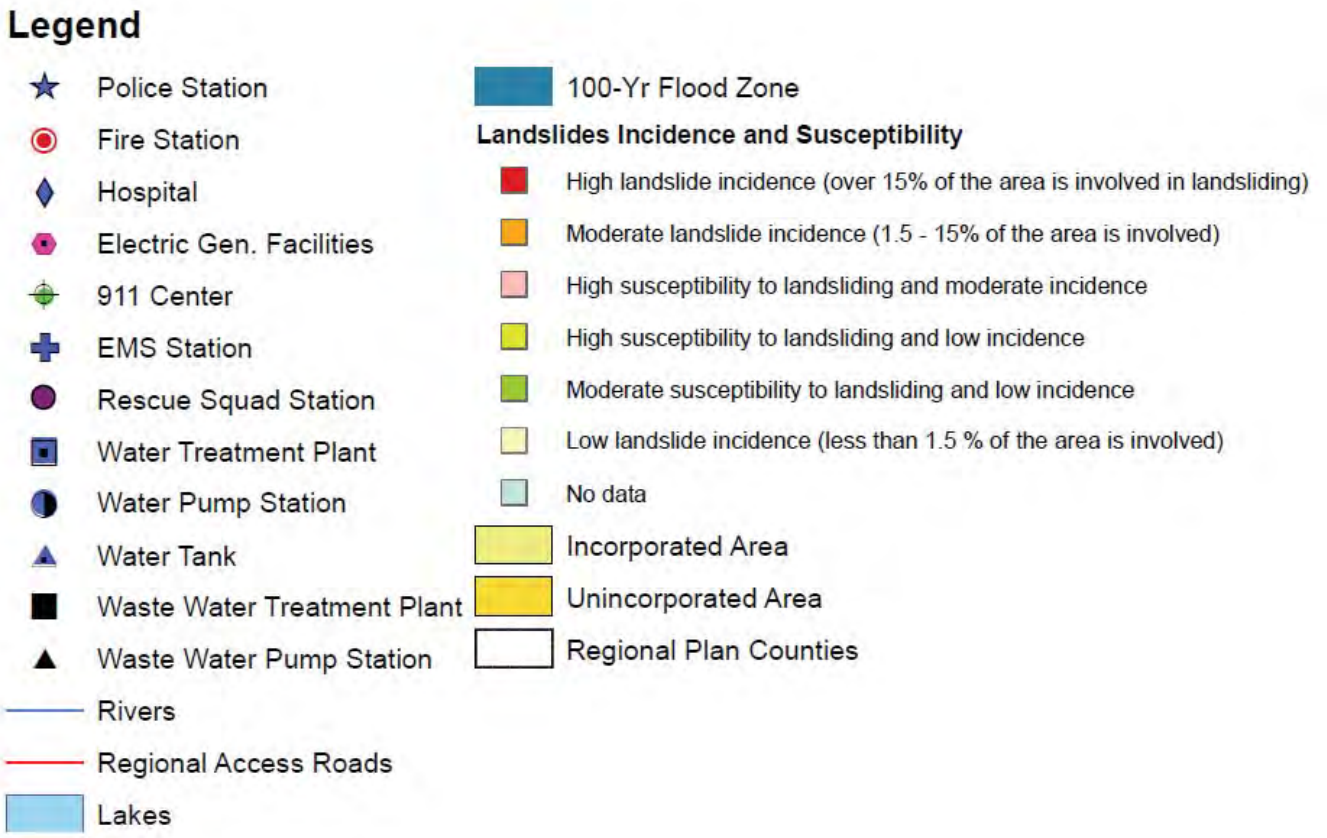
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District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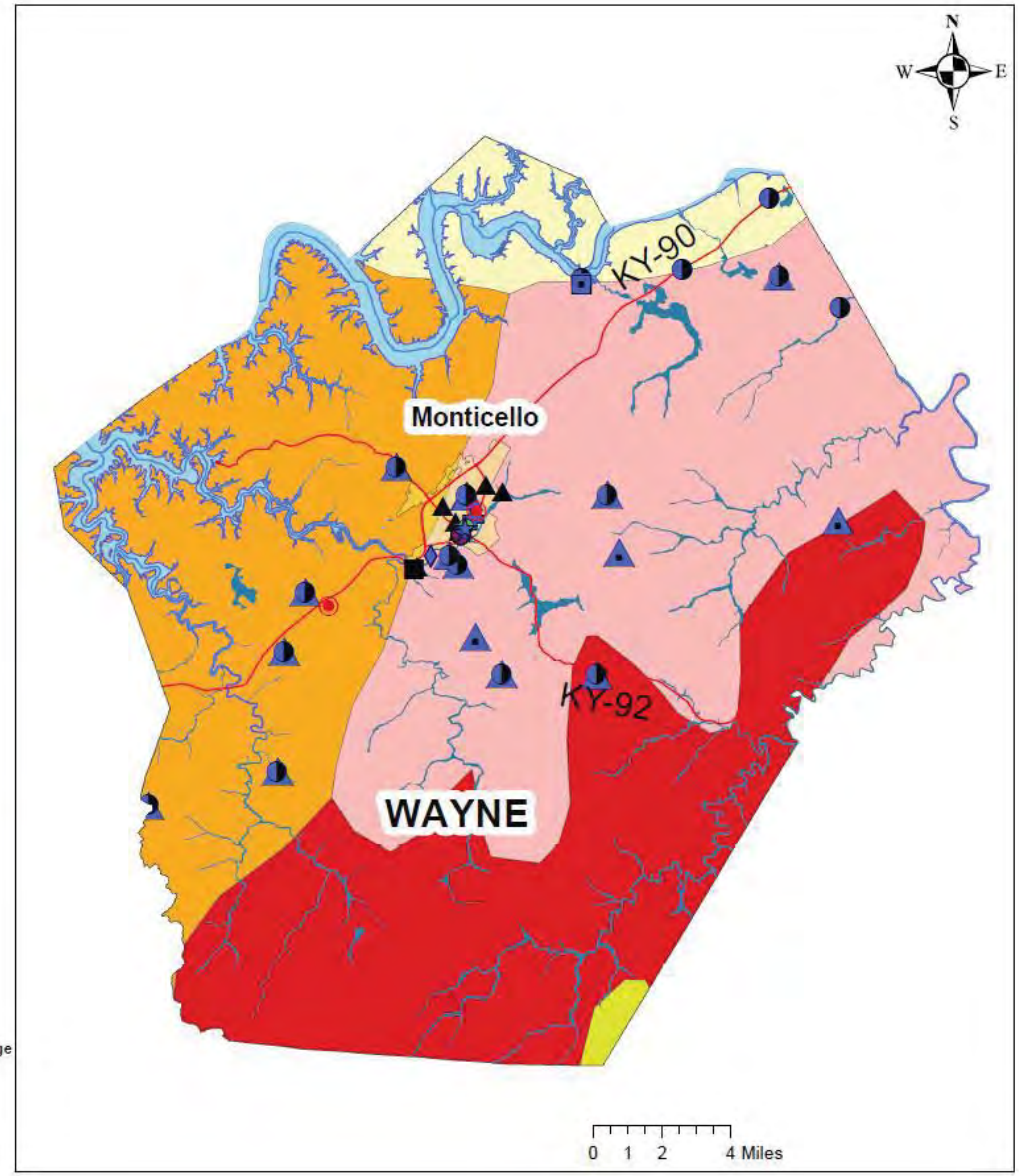
No data
Incorporated Area
Unincorporated Area
Regional Plan Counties

Map 6.1(10)
LCADD Region
Tier 1 Essential Facilities
Wayne County

Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

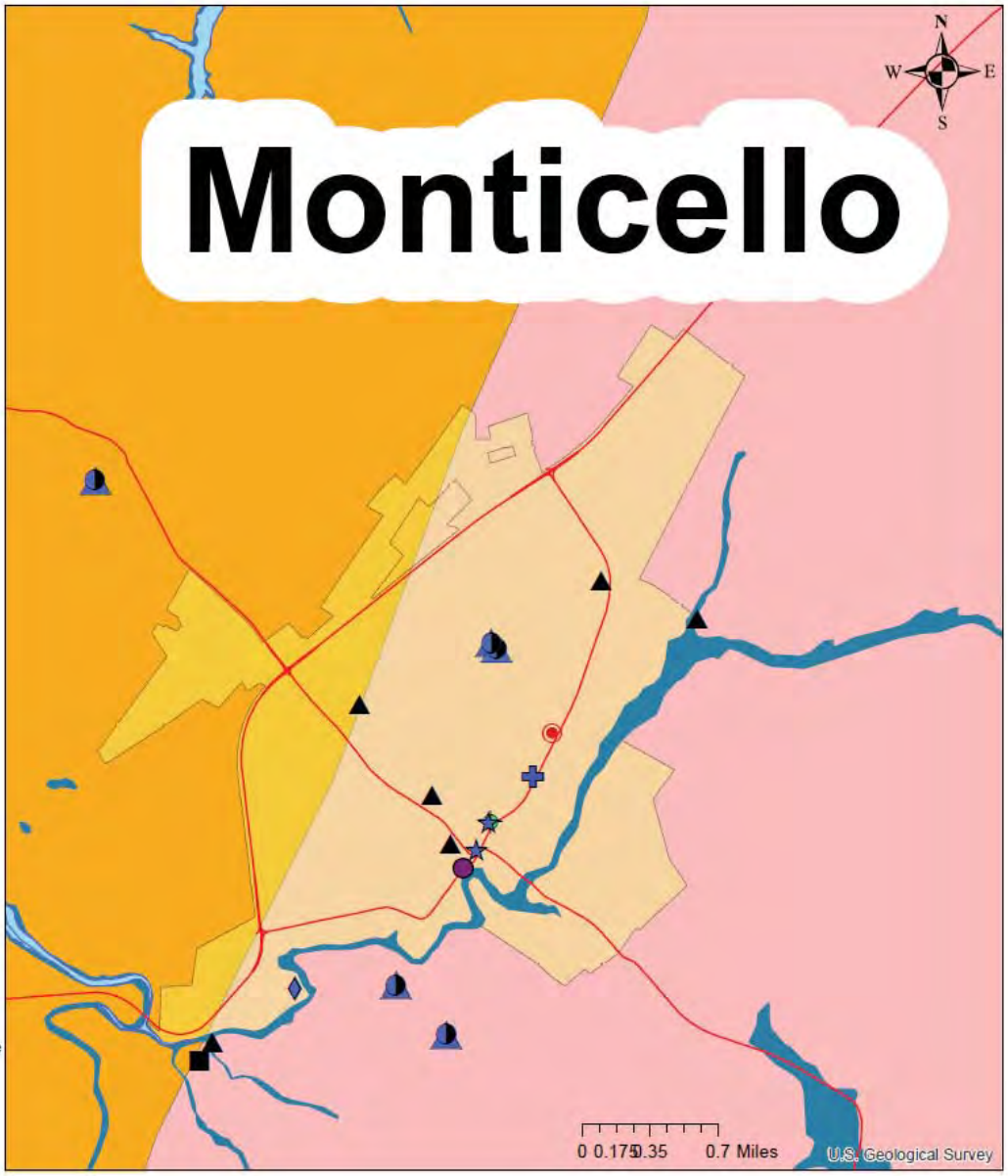
Prepared By:
Lake Cumberland Area Development District

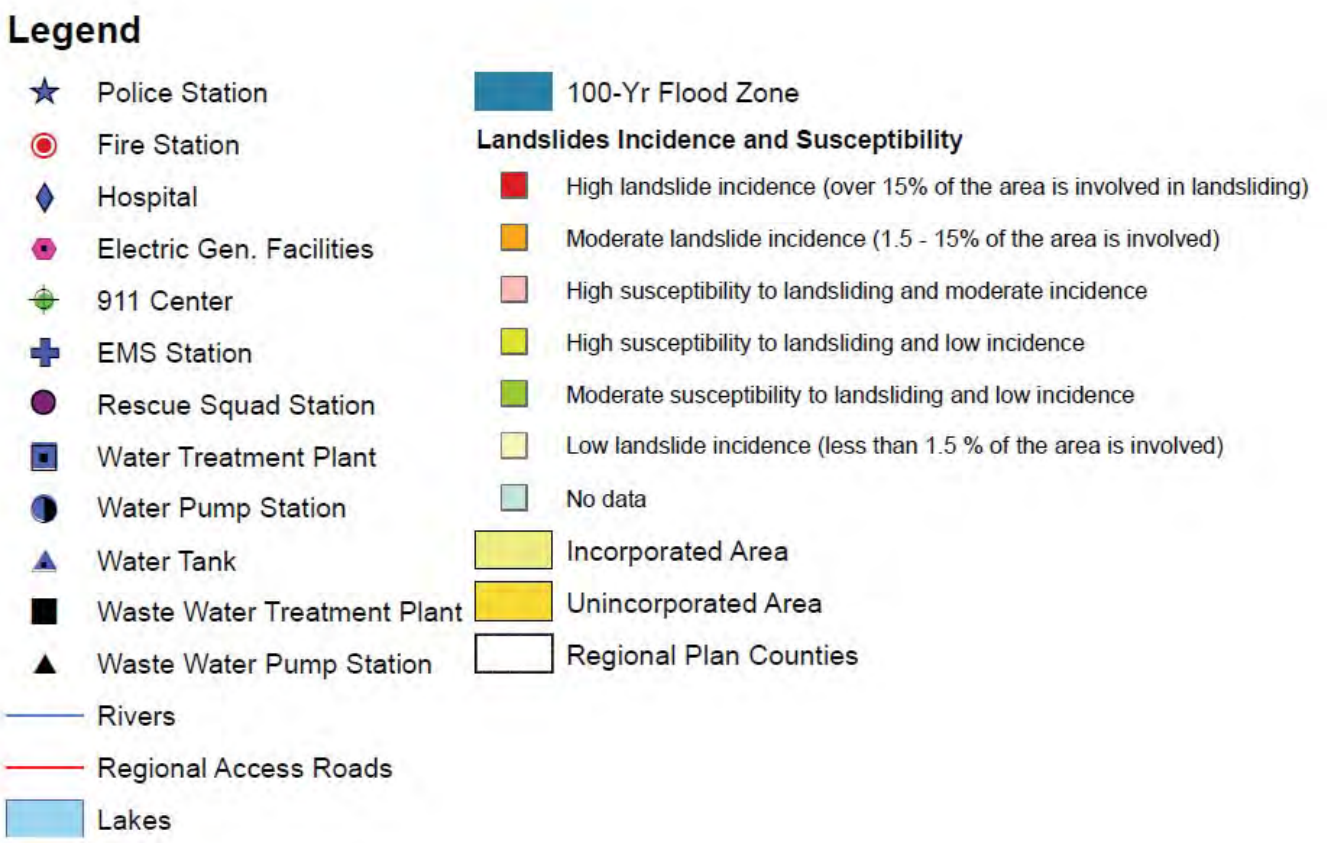


Map 6.1(10a)
LCADD Region
Tier 1 Essential Facilities
Wayne County/Monticello

Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Subcommittee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District




Legend
Police Station
Fire Station
Hospital
Electric Gen. Facilities
911 Center
EMS Station
Rescue Squad Station
Water Treatment Plant
Water Pump Station
Water Tank
Waste Water Treatment Plant
Waste Water Pump Station
Rivers
Regional Access Roads
Lakes
100-Yr Flood Zone
Landslides Incidence and Susceptibility
High landslide incidence (over 15% of the area is involved in landsliding)
Moderate landslide incidence (1.5 - 15% of the area is involved)
High susceptibility to landsliding and moderate incidence
High susceptibility to landsliding and low incidence
Moderate susceptibility to landsliding and low incidence
Low landslide incidence (less than 1.5 % of the area is involved)
No data
Incorporated Area
Unincorporated Area
Regional Plan Counties

Tier 2 Facilities

Table 6.1(3) - Tier 2 Facilities

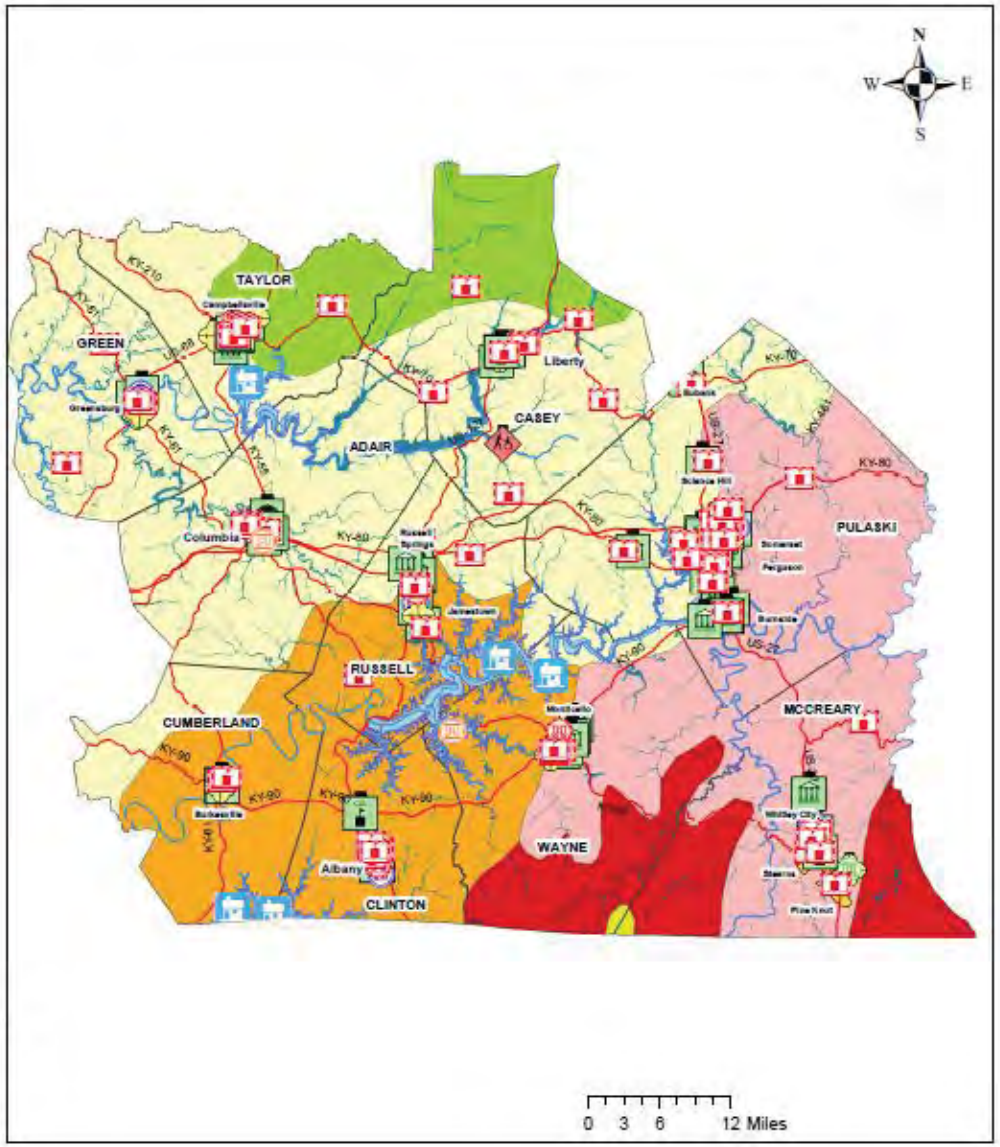
Lindsey Wilson College	College	$250,000,000.00	Adair
County Courthouse	Courthouse	$1,500,000.00	Adair
Adair Co. Regional Jail	Jail	$1,854,800.00	Adair
County Judicial Center	Justice Center	$12,470,000.00	Adair
Adair Youth Development Center	Juvenile Fac.	$10,000,000.00	Adair
Summit Manor	Nursing Home	$3,430,000.00	Adair
Adair County High School	School	$4,900,000.00	Adair
Adair County Middle School	School	$4,900,000.00	Adair
Adair County Elementary School	School	$4,900,000.00	Adair
Adair County Primary Center	School	$4,900,000.00	Adair
John Adair Intermediate School	School	$4,900,000.00	Adair
Liberty City Hall	City Hall	$250,000.00	Casey
County Courthouse	Courthouse	$1,500,000.00	Casey
Casey County Jail	Jail	$388,200.00	Casey
County Judicial Center	Justice Center	$12,500,000.00	Casey
Liberty Health Care Center	Nursing Home	$3,430,000.00	Casey
Casey County High School	School	$4,900,000.00	Casey
Casey County Middle School	School	$4,900,000.00	Casey
Casey County Vocational School	School	$4,900,000.00	Casey
Casey County Alternative School	School	$4,900,000.00	Casey
Walnut Hill Elementary	School	$4,900,000.00	Casey
Liberty Elementary	School	$4,900,000.00	Casey
Douglas Elementary	School	$4,900,000.00	Casey
Garrett Elementary	School	$4,900,000.00	Casey
Middleburg Elementary	School	$4,900,000.00	Casey
Phelps Elementary	School	$4,900,000.00	Casey
Phillips Elementary	School	$4,900,000.00	Casey
Albany City Hall	City Hall	$250,000.00	Clinton
County Courthouse	Courthouse	$1,500,000.00	Clinton
Clinton County Jail	Jail	$1,085,300.00	Clinton
Clinton County Health Care Center	Nursing Home	$3,430,000.00	Clinton
Albany Elementary School	School	$4,900,000.00	Clinton
Clinton County Vocational School	School	$4,900,000.00	Clinton
Clinton County High School	School	$4,900,000.00	Clinton
Clinton County Middle School	School	$4,900,000.00	Clinton
Clinton County Learning Center	School	$4,900,000.00	Clinton
Burkesville City Hall	City Hall	$150,000.00	Cumberland
County Courthouse	Courthouse	$1,361,000.00	Cumberland
County Judicial Center	Justice Center	$5,965,000.00	Cumberland

Cumberland Valley Manor	Nursing Home	$2,000,000.00	Cumberland
Cumberland Elementary School	School	$4,900,000.00	Cumberland
Cumberland County High School	School	$4,900,000.00	Cumberland
Cumberland County Middle School	School	$4,900,000.00	Cumberland
Greensburg City Hall	City Hall	$150,000.00	Green
County Courthouse	Courthouse	$1,250,000.00	Green
County Judicial Center	Justice Center	$11,500,000.00	Green
McDowell Skilled NSG. Facility	Nursing Home	$3,430,000.00	Green
Green Hill Manor NF	Nursing Home	$3,430,000.00	Green
Green County High School	School	$4,900,000.00	Green
Green County Middle School	School	$4,900,000.00	Green
Green County Vocational School	School	$4,900,000.00	Green
Greensburg Elementary	School	$4,900,000.00	Green
Pierce Elementary	School	$4,900,000.00	Green
Summersville Elementary	School	$4,900,000.00	Green
McCreary County Learning Center	College	$4,900,000.00	McCreary
McCreary County Courthouse	Courthouse	$6,751,000.00	McCreary
McCreary County Detention Center	Jail	$1,625,800.00	McCreary
McCreary Health Center	Nursing Home	$3,430,000.00	McCreary
McCreary Federal Prison	Prison	$135,000,000.00	McCreary
McCreary County Central High School	School	$28,081,000.00	McCreary
Whitley City Elementary School	School	$14,212,000.00	McCreary
Pine Knot Elementary School	School	$12,589,000.00	McCreary
Pine Knot Middle School	School	$12,324,000.00	McCreary
McCreary Co. Middle School	School	$13,015,000.00	McCreary
Somerset City Hall	City Hall	$350,000.00	Pulaski
Ferguson City Hall	City Hall	$150,000.00	Pulaski
Science Hill City Hall	City Hall	$150,000.00	Pulaski
Eubank City Hall	City Hall	$150,000.00	Pulaski
Burnside City Hall	City Hall	$150,000.00	Pulaski
Somerset Community College	College	$100,000,000.00	Pulaski
County Courthouse	Courthouse	$8,500,000.00	Pulaski
Pulaski CO Detention Center	Jail	$4,200,000.00	Pulaski
County Judicial Center	Justice Center	$237,000,000.00	Pulaski
Somerset Nursing & Rehab. Fac.	Nursing Home	$3,430,000.00	Pulaski
Britthaven of Somerset	Nursing Home	$3,430,000.00	Pulaski
Lake Cumberland Reg. Hospital SCU	Nursing Home	$3,430,000.00	Pulaski
Sunrise Manor NSG. & Rehab. Fac.	Nursing Home	$3,430,000.00	Pulaski
Meece Middle School	School	$4,900,000.00	Pulaski

Hopkins Elementary School	School	$4,900,000.00	Pulaski
Somerset Vocational School	School	$4,900,000.00	Pulaski
Pulaski County High School	School	$4,900,000.00	Pulaski
Pulaski Elementary School	School	$4,900,000.00	Pulaski
Somerset Aeronauntical Vocational School	School	$4,900,000.00	Pulaski
Southern Elementary School	School	$4,900,000.00	Pulaski
Southern Middle School	School	$4,900,000.00	Pulaski
Northern Middle School	School	$4,900,000.00	Pulaski
Saline Christian Academy	School	$4,900,000.00	Pulaski
Southwestern High School	School	$4,900,000.00	Pulaski
Oak Hill Elementary School	School	$4,900,000.00	Pulaski
Burnside Elementary School	School	$4,900,000.00	Pulaski
Shopville Elementary School	School	$4,900,000.00	Pulaski
Science Hill Elementary School	School	$4,900,000.00	Pulaski
Nancy Elementary School	School	$4,900,000.00	Pulaski
Eubank Grade School	School	$4,900,000.00	Pulaski
Somerset High School	School	$4,900,000.00	Pulaski
Memorial Elementary	School	$4,900,000.00	Pulaski
Pulaski Central Experimental Alternative School	School	$4,900,000.00	Pulaski
Temple Christian Academy	School	$4,900,000.00	Pulaski
Russell Springs City Hall	City Hall	$870,000.00	Russell
Jamestown City Hall	City Hall	$957,000.00	Russell
County Courthouse	Courthouse	$1,500,000.00	Russell
Russell County Jail	Jail	$3,700,000.00	Russell
County Judicial Center	Justice Center	$11,620,000.00	Russell
Fair Oaks Health Systems L.L.C.	Nursing Home	$3,430,000.00	Russell
Jamestown Elementary	School	$4,900,000.00	Russell
Russell County High School	School	$4,900,000.00	Russell
Russell County Middle School	School	$4,900,000.00	Russell
Russell County Vocational School	School	$4,900,000.00	Russell
Russell Springs Elementary	School	$4,900,000.00	Russell
Salem Elementary	School	$4,900,000.00	Russell
Union Chapel Elementary	School	$4,900,000.00	Russell
Campbellsville City Hall	City Hall	$635,536.00	Taylor
Campbellsville University	College	$475,000,000.00	Taylor
County Courthouse	Courthouse	$1,565,000.00	Taylor
County Judicial Center	Justice Center	$14,970,000.00	Taylor
Medco Center of Campbellsville	Nursing Home	$3,430,000.00	Taylor
Grandview Nursing Home	Nursing Home	*$0.00	Taylor

Mannsville Elementary	School	$4,900,000.00	Taylor
Taylor County Elementary	School	$4,900,000.00	Taylor
Taylor County High School	School	$4,900,000.00	Taylor
Taylor County Middle School	School	$4,900,000.00	Taylor
Campbellsville Elementary	School	$4,900,000.00	Taylor
Campbellsville High School	School	$4,900,000.00	Taylor
Campbellsville Middle School	School	$4,900,000.00	Taylor
Monticello City Hall	City Hall	$950,000.00	Wayne
County Courthouse	Courthouse	$1,464,700.00	Wayne
Wayne County Detention Center	Jail	$3,600,000.00	Wayne
County Judicial Center	Justice Center	$7,400,000.00	Wayne
Lake Cumberland Youth Development	Juvenile Fac.	$3,000,000.00	Wayne
Golden Years Nursing Home	Nursing Home	$3,430,000.00	Wayne
Monticello Independent	School	$4,900,000.00	Wayne
A.J. Lloyd Middle School	School	$4,900,000.00	Wayne
Walker Elementary	School	$4,900,000.00	Wayne
Wayne County Early Childhood Center	School	$4,900,000.00	Wayne
Wayne County Vocational School	School	$4,900,000.00	Wayne
Turner Intermediate	School	$4,900,000.00	Wayne
Bell Elementary	School	$4,900,000.00	Wayne
Wayne County High School	School	$4,900,000.00	Wayne

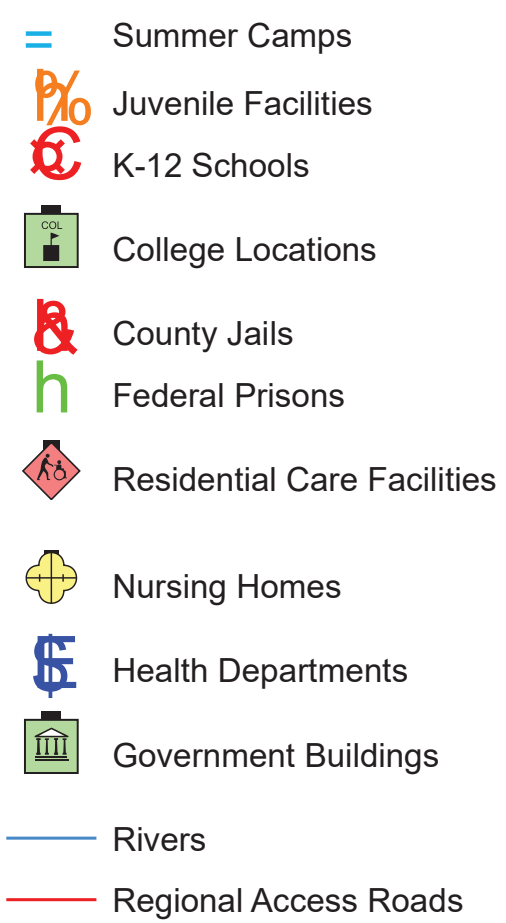
Map 6.1(11)
LCADD Region
Tier 2 Essential Facilities



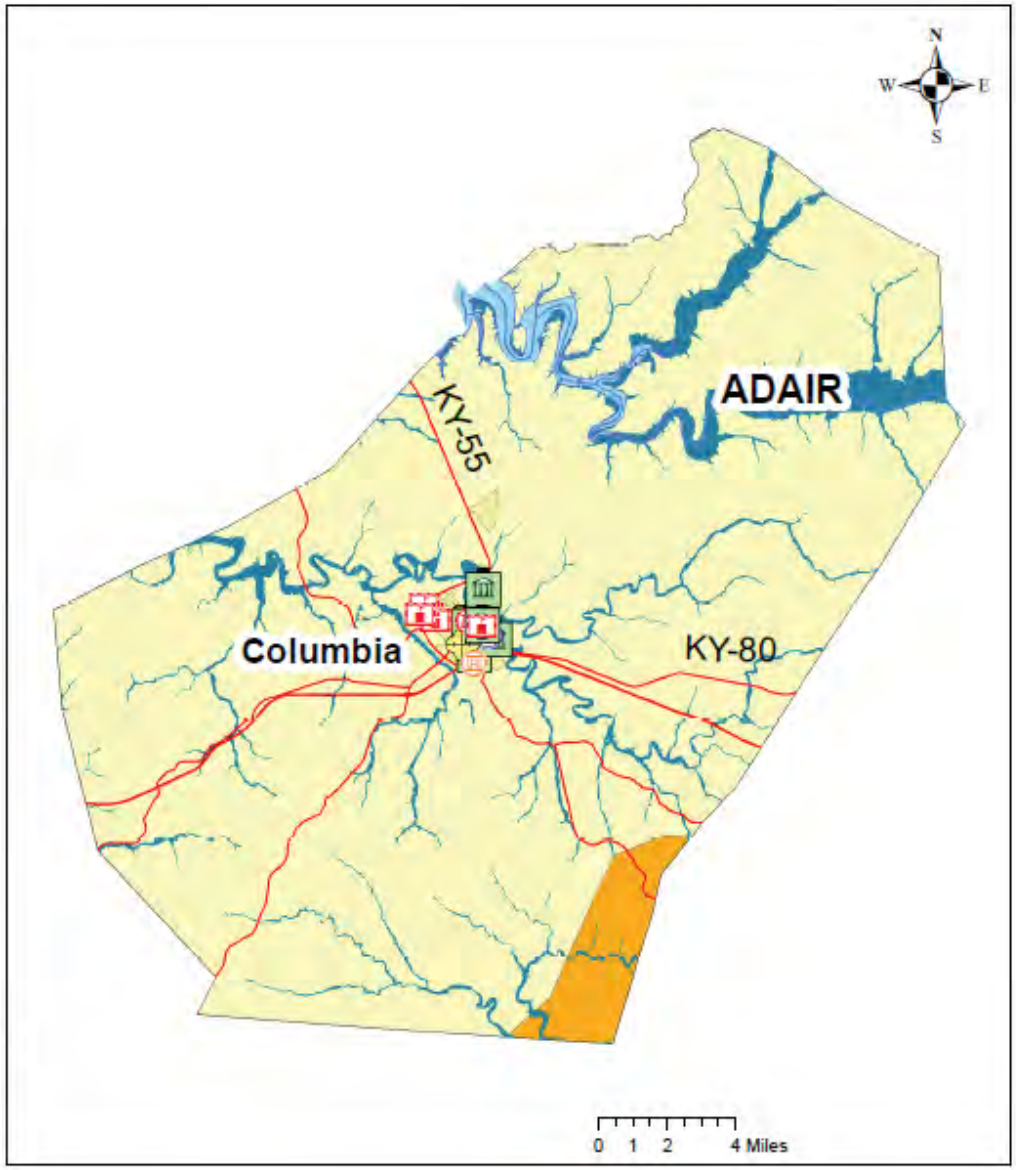
Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

Legend


Summer Camps
Juvenile Facilities
K-12 Schools
College Locations
County Jails
Federal Prisons
Residential Care Facilities
Nursing Homes
Health Departments
Government Buildings
Rivers
Regional Access Roads
Lakes
100-Yr Flood Zone
Incorporated Area
Unincorporated Area
Regional Plan Counties
Landslides Incidence and Susceptibility
High landslide incidence (over 15% of the area is involved in landsliding)
Moderate landslide incidence (1.5 - 15% of the area is involved)
High susceptibility to landsliding and moderate incidence
High susceptibility to landsliding and low incidence
Moderate susceptibility to landsliding and low incidence
Low landslide incidence (less than 1.5 % of the area is involved)
No data

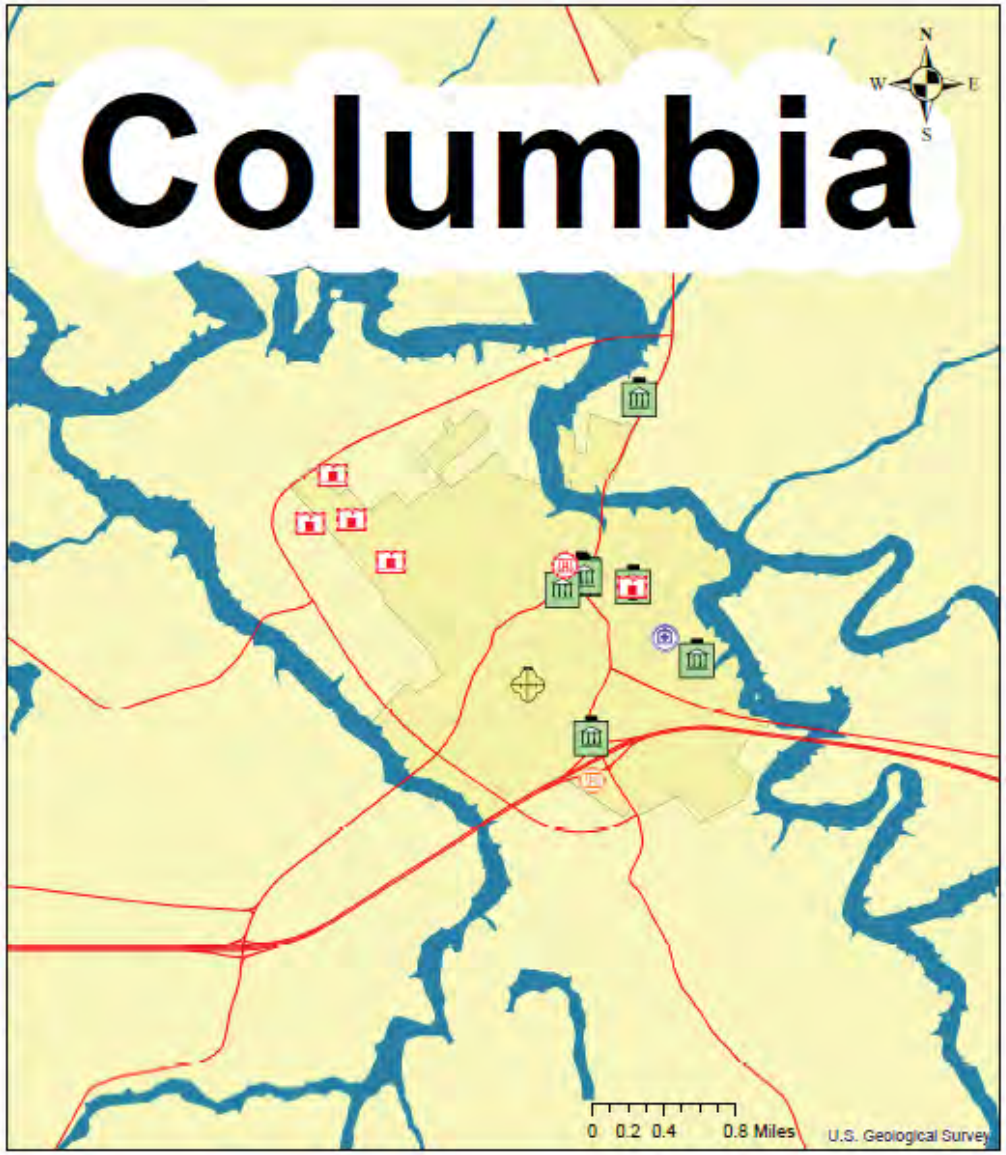
Map 6.1(11a)
LCADD Region
Tier 2 Essential Facilities
Adair County



Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

Map 6.1(11b)
LCADD Region
Tier 2 Essential Facilities
Adair County/Columbia



Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

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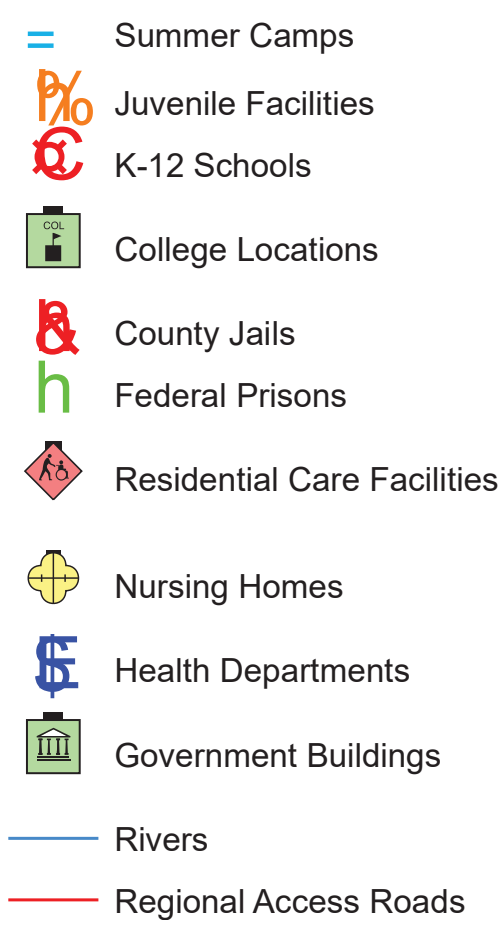
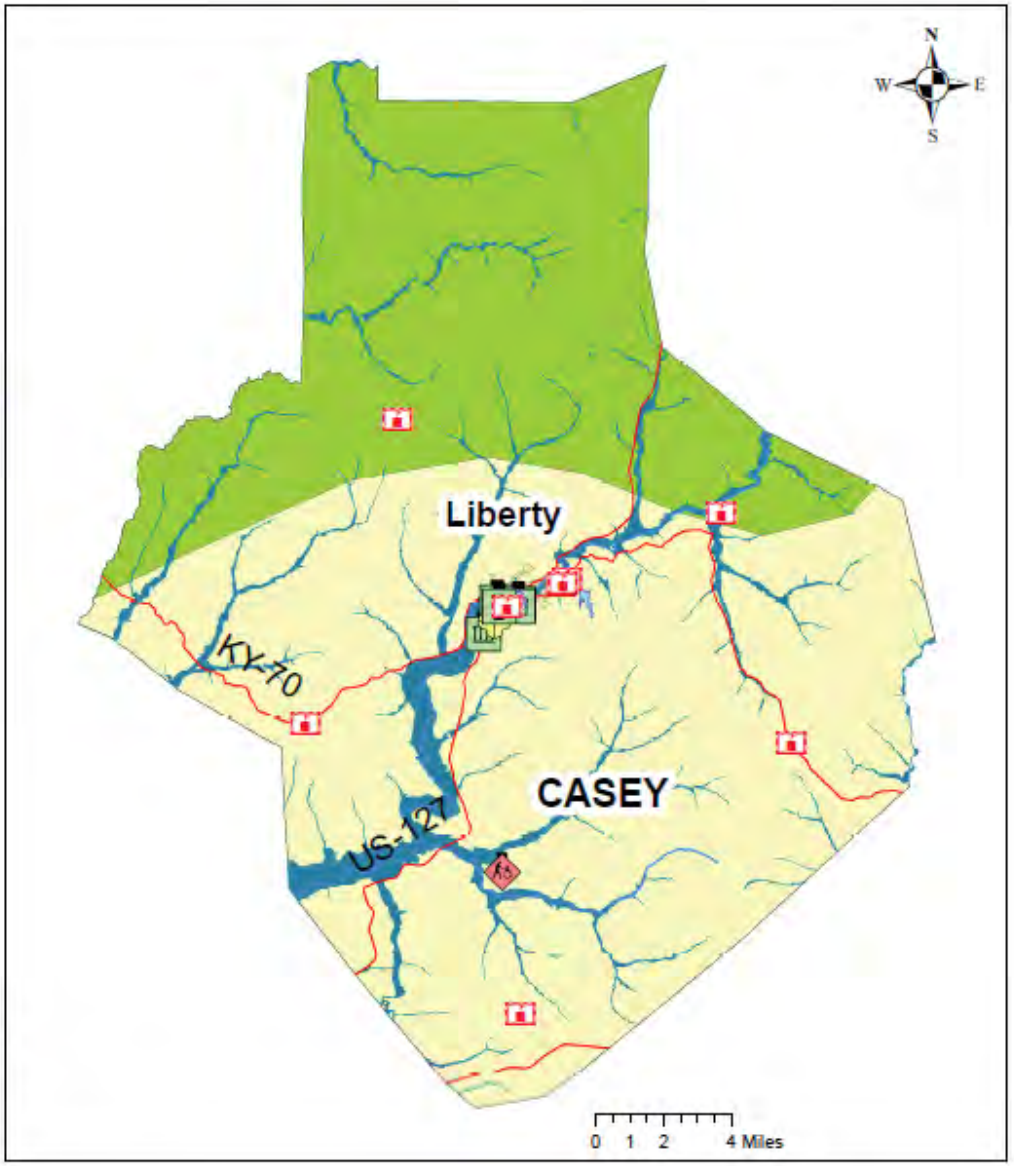

Summer Camps
Juvenile Facilities
K-12 Schools
College Locations
County Jails
Federal Prisons
Residential Care Facilities
Nursing Homes
Health Departments
Government Buildings
Rivers
Regional Access Roads
Lakes
100-Yr Flood Zone
Incorporated Area
Unincorporated Area
Regional Plan Counties
Landslides Incidence and Susceptibility
High landslide incidence (over 15% of the area is involved in landsliding)
Moderate landslide incidence (1.5 - 15% of the area is involved)
High susceptibility to landsliding and moderate incidence
High susceptibility to landsliding and low incidence
Moderate susceptibility to landsliding and low incidence
Low landslide incidence (less than 1.5 % of the area is involved)
No data

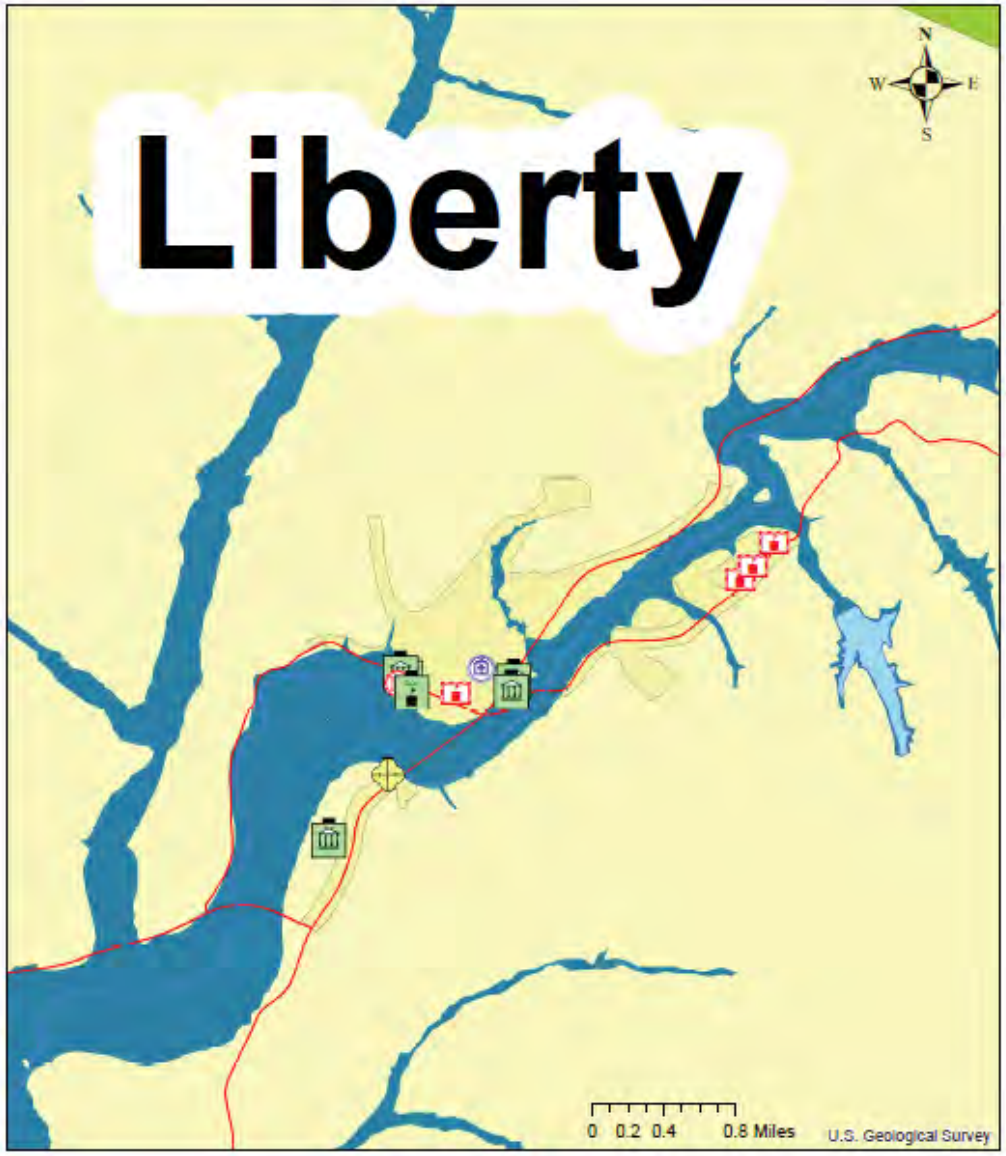
Map 6.1(11c)
LCADD Region
Tier 2 Essential Facilities
Casey County

Data Source: Lake Cumberland ADD GIS Databases, Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District



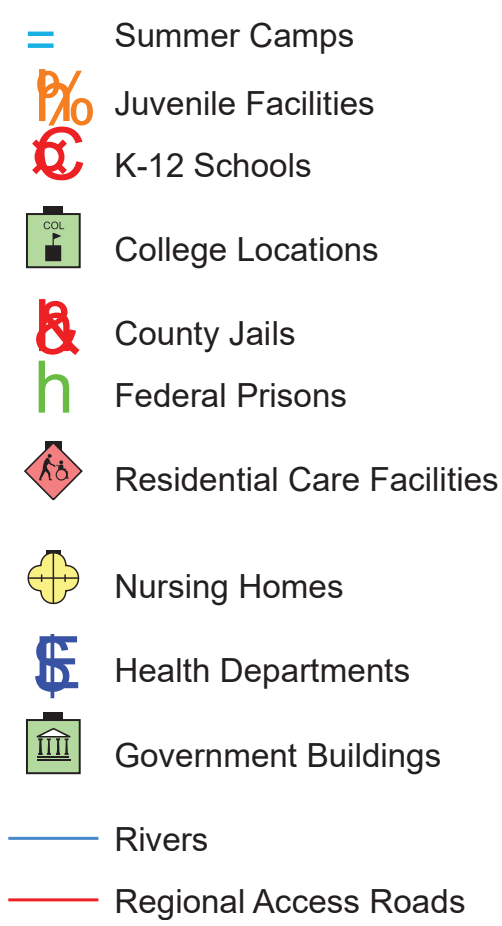
Map 6.1(11d)
LCADD Region
Tier 2 Essential Facilities
Casey County/Liberty



Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

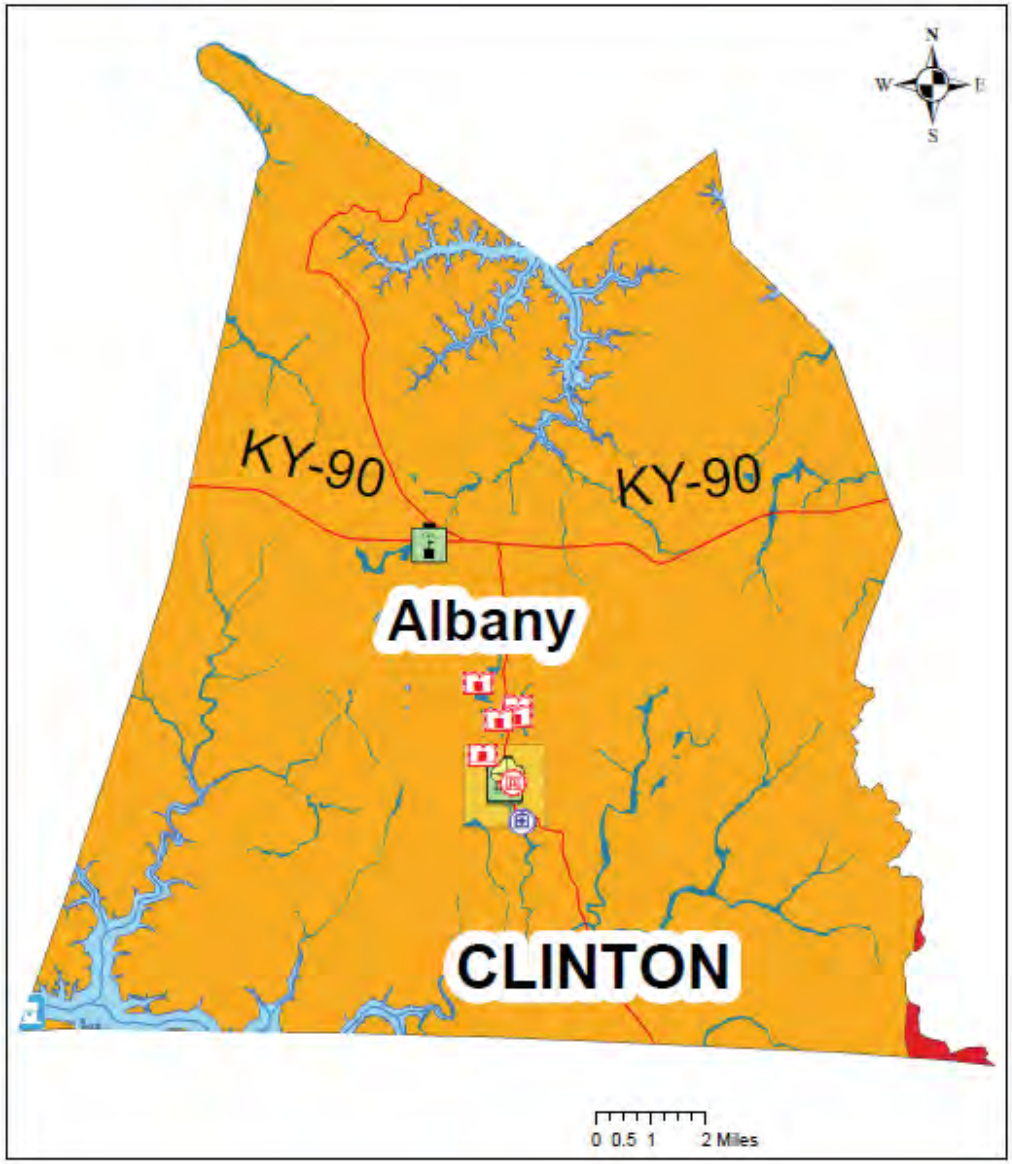
Legend


Summer Camps
Juvenile Facilities
K-12 Schools
College Locations
County Jails
Federal Prisons
Residential Care Facilities
Nursing Homes
Health Departments
Government Buildings
Rivers
Regional Access Roads
Lakes
100-Yr Flood Zone
Incorporated Area
Unincorporated Area
Regional Plan Counties
Landslides Incidence and Susceptibility
High landslide incidence (over 15% of the area is involved in landsliding)
Moderate landslide incidence (1.5 - 15% of the area is involved)
High susceptibility to landsliding and moderate incidence
High susceptibility to landsliding and low incidence
Moderate susceptibility to landsliding and low incidence
Low landslide incidence (less than 1.5 % of the area is involved)
No data

Map 6.1(11e)
LCADD Region
Tier 2 Essential Facilities
Clinton County

Data Source: Lake Cumberland ADD GIS Databases, Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

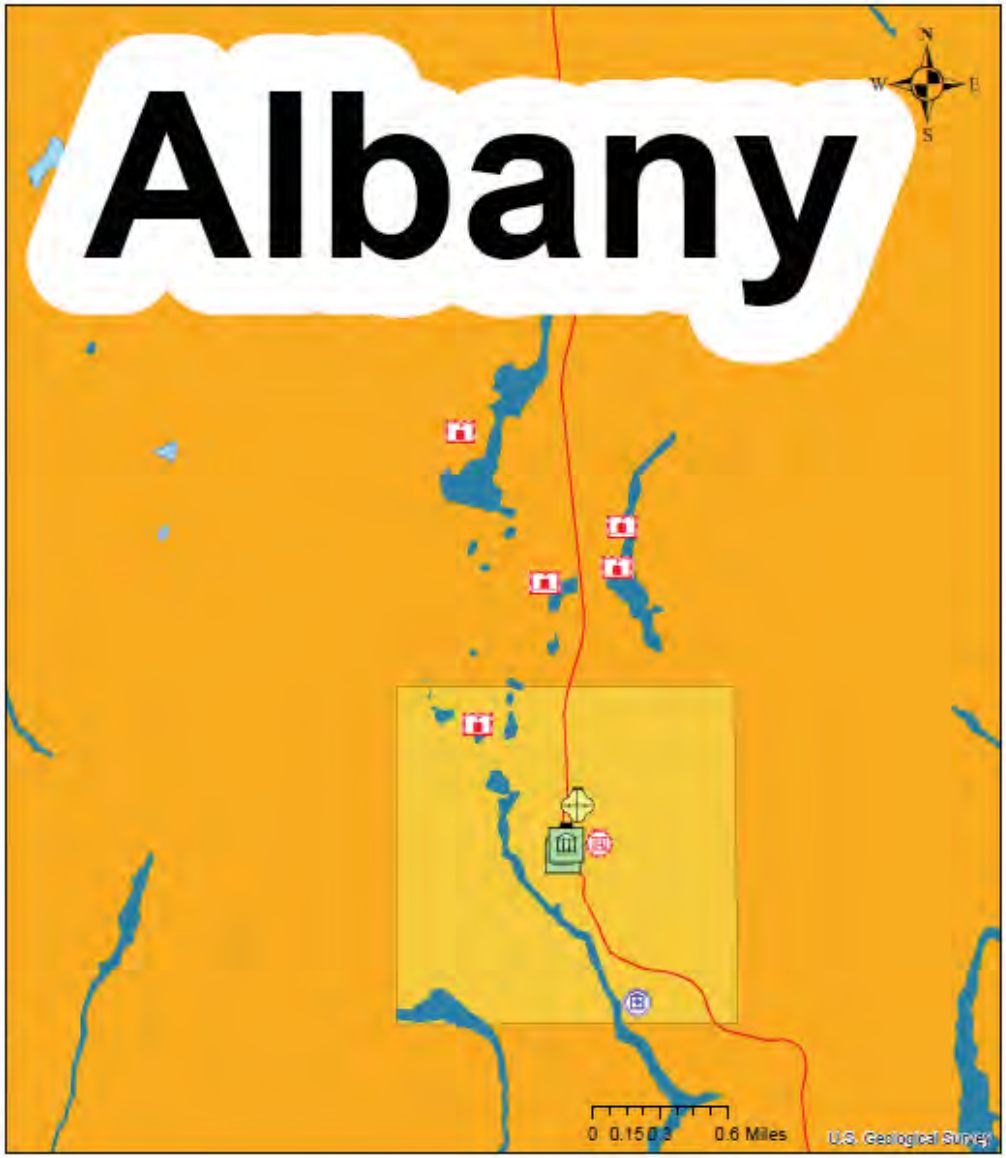
Prepared By:
Lake Cumberland Area Development District



Map 6.1(11f)
LCADD Region
Tier 2 Essential Facilities
Clinton County/Albany

Data Source: Lake Cumberland ADD GIS Databases, Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District



Legend

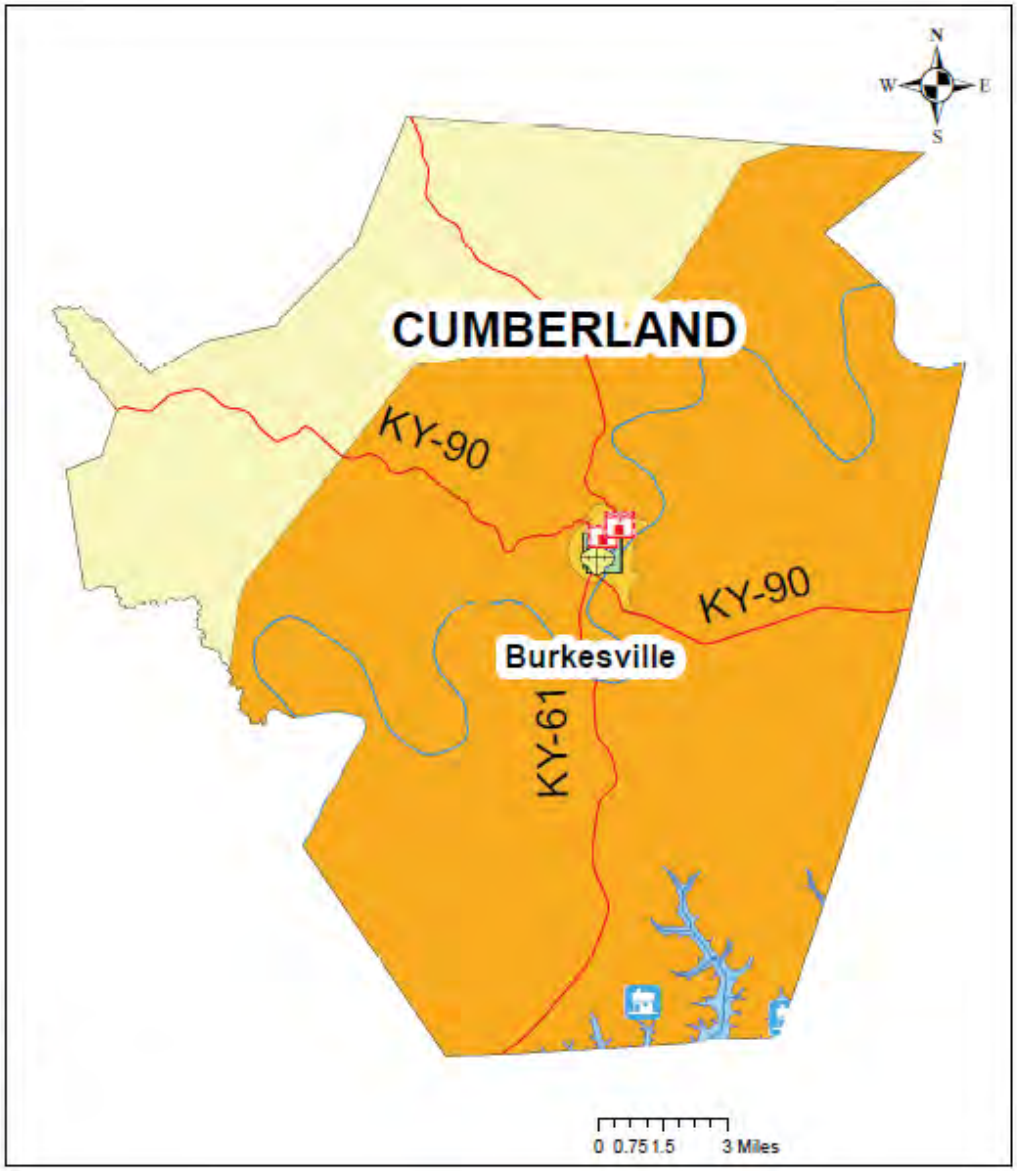
- Summer Camps
- Juvenile Facilities
- K-12 Schools
- College Locations
- County Jails
- Federal Prisons
- Residential Care Facilities
- Nursing Homes
- Health Departments
- Government Buildings
- Rivers
- Regional Access Roads

- Lakes
- 100-Yr Flood Zone
- Incorporated Area
- Unincorporated Area
- Regional Plan Counties

Landslides Incidence and Susceptibility

- High landslide incidence (over 15% of the area is involved in landsliding)
- Moderate landslide incidence (1.5 - 15% of the area is involved)
- High susceptibility to landsliding and moderate incidence
- High susceptibility to landsliding and low incidence
- Moderate susceptibility to landsliding and low incidence
- Low landslide incidence (less than 1.5 % of the area is involved)
- No data

Map 6.1(11g)
LCADD Region
Tier 2 Essential Facilities
Cumberland County



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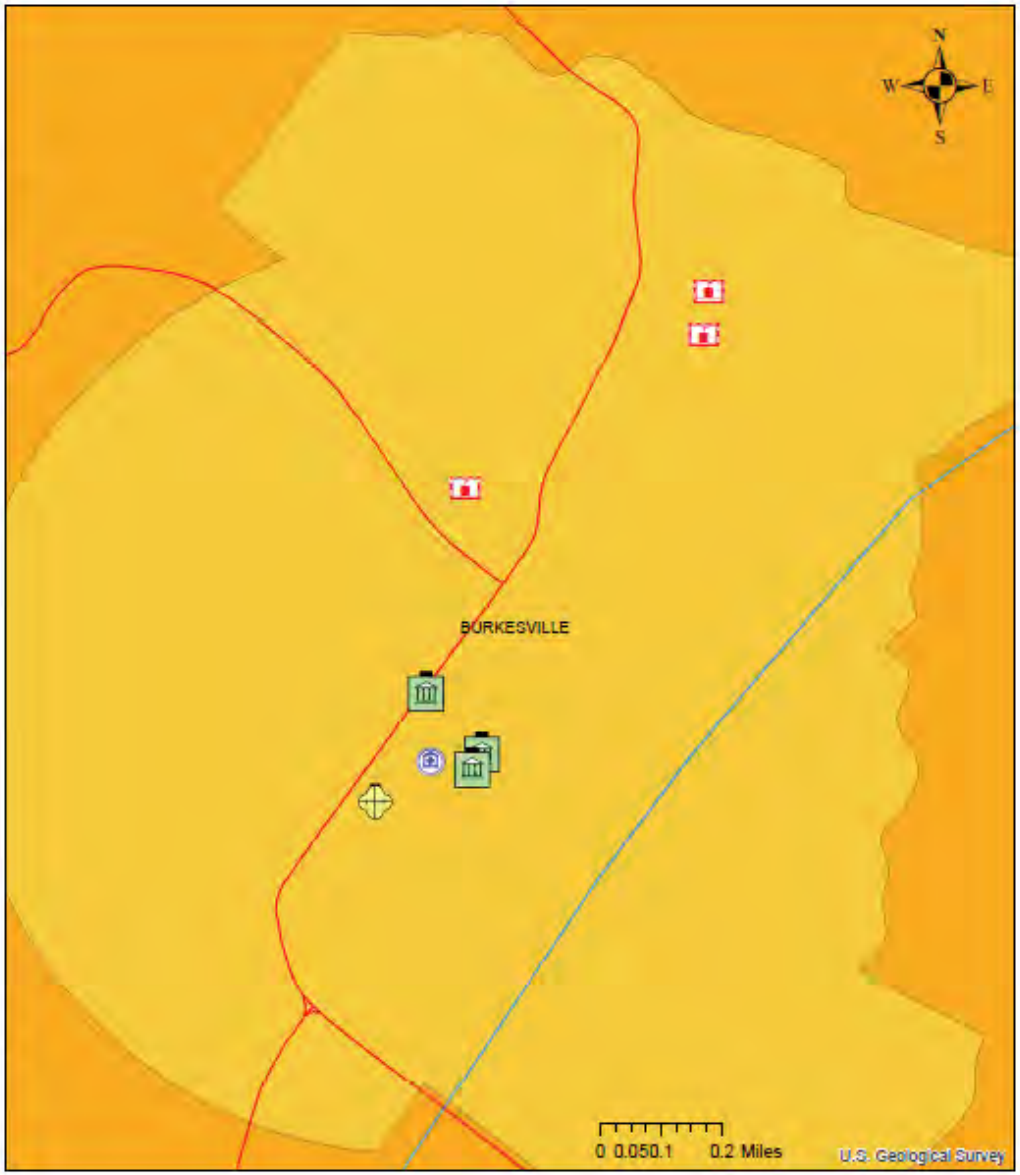
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

Map 6.1(11h)
LCADD Region
Tier 2 Essential Facilities
Cumberland Co./Burkesville

Data Source: Lake Cumberland ADD GIS Databases, Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District



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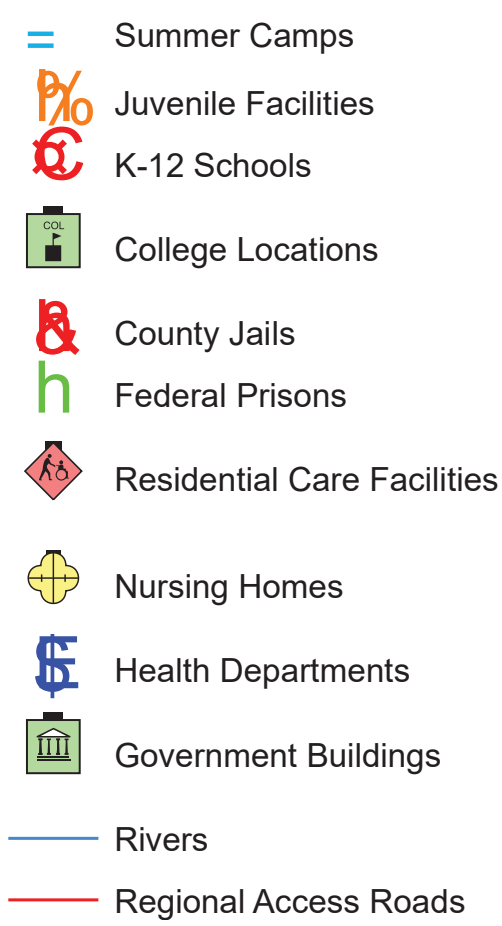
Summer Camps
Juvenile Facilities
K-12 Schools
College Locations
County Jails
Federal Prisons
Residential Care Facilities
Nursing Homes
Health Departments
Government Buildings
Rivers
Regional Access Roads
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Unincorporated Area
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Moderate landslide incidence (1.5 - 15% of the area is involved)
High susceptibility to landsliding and moderate incidence
High susceptibility to landsliding and low incidence
Moderate susceptibility to landsliding and low incidence
Low landslide incidence (less than 1.5 % of the area is involved)
No data

Map 6.1(11i)
LCADD Region
Tier 2 Essential Facilities
Green County

Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

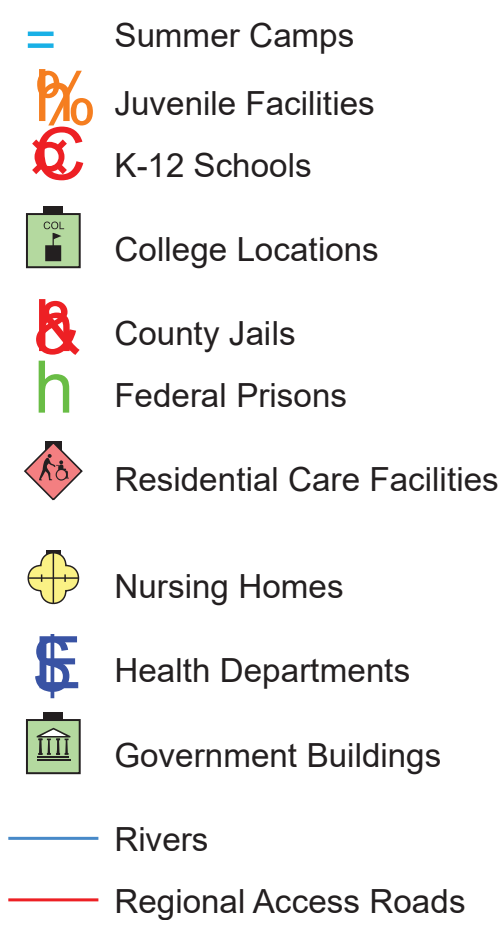
Prepared By:
Lake Cumberland Area Development District

Map 6.1(11j)
LCADD Region
Tier 2 Essential Facilities
Green County/Greensburg

Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

Legend


Summer Camps
Juvenile Facilities
K-12 Schools
College Locations
County Jails
Federal Prisons
Residential Care Facilities
Nursing Homes
Health Departments
Government Buildings
Rivers
Regional Access Roads
Lakes
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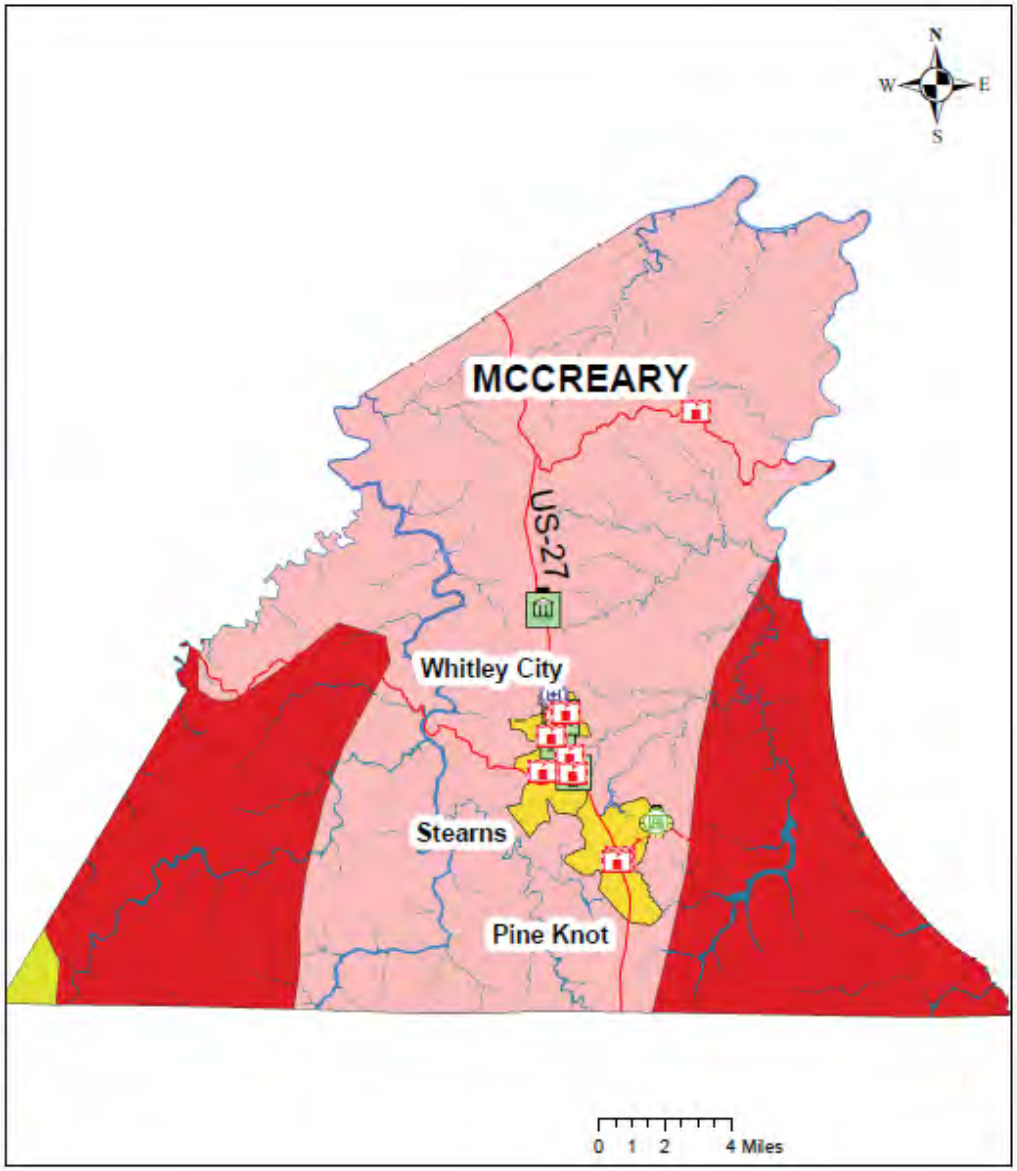
Moderate landslide incidence (1.5 - 15% of the area is involved)
High susceptibility to landsliding and moderate incidence
High susceptibility to landsliding and low incidence
Moderate susceptibility to landsliding and low incidence
Low landslide incidence (less than 1.5 % of the area is involved)
No data

Map 6.1(11k)
LCADD Region
Tier 2 Essential Facilities
McCreary County



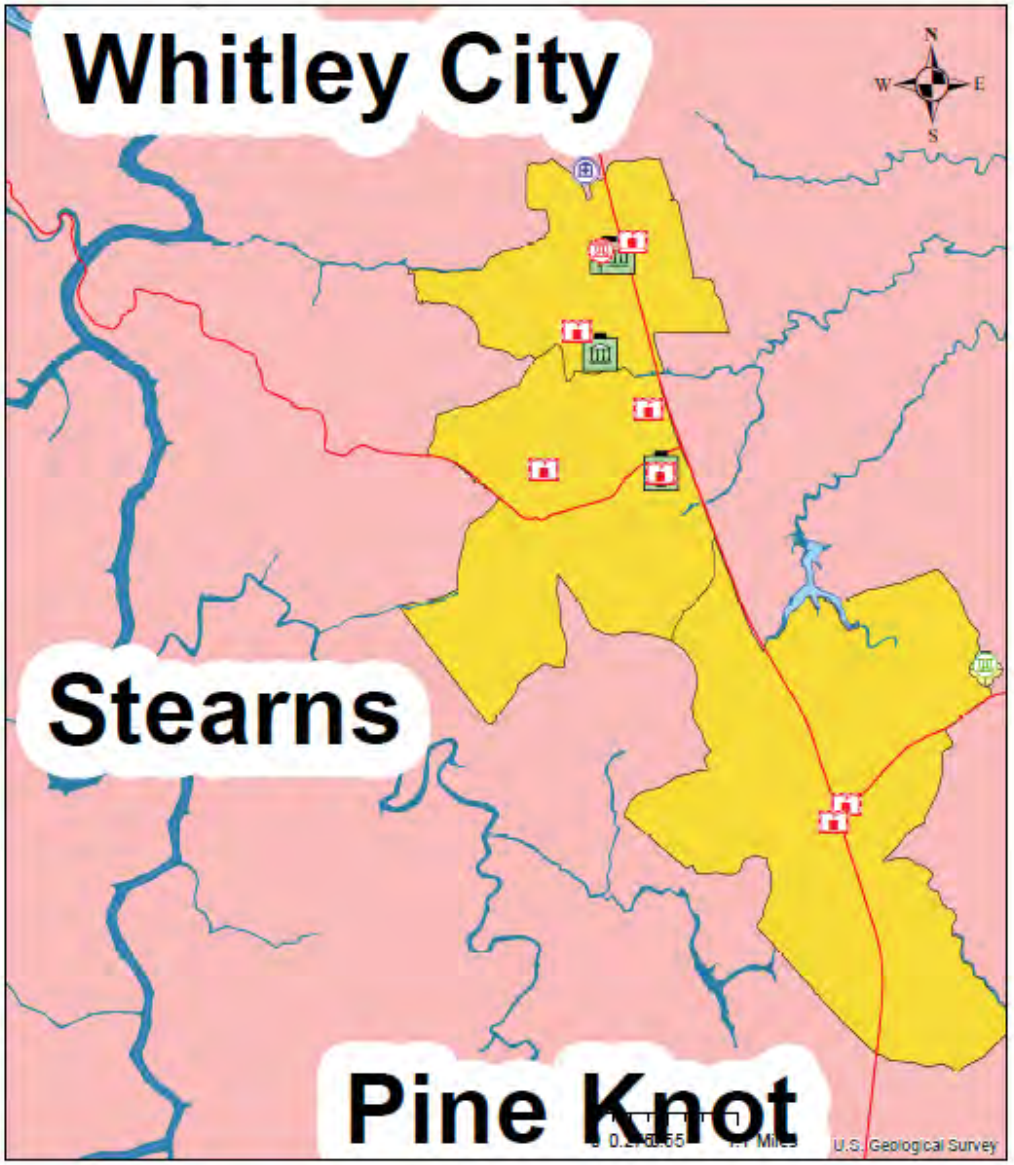
Data Source: Lake Cumberland ADD GIS Databases, Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

Map 6.1(11l)
LCADD Region
Tier 2 Essential Facilities
McCreary County
Whitley City
Stearns

Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District



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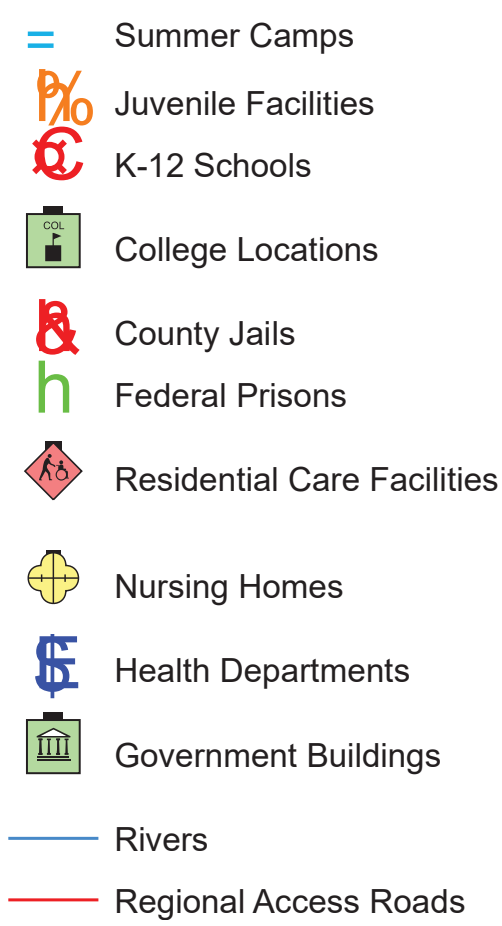
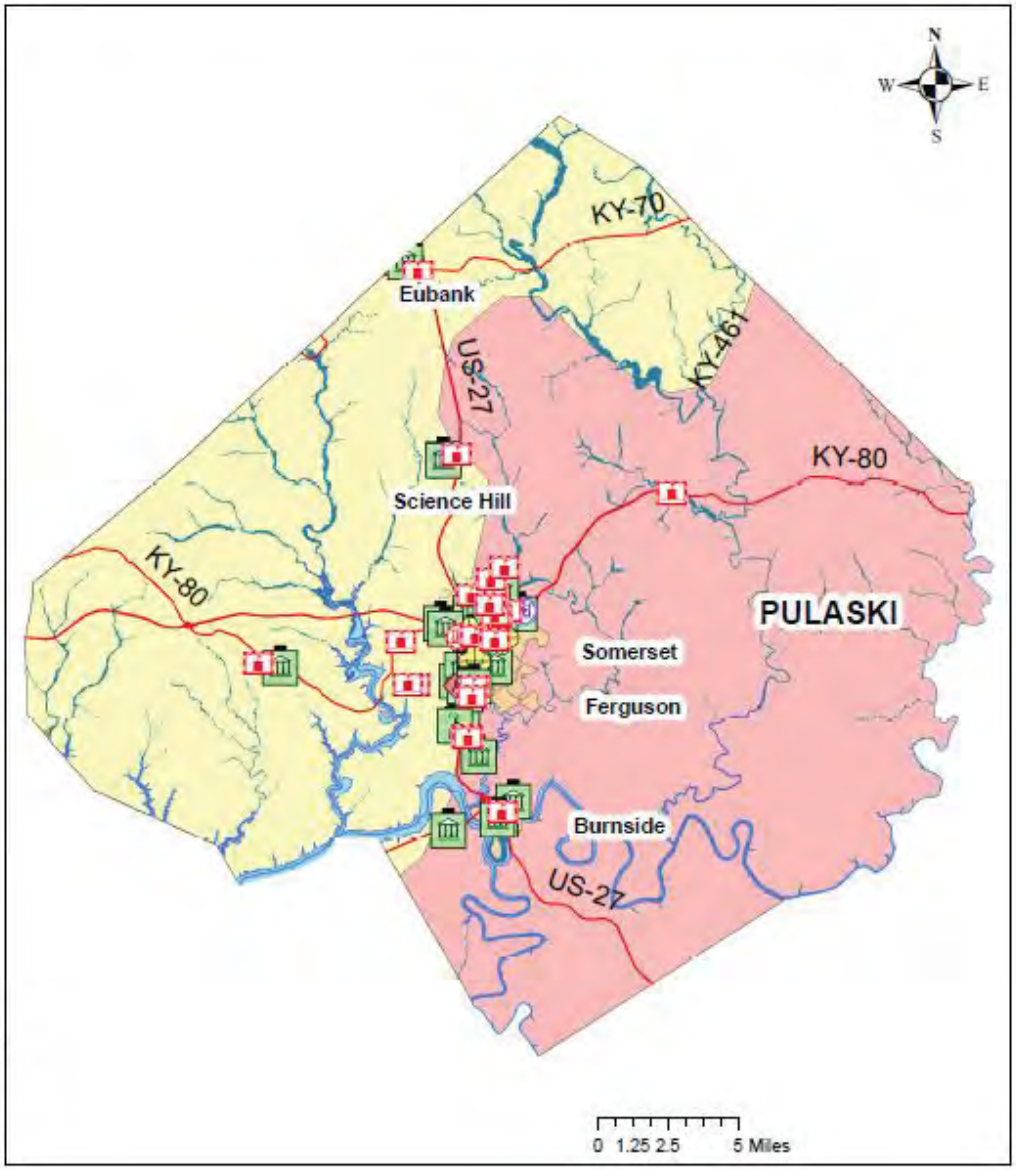

Summer Camps
Juvenile Facilities
K-12 Schools
College Locations
County Jails
Federal Prisons
Residential Care Facilities
Nursing Homes
Health Departments
Government Buildings
Rivers
Regional Access Roads
Lakes
100-Yr Flood Zone
Incorporated Area
Unincorporated Area
Regional Plan Counties
Landslides Incidence and Susceptibility
High landslide incidence (over 15% of the area is involved in landsliding)
Moderate landslide incidence (1.5 - 15% of the area is involved)
High susceptibility to landsliding and moderate incidence
High susceptibility to landsliding and low incidence
Moderate susceptibility to landsliding and low incidence
Low landslide incidence (less than 1.5 % of the area is involved)
No data

Map 6.1(11m)
LCADD Region
Tier 2 Essential Facilities
Pulaski County



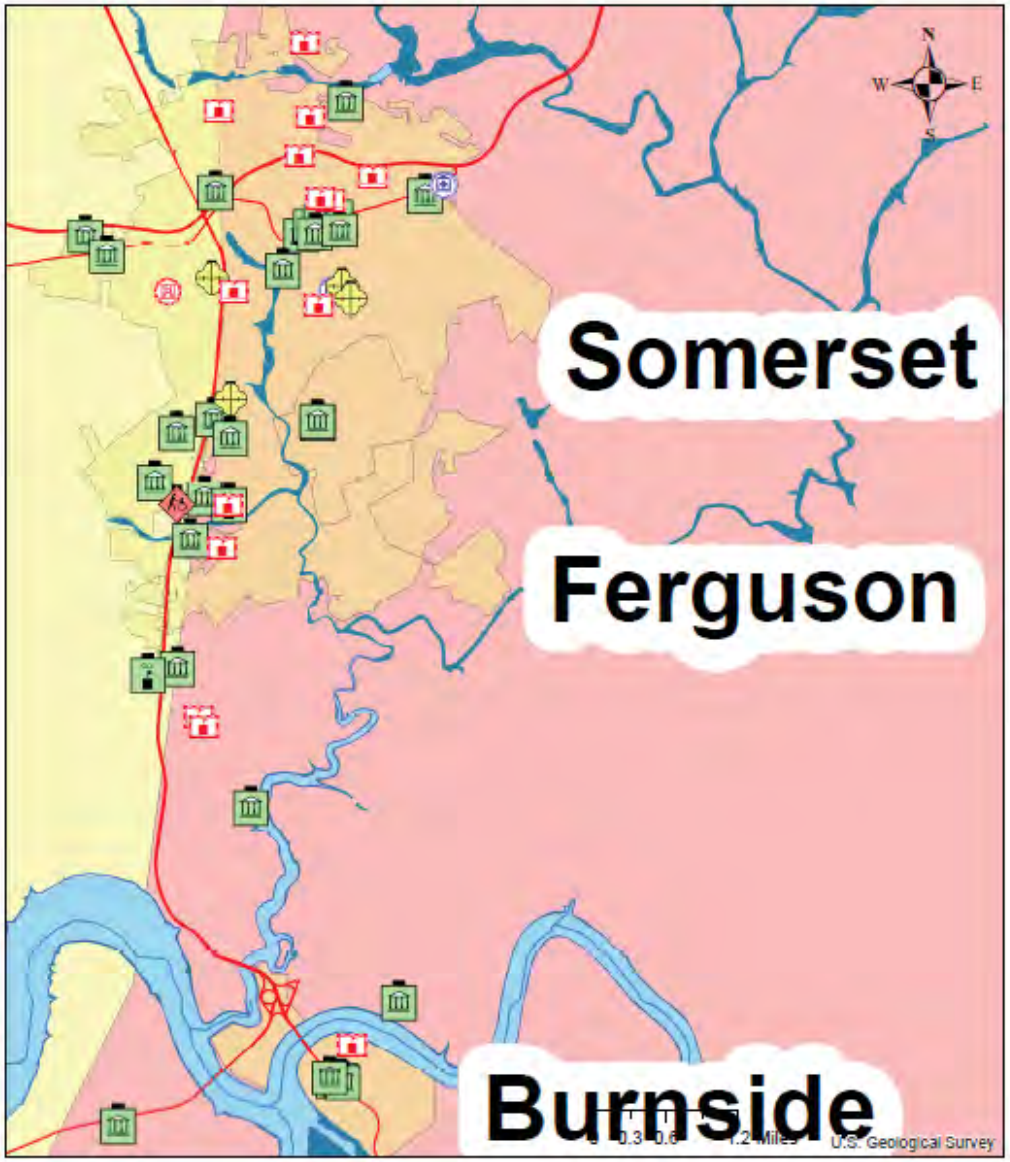
Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

Map 6.1(11n)
LCADD Region
Tier 2 Essential Facilities
Pulaski County
Somerset
Ferguson
Burnside

Data Source: Lake Cumberland ADD GIS Databases, Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

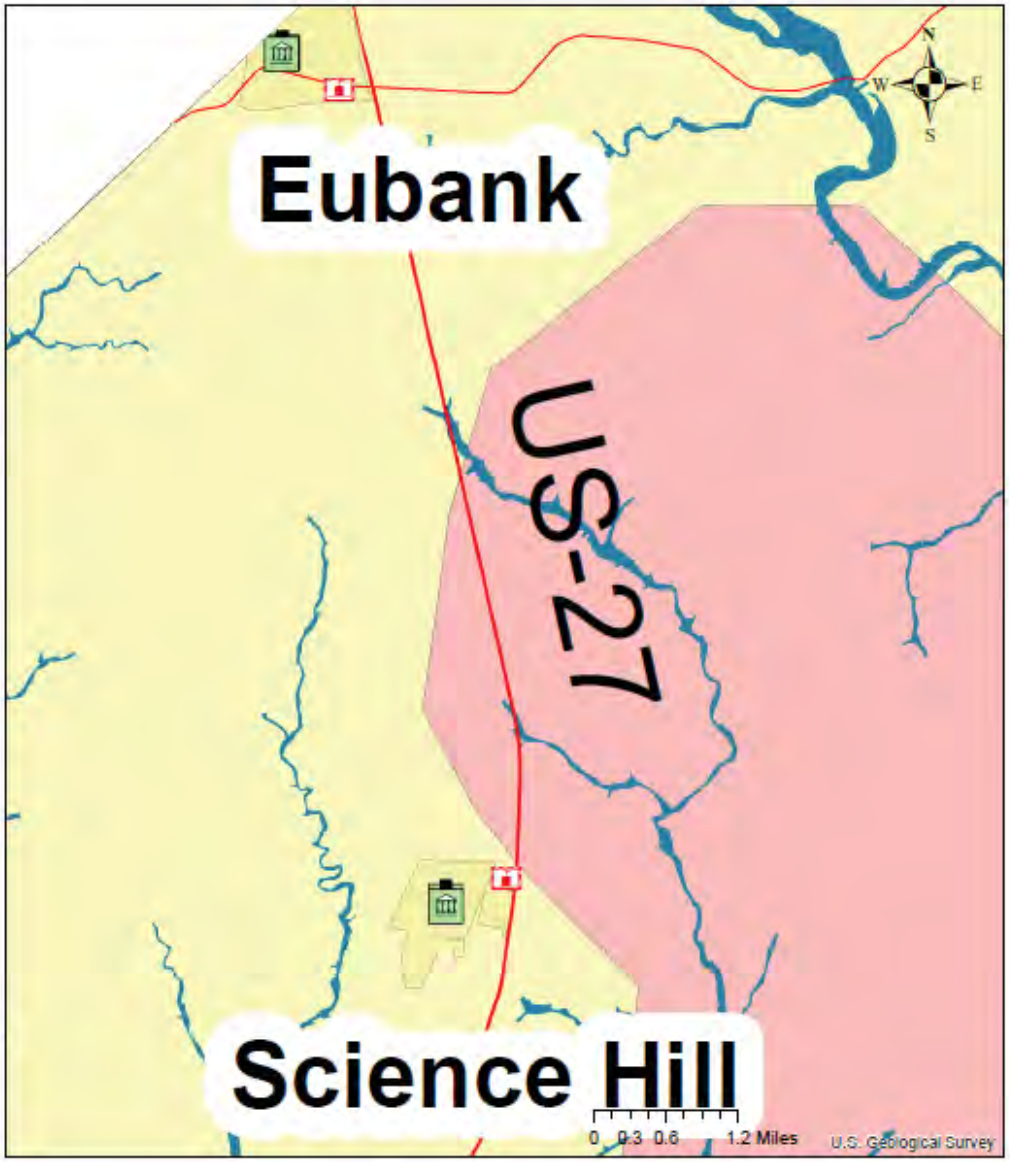
Prepared By:
Lake Cumberland Area Development District



Map 6.1(11o)
LCADD Region
Tier 2 Essential Facilities
Pulaski County
Science Hill
Eubank

Data Source: Lake Cumberland ADD GIS Databases, Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District



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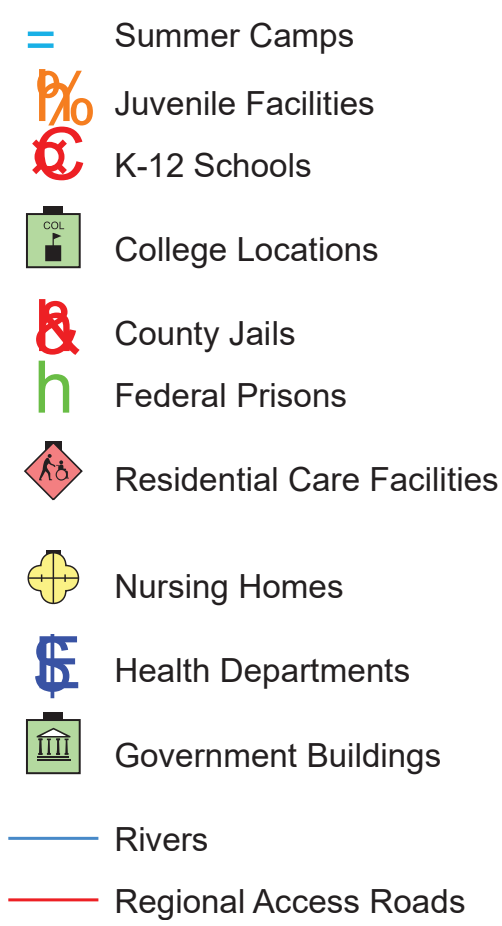
Summer Camps
Juvenile Facilities
K-12 Schools
College Locations
County Jails
Federal Prisons
Residential Care Facilities
Nursing Homes
Health Departments
Government Buildings
Rivers
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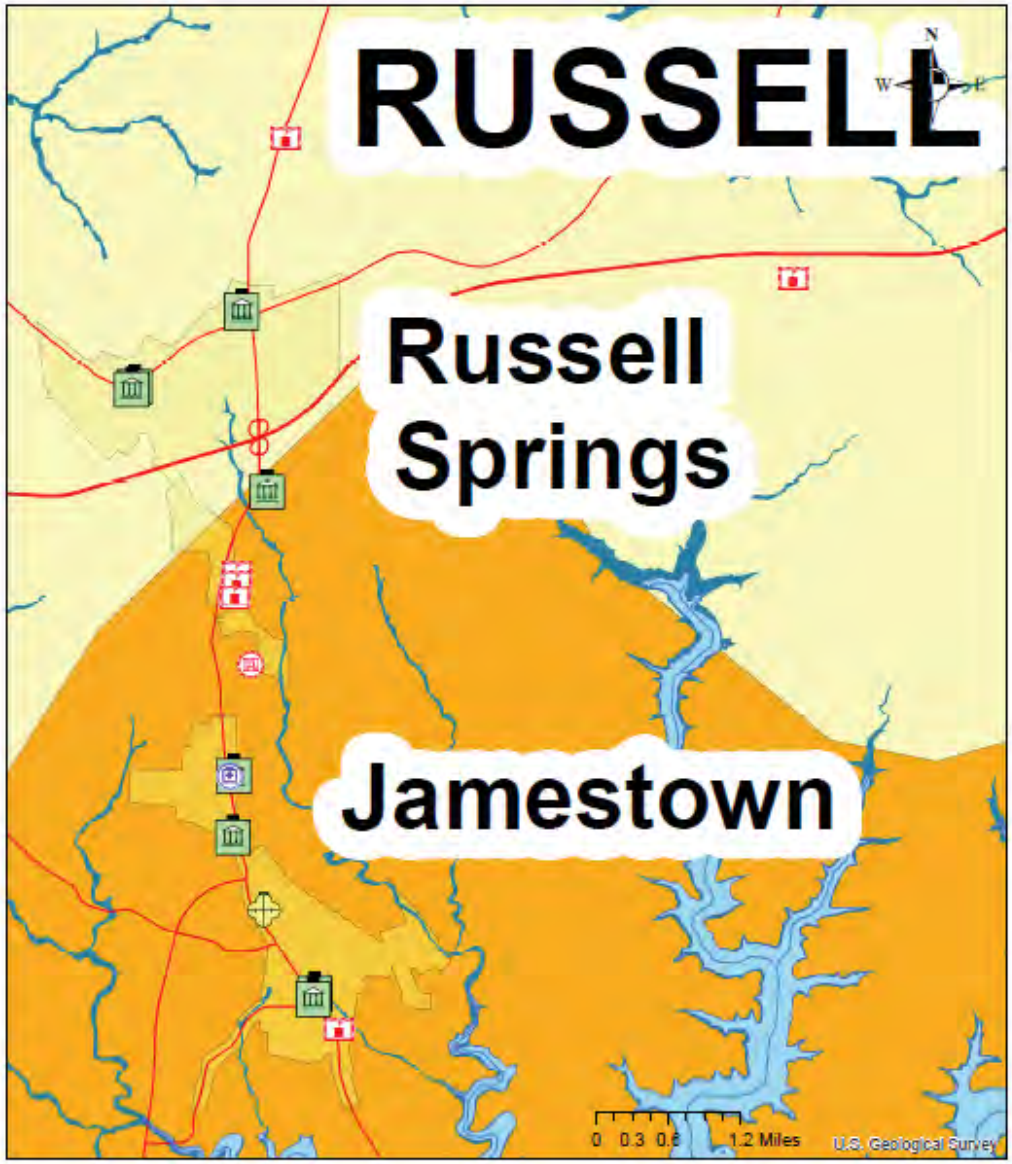
High susceptibility to landsliding and low incidence
Moderate susceptibility to landsliding and low incidence
Low landslide incidence (less than 1.5 % of the area is involved)
No data

Map 6.1(11p)
LCADD Region
Tier 2 Essential Facilities
Russell County

Data Source: Lake Cumberland ADD GIS Databases, Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

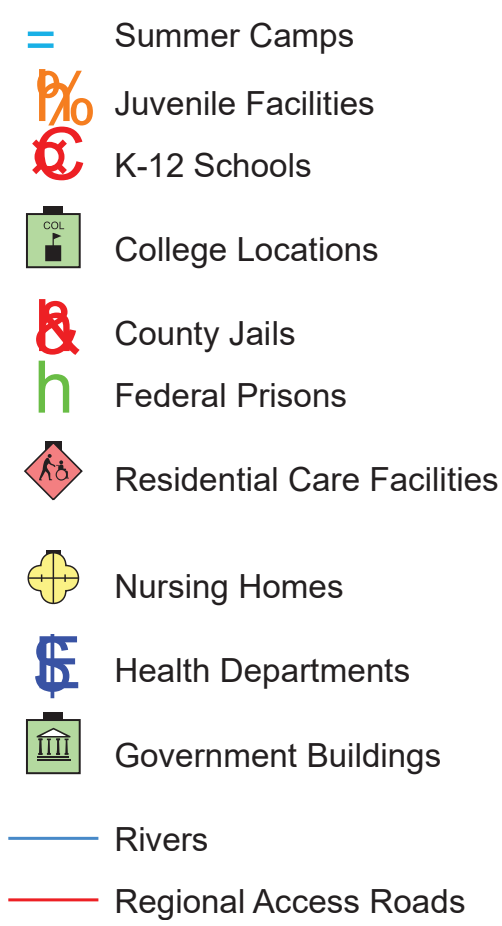
Map 6.1(11q)
LCADD Region
Tier 2 Essential Facilities
Russell County
Jamestown
Russell Springs



Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

Legend


Summer Camps
Juvenile Facilities
K-12 Schools
College Locations
County Jails
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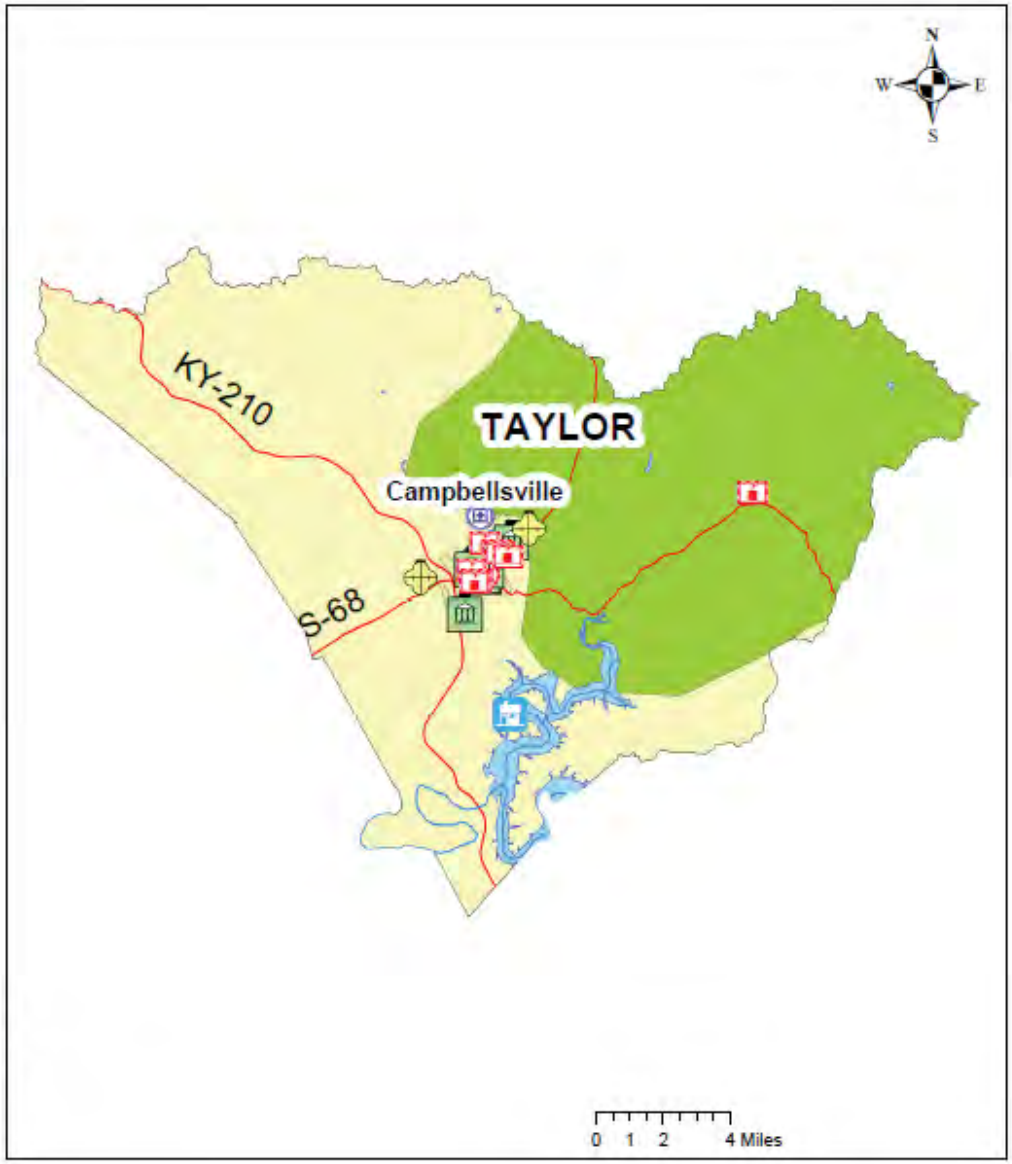
High susceptibility to landsliding and low incidence
Moderate susceptibility to landsliding and low incidence
Low landslide incidence (less than 1.5 % of the area is involved)
No data

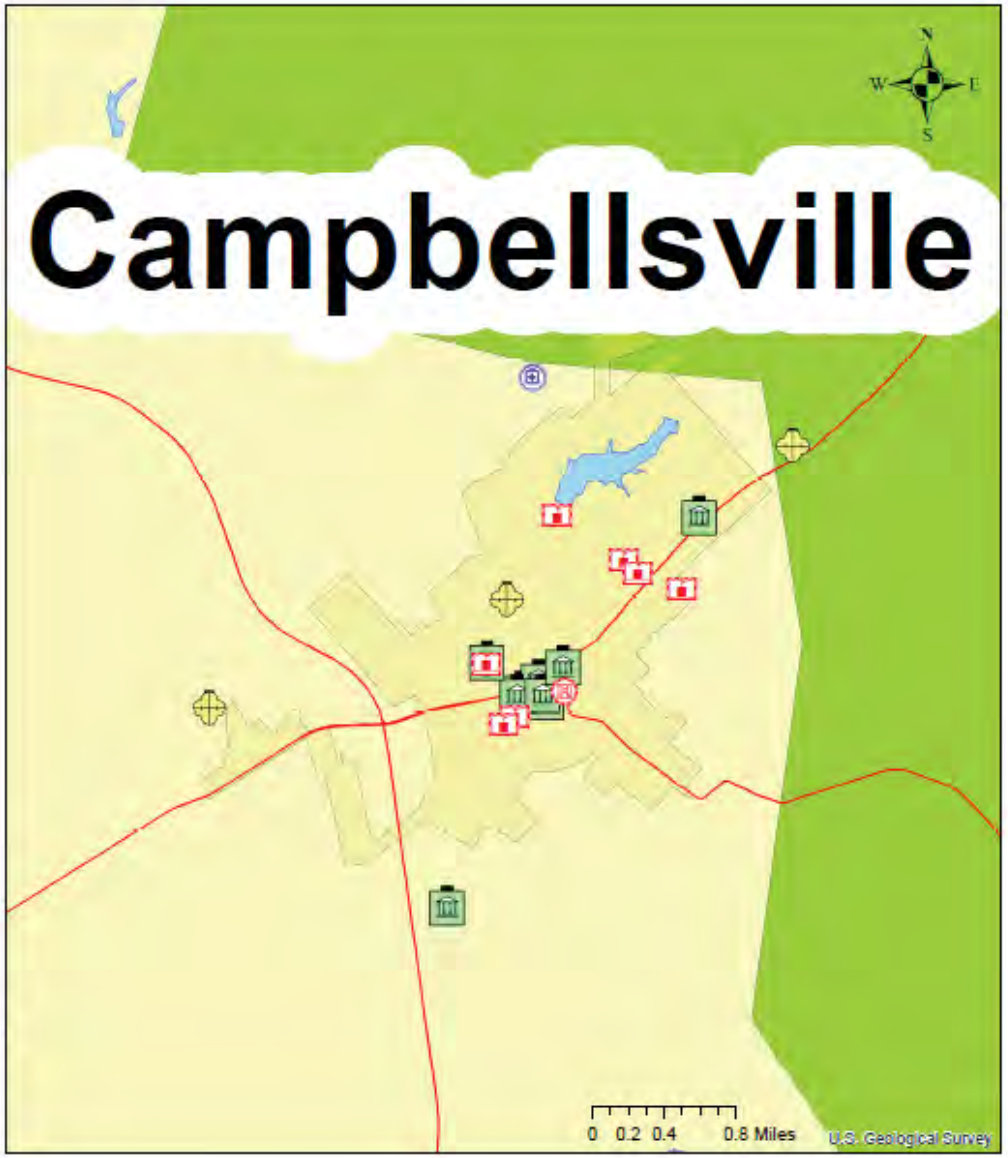
Map 6.1(11r)
LCADD Region
Tier 2 Essential Facilities
Taylor County



Data Source: Lake Cumberland ADD GIS Databases, Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

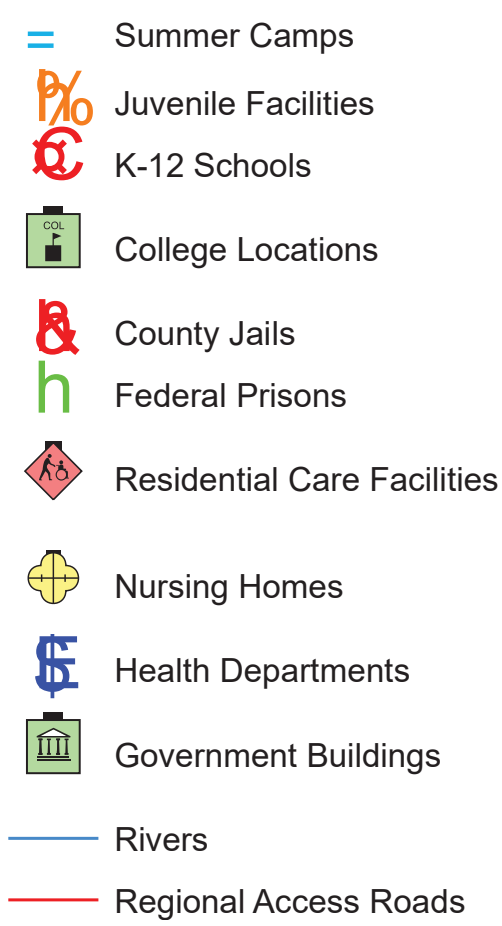
Map 6.1(11s)
LCADD Region
Tier 2 Essential Facilities
Taylor County/Campbellsville



Data Source: Lake Cumberland ADD GIS Databases,
Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District

Legend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County Jails
Federal Prisons
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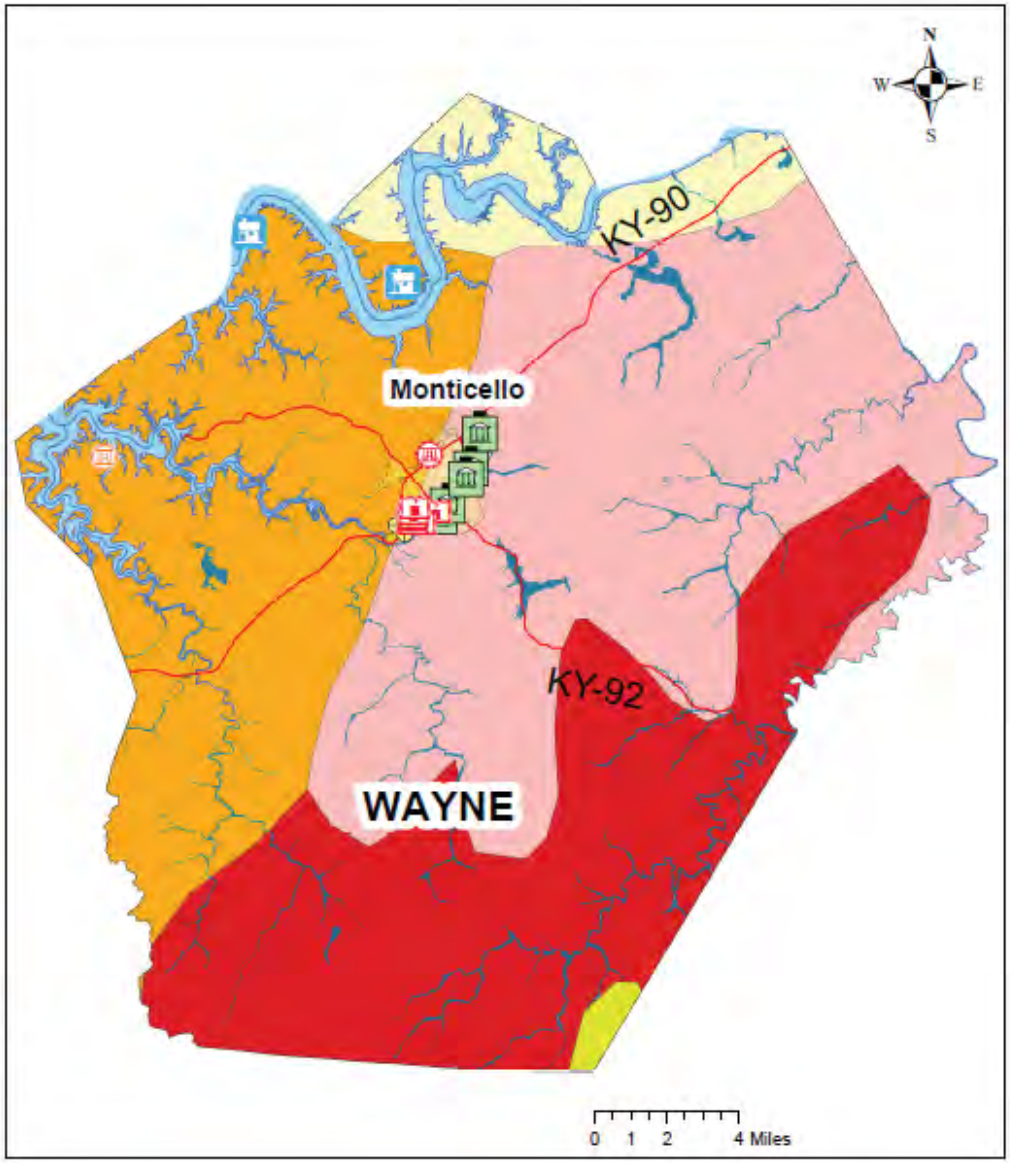
Low landslide incidence (less than 1.5 % of the area is involved)
No data

Map 6.1(11t)
LCADD Region
Tier 2 Essential Facilities
Wayne County

Data Source: Lake Cumberland ADD GIS Databases, Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

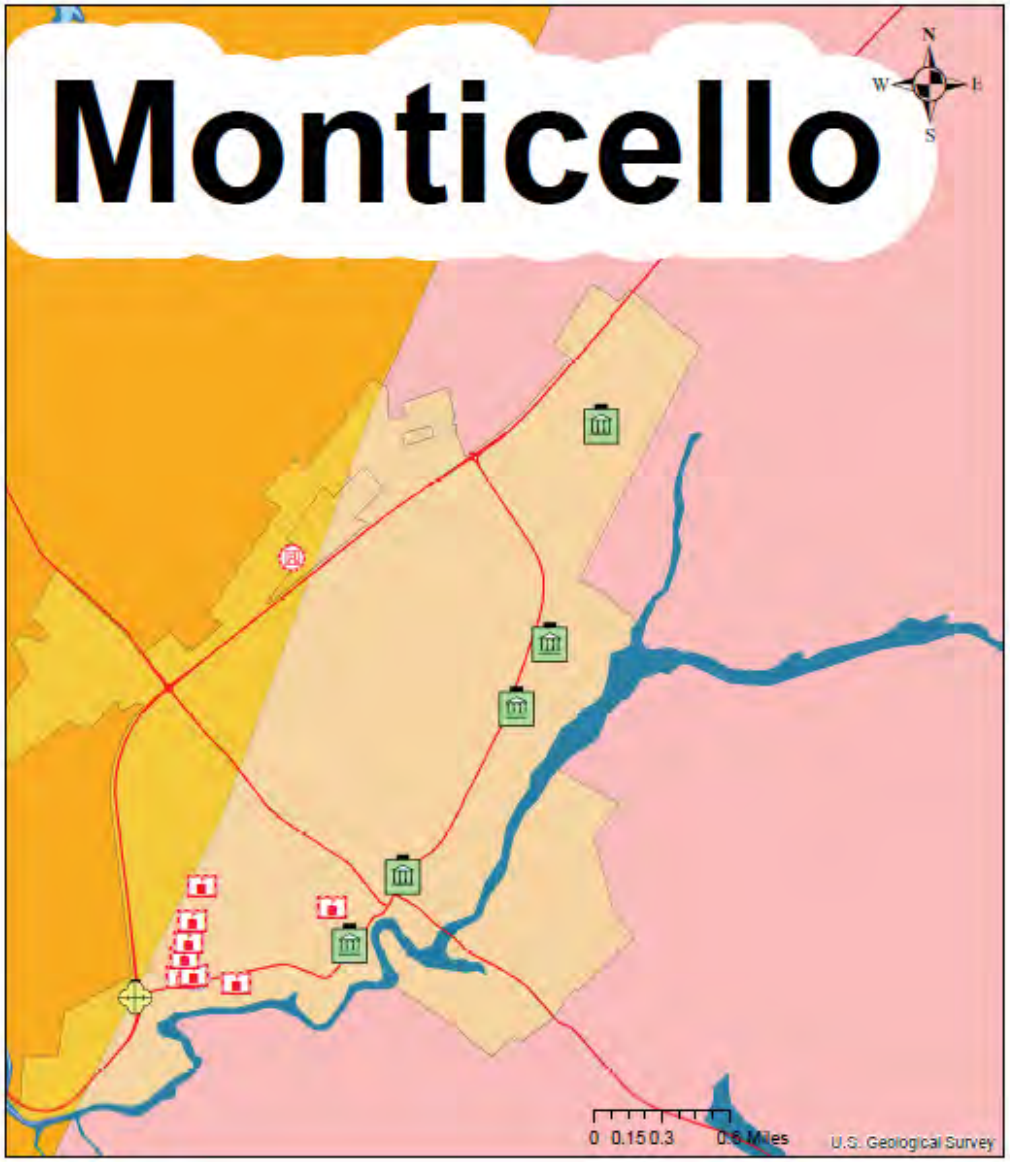
Prepared By:
Lake Cumberland Area Development District



Map 6.1(11u)
LCADD Region
Tier 2 Essential Facilities
Wayne County/Monticello

Data Source: Lake Cumberland ADD GIS Databases, Census 2010 Data and Subcommittee Input
Online Linkage: none
Title of Content: LCADD GIS Databases, Census 2010
Type of Content: GIS Mapping and Committee Personal Knowledge
Publication Date: Various with updates where possible.

Prepared By:
Lake Cumberland Area Development District



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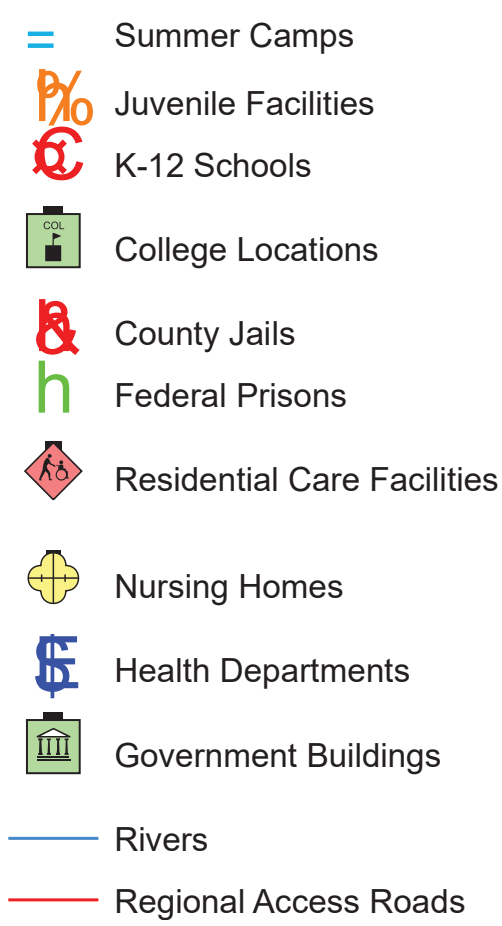
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High susceptibility to landsliding and low incidence
Moderate susceptibility to landsliding and low incidence
Low landslide incidence (less than 1.5 % of the area is involved)
No data

Tier 3 Facilities (No mapping available for Tier 3 Facilities)
Table 6.1(4) - Tier 3 Facilities

Facility	Type	Estimated Cost	County
Columbia-Adair County Airport	Airport	$10,651,000.00	Adair
WAIN 1270	Am	$980,000	Adair
Archeological Site 15 Ad 33	Archeological Site	None Available	Adair
Archeological Site 15 Ad 36	Archeological Site	None Available	Adair
Archeological Site 15 Ad 54	Archeological Site	None Available	Adair
Columbia Bancshares Inc	Bank Holding Companies	None Available	Adair
Mc Camish Manufacturing	Carpentry Work	None Available	Adair
Maynard, Brenda Lee (dba Candy Land Child Care)	Certified	None Available	Adair
A 1 Gate Co	Construction Materials, Nec	None Available	Adair
Mc Donalds	Fast Food Services	None Available	Adair
Wendys	Fast Food Services	None Available	Adair
WAIN-FM CH 228	Fm	$980,000	Adair
Houchens Market	Grocery Stores	None Available	Adair
Adair County Courthouse	Historic Property	None Available	Adair
Field, John, House	Historic Property	None Available	Adair
Gaither, Dr. Nathan, House	Historic Property	None Available	Adair
Giles, Janice Holt and Henry, Log House	Historic Property	None Available	Adair
Trabue, Daniel, House	Historic Property	None Available	Adair
Zion Meetinghouse and School	Historic Property	None Available	Adair
Personal-Touch Home Care Inc	Home Health Care Services	None Available	Adair
Imo Industries Inc	Industrial Supplies	None Available	Adair
Adair Youth Development Center	Juvenile Fac.	Not Available	Adair
Adair County Head Start	Licensed Type I	None Available	Adair
Dollhouse Daycare	Licensed Type I	None Available	Adair
Learning Tree Kids Zone, Inc.	Licensed Type I	None Available	Adair

Little Lambs Learning Center	Licensed Type I	None Available	Adair
Robin's Nest Daycare	Licensed Type I	None Available	Adair
Adair County Administration	Local Government Personnel Offices	None Available	Adair
Kentucky Tie & Lumber Co	Lumber And Other Building Materials	None Available	Adair
Holms Bend Boat Dock	Marina	$5,000,000.00	Adair
Holms Bend Boat Dock	Marina	$5,000,000.00	Adair
United Citizens Bank	National Commercial Banks	None Available	Adair
Summit Manor	Nursing Home	Not Available	Adair
Phil Aaron Medical Ctr	Offices & Clinics Of Medical Doctors	None Available	Adair
Westlake Primary Care	Offices & Clinics Of Medical Doctors	None Available	Adair
Kentucky State Police	Police Protection	None Available	Adair
Adanta Group Behavioral Svc	Psychiatric Hospitals	None Available	Adair
Spectrum Care Academy	Psychiatric Hospitals	None Available	Adair
Adair County 911 Ctr	Public Order And Safety, Nec	None Available	Adair
Adair County Board-Education	School Districts	None Available	Adair
Business Card Factory	Stationery Stores	None Available	Adair
Rogers Trucking Inc	Trucking, Except Local	None Available	Adair
US Post Office	U.S. Postal Service	None Available	Adair
Adair County Animal Hospital	Veterinary Services, Specialties	None Available	Adair
WKDO 1560	Am	$980,000	Casey
Bread Of Life Cafe	Book Stores	None Available	Casey
Galilean Christian Academy	Childrens Home	Not Available	Casey
Floyd Gates	Construction Materials, Nec	None Available	Casey
Tarter	Fabricated Pipe & Fittings	None Available	Casey
WKDO-FM CH 254	Fm	$980,000	Casey
Casey County Courthouse	Historic Property	None Available	Casey
Liberty Downtown Historic District	Historic Property	None Available	Casey

Casey County Early Head Start	Licensed Type I	None Available	Casey
Dunnville Childcare and Early Learning Center	Licensed Type I	None Available	Casey
Jones Park Early Head Start	Licensed Type I	None Available	Casey
Kids Team	Licensed Type I	None Available	Casey
Liberty Head Start	Licensed Type I	None Available	Casey
Phillips Child Development Center Site #2	Licensed Type I	None Available	Casey
Phillips Child Development Center Site #3	Licensed Type I	None Available	Casey
Liberty Health Care Center	Nursing Home	Not Available	Casey
Clinton County Health Care Ctr	Admin. Of Public Health Programs	None Available	Clinton
Spring Creek Airport	Airport	$10,651,000.00	Clinton
Spring Creek Airport	Airport	$10,651,000.00	Clinton
WANY 1390	Am	$980,000	Clinton
WSBI 1210	Am	$980,000	Clinton
Albany Bancorp Inc	Bank Holding Companies	None Available	Clinton
Trooper Island Camp	Camp	Not Available	Clinton
Aaron, Terry Lynn (dba Tender Touch In Home)	Certified	None Available	Clinton
Norris, Frankie Elaine (dba Stepmother's Daycare)	Certified	None Available	Clinton
WANY-FM CH 292	Fm	$980,000	Clinton
Gaddie-Shamrock Inc	Highway And Street Construction	None Available	Clinton
Huddleston, Judge Killis, House	Historic Property	None Available	Clinton
Noland, Jesse, House	Historic Property	None Available	Clinton
Clinton County Early Head Start Center	Licensed Type I	None Available	Clinton
Clinton County Head Start	Licensed Type I	None Available	Clinton
GG's Playhouse	Licensed Type I	None Available	Clinton
Mig's Place	Licensed Type I	None Available	Clinton
Patriot Industries Inc	Manufacturing Industries, Nec	None Available	Clinton
Wolf River Resort	Marina	$5,000,000.00	Clinton

Wisdom Boat Dock	Marina	$5,000,000.00	Clinton
Dale Hollow State Park	Marina	$5,000,000.00	Clinton
Wolf River Resort	Marina	$5,000,000.00	Clinton
Wisdom Boat Dock	Marina	$5,000,000.00	Clinton
Dale Hollow State Park	Marina	$5,000,000.00	Clinton
Cowboy Charcoal	Nondurable Goods, Nec	None Available	Clinton
Clinton County Health Care Center	Nursing Home	Not Available	Clinton
Cagles Inc	Poultry Slaughtering And Processing	None Available	Clinton
Foothills Academy, Inc.	Youth Treatment	Not Available	Clinton
WKYR 1570	Am	$980,000	Cumberland
Salvation Army Camp	Camp	Not Available	Cumberland
Branham, Carolyn Sue (dba Carolyn's Child Care)	Certified	None Available	Cumberland
Dubre, Julie Faye (dba Sugar-N-Spice Daycare)	Certified	None Available	Cumberland
WAPD CH 219	Fm	$980,000	Cumberland
WKYR-FM CH 300	Fm	$980,000	Cumberland
Baker, James, House	Historic Property	None Available	Cumberland
Coe House	Historic Property	None Available	Cumberland
Marrowbone Historic District	Historic Property	None Available	Cumberland
Burkesville Head Start	Licensed Type I	None Available	Cumberland
Busy Bees Daycare	Licensed Type I	None Available	Cumberland
Cumberland County School Age Child Care Program	Licensed Type I	None Available	Cumberland
Learning Tree Kids Zone, Inc.	Licensed Type I	None Available	Cumberland
Boat Dock	Marina	$5,000,000.00	Cumberland
Boat Dock	Marina	$5,000,000.00	Cumberland
Electric Mills/Ky	Nonferrous Wiredrawing & Insulating	None Available	Cumberland

Cumberland Valley Manor	Nursing Home	Not Available	Cumberland
WAKY 1540	Am	$980,000	Green
Sullivan, Brittany Marie (dba BB's Little Blessings)	Certified	None Available	Green
Mc Donalds	Fast Food Services	None Available	Green
WGRK-FM CH 276	Fm	$980,000	Green
Houchens Market	Grocery Stores	None Available	Green
Allen, John C., House	Historic Property	None Available	Green
Allen's, James, Inn	Historic Property	None Available	Green
Anderson House	Historic Property	None Available	Green
Barrett-Blakeman House	Historic Property	None Available	Green
Brents-Lisle House	Historic Property	None Available	Green
Chewning House	Historic Property	None Available	Green
Christie, Christopher Columbus, House	Historic Property	None Available	Green
Court Clerk's Office-County & Circuit	Historic Property	None Available	Green
Cowherd, Francis, House	Historic Property	None Available	Green
Creal Store	Historic Property	None Available	Green
Creel, Elijah, House	Historic Property	None Available	Green
Downtown Greensburg Historic District	Historic Property	None Available	Green
Ebenezer School	Historic Property	None Available	Green
Edwards House	Historic Property	None Available	Green
Edwards, David, House	Historic Property	None Available	Green
Elmore-Carter House	Historic Property	None Available	Green
Emory-Blakeman-Penick House	Historic Property	None Available	Green
Federal House	Historic Property	None Available	Green
Goose Creek Foot Bridge	Historic Property	None Available	Green
Greensburg Academy	Historic Property	None Available	Green
Greensburg Bank Building	Historic Property	None Available	Green

Greensburg Cumberland Presbyterian Church	Historic Property	None Available	Green
Groves-Cabell House	Historic Property	None Available	Green
Herndon, William H., House	Historic Property	None Available	Green
Hilliard, David, House	Historic Property	None Available	Green
Hobson, William, House	Historic Property	None Available	Green
Keltner House	Historic Property	None Available	Green
L & N Passenger Depot	Historic Property	None Available	Green
Lewis, Woodson, House	Historic Property	None Available	Green
Livesay House	Historic Property	None Available	Green
Mears House	Historic Property	None Available	Green
Montgomery House	Historic Property	None Available	Green
Montgomery's Mill	Historic Property	None Available	Green
Mt. Gilead Baptist Church	Historic Property	None Available	Green
Mud Brick House in Greensburg	Historic Property	None Available	Green
Old Courthouse	Historic Property	None Available	Green
Philpot House	Historic Property	None Available	Green
Sandidge House	Historic Property	None Available	Green
Simpson Log House	Historic Property	None Available	Green
Wallace, Napoleon, House	Historic Property	None Available	Green
Webbs Female Academy	Historic Property	None Available	Green
White-Penick House	Historic Property	None Available	Green
Whitlock Log Cabin	Historic Property	None Available	Green
Williams, Daniel Motley, House	Historic Property	None Available	Green
Wilson, R. H., House	Historic Property	None Available	Green
Woodward House	Historic Property	None Available	Green
Family Home Health Care	Home Health Care Services	None Available	Green

Green County Family Resource	Job Training And Related Services	None Available	Green
Green County - The Learning Center	Licensed Type I	None Available	Green
Green County FRC Dragon's Den	Licensed Type I	None Available	Green
Green County Head Start	Licensed Type I	None Available	Green
A & B Downey Lumber	Lumber And Other Building Materials	None Available	Green
Forcht Bank	National Commercial Banks	None Available	Green
Green Hill Manor NF	Nursing Home	Not Available	Green
McDowell Skilled NSG. Facility	Nursing Home	Not Available	Green
Crossroads Developers LLC	Real Estate Agents And Managers	None Available	Green
Indiana Hardwoods Greensburg	Sawmills & Planing Mills, General	None Available	Green
Garrison Construction Co Inc	Single-Family Housing Construction	None Available	Green
Topps Safety Apparel	Women's And Children's Clothing	None Available	Green
Mc Creary County Health Care	Admin. Of Public Health Programs	None Available	McCreary
Mccreary County Airport	Airport	$10,651,000.00	McCreary
Mccreary County Airport	Airport	$10,651,000.00	McCreary
Mc Creary Bancshares Inc	Bank Holding Companies	None Available	McCreary
Sandhill 4H Camp	Camp	Not Available	McCreary
Outdoor Venture Corp	Canvas And Related Products	None Available	McCreary
WHAY CH 290	Fm	$980,000	McCreary
Barren Fork Coal Camp and Mine Archeological District	Historic Property	None Available	McCreary
Stearns Administrative and Commercial District	Historic Property	None Available	McCreary
Le Sportsac	Leather Tanning And Finishing	None Available	McCreary
Eagle Child and Family Development Center	Licensed Type I	None Available	McCreary
Heavenly Gifts Child Care and Learning Center	Licensed Type I	None Available	McCreary
Little Lambs Childcare Center	Licensed Type I	None Available	McCreary
Lots of Tots Daycare	Licensed Type I	None Available	McCreary
McCreary County Head Start	Licensed Type I	None Available	McCreary

Boat Ramp	Marina	$5,000,000.00	McCreary
Boat Ramp	Marina	$5,000,000.00	McCreary
Boat Ramp	Marina	$5,000,000.00	McCreary
Boat Ramp	Marina	$5,000,000.00	McCreary
McCreary Health Center	Nursing Home	Not Available	McCreary
Stearns Switchyard	Rail Switchyard	$5,000,000.00	McCreary
Stearns Switchyard	Rail Switchyard	$5,000,000.00	McCreary
Somerset Nursing & Rehab. Fac.	Nursing Home	Not Available	
Somerset-Pulaski Countyairport	Airport	$10,651,000.00	
Somerset-Pulaski Countyairport	Airport	$10,651,000.00	Pulaski
WSFC 1240	Am	$980,000	Pulaski
WKEQ 910	Am	$980,000	Pulaski
WTLO 1480	Am	$980,000	Pulaski
The Neighborhood of Somerset	Assisted Living	Not Available	Pulaski
Michael J Bush CPA PSC	Assisted Living	Not Available	Pulaski
Crestview Nursing Home	Assisted Living	Not Available	Pulaski
The Highlands	Assisted Living	Not Available	Pulaski
Citizens Bancshares Inc	Bank Holding Companies	None Available	Pulaski
Sharpe House Boats	Boat Building And Repairing	None Available	Pulaski
Sumerset Houseboats	Boat Building And Repairing	None Available	Pulaski
Hardwick Block Co	Brick, Stone, & Related Materials	None Available	Pulaski
Anderson Packaging Inc	Business Services, Nec	None Available	Pulaski
Bondtech Corp	Business Services, Nec	None Available	Pulaski
Barrett, Brenda Jeanette (dba Brenda's Child Care)	Certified	None Available	PULASKI
Cox, Rita Mae (dba Rita's Childcare)	Certified	None Available	PULASKI
Hodge, Diana Kaye (dba NaNa's Childcare)	Certified	None Available	PULASKI
Molen, Rebecca Karen (dba Becky's Babies)	Certified	None Available	PULASKI
Perez, Mindy Rose (dba Kiddie Poo'z Child Care)	Certified	None Available	PULASKI

Southern Belle Dairy Co LLC	Dairy Farms	None Available	Pulaski
Cracker Barrel Old Country Str	Eating Places	None Available	Pulaski
Bob Evans Restaurant	Eating Places	None Available	Pulaski
South Kentucky Rural Electric	Electric Services	None Available	Pulaski
East Kentucky Power Co-Op	Electric Services	None Available	Pulaski
WSEK CH 246	Fm	$980,000	Pulaski
WLLK CH 230	Fm	$980,000	Pulaski
WKII-FM CH 272	Fm	$980,000	Pulaski
WTHL CH 213	Fm	$980,000	Pulaski
WDCL-FM CH 209	Fm	$980,000	Pulaski
Somerset Food Svc	Groceries, General Line	None Available	Pulaski
Somerset Wood Products	Hardwood Dimension & Flooring Mills	None Available	Pulaski
Armstrong Wood Products	Hardwood Dimension & Flooring Mills	None Available	Pulaski
Battle of Dutton's Hill Monument	Historic Property	None Available	Pulaski
Battle of Mill Springs Historic Areas	Historic Property	None Available	Pulaski
Battle of Mill Springs Historic Areas (Boundary Increase)	Historic Property	None Available	Pulaski
Beatty-Newell House	Historic Property	None Available	Pulaski
Boland House	Historic Property	None Available	Pulaski
Buck-Mercer House	Historic Property	None Available	Pulaski
Burnside Historic District	Historic Property	None Available	Pulaski
Burnside Lodge	Historic Property	None Available	Pulaski
Burnside Methodist Church	Historic Property	None Available	Pulaski
City Hall	Historic Property	None Available	Pulaski
Confederate Mass Grave Monument in Somerset	Historic Property	None Available	Pulaski
Crawford House	Historic Property	None Available	Pulaski
Crawford, A. Jackson, Building	Historic Property	None Available	Pulaski
Dabney Post Office	Historic Property	None Available	Pulaski
Evans House	Historic Property	None Available	Pulaski

Fox, William, House	Historic Property	None Available	Pulaski
Gover--Hardin House	Historic Property	None Available	Pulaski
Harvey's Hill Historic District	Historic Property	None Available	Pulaski
Hotel Beecher	Historic Property	None Available	Pulaski
James-Hansford House	Historic Property	None Available	Pulaski
James-Owens House	Historic Property	None Available	Pulaski
Mill Springs National Cemetery	Historic Property	None Available	Pulaski
Morrow House	Historic Property	None Available	Pulaski
North Main Street Historic District	Historic Property	None Available	Pulaski
Parker House	Historic Property	None Available	Pulaski
Payne House	Historic Property	None Available	Pulaski
Payne Mill	Historic Property	None Available	Pulaski
Perkins, Dr. John Milton, House	Historic Property	None Available	Pulaski
Robinson Mill	Historic Property	None Available	Pulaski
Scott, Dill, House	Historic Property	None Available	Pulaski
Smith House	Historic Property	None Available	Pulaski
Smith, Beecher, House	Historic Property	None Available	Pulaski
Somerset Armory	Historic Property	None Available	Pulaski
Somerset City School and Carnegie Library	Historic Property	None Available	Pulaski
Somerset Downtown Commercial District	Historic Property	None Available	Pulaski
South Courthouse Square Historic District	Historic Property	None Available	Pulaski
US Post Office--Bronston	Historic Property	None Available	Pulaski
Waddle-Prather House	Historic Property	None Available	Pulaski
West Columbia Street District	Historic Property	None Available	Pulaski
Withers House	Historic Property	None Available	Pulaski
Zollicoffer, Gen. Felix K., Monument	Historic Property	None Available	Pulaski

Lifeline Home Health Care	Home Health Care Services	None Available	Pulaski
Lifeline Home Care	Home Health Care Services	None Available	Pulaski
Hartco Flooring Co	Homefurnishings	None Available	Pulaski
Adamas Diamond Corp	Jewelry & Precious Stones	None Available	Pulaski
Somerset Community College	Junior Colleges	None Available	Pulaski
3 Sisters and the Mom Daycare, LLC	Licensed Type I	None Available	PULASKI
Bright Beginnings Child Care Center	Licensed Type I	None Available	PULASKI
Children's Learning Tree (The)	Licensed Type I	None Available	PULASKI
Dunbar Intergenerational Center/ Head Start	Licensed Type I	None Available	PULASKI
Growing Zone Learning Center, LLC	Licensed Type I	None Available	PULASKI
Kids Care Child Development Center	Licensed Type I	None Available	PULASKI
Kids Kastle II	Licensed Type I	None Available	PULASKI
Little Oaks Academy	Licensed Type I	None Available	PULASKI
Memorial Childcare Center	Licensed Type I	None Available	PULASKI
P. J.'s Primary Care Center, Inc. #1	Licensed Type I	None Available	PULASKI
Pirate's Playhouse Northern Elementary School	Licensed Type I	None Available	PULASKI
Pulaski County Migrant Head Start Center	Licensed Type I	None Available	PULASKI
Science Hill Head Start	Licensed Type I	None Available	PULASKI
Somerset Christian School	Licensed Type I	None Available	PULASKI
Somerset City Hopeway Center	Licensed Type I	None Available	PULASKI
Somerset School Age Child Care Program	Licensed Type I	None Available	PULASKI
Sonshine Learning Center, Inc.	Licensed Type I	None Available	PULASKI
Southern Head Start Center	Licensed Type I	None Available	PULASKI
St. Patrick Pre-School	Licensed Type I	None Available	PULASKI
The Children's House	Licensed Type I	None Available	PULASKI

The Corral After School Program	Licensed Type I	None Available	PULASKI
The General's Kids	Licensed Type I	None Available	PULASKI
Tree Top Toddlers Childcare Center	Licensed Type I	None Available	PULASKI
Wendy's Wonderland Inc. III	Licensed Type I	None Available	PULASKI
Day Play Child Care Center	Licensed Type Ii	None Available	PULASKI
Linda's Child Care	Licensed Type Ii	None Available	PULASKI
Sandy's Home Provider	Licensed Type Ii	None Available	PULASKI
Lowes	Lumber And Other Building Materials	None Available	Pulaski
Lees Ford Marina	Marina	$5,000,000.00	Pulaski
Buck Creek Boat Dock	Marina	$5,000,000.00	Pulaski
Burnside Marina	Marina	$5,000,000.00	Pulaski
Lees Ford Marina	Marina	$5,000,000.00	Pulaski
Buck Creek Boat Dock	Marina	$5,000,000.00	Pulaski
Burnside Marina	Marina	$5,000,000.00	Pulaski
First & Farmers National Bank	National Commercial Banks	None Available	Pulaski
Alton Blakley Ford Lincoln	New And Used Car Dealers	None Available	Pulaski
Somerset Automotive Group	New And Used Car Dealers	None Available	Pulaski
Don Marshall Nissan & Chrysler	New And Used Car Dealers	None Available	Pulaski
Commonwealth Journal	Newspapers	None Available	Pulaski
Kingsford Manufacturing Co	Nondurable Goods, Nec	None Available	Pulaski
Britthaven of Somerset	Nursing Home	Not Available	Pulaski
Lake Cumberland Reg. Hospital SCU	Nursing Home	Not Available	Pulaski
Sunrise Manor NSG. & Rehab. Fac.	Nursing Home	Not Available	Pulaski
SOMERSET Energy	Petroleum Refining	None Available	Pulaski
Crane/Fiat Mfg	Plumbing & Hydronic Heating Supplies	None Available	Pulaski
GE Somerset Glass Plant	Products Of Purchased Glass	None Available	Pulaski
Adanta Group-Behavorial Health	Psychiatric Hospitals	None Available	Pulaski

Southern Kentucky Intermodal Park	Rail Switchyard	$5,000,000.00	Pulaski
Southern Kentucky Intermodal Park	Rail Switchyard	$5,000,000.00	Pulaski
State Of Kentucky Dept-Highway	Regulation, Admin. Of Transportation	None Available	Pulaski
Eagle Hardwoods	Sawmills & Planing Mills, General	None Available	Pulaski
WKSO-TV CH 29	Tv	$980,000	Pulaski
Toyotetsu America Inc	Welding Repair	None Available	Pulaski
Beaver Creek Wilderness Area	Natural Resourse	None Available	Regional Assets
Beaver Creek WMA	Natural Resourse	None Available	Regional Assets
Big South Fork National River and Recreation Area	Natural Resourse	None Available	Regional Assets
Cane Creek WMA	Natural Resourse	None Available	Regional Assets
Cumberland Falls State Park Nature Preserve	Natural Resourse	None Available	Regional Assets
Cumberland Falls State Resort Park	Natural Resourse	None Available	Regional Assets
Cumberland River	Natural Resourse	None Available	Regional Assets
Cumberland River	Natural Resourse	None Available	Regional Assets
Dale Hollow Lake	Natural Resourse	None Available	Regional Assets
Dale Hollow Lake WMA	Natural Resourse	None Available	Regional Assets
Dale Hollow State Resort Park	Natural Resourse	None Available	Regional Assets
Daniel Boone National Forest	Natural Resourse	None Available	Regional Assets
Dennis-Gray WMA	Natural Resourse	None Available	Regional Assets
General Burnside Island State Park	Natural Resourse	None Available	Regional Assets
Green River	Natural Resourse	None Available	Regional Assets
Green River Lake	Natural Resourse	None Available	Regional Assets
Green River Lake State Park	Natural Resourse	None Available	Regional Assets
Green River Lake WMA	Natural Resourse	None Available	Regional Assets
Green River TNC	Natural Resourse	None Available	Regional Assets

Hazeldell Meadow	Natural Resourse	None Available	Regional Assets
Lake Cumberland	Natural Resourse	None Available	Regional Assets
Lake Cumberland State Resort Park	Natural Resourse	None Available	Regional Assets
Lake Cumberland WMA	Natural Resourse	None Available	Regional Assets
Little South Fork	Natural Resourse	None Available	Regional Assets
Mud Camp Creek WMA	Natural Resourse	None Available	Regional Assets
Natural Arch Scenic Area	Natural Resourse	None Available	Regional Assets
R. F. Tarter WMA	Natural Resourse	None Available	Regional Assets
Rockcastle River	Natural Resourse	None Available	Regional Assets
South Fork Cumberland River	Natural Resourse	None Available	Regional Assets
Lake Cumberland Community Svc	Admin. Of Social & Manpower Programs	None Available	Russell
Russell County Airport-Fpps	Airport	$10,651,000.00	Russell
Russell County Airport-Fpps	Airport	$10,651,000.00	Russell
WIDS 570	Am	$980,000	Russell
WJKY 1060	Am	$980,000	Russell
Bruss North America Inc	Automobiles And Other Motor Vehicles	None Available	Russell
Loy, Lynda (dba The Apple Patch Preschool)	Certified	None Available	Russell
Stephens, Stephanie Nicole (dba Love-A-Lots In Home Childcare)	Certified	None Available	Russell
Duo Co Telecom Cable	Electrical Work	None Available	Russell
Bennetts Carpets	Floor Covering Stores	None Available	Russell
WJRS CH 285	Fm	$980,000	Russell
WHVE CH 224	Fm	$980,000	Russell
Kroger	Grocery Stores	None Available	Russell
Russell Lodge No. 284	Historic Property	None Available	Russell
Jamestown Resort & Marina	Hotels And Motels	None Available	Russell
Lake Cumberland State Resort	Hotels And Motels	None Available	Russell

Fruit Of The Loom Inc	Knit Underwear Mills	None Available	Russell
Another Tots Landing	Licensed Type I	None Available	Russell
Another Tots Landing	Licensed Type I	None Available	Russell
Superior Battery Mfg Co	Management Consulting Services	None Available	Russell
Jamestown Resort Marina	Marina	$5,000,000.00	Russell
Jamestown Resort Marina	Marina	$5,000,000.00	Russell
State Dock Marina Svc LLC	Marinas	None Available	Russell
Stephens Pipe & Steel Supply	Metals Service Centers And Offices	None Available	Russell
Fair Oaks Health Systems L.L.C.	Nursing Home	Not Available	Russell
Branscum Construction Co	Single-Family Housing Construction	None Available	Russell
Duo County Telephone Coop Corp	Telephone Communications, Exc. Radio	None Available	Russell
WTCO 1450	Am	$980,000	Taylor
Campbellsville Industries Inc	Architectural Metal Work	None Available	Taylor
Windsor Gardens	Assisted Living	Not Available	Taylor
J & D Auto Electric	Automotive Repair Shops, Nec	None Available	Taylor
Taylor County Bancshares Inc	Bank Holding Companies	None Available	Taylor
Amazon.Com Inc	Book Stores	None Available	Taylor
Upstream	Business Services, Nec	None Available	Taylor
Tim Horton Camp Kentahten	Camp	Not Available	Taylor
Classic Kitchens Inc	Carpentry Work	None Available	Taylor
Gowdy, Tonya (dba Precious Moments Family Child Care)	Certified	None Available	Taylor
ABC Child Care Inc	Child Day Care Services	None Available	Taylor
Campbellsville Child Devmnt	Child Day Care Services	None Available	Taylor
Farmers Gate Co	Construction Materials, Nec	None Available	Taylor
Walmart Supercenter	Department Stores	None Available	Taylor
Kroger Pharmacy	Drug Stores And Proprietary Stores	None Available	Taylor
Creek Side Family Restaurant	Eating Places	None Available	Taylor

Druthers Restaurant	Eating Places	None Available	Taylor
Campbellsville Apparel Co LLC	Family Clothing Stores	None Available	Taylor
A&W All-American Food	Fast Food Services	None Available	Taylor
Burger King	Fast Food Services	None Available	Taylor
Mr Gattis	Fast Food Services	None Available	Taylor
Sonic Drive-In	Fast Food Services	None Available	Taylor
Mc Donalds	Fast Food Services	None Available	Taylor
WCKQ CH 281	Fm	$980,000	Taylor
WVLC CH 260	Fm	$980,000	Taylor
Forestry Division	Forestry Services	None Available	Taylor
Battle of Tebbs Bend	Historic Property	None Available	Taylor
Battle of Tebbs Bend (Boundary Increase)	Historic Property	None Available	Taylor
Battle of Tebb's Bend Monument	Historic Property	None Available	Taylor
Campbellsville Historic Commercial District	Historic Property	None Available	Taylor
Campbellsville Residential Historic District	Historic Property	None Available	Taylor
Campbellsville School, Stadium and Athletic Field	Historic Property	None Available	Taylor
Chandler, John, House	Historic Property	None Available	Taylor
Clay Hill	Historic Property	None Available	Taylor
Cowherd, Jonathan, Jr., House	Historic Property	None Available	Taylor
Hiestand, Jacob, House	Historic Property	None Available	Taylor
Merchant's Hotel	Historic Property	None Available	Taylor
Sanders, Durham, House	Historic Property	None Available	Taylor
Tate, Isaac, Farm	Historic Property	None Available	Taylor
Taylor County Clerk's Office	Historic Property	None Available	Taylor
Family Home Health Care	Home Health Care Services	None Available	Taylor
Ingersoll-Rand Co	Industrial Machinery And Equipment	None Available	Taylor
Monumental Life Insurance Co	Insurance Agents, Brokers, & Service	None Available	Taylor

A Child's Workplace LLC	Licensed Type I	None Available	Taylor
A Wise Choice Preschool and Daycare	Licensed Type I	None Available	Taylor
Campbellsville Child Development Center	Licensed Type I	None Available	Taylor
Campbellsville Christian Church Center For Education	Licensed Type I	None Available	Taylor
Campbellsville/Taylor County Head Start	Licensed Type I	None Available	Taylor
Kentucky Christian Academy	Licensed Type I	None Available	Taylor
Learning Tree Kids Zone, Inc.	Licensed Type I	None Available	Taylor
Porter's Playhouse	Licensed Type I	None Available	Taylor
Creative Kids Daycare	Licensed Type Ii	None Available	Taylor
Lowes	Lumber And Other Building Materials	None Available	Taylor
Overhead Door	Lumber And Other Building Materials	None Available	Taylor
Wholesale Hardwood Interiors	Lumber And Other Building Materials	None Available	Taylor
Emhart Fastening Teknologies	Metal Coating And Allied Services	None Available	Taylor
Citizens Bank & Trust Co	National Commercial Banks	None Available	Taylor
Forcht Bank	National Commercial Banks	None Available	Taylor
Alex Montgomery Chevrolet Olds	New And Used Car Dealers	None Available	Taylor
Alex Montgomrey Chevrolet Olds	New And Used Car Dealers	None Available	Taylor
Medco Center of Campbellsville	Nursing Home	Not Available	Taylor
Metzmeier Nursing Home	Nursing Home	Not Available	Taylor
Internal Medicine Assoc	Offices & Clinics Of Medical Doctors	None Available	Taylor
A-1 Cooling Co	Plumbing, Heating, Air-Conditioning	None Available	Taylor
Adanta Clinical Svc	Psychiatric Hospitals	None Available	Taylor
Campbellsville Country Club	Public Golf Courses	None Available	Taylor
A Windsor Gardens Community	Residential Care	None Available	Taylor
Cox Interior Inc	Special Product Sawmills, Nec	None Available	Taylor
Green River Park	Trailer Parks And Campsites	None Available	Taylor
Bluegrass Stockyards	Transportation Services, Nec	None Available	Taylor

Con-Way Central Express	Trucking, Except Local	None Available	Taylor
H & O Transport Inc	Trucking, Except Local	None Available	Taylor
W04BP CH 4	Tv	$980,000	Taylor
At Home Caregivers		None Available	Taylor
Wayne County Airport	Airport	$10,651,000.00	Wayne
Wayne County Airport	Airport	$10,651,000.00	Wayne
WFLW 1360	Am	$980,000	Wayne
Monticello Banking Co	Bank Holding Companies	None Available	Wayne
Lakeview Yachts	Boat Building And Repairing	None Available	Wayne
Fantasy Yachts	Boat Building And Repairing	None Available	Wayne
Camp Earl Wallace	Camp	Not Available	Wayne
Lake Cumberland 4-H Camp	Camp	Not Available	Wayne
Brett, Alice Kay (dba ABC Learning Ladder Childcare and Preschool)	Certified	None Available	Wayne
Jones, Alicia (dba Alicia Jones Child Care)	Certified	None Available	Wayne
Weymouth, Mellisa (dba Weymouth Family Childcare)	Certified	None Available	Wayne
Worley, Sandy (dba Sandy's Daycare)	Certified	None Available	Wayne
Affiliated Computer Svc	Computer Programming Services	None Available	Wayne
Image Entry	Data Processing And Preparation	None Available	Wayne
Wal-Mart	Department Stores	None Available	Wayne
WMKZ CH 226	Fm	$980,000	Wayne
WKYM CH 269	Fm	$980,000	Wayne
Cobb-Vantress Strawberry Farm	General Farms, Primarily Crop	None Available	Wayne
Adkins--Hurt Mill	Historic Property	None Available	Wayne
Fairchild House	Historic Property	None Available	Wayne
Hotel Breeding	Historic Property	None Available	Wayne
Mill Springs Mill	Historic Property	None Available	Wayne
Monticello Historic Commercial District	Historic Property	None Available	Wayne

West-Metcalfe House	Historic Property	None Available	Wayne
Conley Bottom Resort	Hotels And Motels	None Available	Wayne
Lake Cumberland Youth Developmen	Juvenile Fac.	Not Available	Wayne
Betty's Day Care	Licensed Type I	None Available	Wayne
Busy Bees & A,B,C's Early Learning Center	Licensed Type I	None Available	Wayne
Cardinal Kids Campus	Licensed Type I	None Available	Wayne
Gehring Child Care Center, Inc.	Licensed Type I	None Available	Wayne
McGinnis Day Care	Licensed Type I	None Available	Wayne
Monticello/Wayne County Head Start	Licensed Type I	None Available	Wayne
Thelma's Child Care	Licensed Type I	None Available	Wayne
Wendy's Wonderland	Licensed Type I	None Available	Wayne
Wendy's Wonderland, Inc.	Licensed Type I	None Available	Wayne
Dorothy Brown's Day Care	Licensed Type Ii	None Available	Wayne
Flonnie's Child Care	Licensed Type Ii	None Available	Wayne
Monticello Flooring & Lumber	Lumber And Other Building Materials	None Available	Wayne
Patriot Industries Inc	Manufacturing Industries, Nec	None Available	Wayne
Golden Years Nursing Home	Nursing Home	Not Available	Wayne
Cobb-Vantress Inc	Poultry And Poultry Products	None Available	Wayne
Bluegrass Cellular	Radiotelephone Communications	None Available	Wayne
Wayne Lumber Co Inc	Sawmills & Planing Mills, General	None Available	Wayne
Wayne County Schools	School Buses	None Available	Wayne
American Woodmark Corp	Wood Kitchen Cabinets	None Available	Wayne
W & W Hardwoods	Wood Products, NEC	None Available	Wayne
Otter Creek Academy	Youth Treatment	Not Available	Wayne

6.2 Hazardous Material Sources

Facilities storing large quantities of hazardous or other regulated materials such as oil deserve special consideration due to the potential environmental contamination possible in the event of a natural disaster. Kentucky regulations require users of hazardous material in specificated quintiles to register their use. However no list or mapping data was located. The Federal EPA does have available its Toxics Release Inventory (TRI) which tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. U.S. facilities in different industry sectors must report annually how much of each chemical is released to the environment and/or managed through recycling, energy recovery and treatment. (A "release" of a chemical means that it is emitted to the air or water, or placed in some type of land disposal.)

TRI-Covered Industries:

- ≠ 212 Mining
- ≠ 221 Utilities
- ≠ 31 - 33 Manufacturing
- ≠ All Other Miscellaneous Manufacturing (includes 1119, 1131, 2111, 4883, 5417, 8114)
- ≠ 424 Merchant Wholesalers, Non-durable Goods
- ≠ 425 Wholesale Electronic Markets and Agents Brokers
- ≠ 511, 512, 519 Publishing
- ≠ 562 Hazardous Waste
- ≠ Federal Facilities

Listed Lake Cumberland Regional TRI Counties[81]:
:

[81] Toxics Release Inventory (TRI) National Analysis, https://www.epa.gov/trinationalanalysis/where-you-live-2015-tri-national-analysis

NOTICE — Some previous reports may have returned incomplete results. Click for more info.

2015 TRI Factsheet: County – Adair, KY

Data Source: 2015 Dataset (released October 2016) (updated November 29, 2016)

The Toxics Release Inventory (TRI) tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. Certain industrial facilities in the U.S. must report annually how much of each chemical is recycled, combusted for energy recovery, treated for destruction, and disposed of or otherwise released on- and off-site. This information is collectively referred to as production-related waste managed.

Map of TRI Facilities in Adair County, KY

Quick Facts for 2015

	Adair County, KY	United States
Number of TRI Facilities:		21,849
Total Production-Related Waste Managed:	0 lbs	27.2 billion lbs
Total On-site and Off-site Disposal or Other Releases:	0 lbs	3.3 billion lbs
Total On-site:	0 lbs	2.8 billion lbs
• Air:	0 lbs	689.6 million lbs
• Water:	0 lbs	191.1 million lbs
• Land:	0 lbs	2.0 billion lbs
Total Off-Site:	0 lbs	500.5 million lbs

Kentucky ranks **11 out of 56** states/territories nationwide based on total releases per square mile (Rank 1 = highest releases)

Looking at production-related waste managed over time helps track progress in reducing waste generated and moving toward safer waste management methods. EPA encourages facilities to first eliminate waste at its source (source reduction). For waste that is generated, the preferred management method is recycling, followed by energy recovery, treatment, and as a last resort, disposing of or otherwise releasing the waste. Under the Pollution Prevention Act of 1990, TRI collects information to track industry progress in reducing waste generation and moving towards safer waste management alternatives. Learn more about Pollution Prevention and TRI.

Production-related waste managed in Adair County, KY, 2003 - 2015

No Data Reported

The following charts represent releases of TRI-covered chemicals to the environment in Adair County, KY. A "release" of a chemical means that it is emitted to the air or water, placed in some type of land disposal, or transferred off-site for disposal or release.

NOTICE — Some previous reports may have returned incomplete results. Click for more info.

2015 TRI Factsheet: County – Casey, KY

Data Source: 2015 Dataset (released October 2016) (updated November 29, 2016)

The Toxics Release Inventory (TRI) tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. Certain industrial facilities in the U.S. must report annually how much of each chemical is recycled, combusted for energy recovery, treated for destruction, and disposed of or otherwise released on- and off-site. This information is collectively referred to as production-related waste managed.

Map of TRI Facilities in Casey County, KY

Quick Facts for 2015

	Casey County, KY	United States
Number of TRI Facilities:		21,849
Total Production-Related Waste Managed:	0 lbs	27.2 billion lbs
Total On-site and Off-site Disposal or Other Releases:	0 lbs	3.3 billion lbs
Total On-site:	0 lbs	2.8 billion lbs
• Air:	0 lbs	689.6 million lbs
• Water:	0 lbs	191.1 million lbs
• Land:	0 lbs	2.0 billion lbs
Total Off-Site:	0 lbs	500.5 million lbs

Kentucky ranks **11 out of 56** states/territories nationwide based on total releases per square mile (Rank 1 = highest releases)

Looking at production-related waste managed over time helps track progress in reducing waste generated and moving toward safer waste management methods. EPA encourages facilities to first eliminate waste at its source (source reduction). For waste that is generated, the preferred management method is recycling, followed by energy recovery, treatment, and as a last resort, disposing of or otherwise releasing the waste. Under the Pollution Prevention Act of 1990, TRI collects information to track industry progress in reducing waste generation and moving towards safer waste management alternatives. Learn more about Pollution Prevention and TRI.

Production-related waste managed in Casey County, KY, 2003 - 2015

No Data Reported

The following charts represent releases of TRI-covered chemicals to the environment in Casey County, KY. A "release" of a chemical means that it is emitted to the air or water, placed in some type of land disposal, or transferred off-site for disposal or release.

Total On-site Releases by Environmental Medium
Casey County, KY, 2003 - 2015

No Data Reported

Top Five Facilities by Total Disposal or Other Releases
Casey County, KY, 2015

No Data Reported

Top Five Chemicals Released to Air and Water
Casey County, KY, 2015

No Releases to Air Reported

No Releases to Water Reported

Note: **=Carcinogenic Chemical
Note: Trend graphs were created using the 2001 core chemicals/industries list.

NOTICE — Some previous reports may have returned incomplete results. Click for more info.

2015 TRI Factsheet: County – Clinton, KY

Data Source: 2015 Dataset (released October 2016) (updated November 29, 2016)

The Toxics Release Inventory (TRI) tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. Certain industrial facilities in the U.S. must report annually how much of each chemical is recycled, combusted for energy recovery, treated for destruction, and disposed of or otherwise released on- and off-site. This information is collectively referred to as production-related waste managed.

Map of TRI Facilities in Clinton County, KY

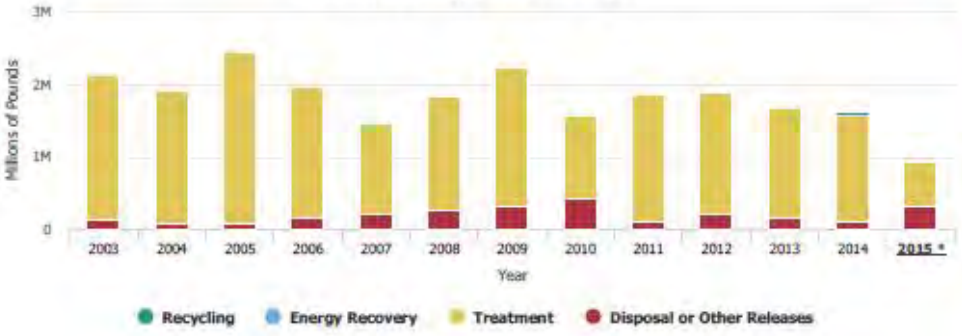
Quick Facts for 2015

	Clinton County, KY	United States
Number of TRI Facilities:	2	21,849
Total Production-Related Waste Managed:	921.7 thousand lbs	27.2 billion lbs
Total On-site and Off-site Disposal or Other Releases:	330.0 thousand lbs	3.3 billion lbs
Total On-site:	327.8 thousand lbs	2.8 billion lbs
• Air:	35.5 thousand lbs	689.6 million lbs
• Water:	640 lbs	191.1 million lbs
• Land:	291.7 thousand lbs	2.0 billion lbs
Total Off-Site:	2.1 thousand lbs	500.5 million lbs

Kentucky ranks **11 out of 56** states/territories nationwide based on total releases per square mile (Rank 1 = highest releases)

Looking at production-related waste managed over time helps track progress in reducing waste generated and moving toward safer waste management methods. EPA encourages facilities to first eliminate waste at its source (source reduction). For waste that is generated, the preferred management method is recycling, followed by energy recovery, treatment, and as a last resort, disposing of or otherwise releasing the waste. Under the Pollution Prevention Act of 1990, TRI collects information to track industry progress in reducing waste generation and moving towards safer waste management alternatives. Learn more about Pollution Prevention and TRI.

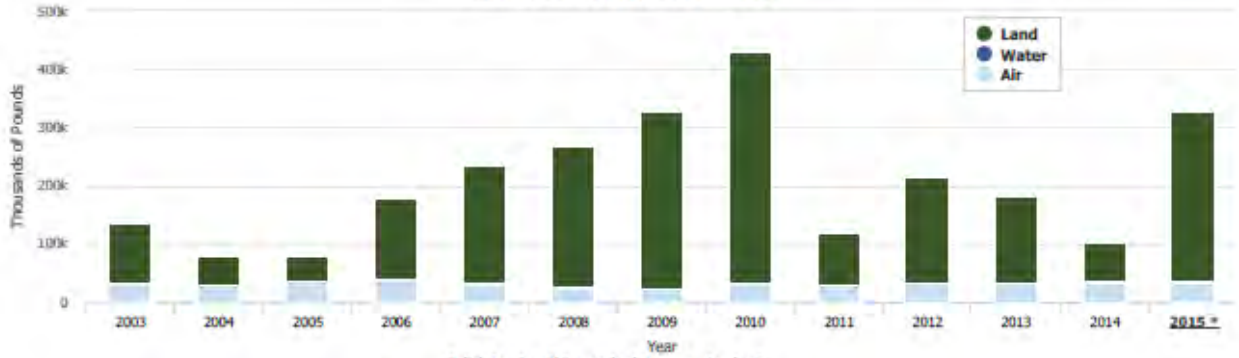
Production-related waste managed in Clinton County, KY, 2003 - 2015



*click to view this year's data as a pie chart.

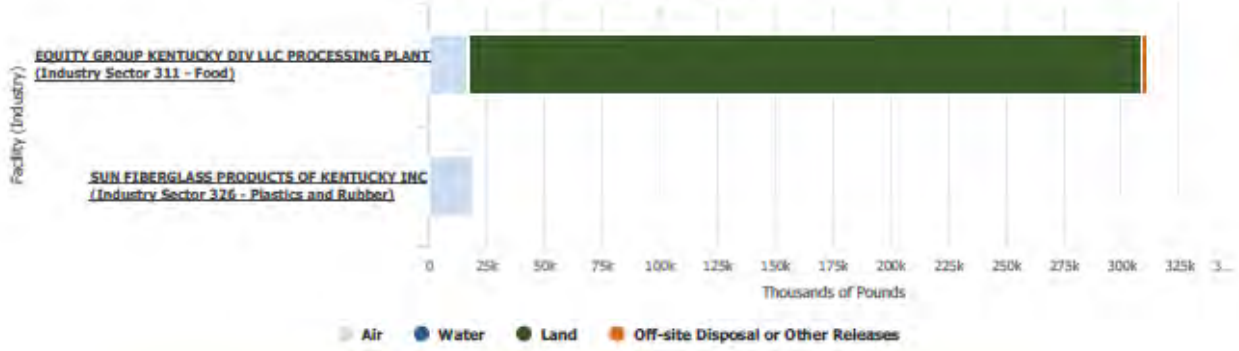
The following charts represent releases of TRI-covered chemicals to the environment in Clinton County, KY. A "release" of a chemical means that it is emitted to the air or water, placed in some type of land disposal, or transferred off-site for disposal or release.

Total On-site Releases by Environmental Medium
Clinton County, KY, 2003 - 2015



*click to view this year's data as a pie chart.

Top Five Facilities by Total Disposal or Other Releases
Clinton County, KY, 2015



Top Five Chemicals Released to Air and Water
Clinton County, KY, 2015

Note: **=Carcinogenic Chemical
Note: Trend graphs were created using the 2001 core chemicals/industries list.

NOTICE — Some previous reports may have returned incomplete results. Click for more info.

2015 TRI Factsheet: County – Cumberland, KY

Data Source: 2015 Dataset (released October 2016) (updated November 29, 2016)

The Toxics Release Inventory (TRI) tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. Certain industrial facilities in the U.S. must report annually how much of each chemical is recycled, combusted for energy recovery, treated for destruction, and disposed of or otherwise released on- and off-site. This information is collectively referred to as production-related waste managed.

Map of TRI Facilities in Cumberland County, KY

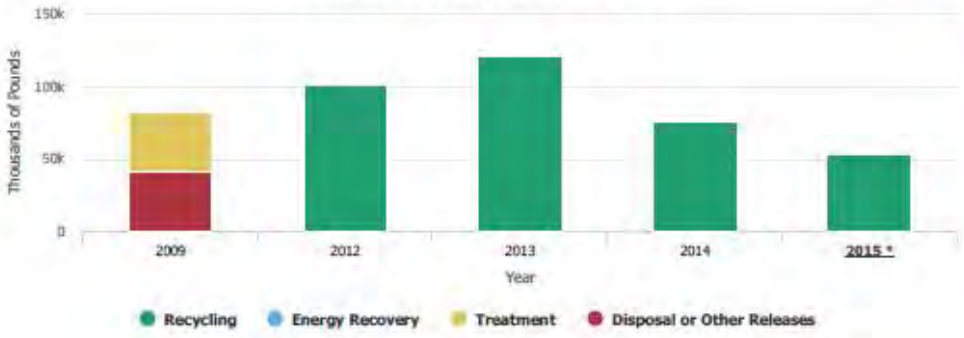
Quick Facts for 2015

	Cumberland County, KY	United States
Number of TRI Facilities:	1	21,849
Total Production-Related Waste Managed:	53.9 thousand lbs	27.2 billion lbs
Total On-site and Off-site Disposal or Other Releases:	2 lbs	3.3 billion lbs
Total On-site:	0 lbs	2.8 billion lbs
• Air:	0 lbs	689.6 million lbs
• Water:	0 lbs	191.1 million lbs
• Land:	0 lbs	2.0 billion lbs
Total Off-Site:	2 lbs	500.5 million lbs

Kentucky ranks **11 out of 56** states/territories nationwide based on total releases per square mile (Rank 1 = highest releases)

Looking at production-related waste managed over time helps track progress in reducing waste generated and moving toward safer waste management methods. EPA encourages facilities to first eliminate waste at its source (source reduction). For waste that is generated, the preferred management method is recycling, followed by energy recovery, treatment, and as a last resort, disposing of or otherwise releasing the waste. Under the Pollution Prevention Act of 1990, TRI collects information to track industry progress in reducing waste generation and moving towards safer waste management alternatives. Learn more about Pollution Prevention and TRI.

Production-related waste managed in Cumberland County, KY, 2003 - 2015



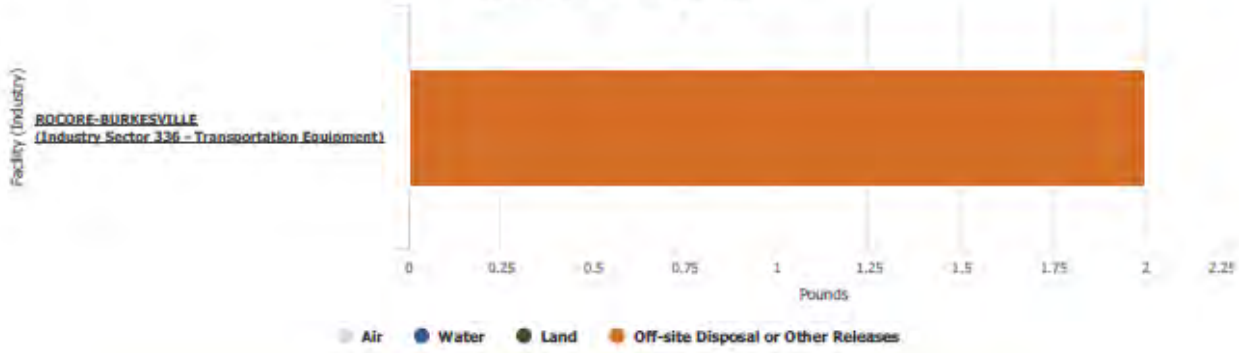
*click to view this year's data as a pie chart.

The following charts represent releases of TRI-covered chemicals to the environment in Cumberland County, KY. A "release" of a chemical means that it is emitted to the air or water, placed in some type of land disposal, or transferred off-site for disposal or release.

Total On-site Releases by Environmental Medium
Cumberland County, KY, 2003 - 2015

*click to view this year's data as a pie chart.

Top Five Facilities by Total Disposal or Other Releases
Cumberland County, KY, 2015



Top Five Chemicals Released to Air and Water
Cumberland County, KY, 2015

No Releases to Air Reported

No Releases to Water Reported

Note: **=Carcinogenic Chemical

Note: Trend graphs were created using the 2001 core chemicals/industries list.

NOTICE — Some previous reports may have returned incomplete results. Click for more info.

2015 TRI Factsheet: County – Green, KY

Data Source: 2015 Dataset (released October 2016) (updated November 29, 2016)

The Toxics Release Inventory (TRI) tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. Certain industrial facilities in the U.S. must report annually how much of each chemical is recycled, combusted for energy recovery, treated for destruction, and disposed of or otherwise released on- and off-site. This information is collectively referred to as production-related waste managed.

Map of TRI Facilities in Green County, KY

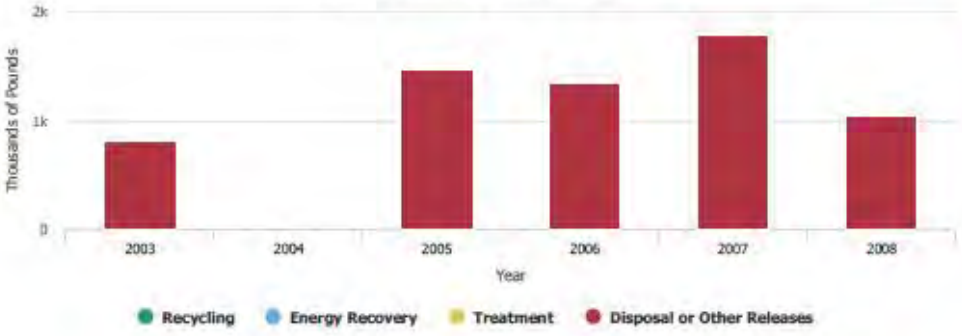
Quick Facts for 2015

	Green County, KY	United States
Number of TRI Facilities:		21,849
Total Production-Related Waste Managed:	0 lbs	27.2 billion lbs
Total On-site and Off-site Disposal or Other Releases:	0 lbs	3.3 billion lbs
Total On-site:	0 lbs	2.8 billion lbs
• Air:	0 lbs	689.6 million lbs
• Water:	0 lbs	191.1 million lbs
• Land:	0 lbs	2.0 billion lbs
Total Off-Site:	0 lbs	500.5 million lbs

Kentucky ranks **11 out of 56** states/territories nationwide based on total releases per square mile (Rank 1 = highest releases)

Looking at production-related waste managed over time helps track progress in reducing waste generated and moving toward safer waste management methods. EPA encourages facilities to first eliminate waste at its source (source reduction). For waste that is generated, the preferred management method is recycling, followed by energy recovery, treatment, and as a last resort, disposing of or otherwise releasing the waste. Under the Pollution Prevention Act of 1990, TRI collects information to track industry progress in reducing waste generation and moving towards safer waste management alternatives. Learn more about Pollution Prevention and TRI.

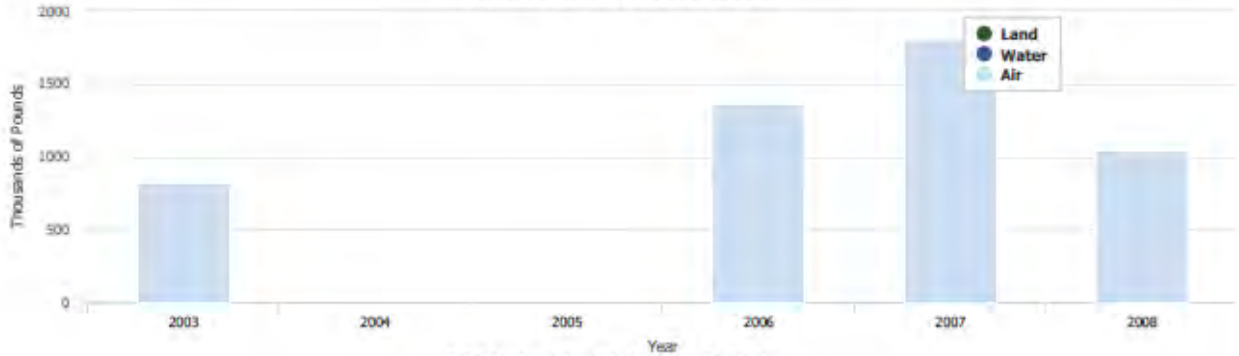
Production-related waste managed in Green County, KY, 2003 - 2015



*click to view this year's data as a pie chart.

The following charts represent releases of TRI-covered chemicals to the environment in Green County, KY. A "release" of a chemical means that it is emitted to the air or water, placed in some type of land disposal, or transferred off-site for disposal or release.

Total On-site Releases by Environmental Medium
Green County, KY, 2003 - 2015



*click to view this year's data as a pie chart.

Top Five Facilities by Total Disposal or Other Releases
Green County, KY, 2015

No Data Reported

Top Five Chemicals Released to Air and Water
Green County, KY, 2015

No Releases to Air Reported

No Releases to Water Reported

Note: **=Carcinogenic Chemical

Note: Trend graphs were created using the 2001 core chemicals/industries list.

NOTICE — Some previous reports may have returned incomplete results. Click for more info.

2015 TRI Factsheet: County – Mccreary, KY

Data Source: 2015 Dataset (released October 2016) (updated November 29, 2016)

The Toxics Release Inventory (TRI) tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. Certain industrial facilities in the U.S. must report annually how much of each chemical is recycled, combusted for energy recovery, treated for destruction, and disposed of or otherwise released on- and off-site. This information is collectively referred to as production-related waste managed.

Map of TRI Facilities in Mccreary County, KY

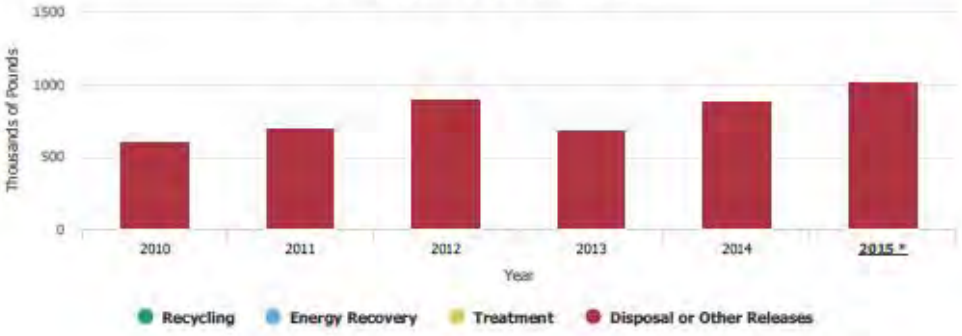
Quick Facts for 2015

	Mccreary County, KY	United States
Number of TRI Facilities:	1	21,849
Total Production-Related Waste Managed:	1.0 thousand lbs	27.2 billion lbs
Total On-site and Off-site Disposal or Other Releases:	1.0 thousand lbs	3.3 billion lbs
Total On-site:	1.0 thousand lbs	2.8 billion lbs
• Air:	1 lbs	689.6 million lbs
• Water:	0 lbs	191.1 million lbs
• Land:	1.0 thousand lbs	2.0 billion lbs
Total Off-Site:	0 lbs	500.5 million lbs

Kentucky ranks **11 out of 56** states/territories nationwide based on total releases per square mile (Rank 1 = highest releases)

Looking at production-related waste managed over time helps track progress in reducing waste generated and moving toward safer waste management methods. EPA encourages facilities to first eliminate waste at its source (source reduction). For waste that is generated, the preferred management method is recycling, followed by energy recovery, treatment, and as a last resort, disposing of or otherwise releasing the waste. Under the Pollution Prevention Act of 1990, TRI collects information to track industry progress in reducing waste generation and moving towards safer waste management alternatives. Learn more about Pollution Prevention and TRI.

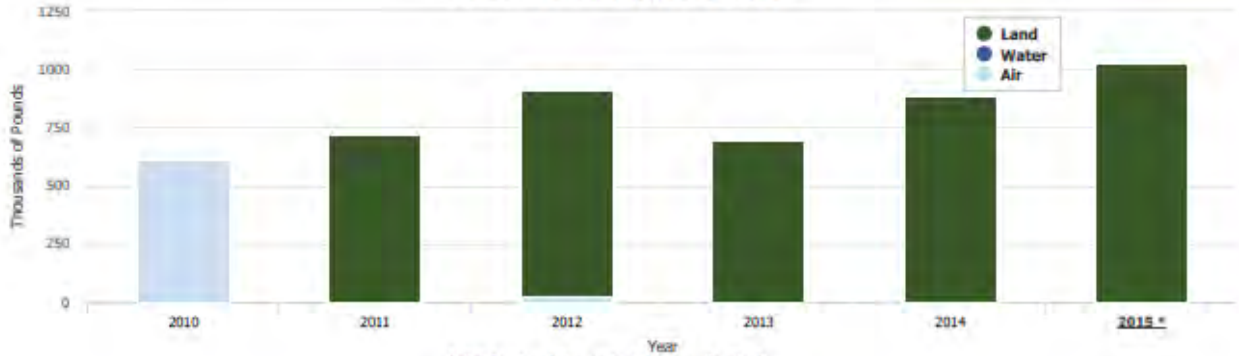
Production-related waste managed in Mccreary County, KY, 2003 - 2015



*click to view this year's data as a pie chart.

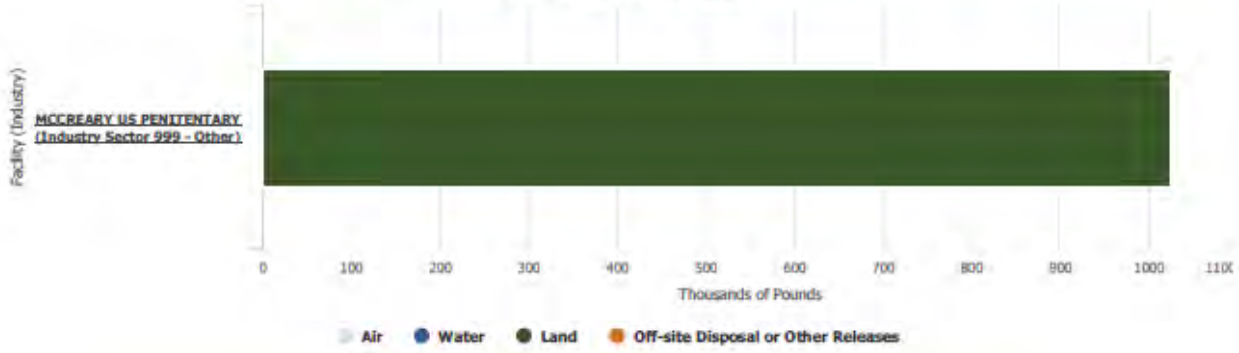
The following charts represent releases of TRI-covered chemicals to the environment in Mccreary County, KY. A "release" of a chemical means that it is emitted to the air or water, placed in some type of land disposal, or transferred off-site for disposal or release.

Total On-site Releases by Environmental Medium
Mccreary County, KY, 2003 - 2015

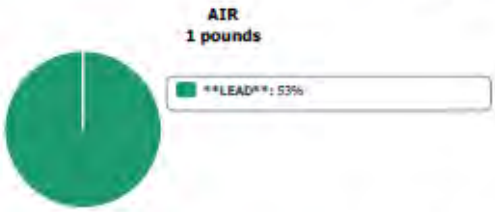


*click to view this year's data as a pie chart.

Top Five Facilities by Total Disposal or Other Releases
Mccreary County, KY, 2015



Top Five Chemicals Released to Air and Water
Mccreary County, KY, 2015



No Releases to Water Reported

Note: **=Carcinogenic Chemical

Note: Trend graphs were created using the 2001 core chemicals/industries list.

NOTICE — Some previous reports may have returned incomplete results. Click for more info.

2015 TRI Factsheet: County – Pulaski, KY

Data Source: 2015 Dataset (released October 2016) (updated November 29, 2016)

The Toxics Release Inventory (TRI) tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. Certain industrial facilities in the U.S. must report annually how much of each chemical is recycled, combusted for energy recovery, treated for destruction, and disposed of or otherwise released on- and off-site. This information is collectively referred to as production-related waste managed.

Map of TRI Facilities in Pulaski County, KY

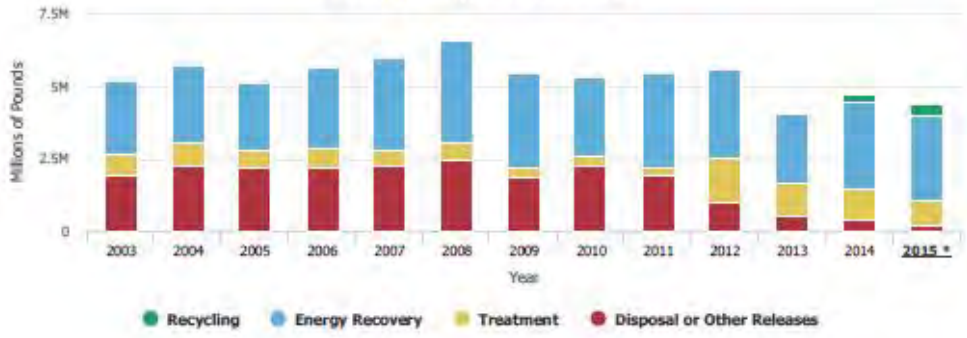
Quick Facts for 2015

	Pulaski County, KY	United States
Number of TRI Facilities:	7	21,849
Total Production-Related Waste Managed:	4.3 million lbs	27.2 billion lbs
Total On-site and Off-site Disposal or Other Releases:	197.2 thousand lbs	3.3 billion lbs
Total On-site:	197.2 thousand lbs	2.8 billion lbs
• Air:	109.3 thousand lbs	689.6 million lbs
• Water:	22 lbs	191.1 million lbs
• Land:	87.8 thousand lbs	2.0 billion lbs
Total Off-Site:	44 lbs	500.5 million lbs

Kentucky ranks **11 out of 56** states/territories nationwide based on total releases per square mile (Rank 1 = highest releases)

Looking at production-related waste managed over time helps track progress in reducing waste generated and moving toward safer waste management methods. EPA encourages facilities to first eliminate waste at its source (source reduction). For waste that is generated, the preferred management method is recycling, followed by energy recovery, treatment, and as a last resort, disposing of or otherwise releasing the waste. Under the Pollution Prevention Act of 1990, TRI collects information to track industry progress in reducing waste generation and moving towards safer waste management alternatives. Learn more about Pollution Prevention and TRI.

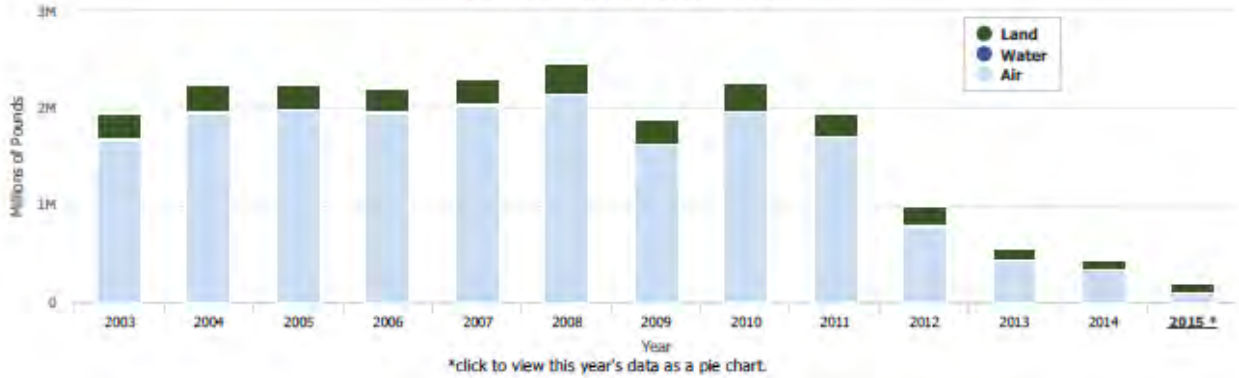
Production-related waste managed in Pulaski County, KY, 2003 - 2015



*click to view this year's data as a pie chart.

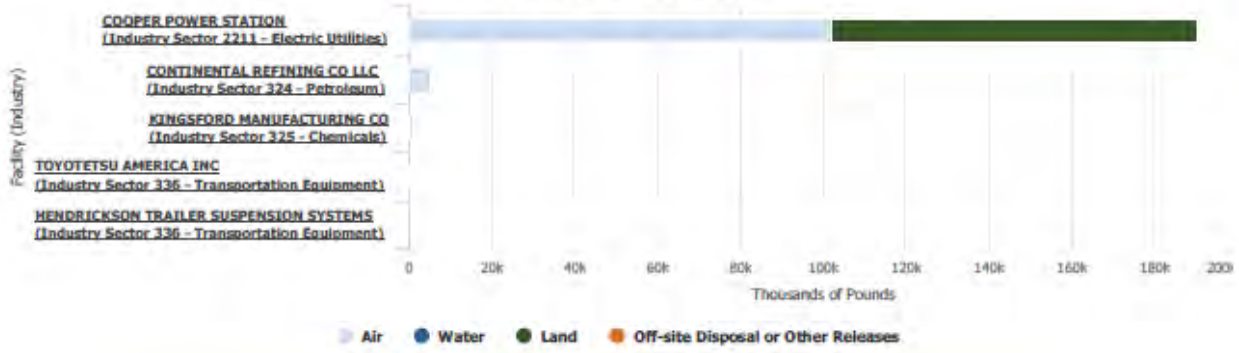
The following charts represent releases of TRI-covered chemicals to the environment in Pulaski County, KY. A "release" of a chemical means that it is emitted to the air or water, placed in some type of land disposal, or transferred off-site for disposal or release.

Total On-site Releases by Environmental Medium
Pulaski County, KY, 2003 - 2015



*click to view this year's data as a pie chart.

Top Five Facilities by Total Disposal or Other Releases
Pulaski County, KY, 2015



Top Five Chemicals Released to Air and Water
Pulaski County, KY, 2015

Note: **=Carcinogenic Chemical

Note: Trend graphs were created using the 2001 core chemicals/industries list.

NOTICE — Some previous reports may have returned incomplete results. Click for more info.

2015 TRI Factsheet: County – Russell, KY

Data Source: 2015 Dataset (released October 2016) (updated November 29, 2016)

The Toxics Release Inventory (TRI) tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. Certain industrial facilities in the U.S. must report annually how much of each chemical is recycled, combusted for energy recovery, treated for destruction, and disposed of or otherwise released on- and off-site. This information is collectively referred to as production-related waste managed.

Map of TRI Facilities in Russell County, KY

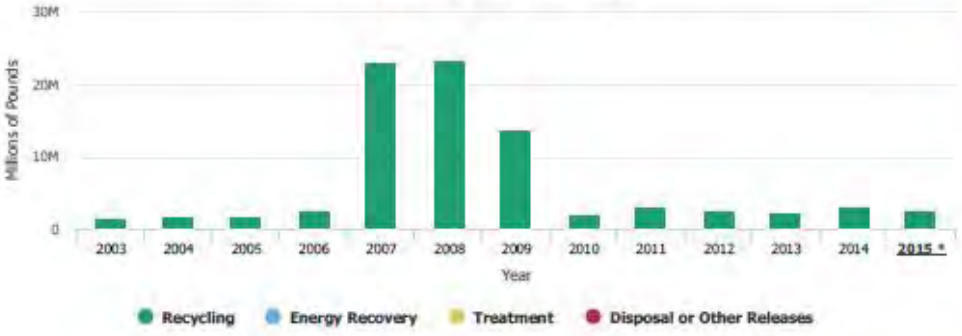
Quick Facts for 2015

	Russell County, KY	United States
Number of TRI Facilities:	1	21,849
Total Production-Related Waste Managed:	2.7 million lbs	27.2 billion lbs
Total On-site and Off-site Disposal or Other Releases:	50 lbs	3.3 billion lbs
Total On-site:	47 lbs	2.8 billion lbs
• Air:	47 lbs	689.6 million lbs
• Water:	0 lbs	191.1 million lbs
• Land:	0 lbs	2.0 billion lbs
Total Off-Site:	3 lbs	500.5 million lbs

Kentucky ranks **11 out of 56** states/territories nationwide based on total releases per square mile (Rank 1 = highest releases)

Looking at production-related waste managed over time helps track progress in reducing waste generated and moving toward safer waste management methods. EPA encourages facilities to first eliminate waste at its source (source reduction). For waste that is generated, the preferred management method is recycling, followed by energy recovery, treatment, and as a last resort, disposing of or otherwise releasing the waste. Under the Pollution Prevention Act of 1990, TRI collects information to track industry progress in reducing waste generation and moving towards safer waste management alternatives. Learn more about Pollution Prevention and TRI.

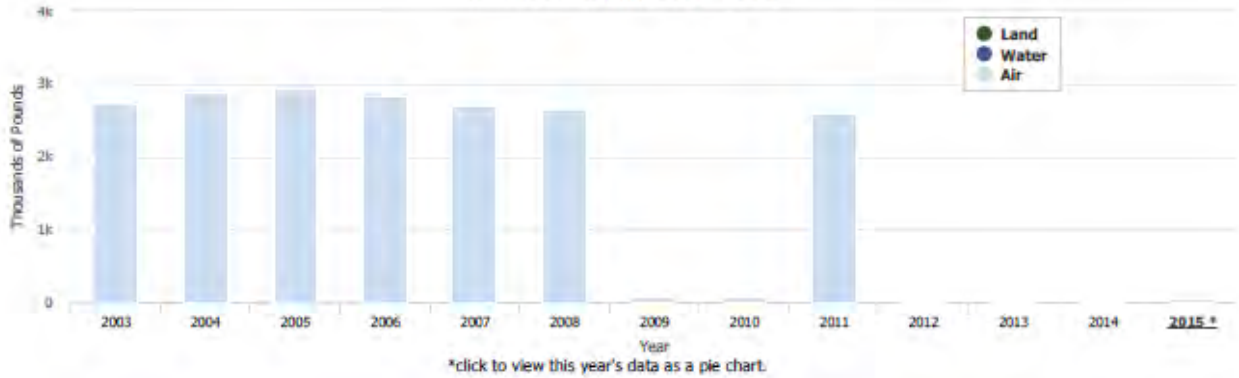
Production-related waste managed in Russell County, KY, 2003 - 2015



*click to view this year's data as a pie chart.

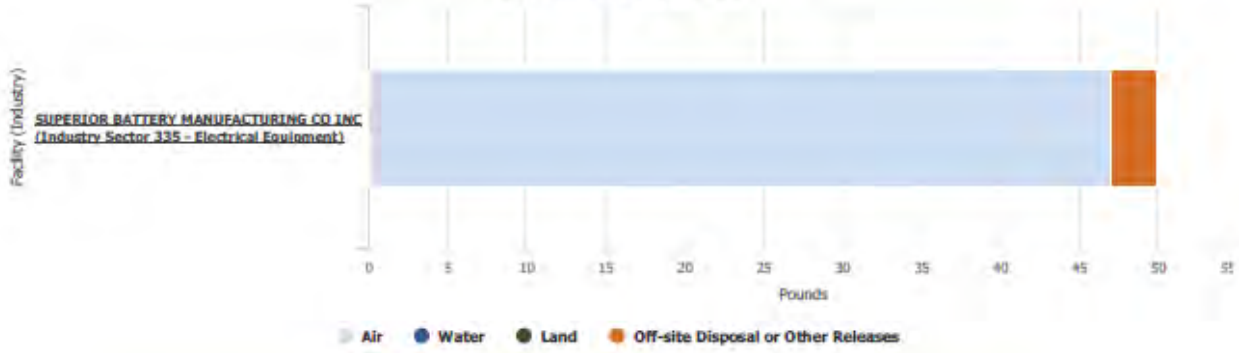
The following charts represent releases of TRI-covered chemicals to the environment in Russell County, KY. A "release" of a chemical means that it is emitted to the air or water, placed in some type of land disposal, or transferred off-site for disposal or release.

Total On-site Releases by Environmental Medium
Russell County, KY, 2003 - 2015

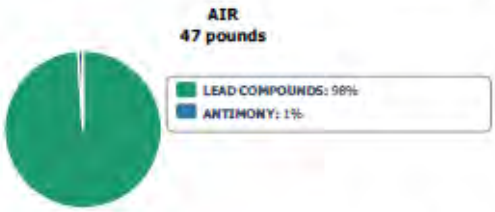


*click to view this year's data as a pie chart.

Top Five Facilities by Total Disposal or Other Releases
Russell County, KY, 2015



Top Five Chemicals Released to Air and Water
Russell County, KY, 2015



No Releases to Water Reported

Note: **=Carcinogenic Chemical

Note: Trend graphs were created using the 2001 core chemicals/industries list.

NOTICE — Some previous reports may have returned incomplete results. Click for more info.

2015 TRI Factsheet: County – Taylor, KY

Data Source: 2015 Dataset (released October 2016) (updated November 29, 2016)

The Toxics Release Inventory (TRI) tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. Certain industrial facilities in the U.S. must report annually how much of each chemical is recycled, combusted for energy recovery, treated for destruction, and disposed of or otherwise released on- and off-site. This information is collectively referred to as production-related waste managed.

Map of TRI Facilities in Taylor County, KY

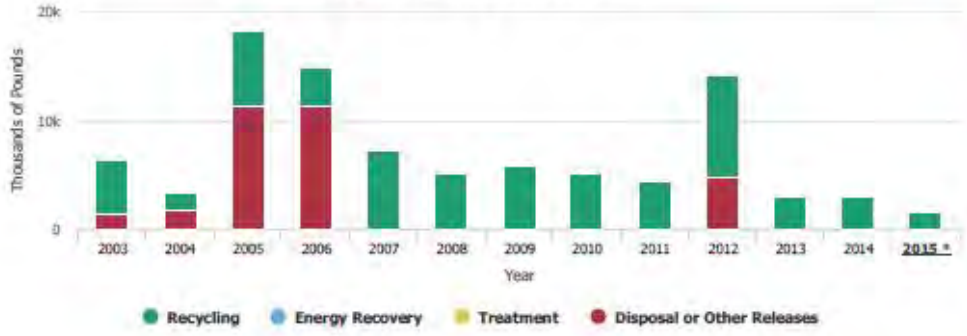
Quick Facts for 2015

	Taylor County, KY	United States
Number of TRI Facilities:	1	21,849
Total Production-Related Waste Managed:	1.5 thousand lbs	27.2 billion lbs
Total On-site and Off-site Disposal or Other Releases:	0 lbs	3.3 billion lbs
Total On-site:	0 lbs	2.8 billion lbs
• Air:	0 lbs	689.6 million lbs
• Water:	0 lbs	191.1 million lbs
• Land:	0 lbs	2.0 billion lbs
Total Off-Site:	0 lbs	500.5 million lbs

Kentucky ranks **11 out of 56** states/territories nationwide based on total releases per square mile (Rank 1 = highest releases)

Looking at production-related waste managed over time helps track progress in reducing waste generated and moving toward safer waste management methods. EPA encourages facilities to first eliminate waste at its source (source reduction). For waste that is generated, the preferred management method is recycling, followed by energy recovery, treatment, and as a last resort, disposing of or otherwise releasing the waste. Under the Pollution Prevention Act of 1990, TRI collects information to track industry progress in reducing waste generation and moving towards safer waste management alternatives. Learn more about Pollution Prevention and TRI.

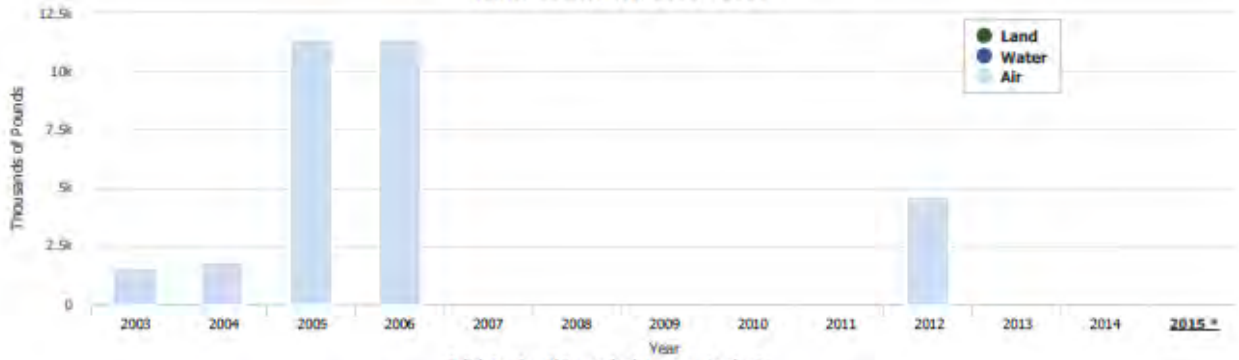
Production-related waste managed in Taylor County, KY, 2003 - 2015



*click to view this year's data as a pie chart.

The following charts represent releases of TRI-covered chemicals to the environment in Taylor County, KY. A "release" of a chemical means that it is emitted to the air or water, placed in some type of land disposal, or transferred off-site for disposal or release.

Total On-site Releases by Environmental Medium
Taylor County, KY, 2003 - 2015



*click to view this year's data as a pie chart.

Top Five Facilities by Total Disposal or Other Releases
Taylor County, KY, 2015

No Data Reported

Top Five Chemicals Released to Air and Water
Taylor County, KY, 2015

No Releases to Air Reported

No Releases to Water Reported

Note: **=Carcinogenic Chemical

Note: Trend graphs were created using the 2001 core chemicals/industries list.

NOTICE — Some previous reports may have returned incomplete results. Click for more info.

2015 TRI Factsheet: County – Wayne, KY

Data Source: 2015 Dataset (released October 2016) (updated November 29, 2016)

The Toxics Release Inventory (TRI) tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. Certain industrial facilities in the U.S. must report annually how much of each chemical is recycled, combusted for energy recovery, treated for destruction, and disposed of or otherwise released on- and off-site. This information is collectively referred to as production-related waste managed.

Map of TRI Facilities in Wayne County, KY

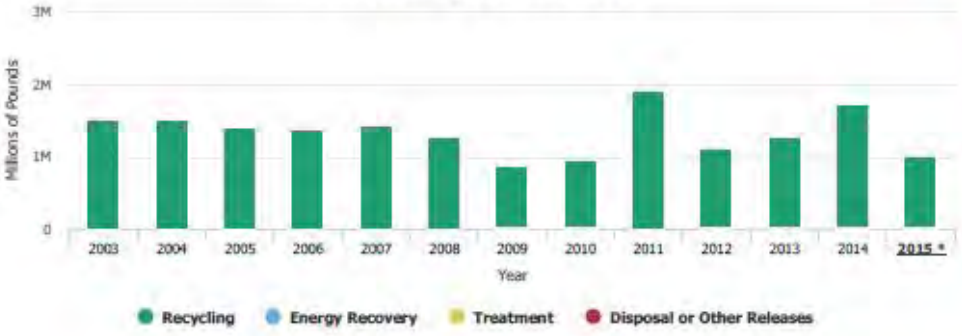
Quick Facts for 2015

	Wayne County, KY	United States
Number of TRI Facilities:	1	21,849
Total Production-Related Waste Managed:	1.0 million lbs	27.2 billion lbs
Total On-site and Off-site Disposal or Other Releases:	28.0 thousand lbs	3.3 billion lbs
Total On-site:	6 lbs	2.8 billion lbs
• Air:	0 lbs	689.6 million lbs
• Water:	6 lbs	191.1 million lbs
• Land:	0 lbs	2.0 billion lbs
Total Off-Site:	28.0 thousand lbs	500.5 million lbs

Kentucky ranks **11 out of 56** states/territories nationwide based on total releases per square mile (Rank 1 = highest releases)

Looking at production-related waste managed over time helps track progress in reducing waste generated and moving toward safer waste management methods. EPA encourages facilities to first eliminate waste at its source (source reduction). For waste that is generated, the preferred management method is recycling, followed by energy recovery, treatment, and as a last resort, disposing of or otherwise releasing the waste. Under the Pollution Prevention Act of 1990, TRI collects information to track industry progress in reducing waste generation and moving towards safer waste management alternatives. Learn more about Pollution Prevention and TRI.

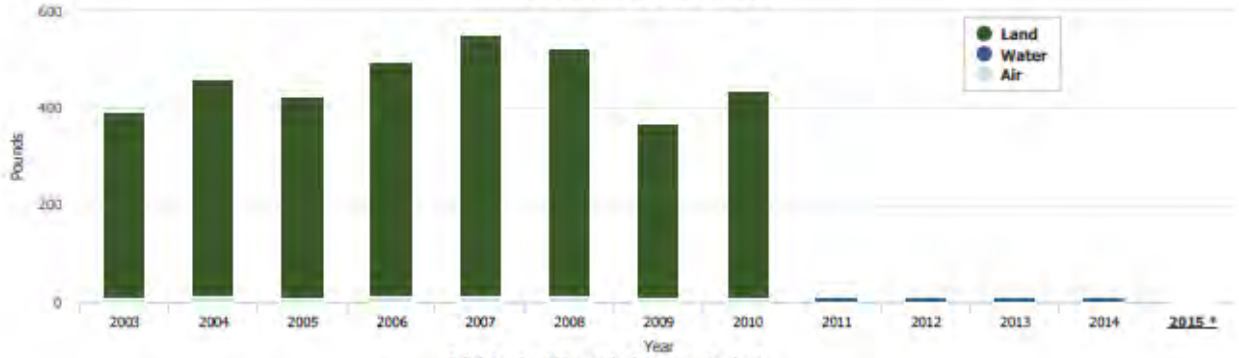
Production-related waste managed in Wayne County, KY, 2003 - 2015



*click to view this year's data as a pie chart.

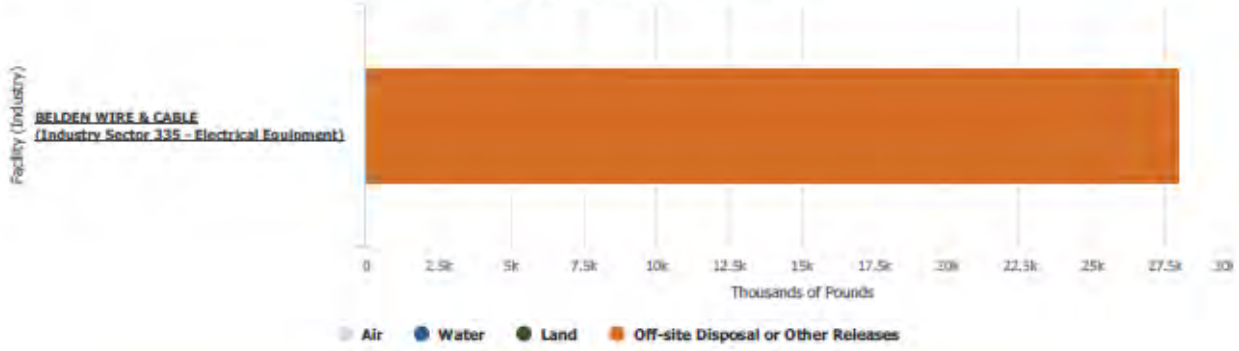
The following charts represent releases of TRI-covered chemicals to the environment in Wayne County, KY. A "release" of a chemical means that it is emitted to the air or water, placed in some type of land disposal, or transferred off-site for disposal or release.

Total On-site Releases by Environmental Medium
Wayne County, KY, 2003 - 2015



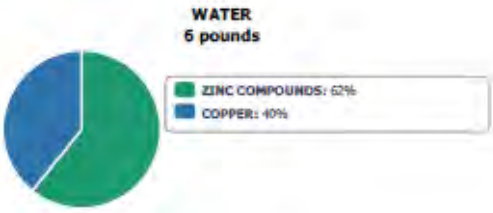
*click to view this year's data as a pie chart.

Top Five Facilities by Total Disposal or Other Releases
Wayne County, KY, 2015



Top Five Chemicals Released to Air and Water
Wayne County, KY, 2015

No Releases to Air Reported



Note: **=Carcinogenic Chemical

Note: Trend graphs were created using the 2001 core chemicals/industries list.

6.3 Repetitive Loss Properties

Nationally, approximately one-fourth of all National Flood Insurance Program (NFIP) claims (almost $9 billion) since 1978 have been paid to "repetitive loss properties," which, in turn, represent only 1.3% of all policies. Repetitive loss scenarios are as follows:

- Repetitive Loss – Properties experiencing two or more losses of at least $1,000 each within any 10-year period since 1978; and
- Severe Repetitive Loss – Single or multi-family residential properties experiencing 4 or more claims, each exceeding $5,000, or properties with 2 separate claims with the cumulative dollar amount exceeding the market value of the property. Either scenario must have at least 2 claims occurring within 10 years of each other

Repetitive Loss properties are those for which two or more losses of at least $1,000 each have been paid under the NFIP within any 10-year period since 1978. FEMA reports that a total of 1 property in the Lake Cumberland Region (Pulaski County) has experienced repetitive losses. This is a business property listed as a non-residential property. Losses occurred in 2006, 2009, 2010, and 2015. This is a business property listed as a non-residential Severe Repetitive Loss property. It should be noted that 1974 Privacy Act requirements limit data that is allowed to be included.

6.4 High Hazard Areas

As a summary of overall vulnerability for the region, the Lake Cumberland Hazard Mitigation Regional Planning Committee has established a number of areas in the Region as being prone to hazards associated with natural disasters. Areas were selected based on the Regional knowledge offered by Region personnel, as well as mapping efforts conducted through the use of GIS and Flood Insurance Rate Maps (FIRMs). The following areas represent subjective, expert interpretations of areas of high priority for future mitigation actions. These high hazard areas were not incorporated into the formal prioritization of proposed mitigation activity specified in this plan update's Mitigation Strategy, however. These areas' exclusion from the formal prioritization mechanism of the Mitigation Strategy can be interpreted as follows: The Mitigation Strategy outlined for this update includes prioritizing specified mitigation actions according to a Low-Medium-High scale based primarily upon subjective input after prior categorization of specified actions into "Funding Available" vs. "Funding Not Available" categories. The Mitigation Strategy further clarifies that once specified mitigation actions are prioritized as "High" within the "Funding Available" category, FEMA's STAPLE+E will be used to further prioritize the "Funding Available- High" projects, assuming such prioritization is needed amidst competing mitigation actions at the time of their potential implementation. Identifying the following high hazard areas, however, does not mean that specific mitigation actions to address these high hazard areas also were developed or that this planning process was the most appropriate time to develop specific mitigation actions addressing the below high hazard areas. Rather, the below list of high hazard areas implies a mitigation action list of latent projects separate from the prioritized list of actions specified in this plan update's Mitigation Strategy. The implication from the high hazard area specification is that *if* a mitigation project addressing the area does manifest and *if* the manifest project is feasible or desirable according to FEMA's STAPLE+E criteria, then this newly manifested project will take higher priority than those mitigation actions labeled "Funding Available" and "High" in classification.

Although these areas are subject to hazards such as wind, fire, earthquakes, and snow, these types of hazards have the potential to affect the entire Region. High hazard areas were selected because they experience Regionalized damage associated with flooding and other hazard problems.

A description of each high hazard area is provided in the following sections, as well as expected causes and potential mitigation issues.

Adair County/Columbia

Milltown – Flooding
An area of concern is a small, isolated area in the vicinity of Milltown and KY 758 and KY 959. Russell Creek connects this area with the rest of the Green River drainage below Green River Lake Dam. Heavy rain events will typically inundate the area causing local flooding.

Cane Valley – Historical Tornado and High Wind Risk Alley
Though there may undoubtedly be specific meteorological reasons why these apparent alleys exist, one hypothesis is the smaller alleys are related to topographic features that may modulate environmental conditions in ways that favor development of these types of paths for tornadoes and high straight-line winds.

Canaan Land Road; Corbin Richards Road – Flooding
Roadway flooding and bridge damage occur in this area.

Bulk Fertilizer Storage Locations – Hazardous Materials
Fire and explosion risk location.

Lindsey Wilson Football Stadium – Hazardous Materials (HAZMAT) Risk
This location was included due to risk of a HAZMAT incident in proximity to its location next to Cumberland Parkway.

Green River Lake
Potential for toxins from algae bloom and contamination risk due to watershed and stream flow.

Russell Creek Drainage
This location has a potential HAZMAT path that would travel through the City of Columbia and high-occupancy areas.

Pipe Line Explosion – Terrorism and Fire Accident
Approximately 400 miles of pipelines located within and through Adair County. (No pipeline mapping is available for public display.)

Casey County/Liberty

US 127 Business District – Flooding
Two 100-year events have taken place, in 2010 and 2015. The past flood events have occurred between the US 127/KY 70 and Trammel Street.

KY 198/Mill Dam Road – Flooding
Another area of concern is a small, isolated area in Middleburg in the vicinity of the KY 198 and Mill Dam Road intersection. The Green River channel passes through this area.

Yosemite/KY 198/KY 70 – Flooding
Another area of concern is in the Yosemite in the vicinity of the KY 198 and KY 70 intersection. The Green River channel passes near this area.

Dunneville/Red Hill Road (KY 1275)/Riffe Creek – Flooding
Another area of concern is the Dunneville/Red Hill Road (KY 1275)/Riffe Creek in the Dunneville. The Green River channel passes near the area.

Clinton County/Albany
There was no single cite identified as uniquely vulnerable. Any natural hazard that strikes anywhere in Clinton County is assumed to have equally deleterious effects. The entirety of Clinton County is a "High Hazard Area."

Cumberland County/Burkesville
Keen Street – Flooding
The past flood events have occurred between the Lower River Street and Keen Street and KY 90 and Keen Street. The flooding appears to be drainage related.

Green County/Greensburg
Shady Lane – Manhole Flooding
Flooding in the area of a wastewater manhole located in the area below the Greensburg Wastewater Treatment Plan at 127 Shady Lane

Russell Creek Road – Flooding
Flooding caused by a low-water bridge on Russell Creek Road

Edmonton Road – Flooding
Flooding around the Goose Creek area around the 6500 to 7200 address range of Edmonton Road

Pitman Creek – Flooding
All areas of Pitman Creek are prone to flooding.

Green River – Flooding
Low-lying areas of the Green River

McCreary County

College Street (KY 3253) and Main Street (N KY 1651) – Flooding
The road floods during heavy rain. Over half of the roadway, including both lanes and a distance almost to the bridge on Cora Cooper Road, is impassable during heavy rains. The hazard is caused by no drainage on either side of the roadway until the bridge. Potential solutions install ditch lines on either side of the roadway and culverts giving slope for rainwater to run off.

Marsh Creek Area, Cal Hill Road (KY 592-1470) – Flooding
Roadway and farmland floods during heavy rain. Flooding causes impassable street and the flooding of farms. Cause of flooding is low-lying area in county within flood zone. Possible solutions are to increase culvert sizes and to keep ditch-lines clean for rainwater run-off.

Pulaski County/Somerset/Eubank/Science Hill/Ferguson/Burnside
There was no single cite identified as uniquely vulnerable. Any natural hazard that strikes anywhere in Pulaski County is assumed to have equally deleterious effects. The entirety of Pulaski County is a "High Hazard Area."

Russell County/Jamestown/Russell Springs
Mount Eden and KY 80 – Flooding
An area of concern is a small, isolated area in the vicinity of Mt. Eden and KY 80.

Old Sano Road and KY 80 – Flooding
Road floods during heavy rain

Jamestown, Virginia Avenue – Flooding
Road floods during heavy rain

KY 76 and US 127 (centered in this area) – High Winds
This area was identified by Committee members as of high risk to straight-line winds. Straight-line wind occurrence, location, and/or timing still is uncertain.

Taylor County/Campbellsville
Miller Park Area – Flooding
Road floods during heavy rain along creek

Buckhorn Creek (Roberts Road to Friendship Pike) – Flooding
Flooding during heavy rain along creek

Wise Road – Flooding
Flooding during heavy rain along Wise Creek from Long Branch to KY 70

Green Acres Subdivision – Flooding
Flooding during heavy rain along backside of subdivision

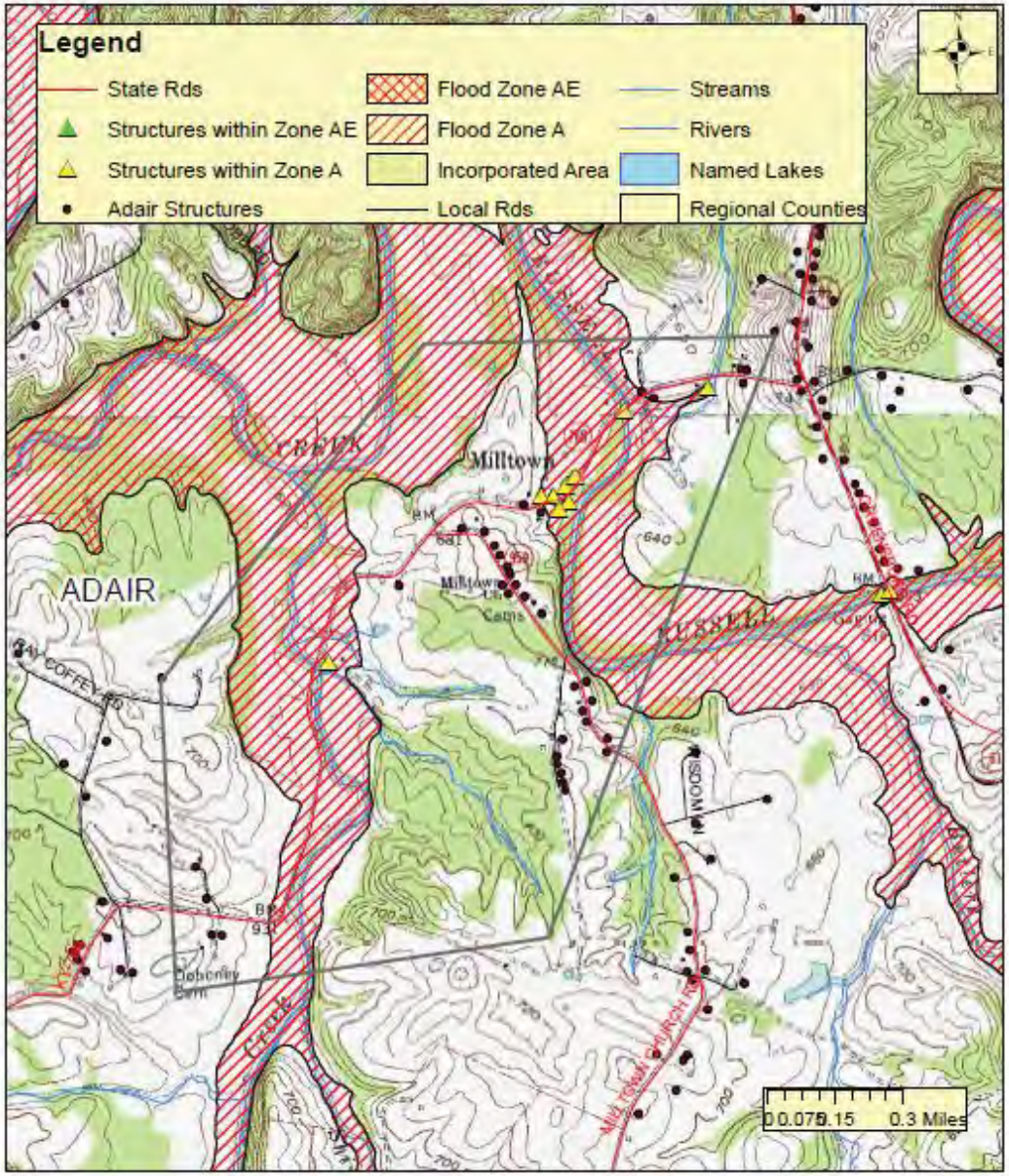
Wayne County/Monticello
Asbury Road – Flooding
This is a low-lying area with poor drainage. Flooding occurs during heavy rains and impacts the area's roadway, parking lots, and basements. This area needs drainage improvements.

North Main Street/KY 795 – Flooding
This is a low-lying area with under-sized drainage infrastructure. Flooding occurs 4-5 times annually during heavy rains and impacts areas of Main Street and the Monticello Fire Department parking lot. This area needs drainage improvements.

Map 6.4(1a)
LCADD Region
Adair County
High Hazard Areas
Milltown

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

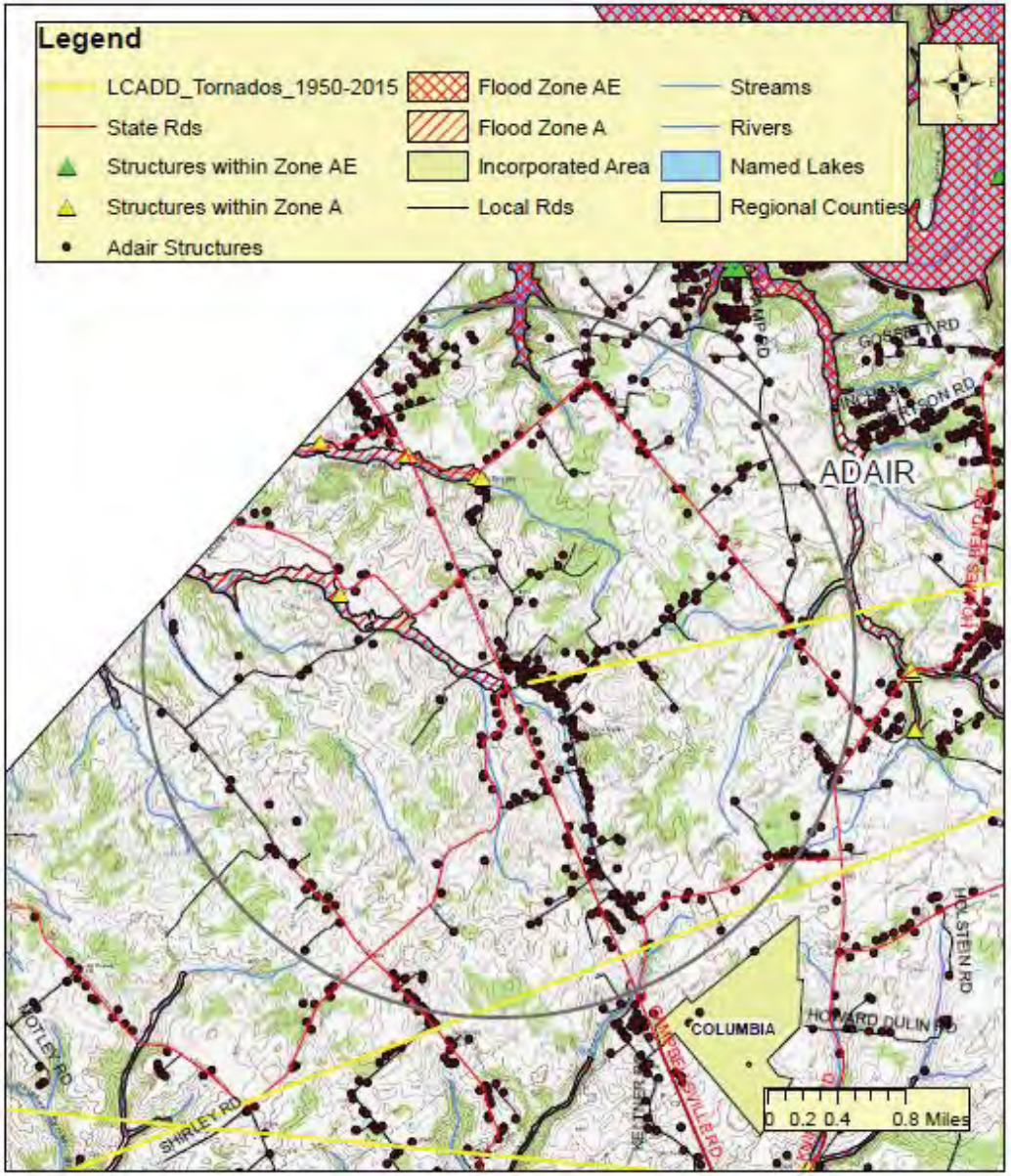
Prepared By:
Lake Cumberland Area Development District



Map 6.4(1b)
LCADD Region
Adair County
High Hazard Areas
Cane Valley

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

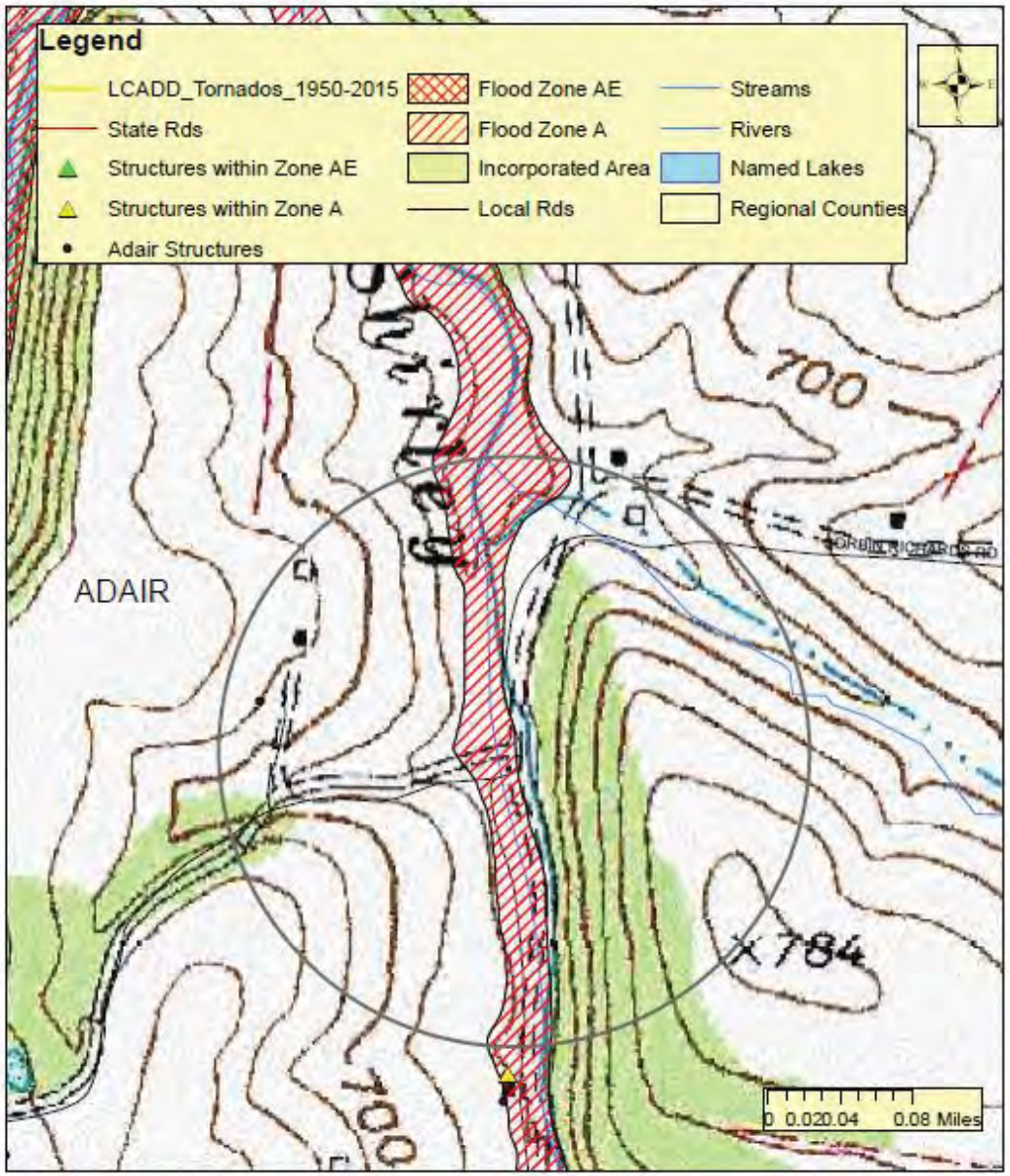
Prepared By:
Lake Cumberland Area Development District



Map 6.4(1c)
LCADD Region
Adair County
High Hazard Areas
Cannan Land Rd. &
Corbin Richards Rd.

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

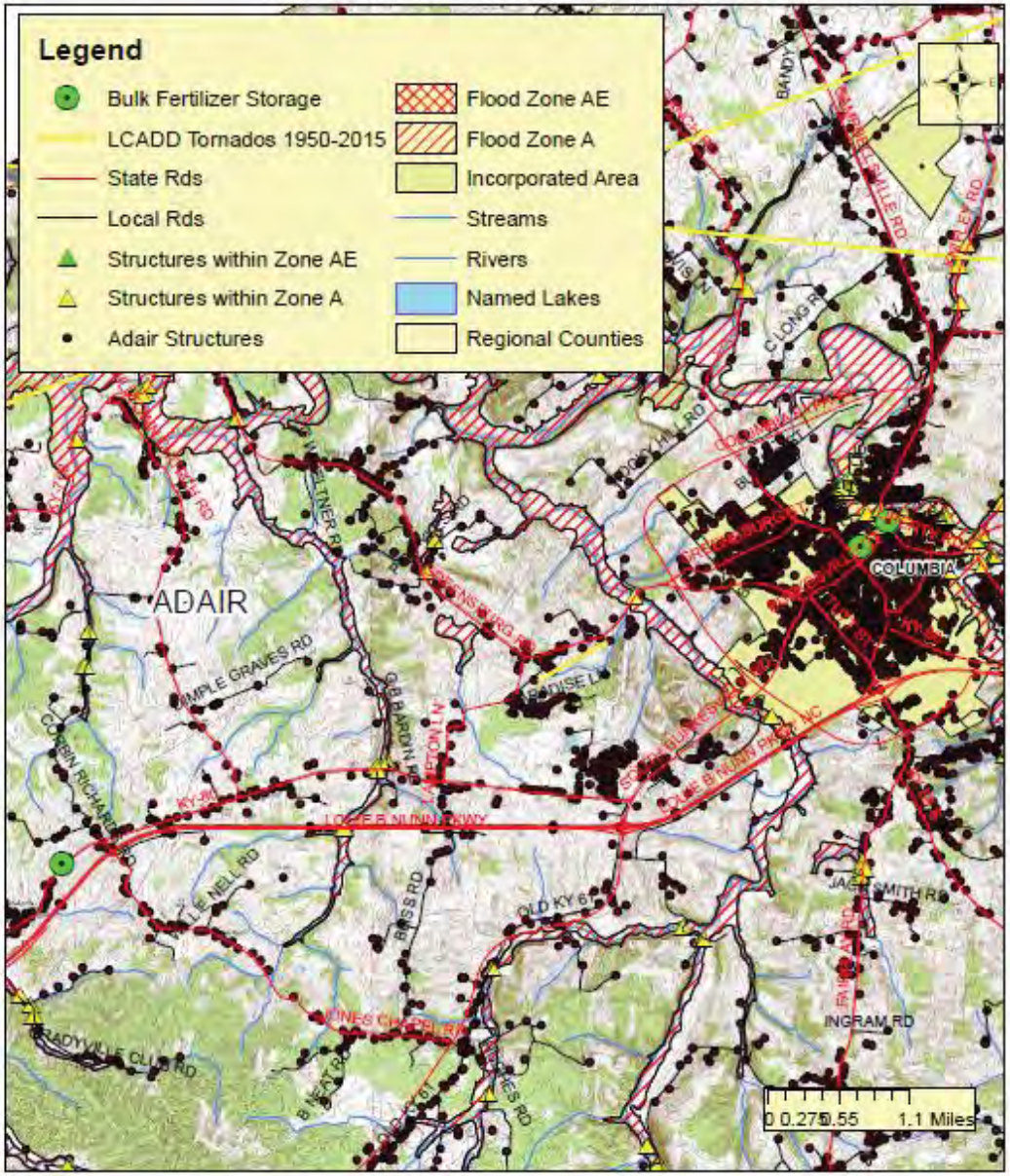
Prepared By:
Lake Cumberland Area Development District



Map 6.4(1d)
LCADD Region
Adair County
High Hazard Areas
Bulk Fertilizer Locations

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

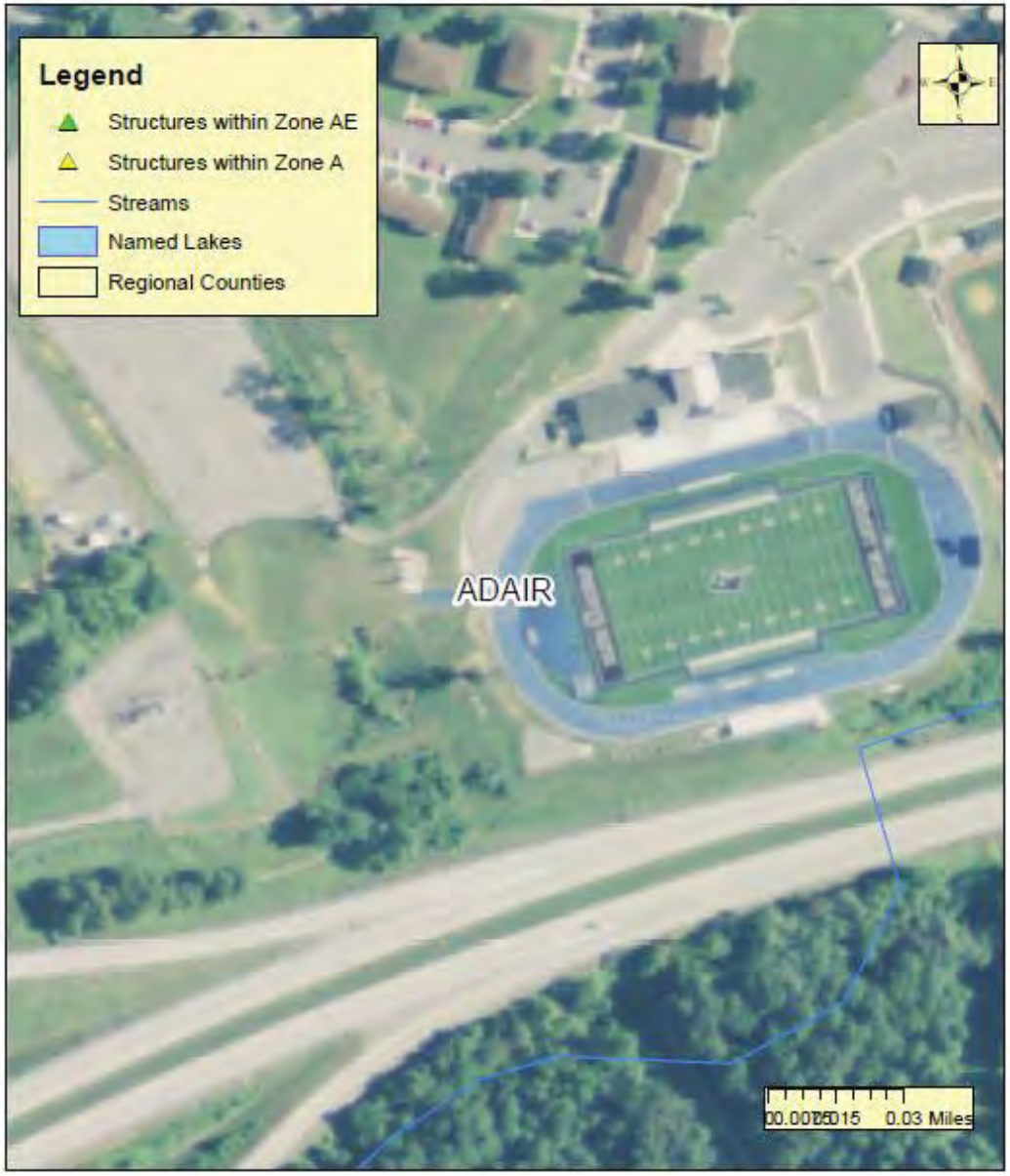
Prepared By:
Lake Cumberland Area Development District



Map 6.4(1e)
LCADD Region
Adair County
High Hazard Areas
LWC Football Stadium
Haz-Mat Risk

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

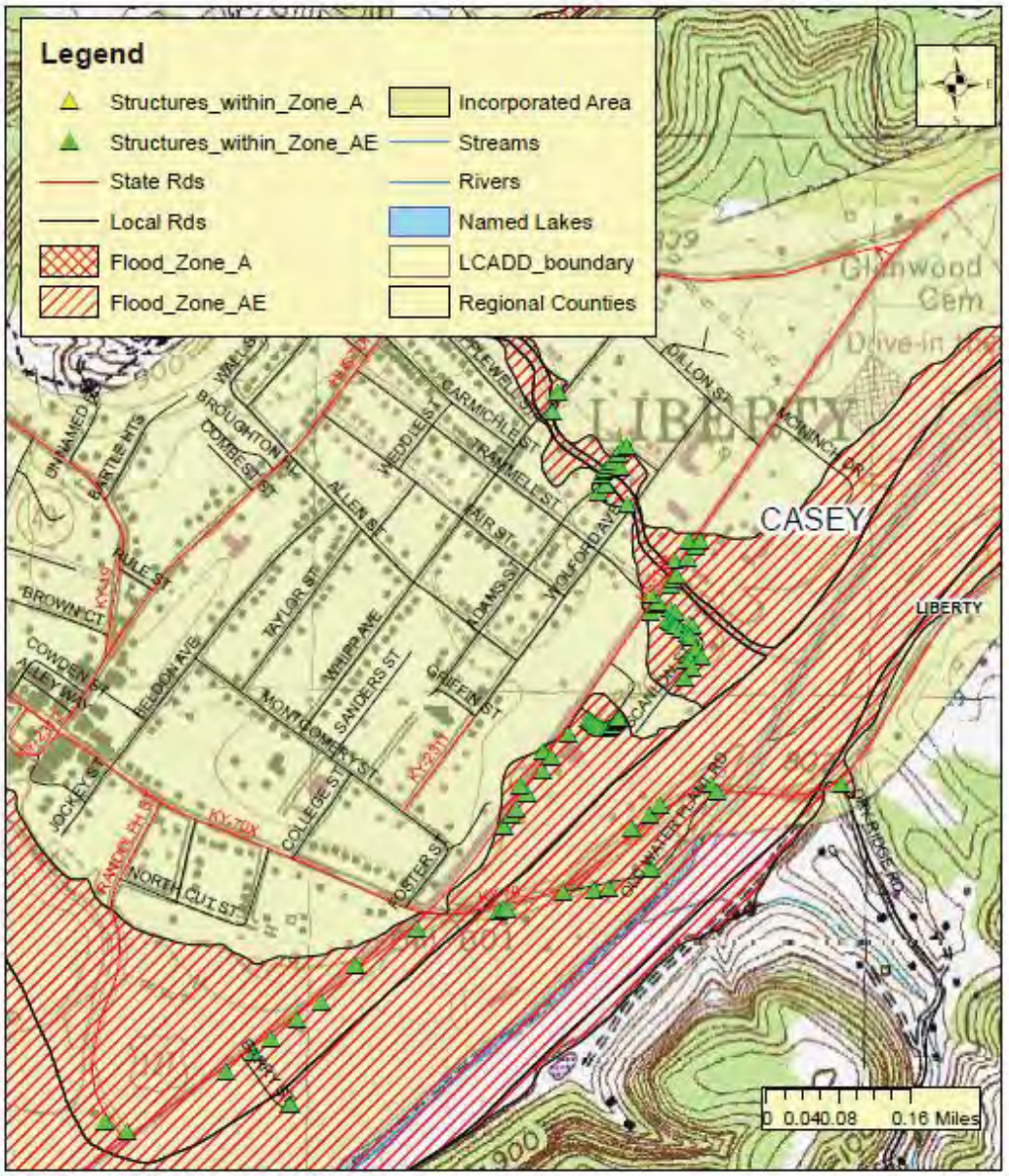
Prepared By:
Lake Cumberland Area Development District



Map 6.4(2a)
LCADD Region
Casey County
High Hazard Areas
US 127 Business District
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

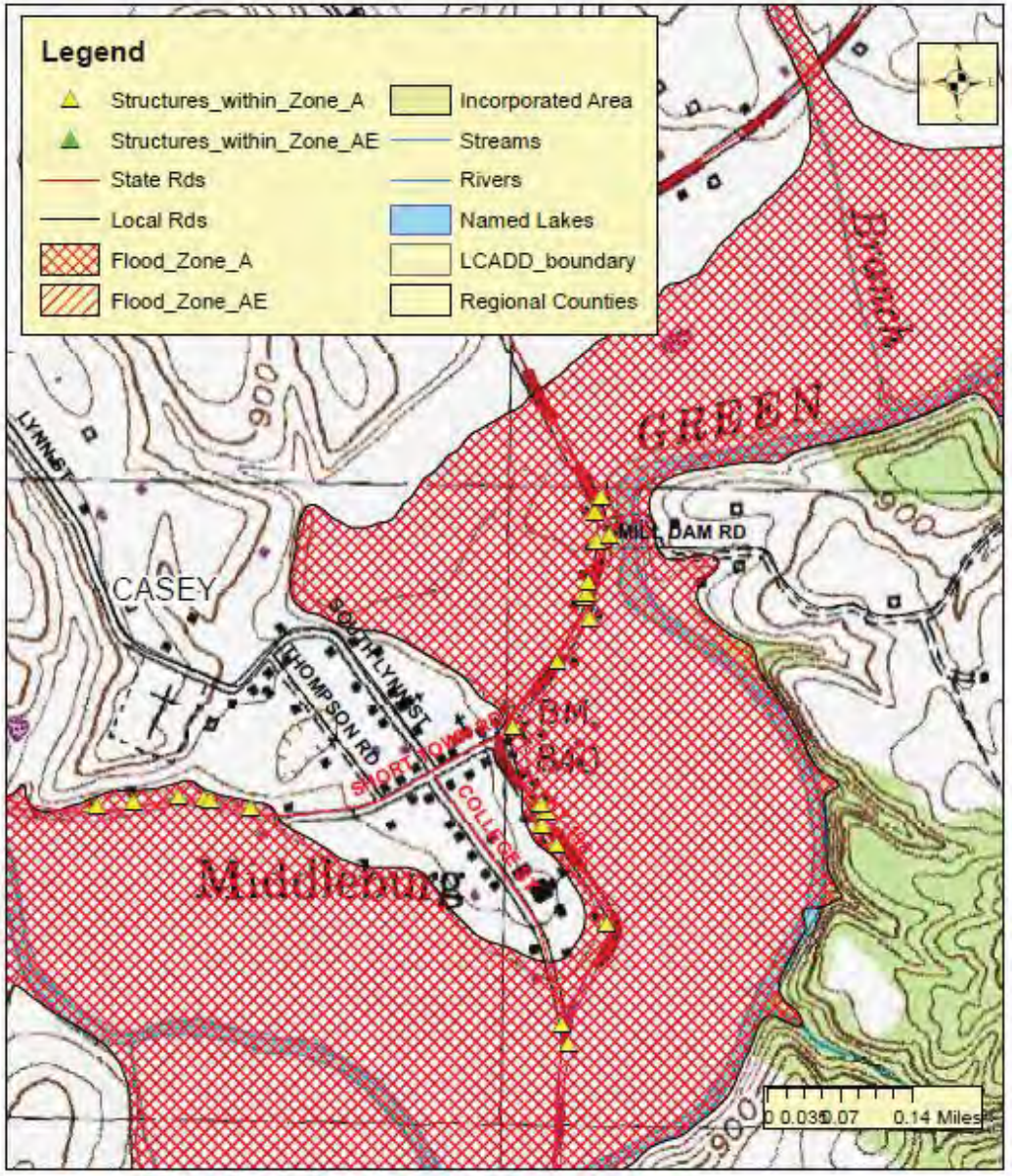
Prepared By:
Lake Cumberland Area Development District



Map 6.4(2b)
LCADD Region
Casey County
High Hazard Areas
KY 198 / Mill Dam Rd.
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

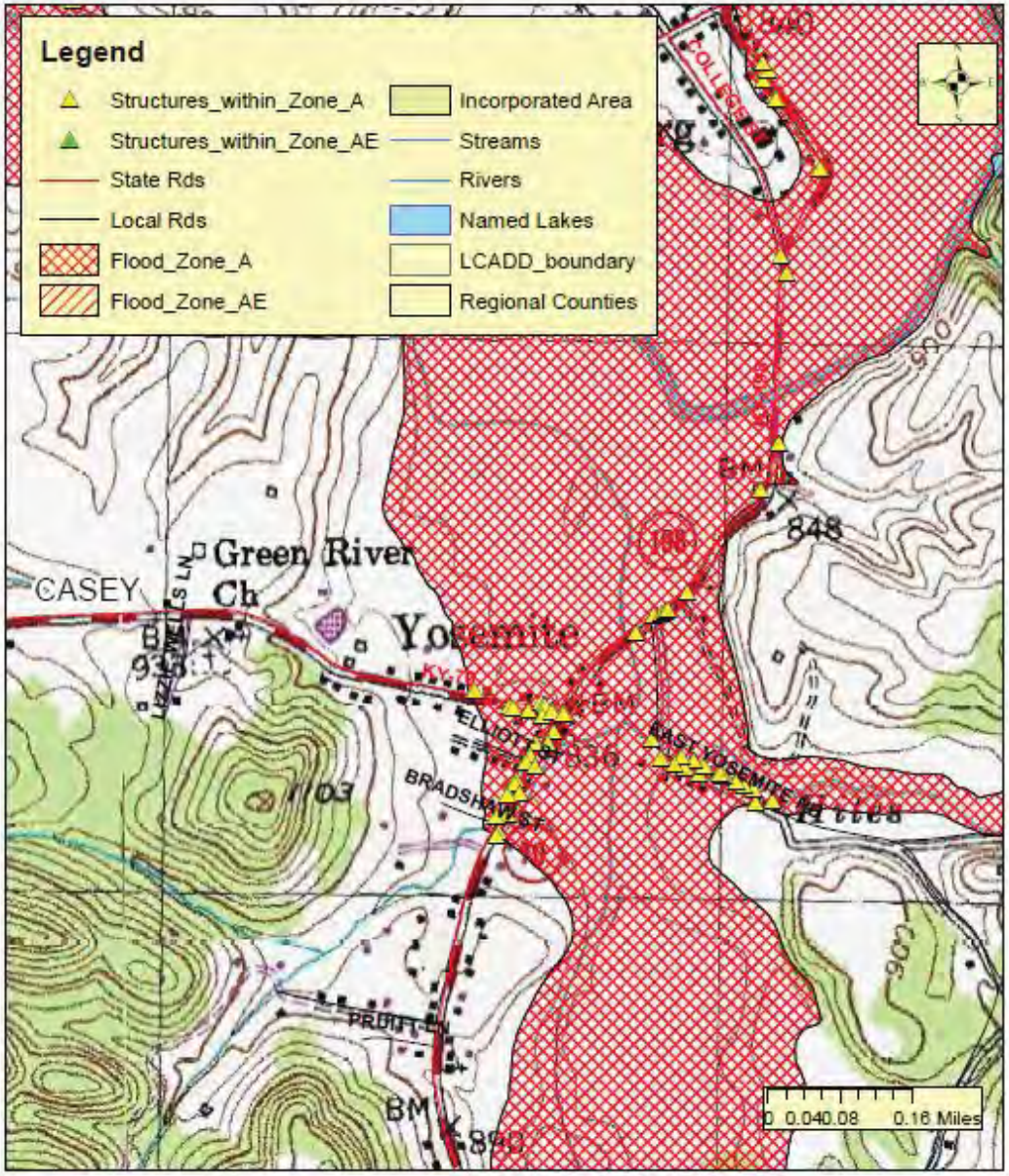
Prepared By:
Lake Cumberland Area Development District



Map 6.4(2c)
LCADD Region
Casey County
High Hazard Areas
Yosemite / KY 198 / KY 70
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retrelved Jan. 2016

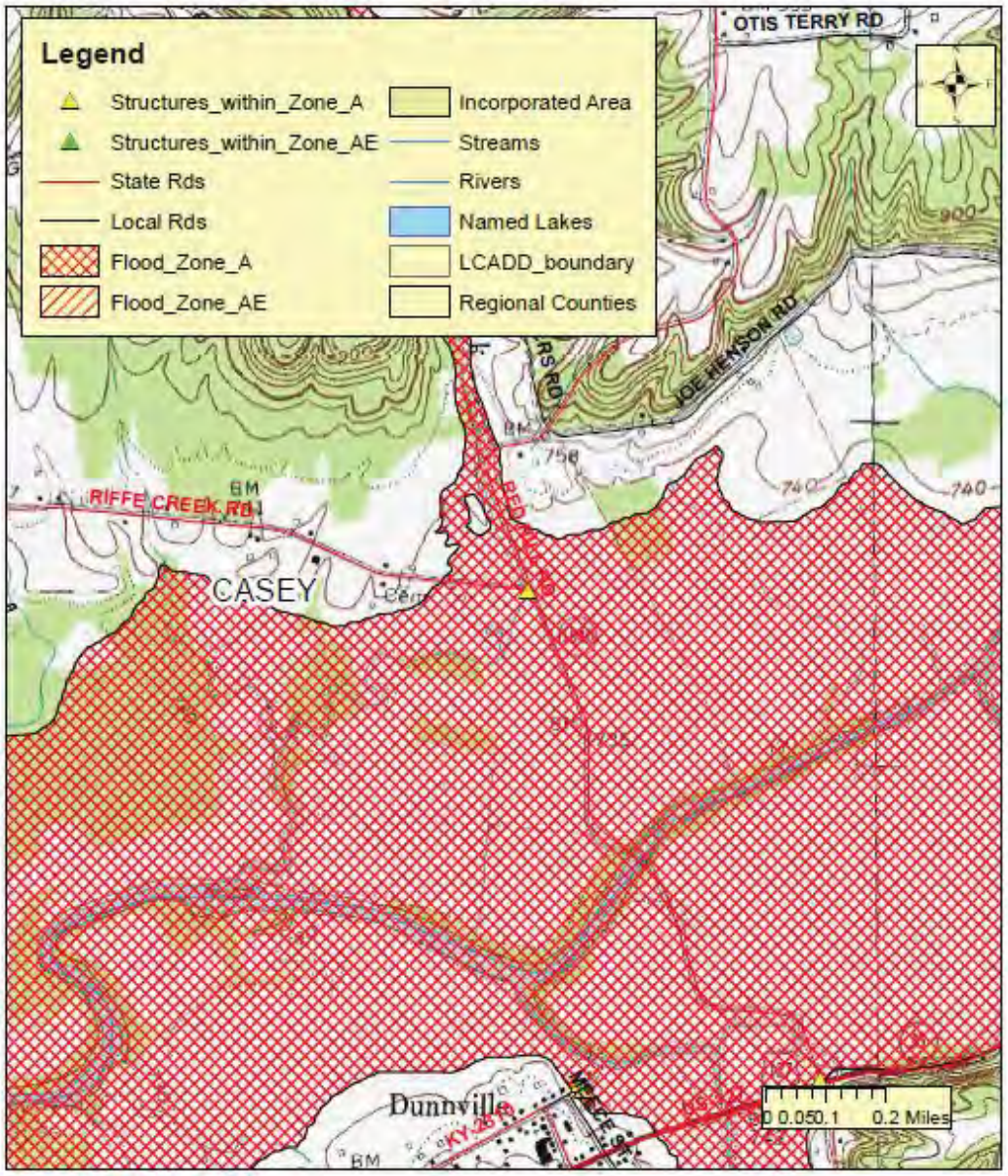
Prepared By:
Lake Cumberland Area Development District



Map 6.4(2d)
LCADD Region
Casey County
High Hazard Areas
Dunnville
Red Hill Rd. / Ruffe Creek Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

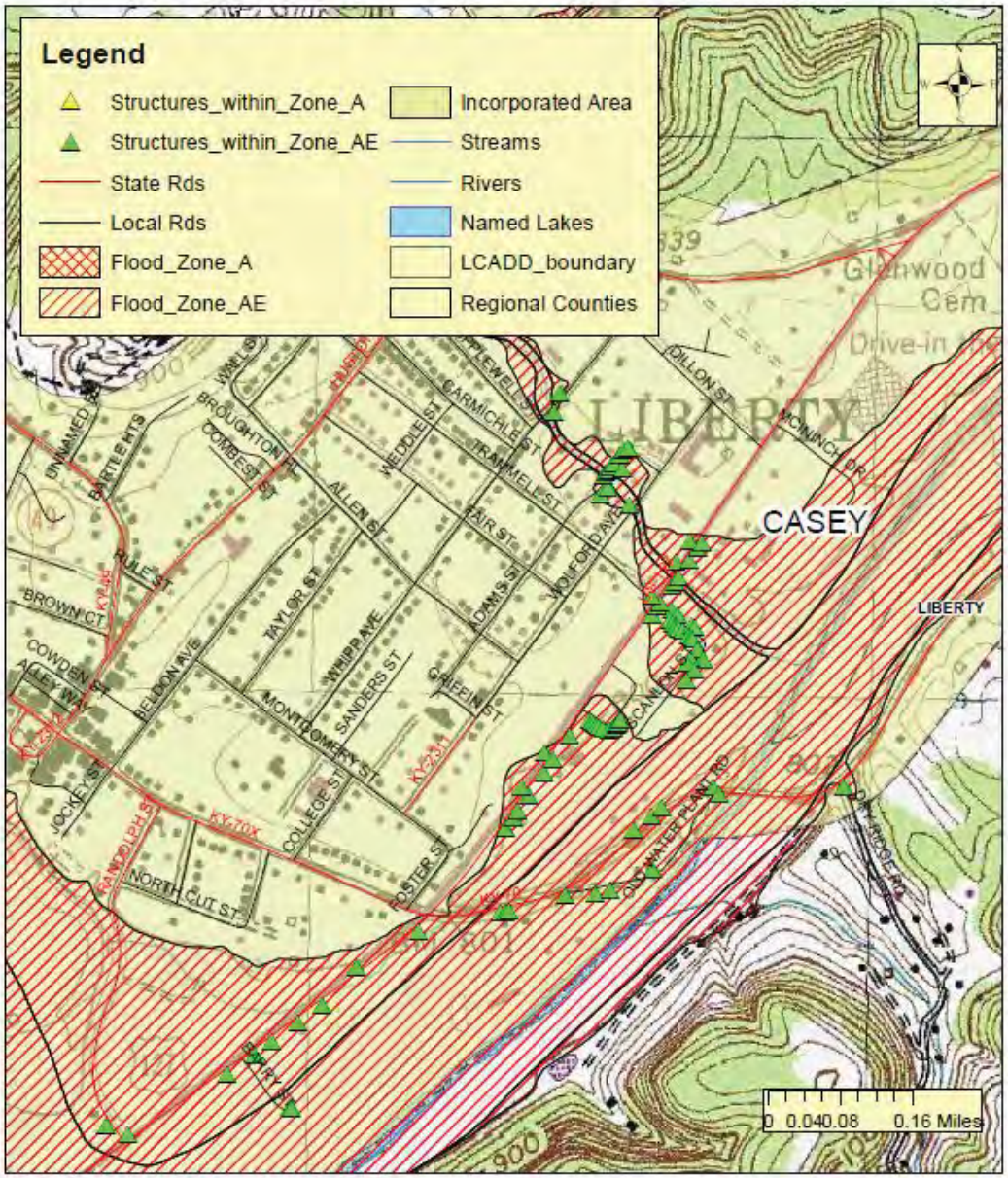
Prepared By:
Lake Cumberland Area Development District



Map 6.4(2a)
LCADD Region
Casey County
High Hazard Areas
US 127 Business District
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

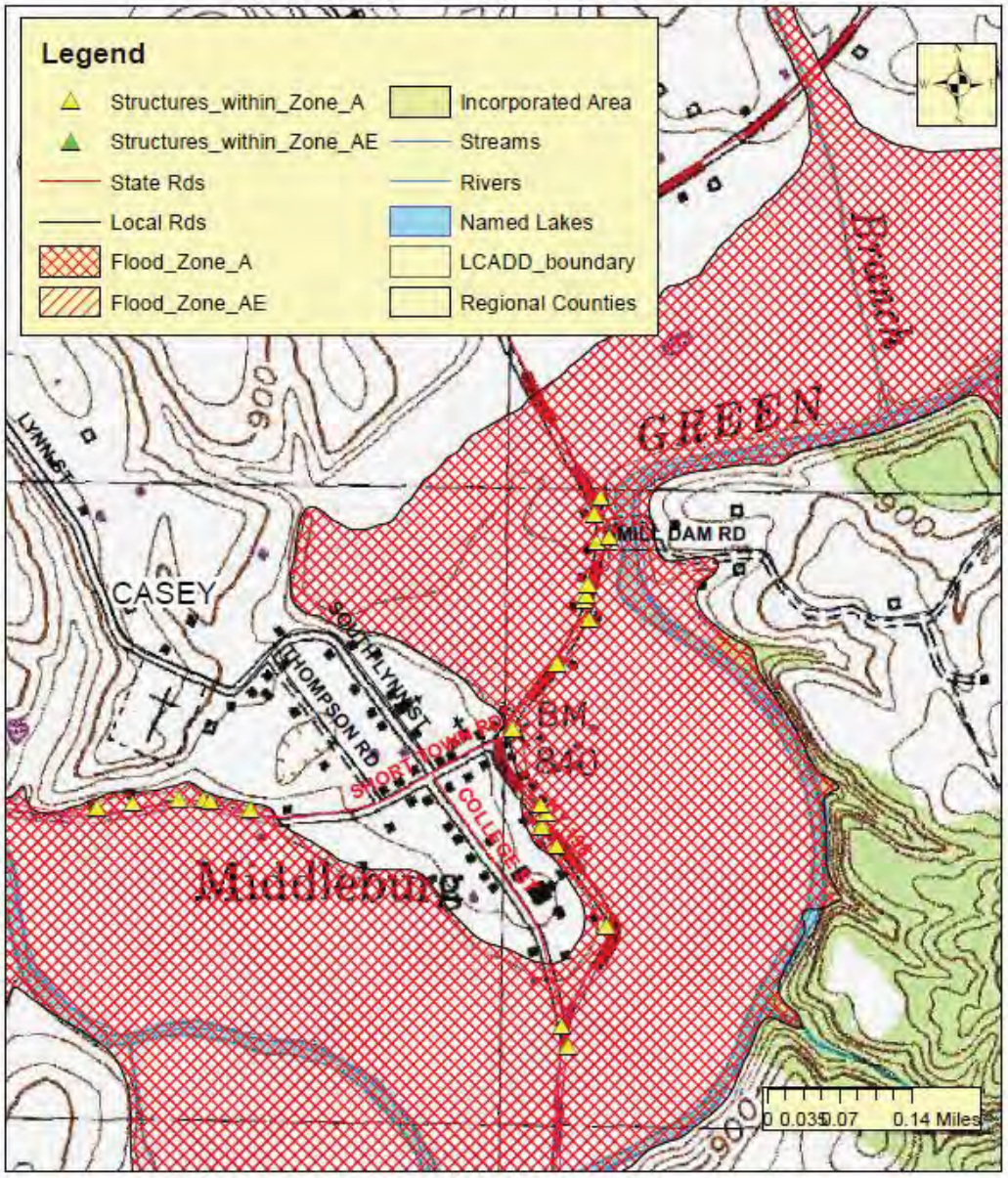
Prepared By:
Lake Cumberland Area Development District



Map 6.4(2b)
LCADD Region
Casey County
High Hazard Areas
KY 198 / Mill Dam Rd.
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

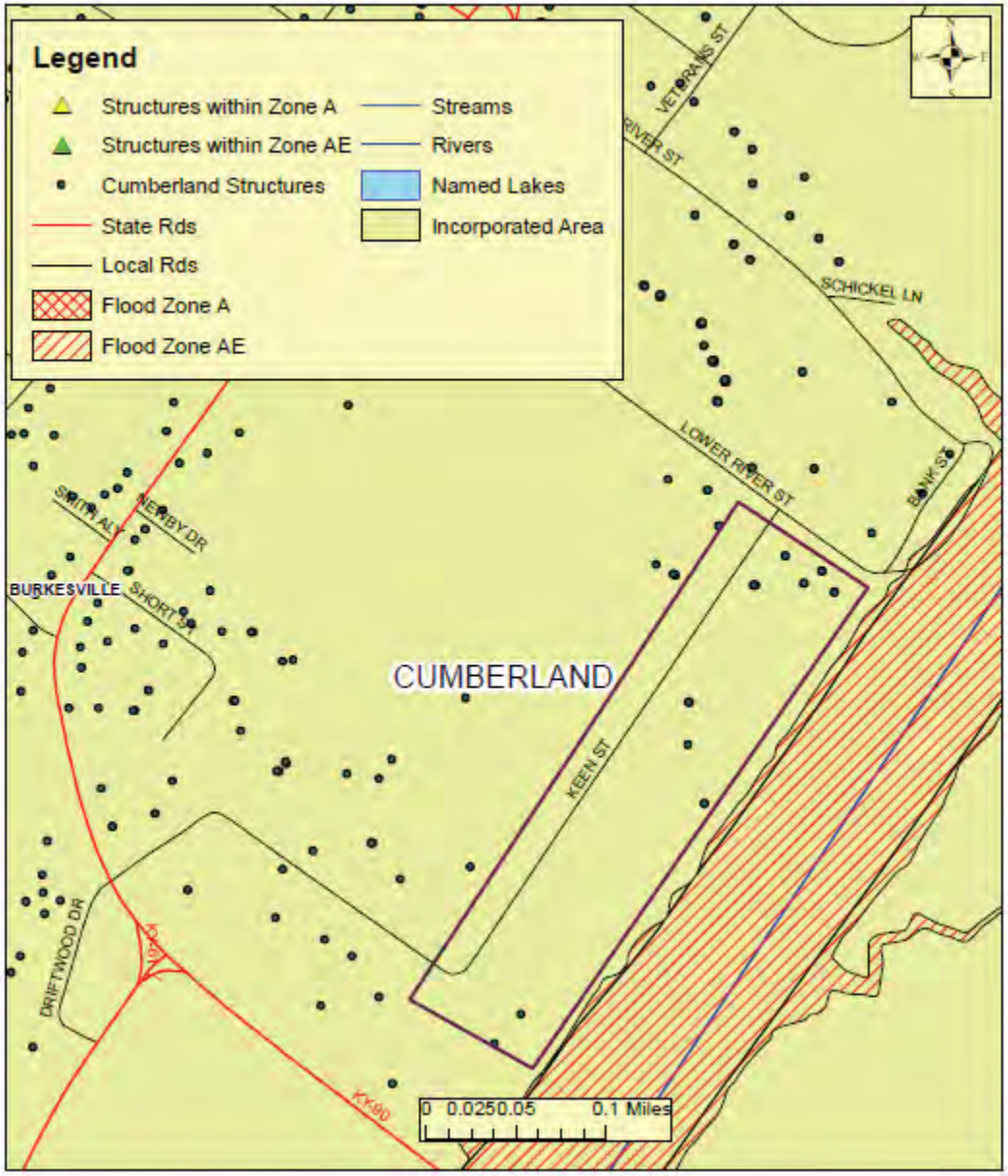
Prepared By:
Lake Cumberland Area Development District



Map 6.4(4a)
LCADD Region
Cumberland County
Burkesville
High Hazard Areas
Keen Street
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

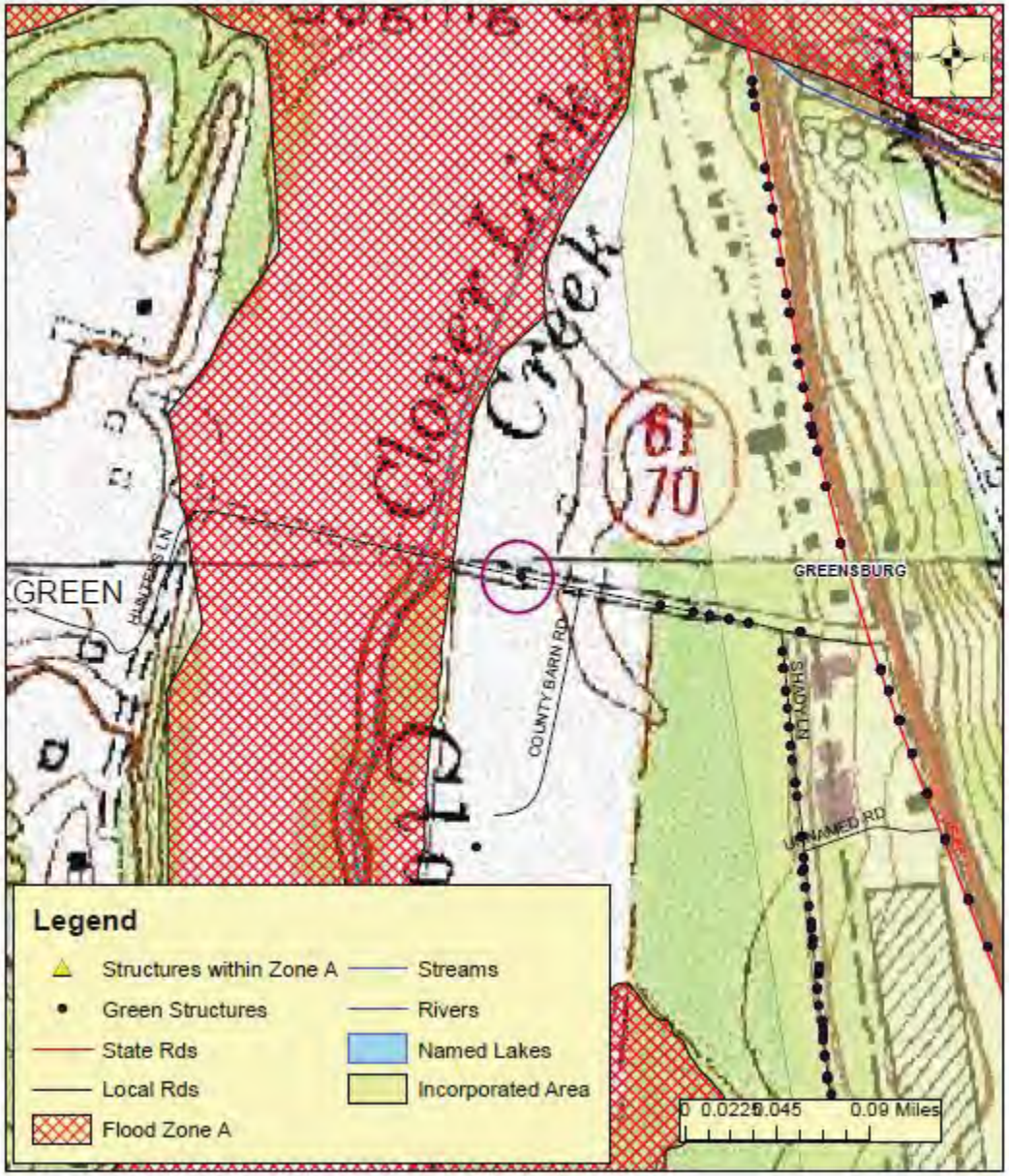
Prepared By:
Lake Cumberland Area Development District



Map 6.4(5a)
LCADD Region
Green County
Greensburg
High Hazard Areas
Shady Lane
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee Input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

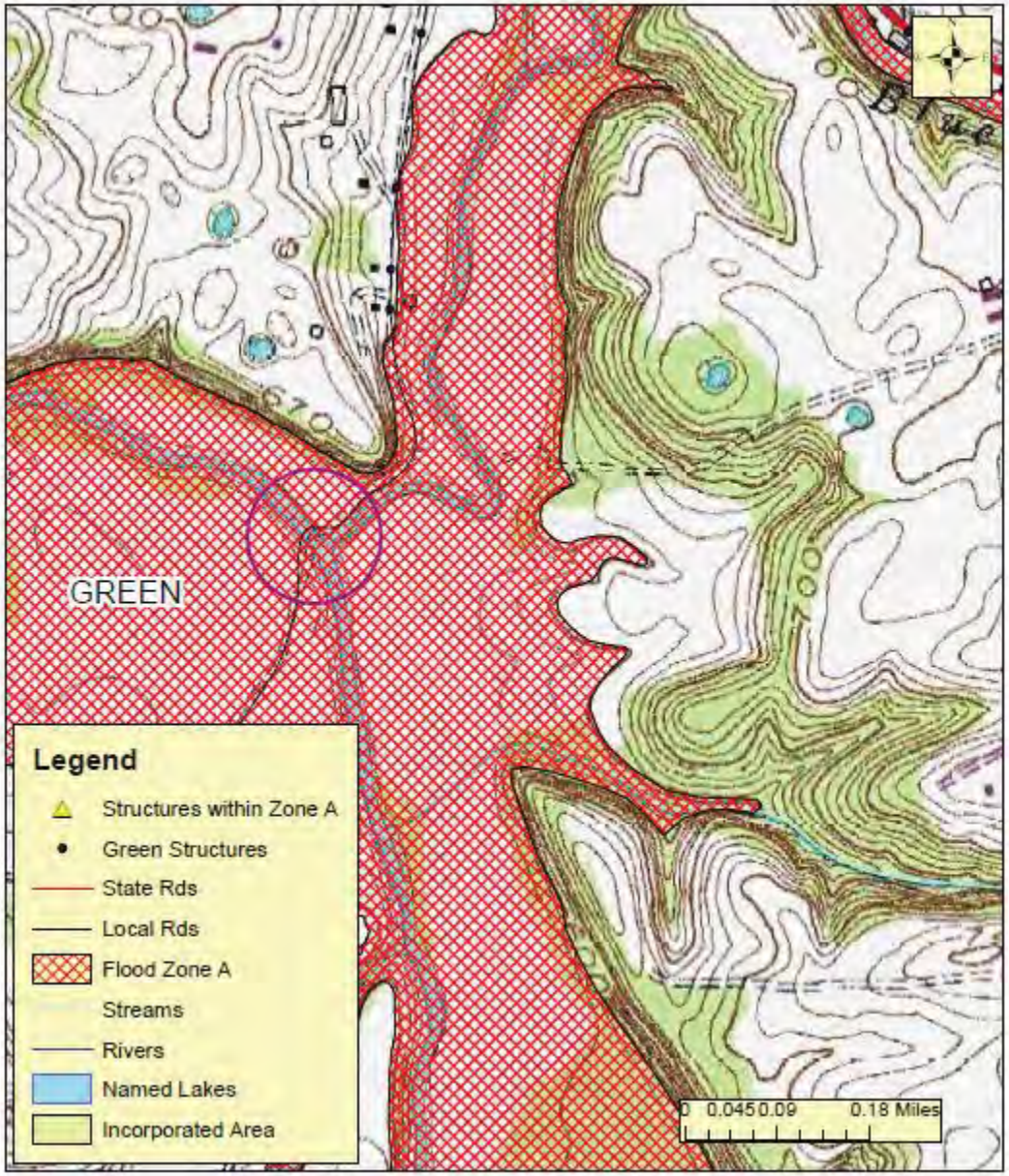
Prepared By:
Lake Cumberland Area Development District



Map 6.4(5b)
LCADD Region
Green County
High Hazard Areas
Russell Creek Road
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

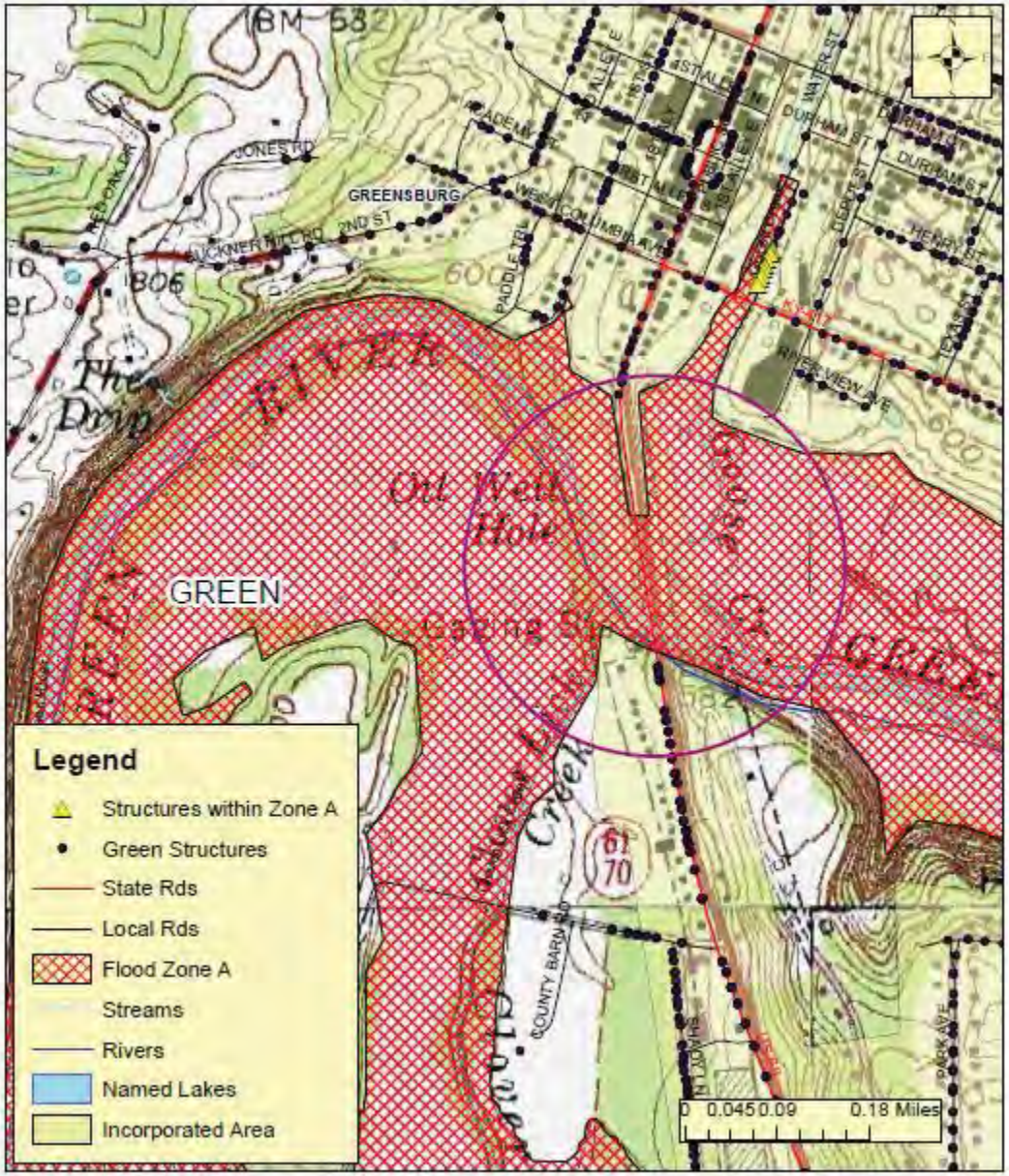
Prepared By:
Lake Cumberland Area Development District



Map 6.4(5c)
LCADD Region
Green County
High Hazard Areas
Edmonton Road
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

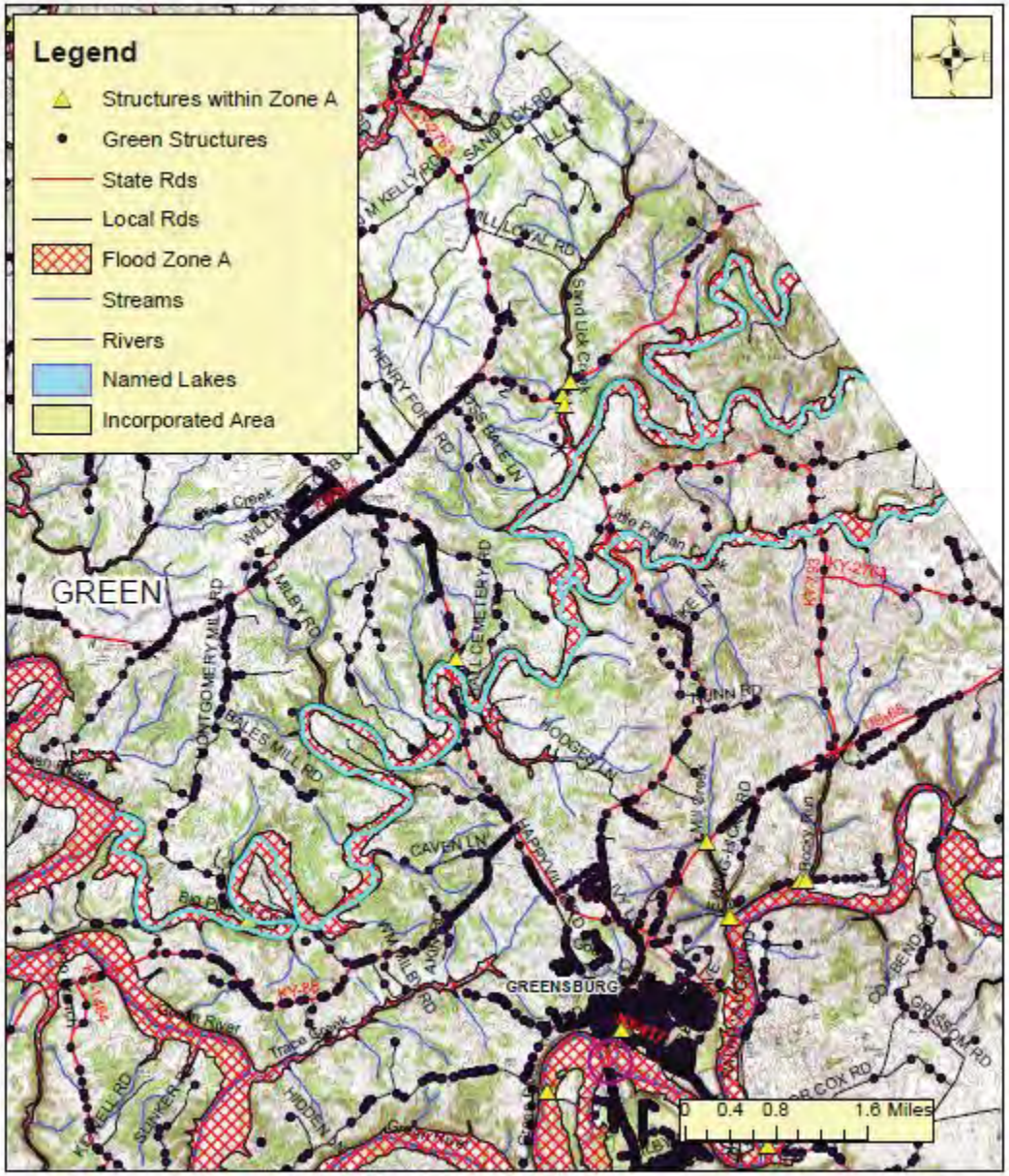
Prepared By:
Lake Cumberland Area Development District



Map 6.4(5d)
LCADD Region
Green County
High Hazard Areas
Pitman Creek
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

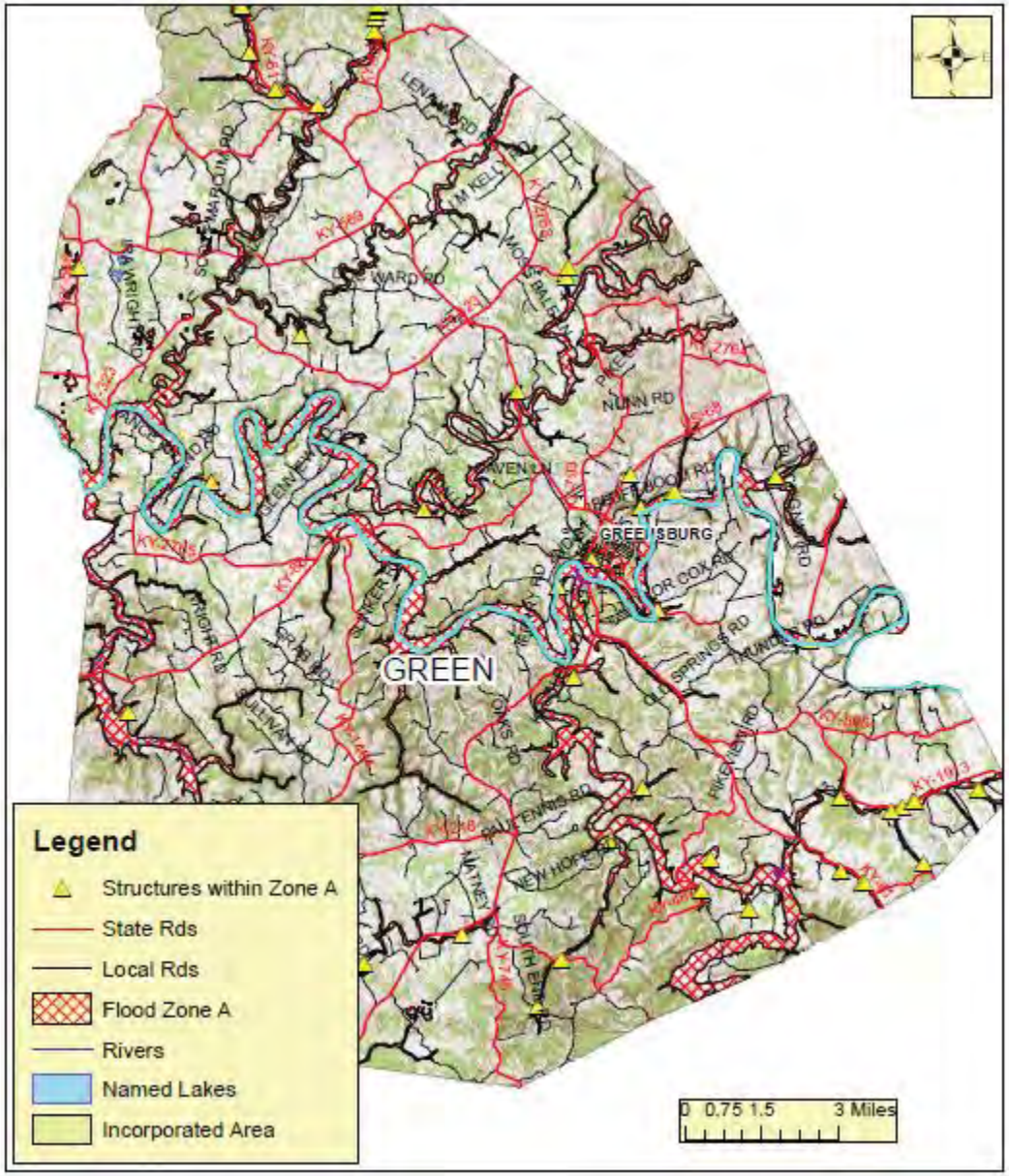
Prepared By:
Lake Cumberland Area Development District



Map 6.4(5e)
LCADD Region
Green County
High Hazard Areas
Green River
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

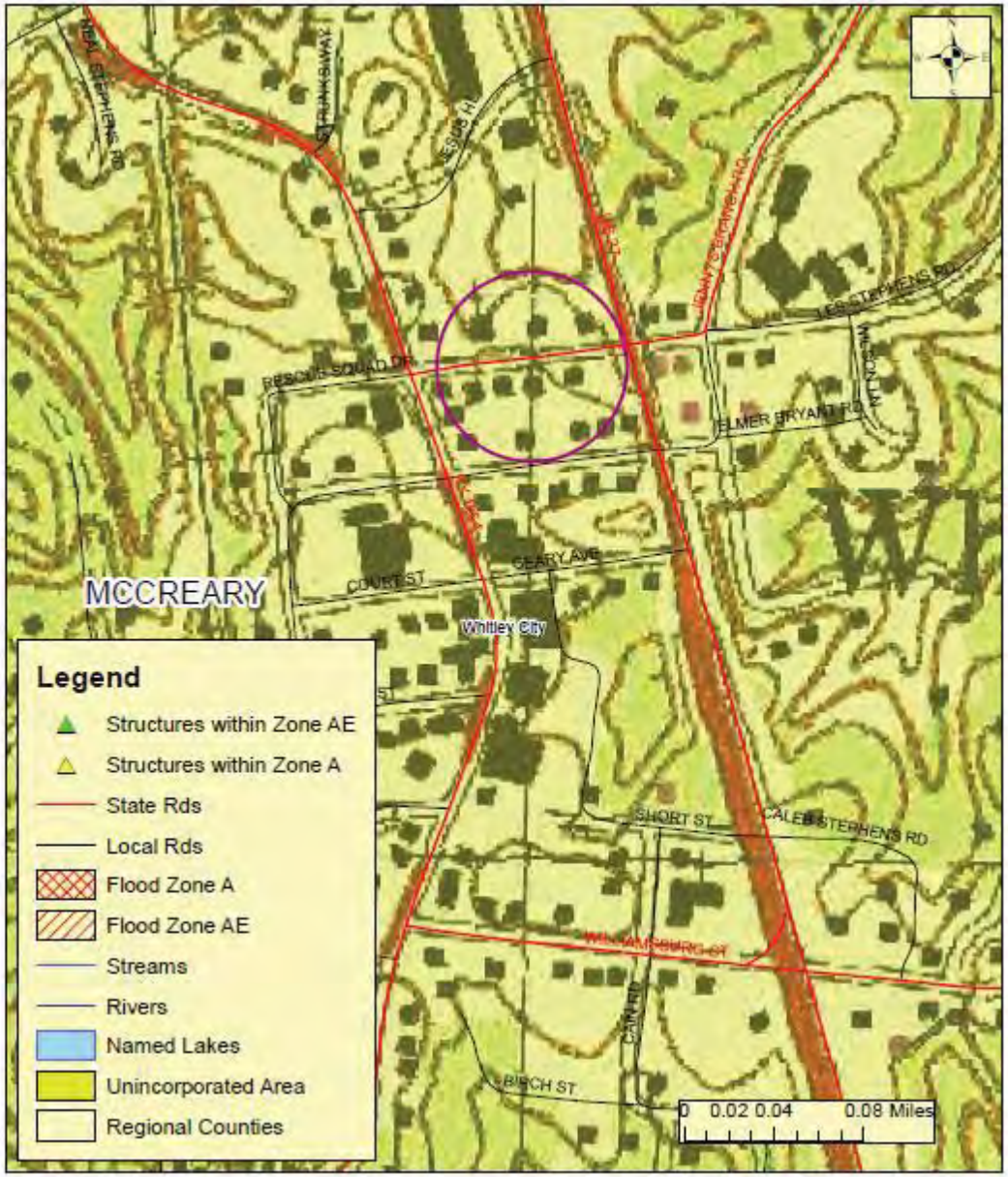
Prepared By:
Lake Cumberland Area Development District



Map 6.4(6a)
LCADD Region
McCreary County
High Hazard Areas
College Street and Main St. Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

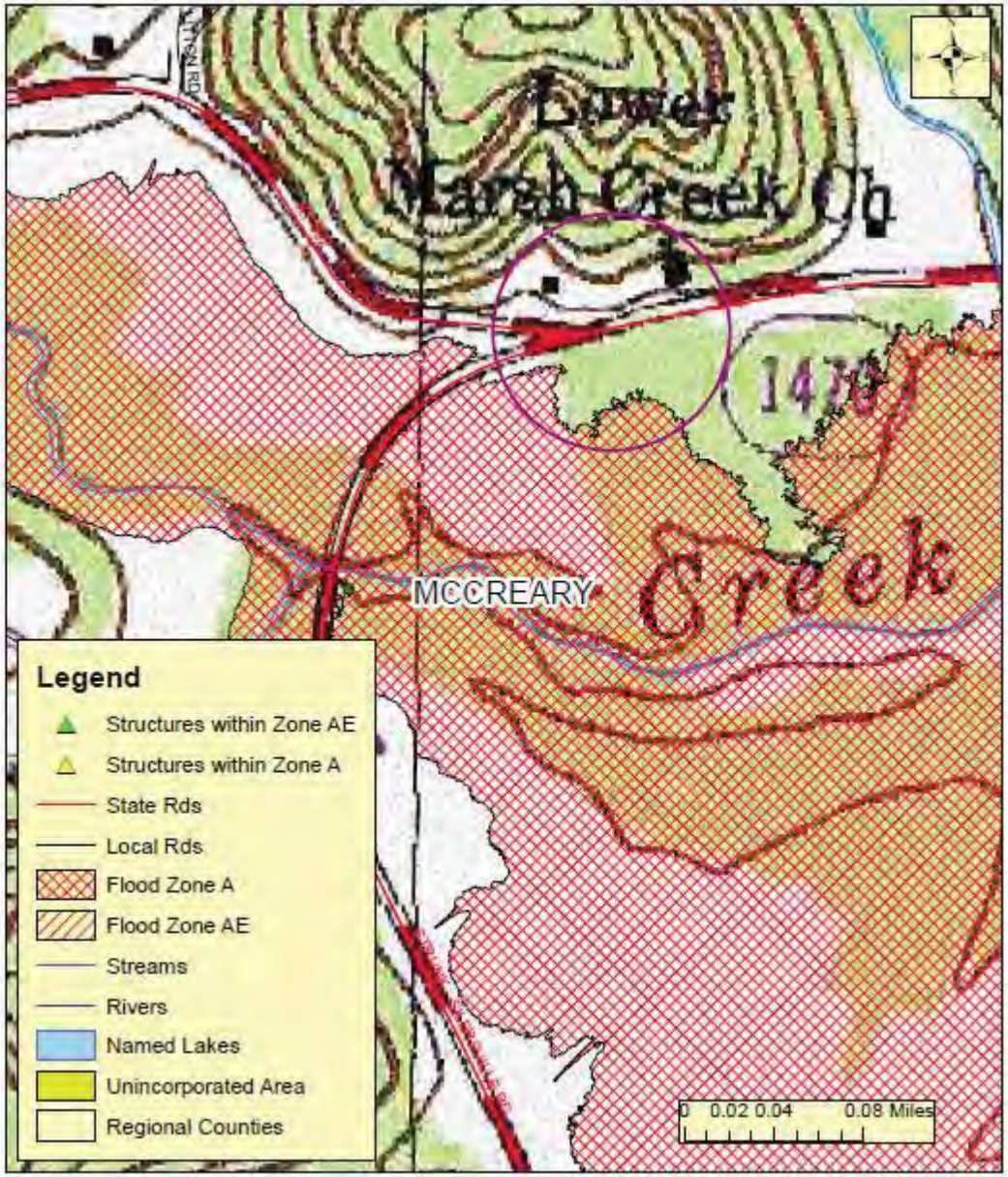
Prepared By:
Lake Cumberland Area Development District



Map 6.4(6b)
LCADD Region
McCreary County
High Hazard Areas
Marsh Creek area Cal Hill Rd.
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

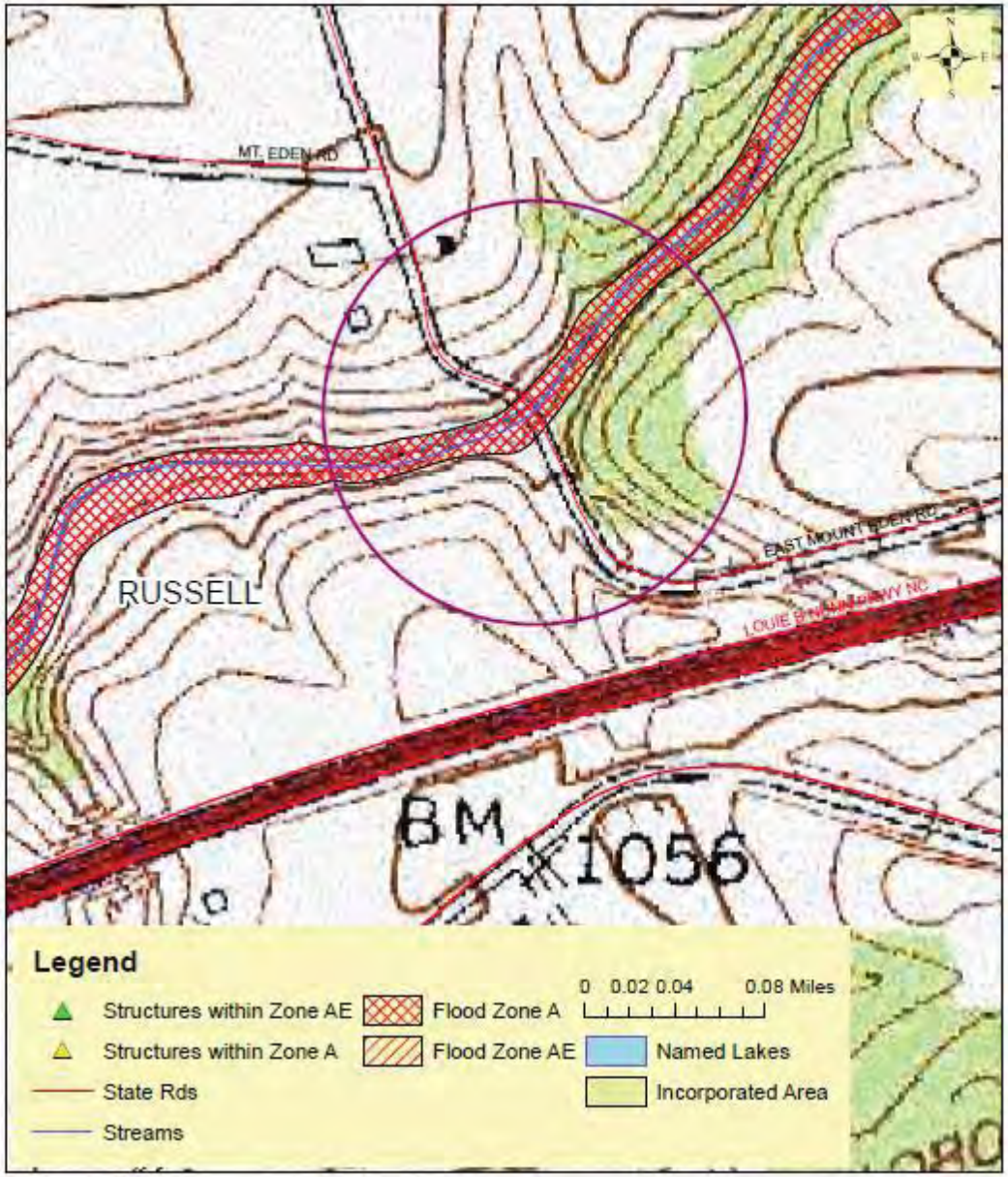
Prepared By:
Lake Cumberland Area Development District



Map 6.4(8a)
LCADD Region
Russell County
High Hazard Areas
Mount Eden
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

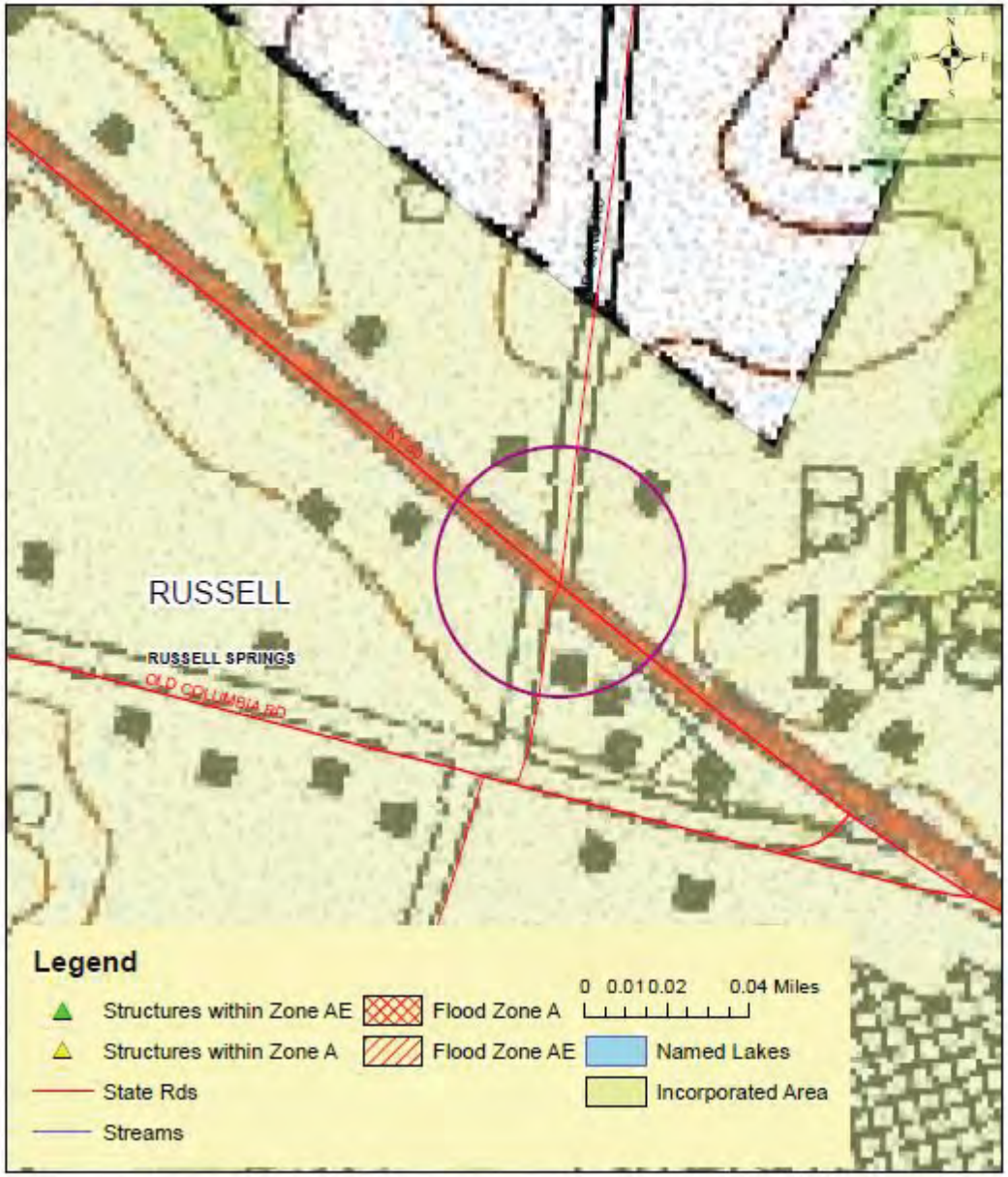
Prepared By:
Lake Cumberland Area Development District



Map 6.4(8b)
LCADD Region
Russell County
High Hazard Areas
Old Sano Road
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

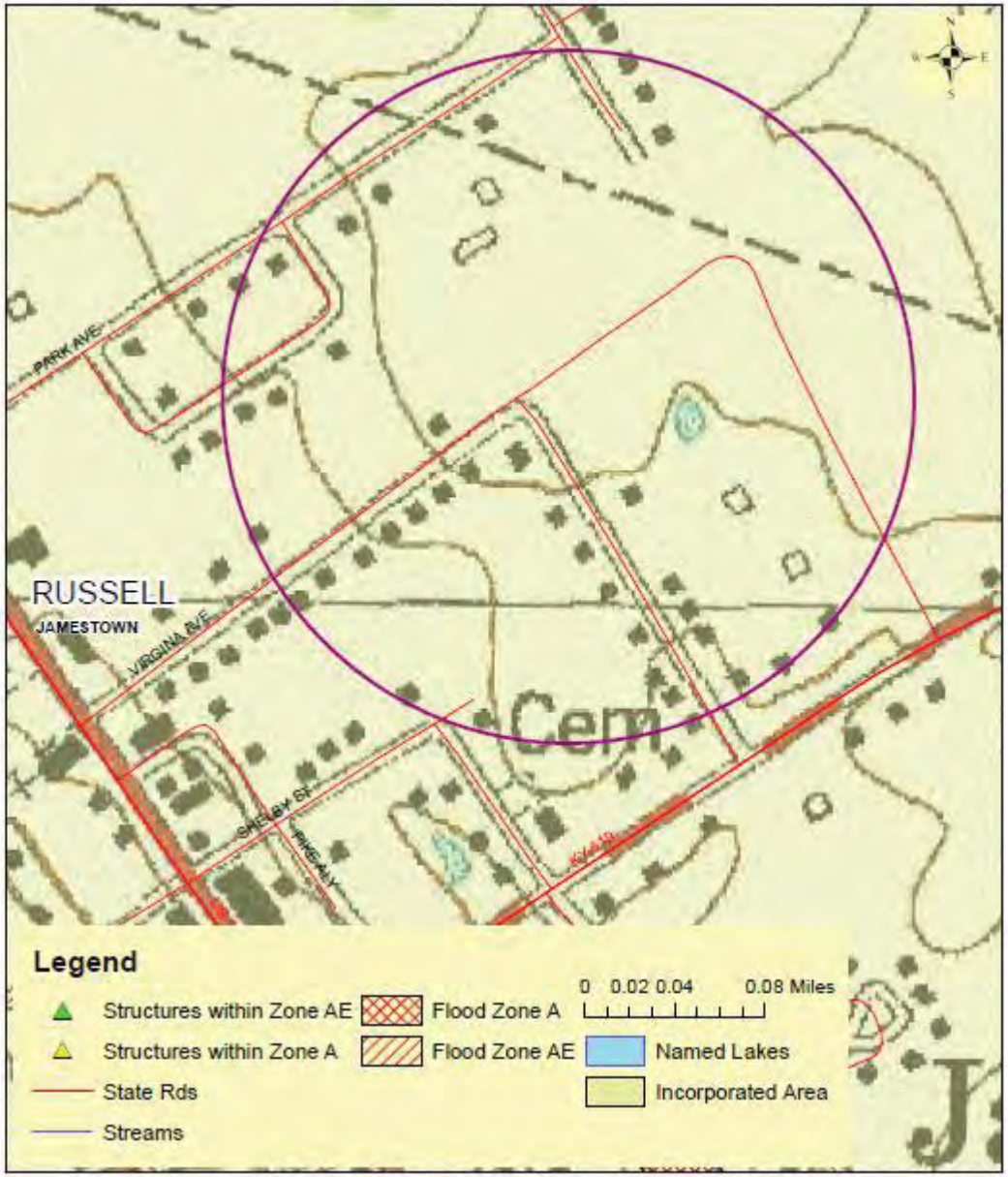
Prepared By:
Lake Cumberland Area Development District



Map 6.4(8c)
LCADD Region
Russell County
High Hazard Areas
Virigina Ave.
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

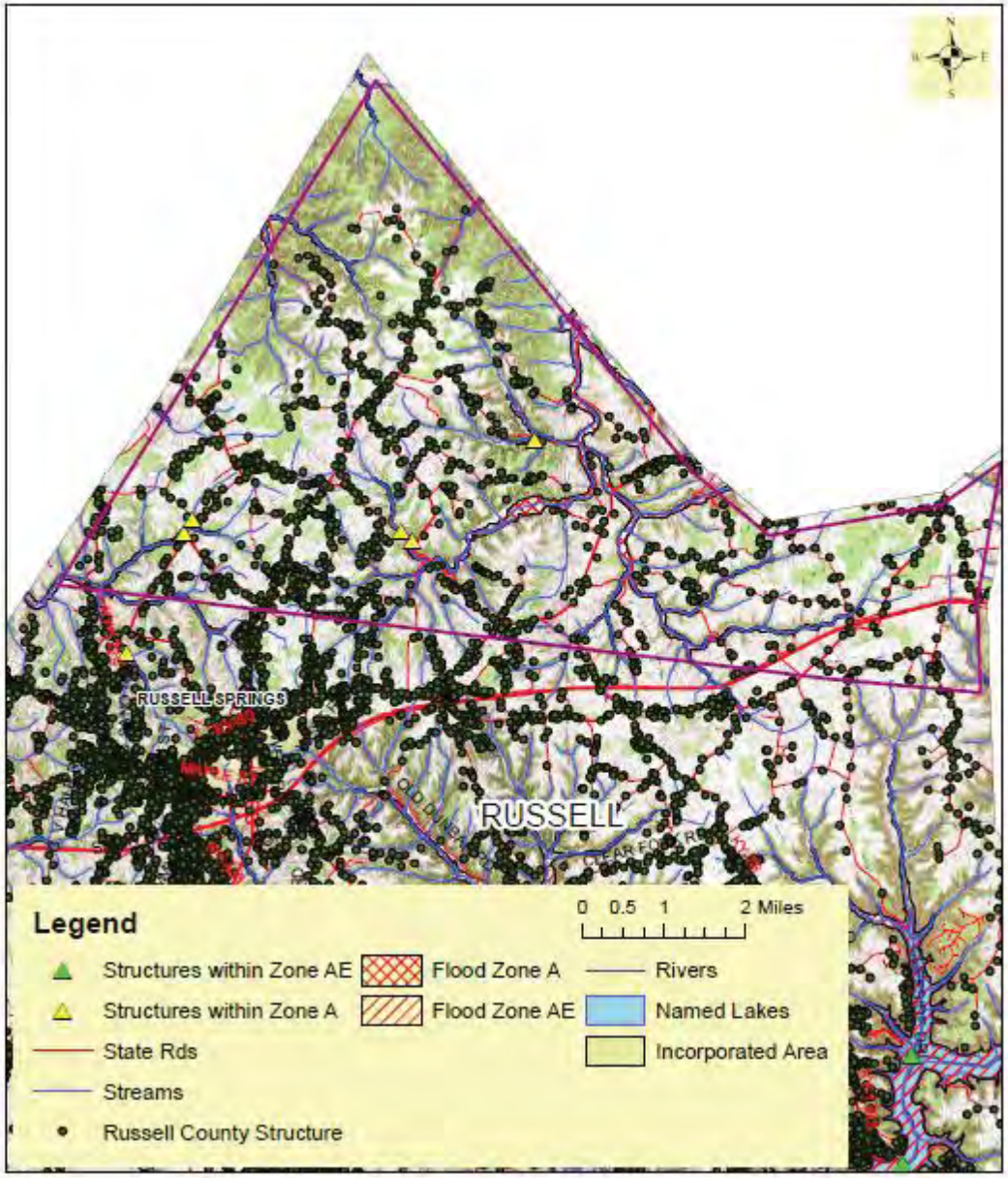
Prepared By:
Lake Cumberland Area Development District



Map 6.4(8d)
LCADD Region
Russell County
High Hazard Areas
KY 76 And US 127
High Winds

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

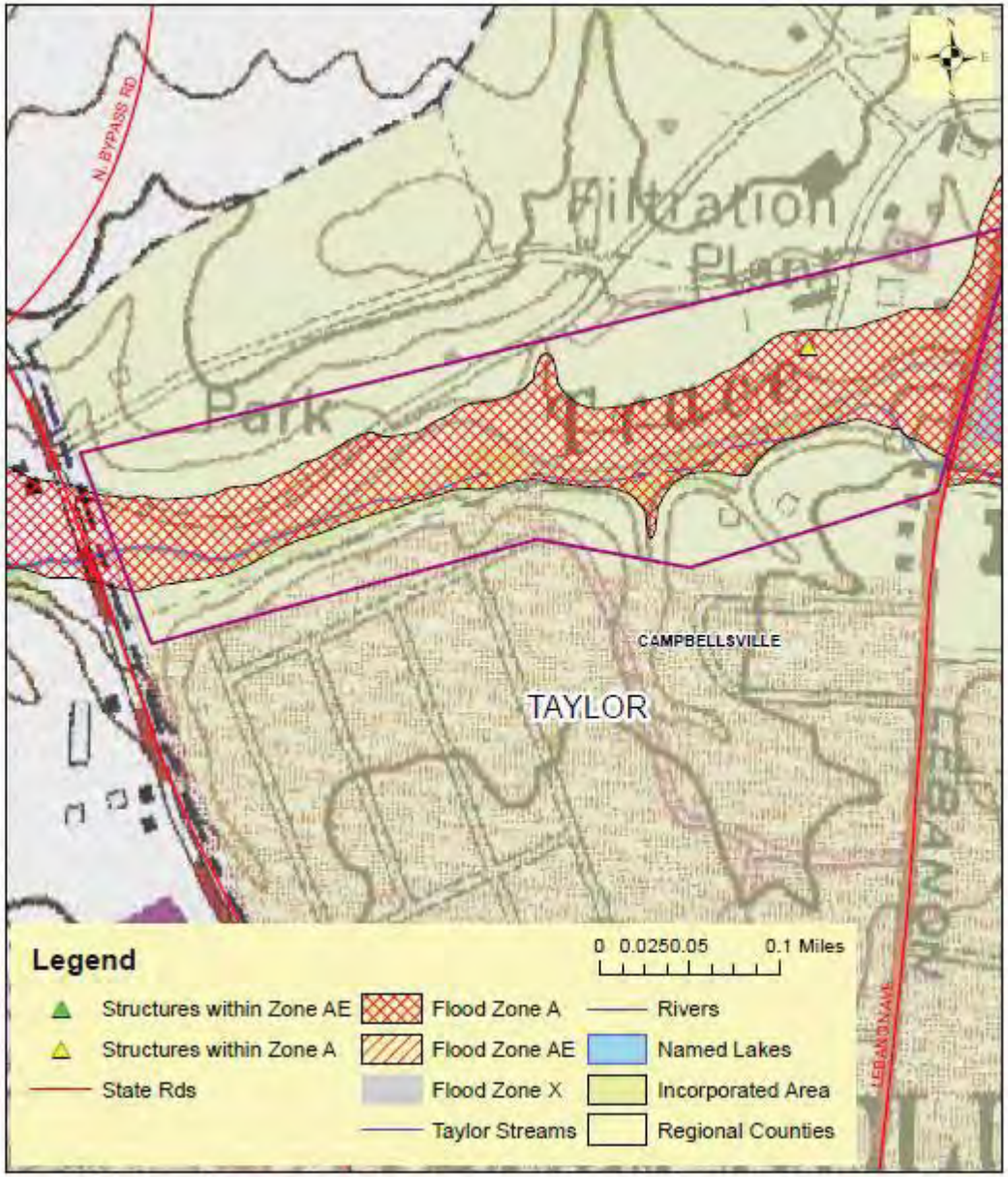
Prepared By:
Lake Cumberland Area Development District



Map 6.4(9a)
LCADD Region
Taylor County
High Hazard Areas
Miller Park
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

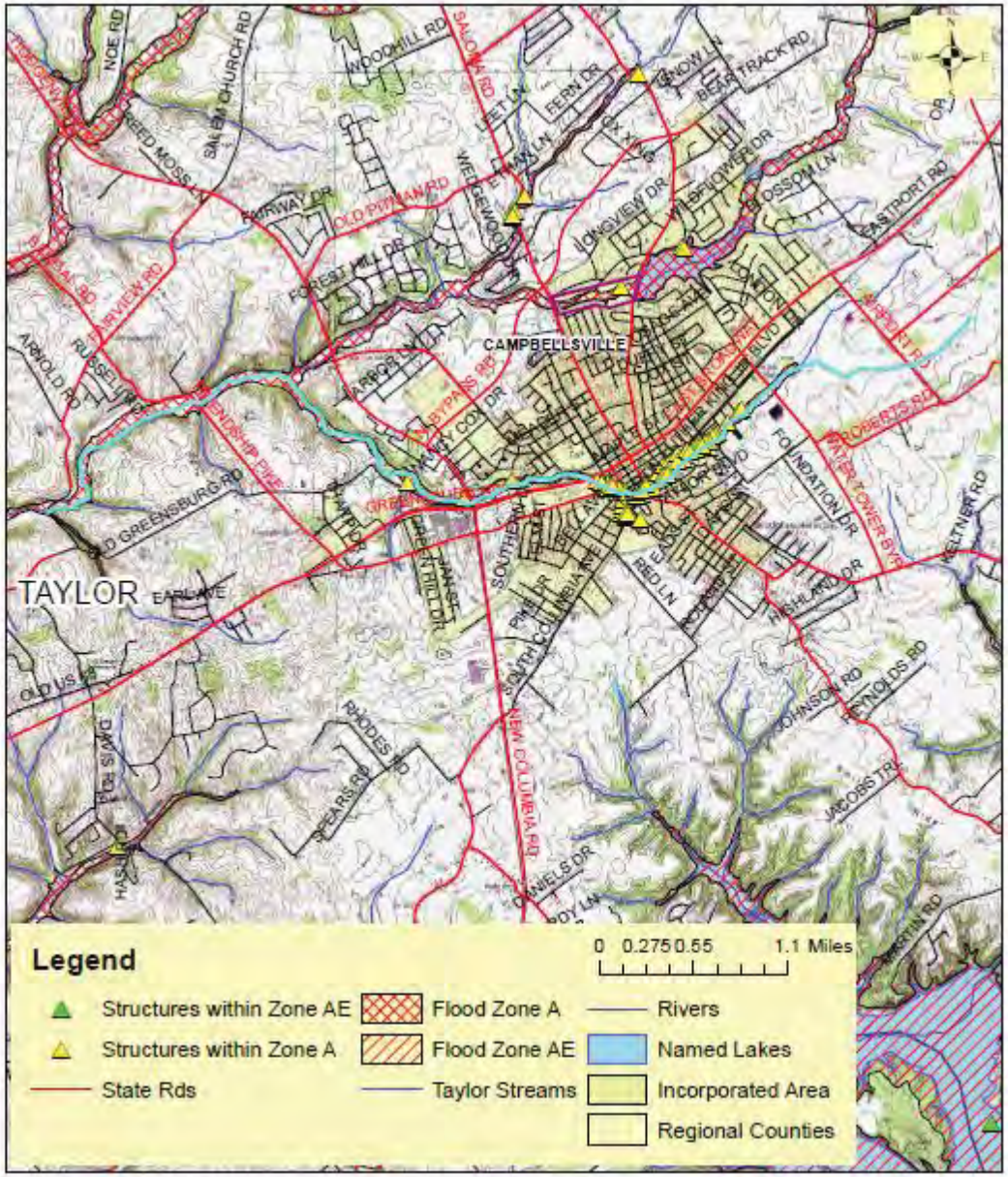
Prepared By:
Lake Cumberland Area Development District



Map 6.4(9b)
LCADD Region
Taylor County
High Hazard Areas
Buckhorn Creek
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

Prepared By:
Lake Cumberland Area Development District



Map 6.4(9c)
LCADD Region
Taylor County
High Hazard Areas
Wise Road
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
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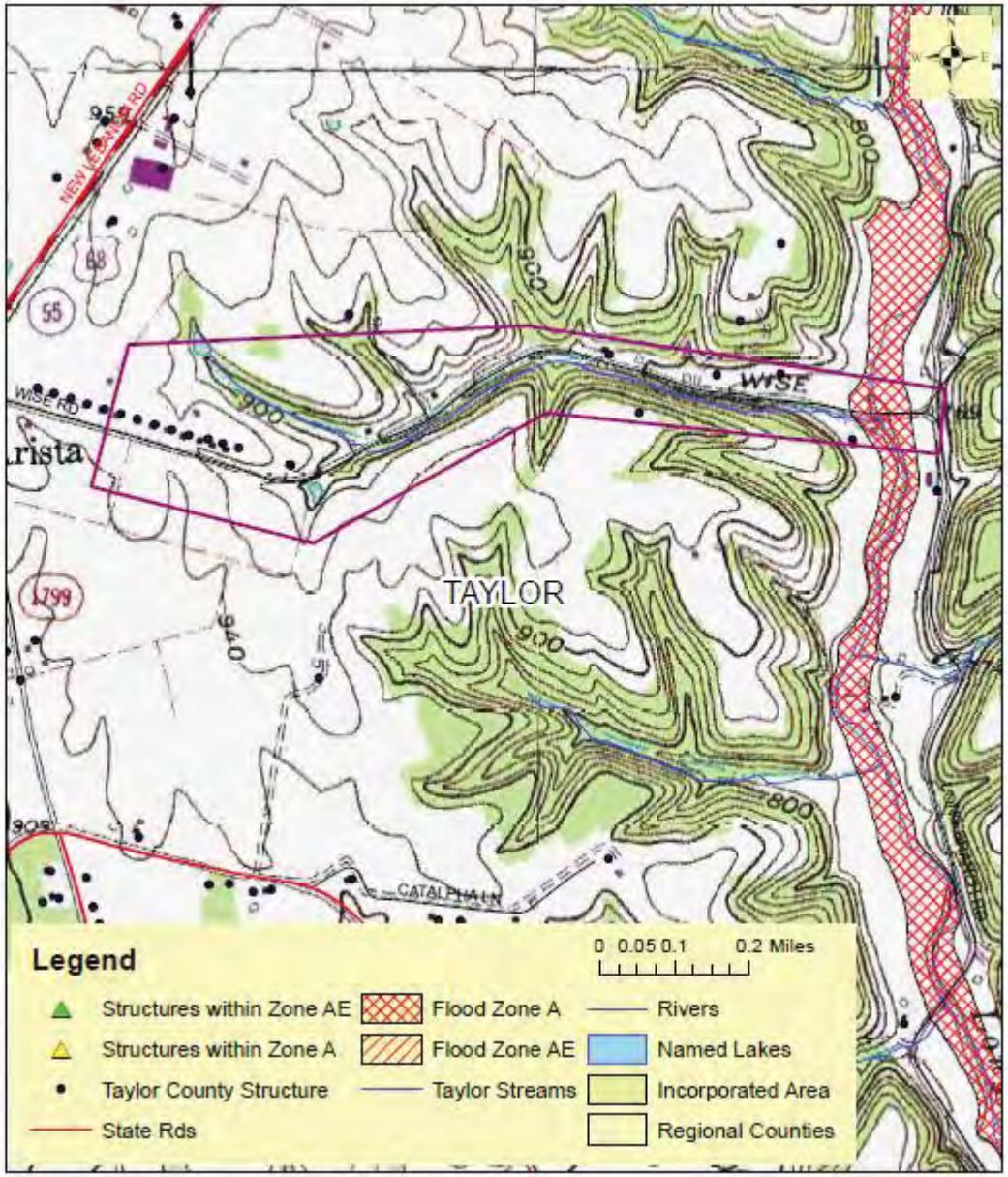

Map 6.4(9d)
LCADD Region
Taylor County
High Hazard Areas
Green Acres Subdivision
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
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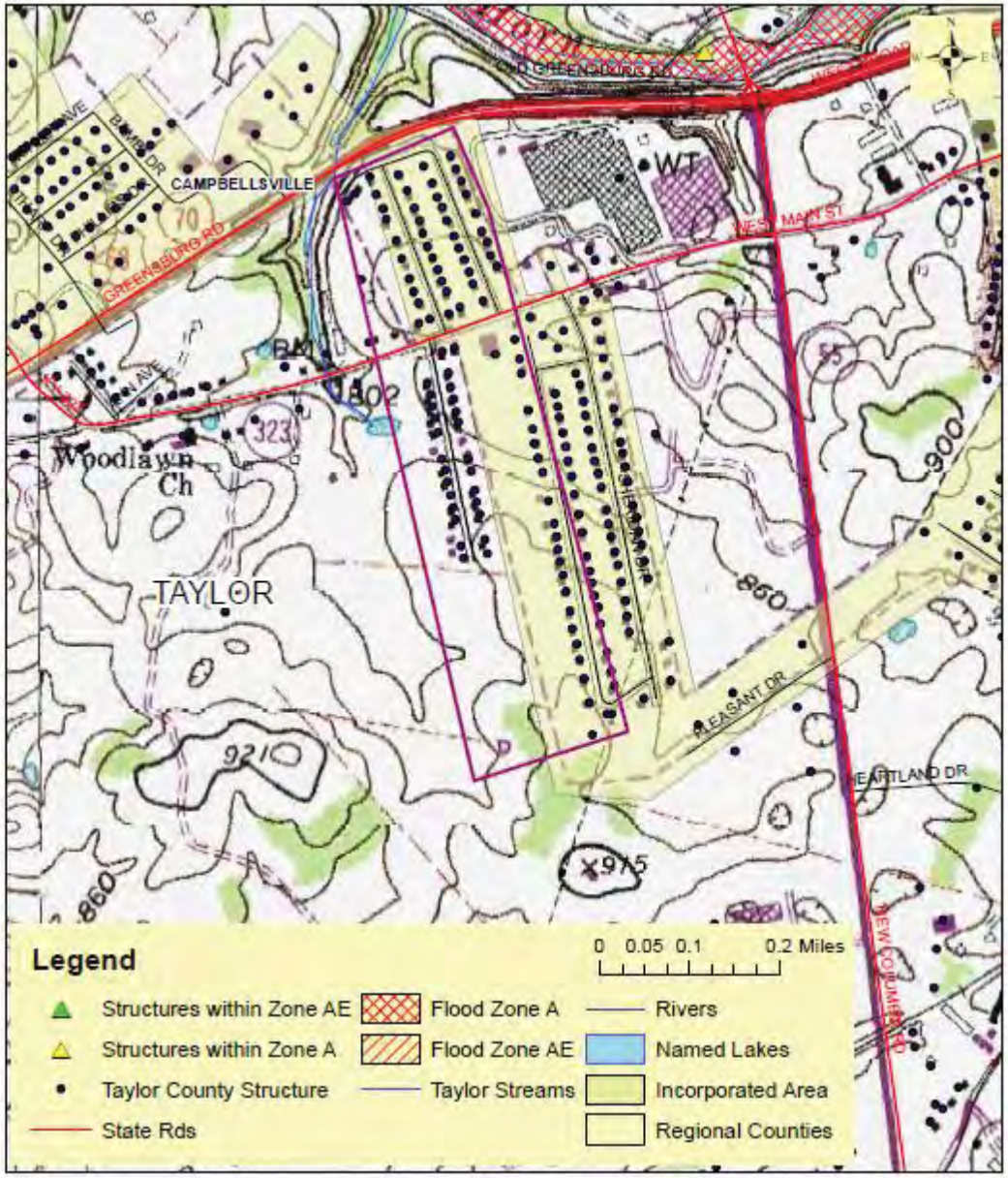

Map 6.4(10a)
LCADD Region
Wayne County
High Hazard Areas
Asbury Road
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

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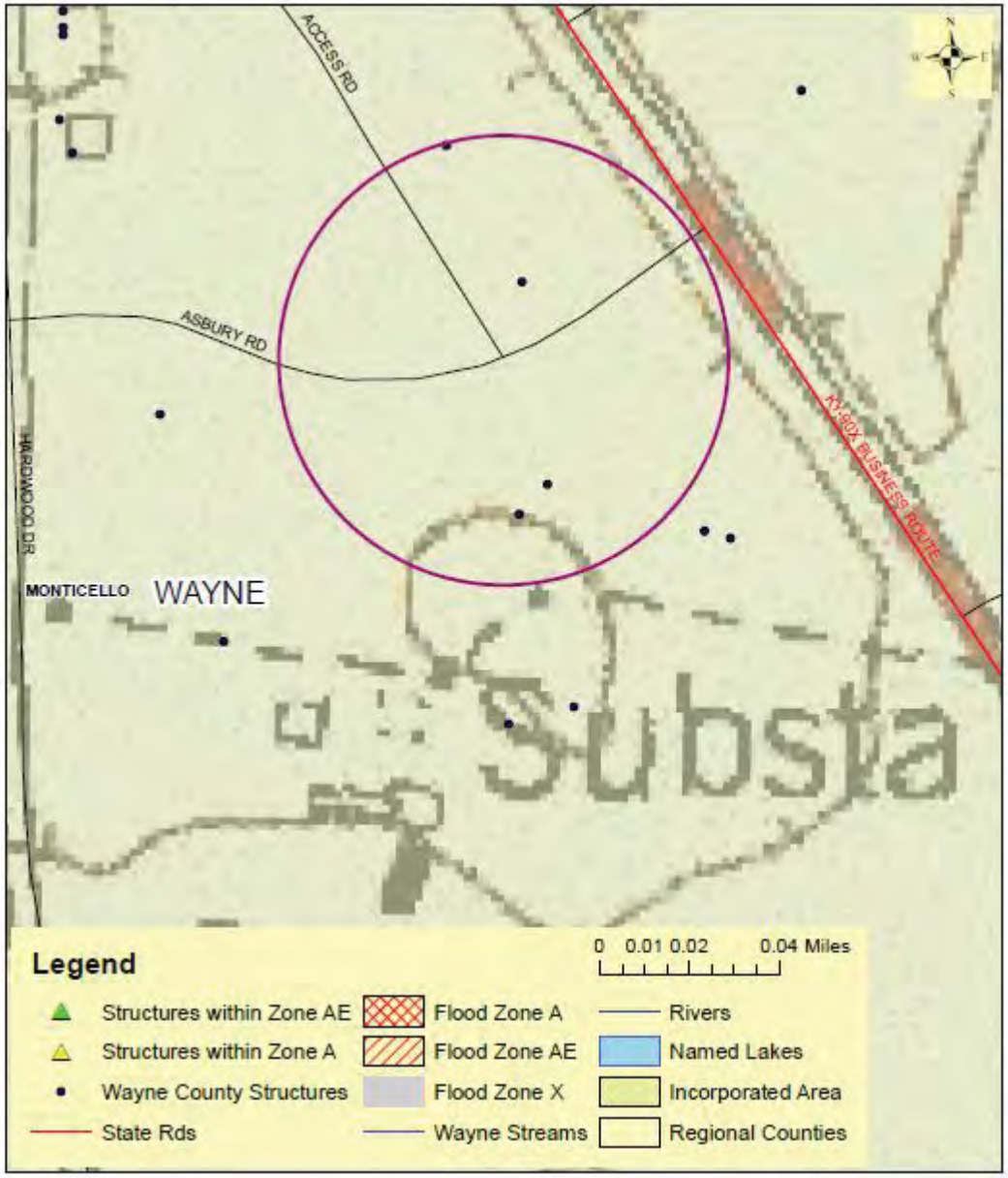
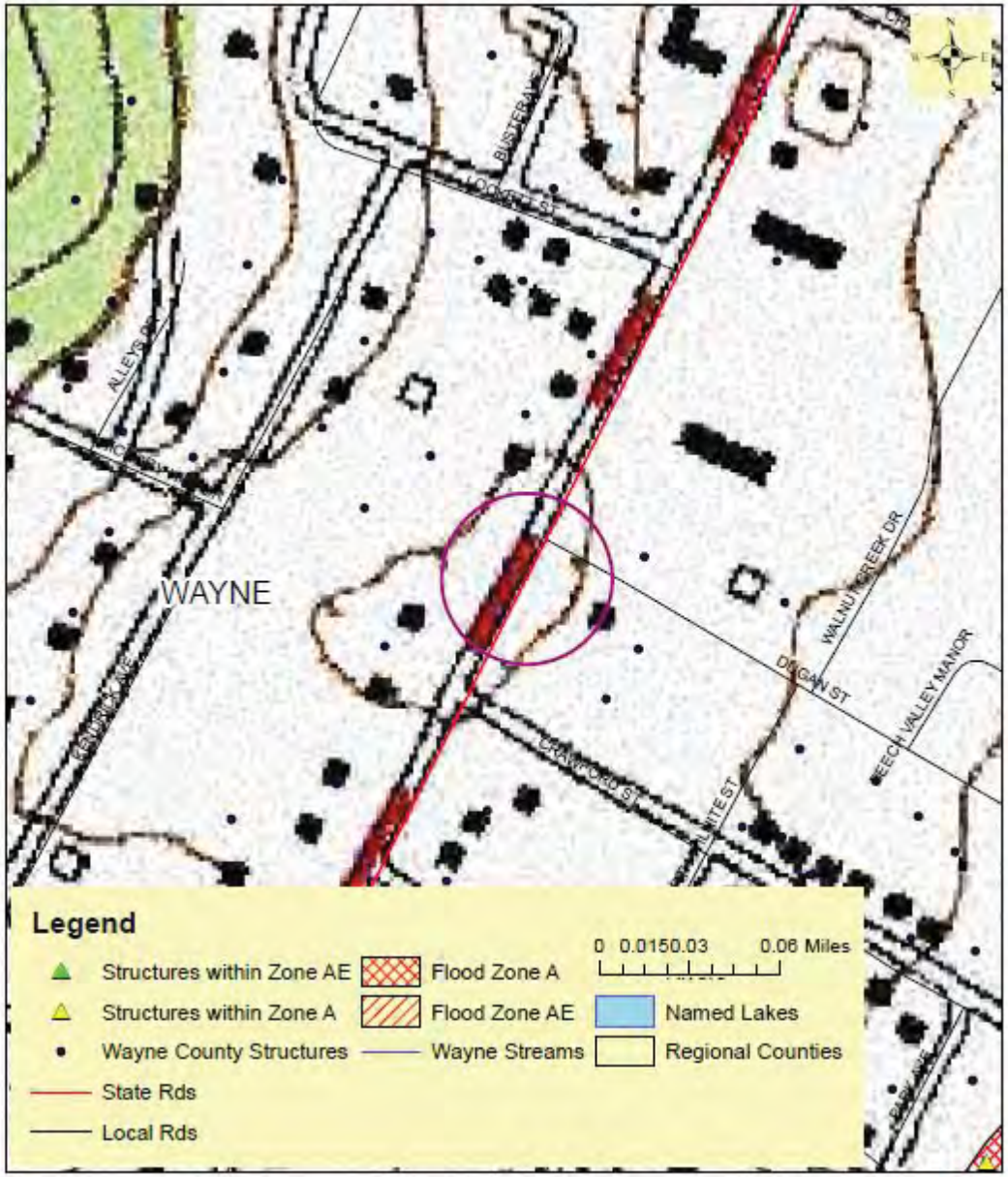
Lake Cumberland Area Development District



Map 6.4(10b)
LCADD Region
Wayne County
High Hazard Areas
Main Street
Flooding

Data Source: Lake Cumberland ADD GIS Databases,
FEMA DFIRM Flood Maps,
Committee input on local flood areas
Online Linkage: none
Title of Content: LCADD GIS Databases, DFIRM Flood Maps
Retreived Jan. 2016

Prepared By:
Lake Cumberland Area Development District



7.0 EXISTING DISASTER MITIGATION MEASURES

Recent natural disaster response has been adequate, with generally good cooperation between various Regional departments. Communication efforts have been improved over the years to better prioritize problem areas and expedite responses. Lake Cumberland Area Development District Hazard Mitigation Plan has implemented a number of mitigation measures in response to previous disaster situations. Existing measures primarily include regulations and bylaws to protect existing structures and future development. Existing mitigation measures are discussed in the following sections.

7.1 Emergency Management Plans and Agencies

Each of the Lake Cumberland Area Development District counties has established an Emergency Management Office and an Emergency Management Plan to document mitigation, preparedness, and response and recovery actions to be taken in the event of an emergency. The plan evaluates natural and manmade hazards, and addresses coordination between departments and agencies within the area to provide for the safety and welfare of the LCADD citizens. The plans are periodically updated to reflect up-to-date information.

Other Plans: The 2011 Regional Hazard Mitigation Plan has been fully integrated into the Lake Cumberland Comprehensive Economic Development Strategy (CEDS). This document serves all 24 LCADD jurisdictions and provides strategies to improve all aspects of regional livability. The 2016 plan will be incorporated upon FEMA approval. Other plans are primarily individual jurisdiction plans are without uniform use or development by each County/City. EOP's are the only uniform plan for each jurisdiction and include local plans by reference and content. The Regional Hazard Mitigation Plan does not try to encompass individual plans that are not uniformly used. Each jurisdiction is encouraged to incorporate the Regional Mitigation Plan Goals and Action elements into all local plans.

7.2 Federal and State Regulations

Development in the 10-county area must adhere to all applicable Federal and State regulations, as set forth by the appropriate agency. Agencies include, but not limited to:

- United States Environmental Protection Agency (EPA);
- United States Army Corps of Engineers (ACoE);
- Federal Emergency Management Agency (FEMA);
- Kentucky Department of Emergency Management (KYEM)
- Kentucky Department of Environmental Protection (KYDEP);
- Kentucky Department of Fire Services (KYFS); and
- Kentucky Department of Public Safety (KYDPS).

All development in Region is subject to the minimum requirements set forth by federal and state regulatory agencies. Regional regulations and bylaws may be developed that outline more stringent requirements. Applicable Regional regulations and bylaws are discussed in the following section.

7.3 Regional Regulations and Bylaws

LCADD region currently has a number of bylaws and regulations in place. Bylaws and regulations provide for water quality and resource area protection in an effort to maintain the health and stability of environmentally sensitive areas. These areas

provide critical water storage during flood events that help alleviate potential property damage and loss of life. Applicable Regional bylaws and regulations include:

- ≠ General Bylaws ;
- ≠ Zoning Bylaws ;
- ≠ Subdivision Regulations;
- ≠ Department of Public Works (DPW) Construction Specifications

The General Bylaws contain a number of relevant sections, including articles on Earth and Soil Removal, Water Use Restrictions, Zoning Bylaws also contain several relevant sections on overlay districts, Floodplain District.. Regulatory documents such as the Subdivision Regulations generally contain design standards to ensure proper design and construction of sites to minimize flooding and other damage. Taylor County updated flood control ordinance 5-15-2011 and the City of Campbellsville amended there storm water regualtions 9-10-2014.

Region agencies, including the Building Department, Conservation Commission, and Planning Board enforce existing Regional regulations, as well as state and federal regulations set forth by the Kentucky Department of Fire Services, Kentucky Department of Public Safety, Environmental Protection Agency, Army Corps of Engineers, Federal Emergency Management Agency, and Kentucky Department of Environmental Protection. If existing bylaws and regulations prove ineffective, or additional measures are developed that better protect infrastructure and the environment, changes should be adopted to maintain adequate protection.

Note that the Kentucky State Building Code, enforced Regionally by the Building Department, contains many standards governing proper construction methods and techniques. Many of the standards are in place to help ensure buildings and other structures can withstand natural hazards such as high winds, heavy rains, snow loads, and high waters. The Building Department requires that permits be obtained for many construction-related projects, and permits must be obtained before occupying the building.

Subdivision Regulations

The local counties/cities vairing degrees of zoning controls on the design of area subdivisions. It is encouraged that current and future zoning controls be such that regulations preserve the scenic and environmental character of the Region. This includes stormwater management that is designed and constructed to:

- ≠ Remove storm water from roadways to permit safe and convenient travel during storms of moderate severity;
- ≠ Control the direction of flow of storm runoff in a manner that is not detrimental to abutting lots, properties or ways; and
- ≠ Mitigate the discharge of stormwater in order to avoid increasing the occurrence of downstream flooding or degradation of water quality.

Designs are encouraged to follow guidance set forth in applicable engineering standards as well as state and federal guidance, covering aspects such as design methodology, design storm frequency, slopes, sizing, layout, and other typical design criteria associated with stormwater system design. All plans, details, narratives, calculations, etc. must be submitted to the local zoning bodies where in place for approval.

7.4 Backup Power Supplies

Much of the region's critical drinking water and wastewater collection, pumping, and treatment infrastructure is not equipped with onsite backup power sources. The 10 counties have portable backup generators for emergency use. However long term or system wide power failure would cause loss of portions of both water and sewer systems. Generators are powered by onsite fuel sources such as above ground diesel tanks or propane tanks, and may be refueled as needed by conventional methods.

The Region routinely tests backup generators, either utilizing automatic test methods such as on water and sewer pump station generators or manual weekly tests.

7.5 Emergency Shelters and Mutual Aid

Each of the 10 counties have emergency shelters set up where citizens can go if in need.

7.6 Preventative Maintenance

The Department of Public Works in each of the counties/cities typically performs several preventative maintenance items directly preceding an expected storm event.

7.7 Structural Upgrades

Tebbs Bridge in Taylor County was replaced due to a mudslide and improvements have been made to the sewer plant system to reduce sewer overflows. Casey County installed 6-7 flood markers in low, flood prone roads to show the depth of the water,

7.8 Public Outreach

Each of the ten counties has implemented several programs as a means of reaching out to the public prior to and during an emergency. Public service announcements and public meetings are used to educate the public concerning hazard events and protection. Each county utilizes local radio stations and social media to provide Information that typically includes closed roadways, power company response estimates, etc.

7.9 National Flood Insurance Program

Jurisdictions currently not participating in the FNIP :Casey County, City of Burnside, City of Ferguson, City of Russell Springs., City of Eubank, and City of Science Hill. All other entities in the region participate in the NFIP. Per FEMA's Regional Multi-

Hazard Mitigation Planning Guidance document, the NFIP has three basic aspects:

1. Floodplain identification and mapping – adopt flood maps depicting hazards;
2. Floodplain management – adopt and enforce floodplain management regulations; and
3. Flood insurance – require property owners to purchase insurance in exchange for floodplain management regulations that reduce future flood damages.

7.10 Existing Disaster Mitigation Measures

Adair:

1. Theron Aiken Bridge – Transportation Grant - $100,000
2. Corbin Richards Road – bridge washout – County Emergency Money - $4,000
3. Canan Land Road – 4 foot tile washout – County Road Fund - $6,000

Casey County:

1. Radios and repeaters funded by CMRS –
2. Installed 6-7 flood makers in low, flood prone roads to show the depth of the water.

Clinton County:

1. Repaired Ewing Branch Road with CDBG Disaster Relief Funds - $223,000
2. South Harper Street, E. Hill Street, Donnie Ferguson Road, and Gordon Speck Road repaired with City of Albany funds.

Cumberland:

1. None reported.

Green County:

1. Education and Training Programs - Tornadoes Safety Newspaper Article, FEMA preparedness article , FEMA Assistance Notification after each declaration. Flood Facts
2. Emergency Operations – Fire Department Safe Room - $730,000

McCreary County:

1. Culvert and road off Hwy 27 and 92 repaired with County Emergency Funds

Pulaski County:

1. None reported.

Russell County:

1. 2012- Mt. Eden Road - $151,800, State $81,000, County - $70,700.
2. 2012 – Airport - $40,934.57, State $31,900, County $9,034.57
3. 2013 – Clear Springs Road - $171,115.90, State $117,400, County $53,715.90
4. 2013- Sirens - $148,867. State $111,650.25, County $37,216.75

5. 2014 Manntown Bridge - $154,816.31,State $123,900, County $30,916.31
6. 2016 – Safe Rooms Bid - $406,000

Taylor County:

1. 2011 -Tebbs Bridge to be moved and replaced due to a mudslide – State $100,000, County $35,000
2. 2016 - Sewer Palnt and System Improvements to reduce sewer overflows – City and EPA Grant $315,915
3. 2011 - Update Flood Control Ordinance
4. 2014 - Storm Water Regulations Amended
5. 2015 – Medical Reserve Corp Training
6. 2014- Kentucky Family Protections and Taylor County Community Watch formed to provide preparedness for emergencies outreach
7. 2012 – Communications improvements – FEMA $417,905
8. 2012 – Installed reverse 911 call systems – City of Campbellsville funded
9. 2013 - Food Assistance- FEMA Grant $11,314

Wayne County:

1. Generators – Hazard Mitigation Grant $60,000
2. Sirens – Hazard Mitigation Grant

Table 7.10(1) – Existing Disaster Mitigation Measures Matrix

Existing Protection	Description	Area	Applicable Hazards	Effectiveness	Improvement or Changes Needed
Emergency Management Agency	Agency in charge of coordinating response efforts between agencies during an emergency	Entire Region	All hazards	Effective to date	Continue to improve response and communications as needed
Emergency Management Plans	Comprehensive Emergency Management Plan to document preparing for, and procedures to be taken during, an emergency Hazardous Materials Emergency Plan outlining actions to be taken in the event of an incident involving hazardous materials	Entire Region, primarily the transportation network	All hazards, Geologic hazards	Effective to date	Update as needed to reflect the most up-to-date information available
Federal and State Regulations	Regulations and agencies designed to protect infrastructure, the environment, and public safety. Agencies include EPA, ACoE, FEMA, MassDEP, DFS, and DPS	Entire Region	All hazards	Effective	Continue to use and enforce federal and state regulations
Public Outreach	Measures to provide information to the public during an emergency. Methods include radio stations and social media. .	Entire Region	All hazards	Effective to date Effective to date	See Section 7.0, Planned Disaster Mitigation Measures See Section 7.0, Planned Disaster Mitigation Measures

National Flood Insurance Program	Jurisdictions currently not participating in the FNIP :Casey County, City of Burnside, City of Ferguson, City of Russell Springs., City of Eubank, and City of Science Hill. All other entities in the region participate in the NFIP	Areas identified in FEMA FIRMs	Flood-related hazards	Effective	Continue to update FEMA maps, record applicable structural elevations within flood-prone areas, establish mutual aid agreements

8.0 PLANNED DISASTER MITIGATION MEASURES

Although the Region has implemented a number of existing hazard mitigation measures as discussed in Section 7.0, additional measures should be considered to protect Region infrastructure in the event of a disaster.

8.1 Goal Statements

During Lake Cumberland Hazard Mitigation Regional Planning Committee meetings, responsible personnel discussed existing areas of hazard protection as discussed in Section 7.0 that require expansion and/or improvement to better protect the Region. The committee then developed general goal statements to reduce impacts and losses due to hazards associated with natural disasters.

The following goals were established by the Lake Cumberland Hazard Mitigation Regional Planning Committee to minimize the impacts of natural disasters on residents, businesses and infrastructure:

- ≠ Provide residents with adequate access to emergency shelters equipped with sufficient provisions, climate control and emergency electricity during natural disaster events;
- ≠ Improve communications between private citizens, businesses, utility companies, and Region, regional, state, and federal agencies before, during and after a natural disaster;
- ≠ Maintain adequate access to public utilities such as electricity, drinking water, and communications during and after a natural disaster;
- ≠ Maintain an adequate Level of Service (LOS) on all roadways during and after natural disasters, particularly on major roadways;
- ≠ Reduce or eliminate preventable damage to buildings and infrastructure;
- ≠ Improve public education to inform residents on what may happen during a natural disasters, particularly regarding rare natural disasters such as tornadoes; and
- ≠ Make improvements to existing practices based on experience gained during disaster response and recovery.

8.2 Planning Process

In order to identify, evaluate and prioritize specific mitigation actions and projects to reduce the effects of a natural disaster, the LCHMRPC prioritized the actions for each jurisdiction into two categories (Funding Available – Funding Unavailable) and then three priority levels were assigned (1-High, 2-Medium and 3-Low). In order to receive a High Priority rating an action was found to be 1) cost effective, 2) environmentally sound and 3) technically feasible. Medium Priority = met 2 of the three factors. Low Priority – met 1 or none of the three factors. Those actions that were rated as Funding Available and High Priority by the committee members and emergency managers, were then evaluated using the STAPLE+E method as developed by FEMA.

- **S**ocial – Determine if measures are acceptable to the public and nearby community;
- **T**echnical – Evaluate whether measures are technically feasible;
- **A**dministrative – Review staffing, funding and maintenance needs for implementation;
- **P**olitical – Evaluate Regional and state political support for the measure;
- **L**egal – Determine if Regional, state or federal laws allow for implementation;
- **E**conomic – Ensure the Regional community budget can support project implementation; and
- **E**nvironmental – Ensure the Regional environment is protected at all times. Proposed Mitigation Actions

STAPLE+E Method of Assessing Risk Mitigation Options

1. Remarks:

    a. There exist many different methodical or standardized processes through which emergency managers can assess the mitigation options that have been generated in response to each risk in the community or country's hazard risk profile.

    b. In the United States, one method that has existed for some time is the STAPLE+E Method, or Framework as it is also often called.

        i. The STAPLE+E Method was first developed by FEMA

        ii. STAPLE+E allows emergency managers to apply a consistent analysis to the range of mitigation options they are considering.

        iii. The acronym "STAPLE+E" refers to the seven criteria according to which these measures are assessed.

        iv. Each of these terms represents an opportunity or constraint to implementing a particular mitigation option.

2. Because communities are generally very different in their overall makeup, a single mitigation option analyzed according to the STAPLE+E criteria may produce very different outcomes in different places.

3. Each criteria considers a different aspect of the community and requires different methods of information collection and analysis.

4. There is no definable or identifiable priority or weight assigned to any of these criteria—the order of the letters in the acronym was determined by the word they formed (which was meant to be easy to remember).

    i. The criteria include (adapted from FEMA, 2005b):

5. **Social**

    a. A mitigation option will only be viable if it is socially accepted within the community where it is implemented. The public is instrumental in guiding decisions such as these through their support or lack thereof.

    b. Even with public support, a proposed mitigation option might not work, but without public support, that the taken action will almost certainly fail.

    c. Emergency managers must have a clear understanding of how the mitigation option will affect the population. They must investigate several questions that will guide their interpretation of this criterion, including:

        i. Will the proposed action adversely affect any one segment of the population?

        ii. Will it give some disproportionate benefit to only one segment?

        iii. Will the action disrupt established neighborhoods, break up legal, political, or electoral districts, or cause the relocation of lower-income people?

        iv. Is the proposed action compatible with present and future community values?

        v. Will the actions adversely affect cultural values or resources?

6. **Technical**

    a. If the proposed action is investigated and found to not be technically feasible, it is clearly a poor option.

    b. Additionally, it is important to investigate when looking into the technical feasibility of each option whether it will help to reduce losses in the long term and whether it has any secondary effects that could eventually nullify its benefits.

    c. By addressing the following questions, the emergency manager can determine the suitability of their proposed actions based on the actual degree of help those actions will provide:

        i. How effective is the action in avoiding or reducing future losses? It is important that the measures taken are able to achieve the anticipated results, not a fraction thereof.

        ii. Will it create more problems than it fixes?

iii. Does it solve the problem or only a symptom?

7. Administrative

a. This factor investigates the community's capabilities for carrying out the projects that would be required to implement each of the mitigation options.

b. Specifically, emergency managers will look at each option's requirements in terms of:

i. Staffing

ii. Funding

iii. Maintenance

c. The community may be able to implement some options on their own, using their own resources, while other options will require (often significant) outside assistance.

d. The questions emergency managers must answer include:

i. Does the jurisdiction have the capability (staff, technical experts, and/or funding) to implement the action, and can it be readily obtained?

ii. Can the community provide the necessary maintenance work required to maintain the method of mitigation?

iii. Can the implementation project be accomplished in a timely manner, without excessive disruption to the community?

8. **Political**

a. Mitigation actions tend to be highly political topics, as discussed in the previous objective.

b. Like most other government actions, they tend to entail more than just the dedication of public funds. Mitigation actions commonly require the use of local services, require permits and permissions, involve some alteration to the fabric of the community, may involve some use of public lands, and involve a certain amount of risk for the political leaders who authorize the actions.

c. The political nature of each option will likewise be an influential decision-making factor when options are being chosen for implementation.

d. Emergency managers will need to be aware of or will need to investigate how local, regional, and national political leaders feel about issues related to such agenda items as the environment, economic development, safety, and emergency management.

e. Logically, actions that go against the current administration's political ideology in any of these areas are likely to receive less support than those that are in line with its beliefs.

f. Political support failures are one of, if not the most common sources of failure for mitigation actions.

g. Emergency managers can measure political support for their mitigation options by addressing the following questions:

   i. Is there political support to implement and maintain this action?

   ii. Have political leaders participated in the planning process so far?

   iii. Is there a local champion willing to help see the action to completion?

   iv. Who are the stakeholders in this proposed action, and how do they feel about the changes that will occur as a result of the action?

   v. Is there enough public support, toward which political leaders are likely to lean, to ensure the success of the action?

   vi. Have all of the stakeholders been offered an opportunity to participate in the planning process?

   vii. How can the mitigation objectives be accomplished at the lowest "cost" to the public?

9. **Legal**

a. Many mitigation options will require actions to be taken that need legal authority in order to be lawfully conducted.

b. Emergency managers must determine whether they will be able to establish the legal authority at the national, provincial, state, or local levels to implement the proposed mitigation actions.

c. It even may be necessary to propose the passage of new laws or regulations to accommodate the needs of the mitigation measure if such legal authority is weak or does not exist.

d. However, this legal authority is best established long before the mitigation action is taken because of the exhaustive process of making or changing laws.

e. Depending upon the country where the mitigation actions are being conducted, government entities at each structural level may operate under their own specific source of delegated authority.

f. Local governments may operate under "enabling legislation" that gives them the power to engage in certain activities, or under informal governance systems based on tribal or other forms of law.

g. Emergency managers will need to identify the unit of government that will ultimately have the authority to grant or deny the permission to undertake the actions necessary to implement the mitigation action.

h. They will be well served to understand the interrelationships between the various levels of government in order to better anticipate any political roadblocks or challenges that may arise.

i. Much of this information can be obtained by asking:

    i. Does the government in question have the authority to grant permissions or permits for the work that is to be conducted?

    ii. Is there a technical, scientific, or legal basis for the mitigation action (i.e., does the mitigation action "fit" the hazard setting?)

    iii. Are the proper laws, ordinances, and resolutions in place to implement the action?

    iv. Are there any potential legal consequences?

    v. Will there by any issues of liability for the actions or support of actions, or lack of action, by any of the mitigation stakeholders?

    vi. Is the action likely to be challenged by stakeholders who may be negatively affected?

10. **Economic**

a. Like all community projects, mitigation options must prove to be cost-effective to the community before they are considered viable for implementation.

b. The mitigation measures must be also be affordable to those who will be funding the project.

c. Mitigation projects often require maintenance long after the project is completed, at the expense of the community where it is implemented.

d. For this reason, affordability means many things, including being fundable without restructuring local budgets, fundable but with some budget restructuring required, fundable but requiring a special tax to be imposed, fundable but requiring external loans, and so on.

e. Mitigation measures that are cost-free to the community or that can be financed within a current budget cycle are much more attractive to government officials who are making funding decisions than options that will require general obligation bonds or other forms of debt that will ultimately draw upon future community funds.

f. Those communities that have very little money to support mitigation actions (a common condition) are likely to be more willing to support a mitigation option if it can be funded, either in part or in whole, by some alternative (outside) source or sources.

g. Emergency managers should ask the following questions when considering the economic aspects of mitigation options:

   i. Are there currently sources of funds that can be used to implement the action?

   ii. What benefits will the action provide?

   iii. Does the cost seem reasonable for the size of the problem and likely benefits?

   iv. What financial burden will be placed on the tax base or local economy to implement or maintain this action?

   v. Will the result of the action negatively affect the economy in some secondary manner, such as reducing some form of income generation that was dependent upon the existence of the hazard?

   vi. Does the action contribute to other community economic goals, such as capital improvements or economic development?

11. **Environmental**

a. Many mitigation measures affect the natural environment, either positively or negatively (and occasionally both positively and negatively to some degree).

b. Emergency managers must consider these effects, as their actions could have long-term effects on the community and could negate any positive gains of the mitigation action.

c. Of course, benefits to the environment often that arise from the implementation of a mitigation measure, which must be considered in the choosing of options.

d. Floodplain buyout programs, for instance, which include acquisition and relocation of structures out of identified floodplains, help to restore the natural function of the floodplain.

e. Vegetation management, which is often performed to control the wildfire hazard risk to humans and property, also provides the same protection to the environment.

f. Questions that Emergency managers should ask when considering the environmental factors associated with particular mitigation options include:

   i. How will this action affect the environment (including land, water, and air resources and endangered species)?

   ii. Will this action comply with environmental laws and regulations?

   iii. Is the action consistent with the community's environmental values and goals?

The STAPLE+E Method asks a significant number of questions about each mitigation action. If every action under consideration was given this degree of assessment, it would take far too long for it to be effective. However, emergency managers (and committee members) can be selective about what mitigation actions merit such comprehensive assessment, and limit the assessment for actions that fall into the Funding Available and High Priority rating category.

The following form (FEMA Example) was used to evaluate priority levels based on STAPLE+E along with each Hazard's Risk Assessment.

Handout 16-7: STAPLEE Criteria Worksheet

Worksheet #4 Evaluate Alternative Mitigation Actions **step 2**

1. *Fill in the goal and its corresponding objective. Use a separate worksheet for each objective. The considerations under each criterion are suggested ones to use; you can revise these to reflect your own considerations (see Table 2-1).*
2. *Fill in the alternative actions that address the specific objectives the planning team identified in Worksheet #1.*
3. ***Scoring:** For each consideration, indicate a plus (+) for favorable, and a negative (-) for less favorable.*

When you complete the scoring, negatives will indicate gaps or shortcomings in the particular action, which can be noted in the Comments section. For considerations that do not apply, fill in N/A for not applicable. Only leave a blank if you do not know an answer. In this case, make a note in the Comments section of the "expert" or source to consult to help you evaluate the criterion.

Goal: _____

Objective: _____

STAPLEE Criteria	S (Social)		T (Technical)			A (Administrative)			P (Political)			L (Legal)			E (Economic)				E (Environmental)				
Considerations → for Alternative Actions ↓	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/ Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/ Water	Effect on Endangered Species	Effect on HAZMAT/ Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws

Source: **Federal Emergency Management Agency. 2003.** ***State and Local Mitigation Planning How-To Guide: Developing the Mitigation Plan – Identifying Mitigation Actions and Implementation Strategies.*** **FEMA.** http://www.fema.gov/fima/planning_howto3.shtm

8.3 Proposed Mitigation Actions

Environmental – Ensure the Regional environment is protected at all times. Proposed Mitigation Actions

Proposed mitigation actions developed during the LCHMRPC planning process have been divided into the following categories:

- ≠ Prevention and Resource Protection – Regulatory modifications to bylaws and regulations to prevent damage and preserve or restore natural resources;
- ≠ Public Safety – Improvements to protect residents during a disaster;
- ≠ Property Protection – Modifications or removal of infrastructure to protect from a hazard;
- ≠ Structural Projects – Construction projects to reduce hazard impacts; and
- ≠ Public Information and Communications – Actions to better provide information during a disaster and procedures for facilitating better communications.

Prevention and Resource Protection
The following proposed disaster mitigation measures should be explored in an effort to preserve natural resources for added environmental protection.

Action Item 1 – All Jurisdictions
Petition FEMA to Update/Modify FIRMs
Existing FEMA FIRMs have some inaccuracies concerning certain areas. In particular, there are areas not shown or shown as subject to flooding when in actuality, areas could be subject to periodic inundation during major storms or are not subject flooding. Monitoring of new FIRMs as they become will be undertaken.

Furthermore, affected residents may not be aware that their property is located in areas where flooding is possible. Conversely, some properties are shown on flood maps and thus required to purchase flood insurance when these locations have never experienced any flooding, even during the largest storms. Each jurisdiction should inventory areas based on the severity of the problem and work with FEMA to complete letter of map revisions (LOMRs) to ensure all affected properties have flood insurance. Updated FIRMs should be incorporated into the each jurisdiction's Floodplain District.

Action Item 2 – All Jurisdictions
Encourage Participation National Flood Insurance Program and/or Improver Community Rating Sustem
The Region will continue to encourage participation in the NFIP by all jurisdictions. Bylaws and/or regulations will also be updated as needed to improve flood protection.

Public Safety

The following proposed disaster mitigation measures should be explored in an effort to preserve public safety in the event of a natural hazard event.

Action Item 3 – All Jurisdictions

Evaluation Of Need For Additional Emergency Shelters And Their Placement In Each County/City

The Council on Aging (Senior Centers), located in each county and due to each being a reasonably far distance from areas in each county (about 10-20 minutes if driving) and many elderlyresidents will need to have pre-planned shelter locations.

The Regional Council on Aging may wish to consider providing alternative locations from those established by Emergency Management Plans within each county to house the elderly population on a temporary basis. Options include utilizing an alternative shelter location during emergencies, such as local churches, assisted living communities or similar facilities.
Note that relocation would be short duration, likely less than 2 days, until affected residents could be relocated to the main emergency shelter in each jurisdiction. All additional or specialized Emergency Shelter locations should be incorporated into Emergency Response Plans.

Action Item 4 – Adair, Clinton, McCreary, Russell, Taylor, and Wayne

Provide Emergency Outdoor Warning Sirens at Key Locations

Outdoor Sirens have a single purpose: to protect the lives of the population vulnerable during outdoor activities from hazards such as tornados, storms and other hazards. Risk analysis should be performed for each proposed siren project to make sure the siren will serve those most vulnerable. The risk analysis compares the potential severity of injury/damage based on the vulnerability of a location from a tornado etc. with the probability of occurrence of such an event at that location.

Each jurisdiction will evaluate if the risk assessment should be followed by risk analysis to determine protection needs and prioritize subsequent mitigation activities.

Action Item 5 – All Jurisdictions

Identify And Establish Additional Emergency Shelters In Areas Cut-Off By Flooding

Where access is limited by flooded roadways, all of which are subject to flooding and should roads become impassible, residents will be unable to access both the primary or alternate emergency shelter.

Each jurisdiction should identify and look into establishing a second emergency shelter in these areas**.** As with Action Item 2, relocation would be short duration until affected residents could be relocated to a main emergency shelter. All additional emergency shelter locations should be incorporated into Emergency Response Plans.

Action Item 6 – All Jurisdictions

Establish Evacuation Procedures

Fortunately, large scale evacuation of the Region has taken place. However, should one ever be required, Officials should document procedures and routes to provide the most efficient routes possible. Considerations should be given to:

- ≠ Procedures for voluntary and mandatory evacuations for different areas of each county/city;
- ≠ Potential duration of an evacuation;
- ≠ How best to disseminate public information concerning evacuations;
- ≠ Role of emergency personnel, particularly police, to facilitate a smooth process;
- ≠ Areas most likely in need of evacuation, such as those located in coastal areas or areas prone to isolation;
- ≠ Control of traffic at critical roadways and intersections;
- ≠ Providing alternate transportation such as busses for those otherwise unable to leave affected areas; and
- ≠ Periodic updates.

Special considerations should also be given to elderly populations, those with special medical needs, people with disabilities, etc. to ensure all people can evacuate safely. Evacuation procedures should be incorporated into the Emergency Response Plans.

Action Item 7 – All Jurisdictions

Ensure Emergency Planning Includes Tourism Visitors

The goal of the Tourism Crisis Management Plan is to ensure the safety and well-being of all visitors and to provide accurate information and visible leadership in a timely fashion. Emergency tourism planning should present a comprehensive and effective county/region wide emergency communications plan for the local tourism industry. The individual emergency plans of each county/city, for tourism entities, should support the County Emergency Management Plan and be in line with the entire regional tourism industry.

The tourism crisis management plan should be developed with the tourism agencies and should be made available to meeting planners, convention attendees, travel professionals and guests to Lake Cumberland Region to ensure they are equipped with the knowledge to make informed decisions and to be assured that their safety and well-being is of utmost importance.

Property Protection

The following proposed disaster mitigation measures should be explored to preserve and protect existing property and infrastructure in the event of a natural hazard event.

Action Item 8 – Clinton, Cumberland, Russell, Wayne, Pulaski, and McCreary

Monitor US Army Corps of Engineers Safety Inspection Reports on the Wolf Creek Dam

Wolf Creek Dam, impounding Lake Cumberland, has been a significant hazard dam located on the Cumberland River. Once completed, the dam's has experienced significant leakage due to karst formations allowing water flow under the dam. This has caused three major repair projects

on the dam structure. Due to the past history monitoring of safety reports and updating of emergency plans and procedures is required.

Action Item 9 – All Jurisdictions
Provide Emergency Power Generators at Critical Water and Wastewater Pump Stations
Evaluations should be conducted to determine the needs for additional generators to maintain both fresh water and wastewater systems during an extended power outage. The CHAMPS application system for FEMA funding should be utilized to maintain current applications on file.

Action Item 10 – McCreary
Establish Replacement Schedule for Emergency Response (EMS) Vehicles – Emergency Response and Mitigation Efforts
Establish efficient and effective delivery of emergency services by providing departments with safe, reliable, economical and environmentally sound transportation and related support services that are responsive to their needs and that preserve vehicle value and equipment investment. Routine replacement maintains a vehicle that is safe for emergency response and cost efficient to operate.

Structural Projects
The following structural projects are proposed as a way to alleviate potential hazard damage to buildings and infrastructure within Lake Cumberland Region

Action Item 11 – All Jurisdictions
Provide Emergency Safe Rooms at Key Locations
Safe rooms have a single purpose: to protect the lives of the population vulnerable during a tornado or hurricane. Risk analysis should be performed for each proposed safe room project to make sure the safe room will serve those most vulnerable. The risk analysis compares the potential severity of damage based on the vulnerability of a building from a tornado or wind of a certain magnitude with the probability of occurrence of such an event at that location.

Each jurisdiction will evaluate if the risk assessment should be followed by risk analysis to determine protection needs and prioritize subsequent mitigation activities.

Action Item 12 – Adair
Provide Roadway Improvements to Prevent Flooding
Repaving of Lory Road will mitigate water buildup that poses difficulties for drivers and potential damages for automobiles during each rainfall. The public should not be subject to the problems that have come with the current road deterioration, design and structure.

Action Item 13 – Adair
Provide Bridge Improvements to Prevent Further Deterioration
Re-concreteing of bridge on Brock Burris Road will mitigate further damage that poses difficulties for drivers and potential damages from high water events.

Action Item 14 – Adair

Provide Bridge Design & Structure Improvements to Prevent Flooding

Prevent bridge flooding on Taylor Ford Road by evaluation of causes and modification of stream flow or bridge replacement. This will mitigate further damage that poses hazards for drivers and potential damages from high water events.

Action Item 15 – Casey

Provide Stream Preventive Maintenance to Prevent Flooding

Prevent flooding on Green River and other streams by track hoe or excavators use to clean debris, trees and gravel bars from river to reduce flooding. This will mitigate further damage that poses hazards and potential damages from high water events.

Action Item 16 – Casey

Reinforce Shucks Creek Road to Prevent Flooding

Install steel cribbage to reinforce Shucks Creek Road. FEMA approved some funding after disaster declaration 4218 March 2015. Estimate was $310,000; FEMA approved $253,000; Contractor quoted closer to $500,000. Residents have to drive up on bank to avoid roadway damage; US Postal Service Route and Casey County School Bus required re-routing due to hazard. This will mitigate further damage that poses hazards and potential damages from high water events.

Action Item 17 – Casey

Box Culvert on Caney Fork Creek Road to Prevent Flooding

Replace on Caney Fork Creek Road two tiles (side by side) with a box culvert. This will mitigate further damage that poses hazards and potential damages from high water events and flooding.

Action Item 18 – Green

Replacement & Rerouting of Sewer Line Next to Green River - Flooding

Apply for funds to replace sewer line at the Green River. A portion of the existing sewer main that runs along the east bank of the Green River, near the discharge of Clover Lick Creek, is in jeopardy of falling into the river. This sewer main contains a sewer manhole that, due to recent river bank slope failure, is located adjacent to the new, vertical river bank slope. If the bank recedes any further, this manhole and a portion of the sewer main will fall into the river. The Clover Lick Creek Interceptor Sewer and Pump Station project is an opportunity to abandon this existing sewer main and thus remove the potential environmental damage from high water and flooding.

Action Item 19 – McCreary

Provide Roadway Improvements to Prevent Landslides

Provide right of way improvements, at several KY 92 East slides, where road is dropping off. Right of way improvement will mitigate further damage that poses difficulties for drivers and potential damages from heavy rain events.

Action Item 20 – Pulaski

Provide Roadway Improvements to Prevent Emergency Response and Evacuation

Provide Overpass needed at Hwy 635 and Hwy 1247. This intersection is routinely blocked by train preventing evacuation or response by emergency vehicles. Construction of overpass will eliminate difficulties for drivers, emergency response vehicles, and potential damages from response delays.

Action Item 21 – Pulaski

Debris Management and Removal Improvements during Disaster Debris Clean-up

Provide Tub Grinders to assist in debris clean-up and management.

Action Item 22 – Pulaski

Emergency Response Equipment for Improved Response to Drowning and Water Related Emergencies

Obtain underwater robot for water related emergency responses.

Action Item 23 – Pulaski

Provide Bridge Design & Replacement to Prevent Flooding

Prevent bridge flooding at Shopville Bridge (by school) by bridge replacement. This will mitigate further damage that poses hazards for drivers and potential damages from high water events.

Action Item 24 – Russell

Provide Roadway Improvements to Prevent Flooding

Improvements to design of Mt. Eden Road will mitigate water buildup that poses difficulties for drivers and potential damages for automobiles during each rainfall. The public should not be subject to the problems that have come with the current road deterioration, design and structure.

Action Item 25 – Russell

Provide Bridge Design & Replacement to Prevent Flooding

Prevent bridge flooding on Cabin Fork Creek Road by replacement with a box culvert type bridge replacement. This will mitigate further damage that poses hazards for drivers and potential damages from high water events.

Action Item 26 – Taylor

Identify and Locate Bridge and Roadway Subject to Flooding for Flooding Prevention

Prevent bridge flooding within the county by evaluation of flood locations with an improvement plan. This will mitigate further damage that poses hazards for drivers and potential damages from high water events.

Action Item 27 – Wayne

Provide Roadway Improvements to Prevent Landslides

Provide right of way improvements, at four road slides on Lower Turkey Creek, Grammar Hill Ridge, and Spann Hill Road, where road is subject to slides. Right of way improvement will mitigate further damage that poses difficulties for drivers and potential damages from heavy rain events.

Public Information and Communications

Action Item 28 – Clinton

Replacement of Generators at City of Albany City Building to Manage Emergency Incidents

Apply for funds to replace emergency generators. This will provide improved city operations and management of all emergency operations within the city during power failures.

Action Item 29 – Casey

Emergency Operations Center to Manage Emergency Incidents

Apply for funds to construct and equip an Emergency Operating Center for Casey County and the City of Liberty. This will provide improved management of all emergency operations within the county.

Action Item 30 – McCreary

Code Red/Reverse 911System – Communications and Mitigation Efforts

Implement a CodeRED high-speed community and emergency notification system to be used by state and local government organizations to effectively alert the residents of McCreary County.

Action Item 31 – McCreary

Threat and Hazard Identification and Risk Assessment – Mitigation Efforts

Conduct a Countywide Threat and Hazard Identification and Risk Assessment to help McCreary County Communities map their risks to the core capabilities. The Threat and Hazard Identification and Risk Assessment (THIRA) is a 4 step common risk assessment process that helps the whole community—including individuals, businesses, faith-based organizations, nonprofit groups, schools and academia and all levels of government—understand its risks and estimate capability requirements. The THIRA process helps communities map their risks to the core capabilities, enabling them to determine whole-community outcomes.

Improved communications with the public, will provide notification of any severe weather warning, evacuation, boil water advisory, or any other type of pertinent information citizens need to be informed of to mitigate community emergencies.

Action Item 32 – Wayne

911 Emergency Operations Center to Manage Emergency Incidents

Apply for funds to construct and equip an Emergency Operating Center for City of Monticello/Wayne County 911 Center. This will provide improved management of all emergency operations within the county.

Action Item 33 – Wayne

Purchase of Generator at Wayne County Courthouse to Manage Emergency Incidents

Apply for funds to purchase emergency generator. This will provide improved county operations and management of all emergency operations within the county during power failures.

8.4 Proposed Disaster Mitigation Measures Matrix

The matrix below outlines the following information for proposed disaster mitigation measures:

Table 8.4(1) – Proposed Disaster Mitigation Measures Matrix

Action Item/Jurisdiction -	Protection Measure	Applicable Hazards
Prevention and Resource Protection		
Action Item 1 – All Jurisdictions	Petition FEMA to Update/Modify FIRMs	Flood-related hazards
Action Item 2 – All Jurisdictions	Encourage Participation National Flood Insurance Program and/or Improver Community Rating System	Flood-related hazards
Public Safety		
Action Item 3 – All Jurisdictions	Evaluation Of Need For Additional Emergency Shelters And Their Placement In Each County/City	All hazards
Action Item 4 – Adair, Clinton, Cumberland, McCreary, Russell, Taylor, and Wayne	Provide Emergency Outdoor Warning Sirens at Key Locations	All hazards
Action Item 5 – All Jurisdictions	Identify And Establish Additional Emergency Shelters In Areas Cut-Off By Flooding	Flood-related hazards
Action Item 6 – All Jurisdictions	Establish Evacuation Procedures	All hazards
Action Item 7 – All Jurisdictions	Ensure Emergency Planning Includes Tourism Visitors	Flood-related hazards
Property Protection		
Action Item 8 – Clinton, Cumberland, Russell, Wayne, Pulaski, and McCreary	Monitor US Army Corps of Engineers Safety Inspection Reports on the Wolf Creek Dam	Flood-related hazards
Action Item 9 – All Jurisdictions	Provide Emergency Power Generators at Critical Infrastructure--Water/Wastewater Pump Stations, Courthouses, Temporary Shelters	All hazards
Structural Projects		
Action Item 11 – All Jurisdictions	Provide Emergency Safe Rooms at Key Locations	Tornados & Straight-line Winds
Action Item 12 – Adair and Cumberland	Provide Roadway Improvements to Prevent Flooding	Flood-related
Action Item 13 – Adair	Provide Bridge Improvements to Prevent Further Deterioration	Flood-related

Action Item 14 – Adair	Provide Bridge Design & Structure Improvements to Prevent Flooding	Flood-related
Action Item 15 – Casey	Provide Stream Preventive Maintenance to Prevent Flooding	Flood-related
Action Item 16 – Casey	Reinforce Shucks Creek Road to Prevent Flooding	Flood-related
Action Item 17 – Casey	Box Culvert on Caney Fork Creek Road to Prevent Flooding	Flood-related
Action Item 18 – Green	Replacement & Rerouting of Sewer Line Next to Green River - Flooding	Flood-related
Action Item 19 – McCreary	Provide Roadway Improvements to Prevent Landslides	Flood-related
Action Item 20 – Pulaski	Provide Roadway Improvements to Prevent Emergency Response and Evacuation	All hazards
Action Item 21 – Pulaski	Debris Management and Removal Improvements during Disaster Debris Clean-up	All hazards
Action Item 22 – Pulaski	Emergency Response Equipment for Improved Response to Drowning and Water Related Emergencies	All hazards
Action Item 23 – Pulaski	Provide Bridge Design & Replacement to Prevent Flooding	Flood-related
Action Item 24 – Russell	Provide Roadway Improvements to Prevent Flooding	Flood-related
Action Item 25 – Russell	Provide Bridge Design & Replacement to Prevent Flooding	Flood-related
Action Item 26 – Taylor	Identify and Locate Bridge and Roadway Subject to Flooding for Flooding Prevention	Flood-related
Action Item 27 – Wayne	Provide Roadway Improvements to Prevent Landslides	Landslide
Public Information and Communications		
Action Item 28 – Clinton	Replacement of Generators at City of Albany City Building to Manage Emergency Incidents	All hazards
Action Item 29 – Casey	Emergency Operations Center to Manage Emergency Incidents	All hazards
Action Item 30 – McCreary	Code Red/Reverse 911System – Communications and	All hazards

	Mitigation Efforts	
Action Item 31 – McCreary	Threat and Hazard Identification and Risk Assessment – Mitigation Efforts	All hazards
Action Item 32 – Wayne	911 Emergency Operations Center to Manage Emergency Incidents	All hazards
Action Item 33 – Wayne	Purchase of Generator at Wayne County Courthouse to Manage Emergency Incidents	All hazards

8.5 National Flood Insurance Program

As outlined earlier, Casey County, City of Burnside, City of Ferguson, City of Russell Springs., City of Eubank, and City of Science Hill do not participate in the NFIP. All other entities in the region participate in the NFIP.. In order to maintain compliance with the NFIP requirements, FIRMs will be periodically updated as necessary to reflect the most up-to-date information possible concerning floodplain locations and flooding hazards. The Floodplain District as regulated under the zoning bylaws will also be updated as needed to reflect any changes in the floodplain and other vulnerable areas as a result of altered stormwater drainage, natural stream channel deviations, global warming, etc.

The Region will continue to evaluate and track flood damage to buildings and infrastructure in Region, particularly for repetitive loss structures, to determine if any additional measures are required to reduce or prevent damage. Bylaws and/or regulations will also be updated as needed to improve flood protection.

8.6 Prioritization and Implementation of Mitigation Actions

Effective implementation of the proposed mitigation actions outlined in Section 8.3 is critical to minimizing damage from future natural hazards. Measures should be prioritized to make the best use out of limited resources as outlined in sections below. Implementation of mitigation actions will be directed and enforced by the appropriate agency and will take place over several years depending on a number of factors such as urgency, need, funding sources, etc.

Mitigation Prioritization and Implementation Matrix

Many mitigation project measures will require additional consideration and design. Many of these items may be mixed and matched, particularly if performed by different agencies. Prioritization is provided as a guideline only and timelines do not represent a definitive schedule. These items have been classified separately, as projects will likely be implemented one at a time following a more specific order. The following matrix provides the following information for proposed projects:

Table 8.6(1) – Prioritization of Project Mitigation Actions

	Priority Rank	Action Item/Jurisdiction	Protection Measure	Responsibility	Project Cost	Potential Funding	Timeline
Prevention and Resource Protection							
	To Be Determined By City Council or Fiscal Court	Action Item 1 – All Jurisdictions	Petition FEMA to Update/Modify FIRMs	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	5 years
	To Be Determined By City Council or Fiscal Court	Action Item 2 – All Jurisdictions	Encourage Participation National Flood Insurance Program and/or Improver Community Rating System	Emergency Management Agency/ Flood Plain Manager	Unknown	Local Funding & FEMA Grant	2-5 years
Public Safety	To Be Determined By City Council or Fiscal Court						
	To Be Determined By City Council or Fiscal Court	Action Item 3 – All Jurisdictions	Evaluation Of Need For Additional Emergency Shelters And Their Placement In Each County/City	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	2 years

	To Be Determined By City Council or Fiscal Court	Action Item 4 – Adair, Clinton, McCreary, Russell, Taylor, and Wayne	Provide Emergency Outdoor Warning Sirens at Key Locations	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 5 – All Jurisdictions	Identify And Establish Additional Emergency Shelters In Areas Cut-Off By Flooding	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	2 years
	To Be Determined By City Council or Fiscal Court	Action Item 6 – All Jurisdictions	Establish Evacuation Procedures	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	2 years
	To Be Determined By City Council or Fiscal Court	Action Item 7 – All Jurisdictions	Ensure Emergency Planning Includes Tourism Visitors	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	2-5 years
Property Protection	To Be Determined By City Council or Fiscal Court						
	To Be Determined By City Council or Fiscal Court	Action Item 8 – Clinton, Cumberland, Russell, Wayne, Pulaski, and McCreary	Monitor US Army Corps of Engineers Safety Inspection Reports on the Wolf Creek Dam	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	yearly

	To Be Determined By City Council or Fiscal Court	Action Item 9 – All Jurisdictions	Provide Emergency Power Generators at Critical Water and Wastewater Pump Stations	Utility Agencies	Unknown	Local Funding & FEMA Grant	2-5 years
Structural Projects	To Be Determined By City Council or Fiscal Court						
	To Be Determined By City Council or Fiscal Court	Action Item 11 – All Jurisdictions	Provide Emergency Safe Rooms at Key Locations	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	5-10 years
	To Be Determined By City Council or Fiscal Court	Action Item 12 – Adair	Provide Roadway Improvements to Prevent Flooding	Road Department	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 13 – Adair	Provide Bridge Improvements to Prevent Further Deterioration	Road Department	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 14 – Adair	Provide Bridge Design & Structure Improvements to Prevent Flooding	Road Department	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 15 – Casey	Provide Stream Preventive Maintenance to Prevent Flooding	Road Department	Unknown	Local Funding & FEMA Grant	2-5 years

	To Be Determined By City Council or Fiscal Court	Action Item 16 – Casey	Reinforce Shucks Creek Road to Prevent Flooding	Road Department	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 17 – Casey	Box Culvert on Caney Fork Creek Road to Prevent Flooding	Road Department	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 18 – Green	Replacement & Rerouting of Sewer Line Next to Green River - Flooding	Utility Agency	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 19 – McCreary	Provide Roadway Improvements to Prevent Landslides	Road Department	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 20 – Pulaski	Provide Roadway Improvements to Prevent Emergency Response and Evacuation	Road Department	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 21 – Pulaski	Debris Management and Removal Improvements during Disaster Debris Clean-up	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	2-5 years

	To Be Determined By City Council or Fiscal Court	Action Item 22 – Pulaski	Emergency Response Equipment for Improved Response to Drowning and Water Related Emergencies	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	2 years
	To Be Determined By City Council or Fiscal Court	Action Item 23 – Pulaski	Provide Bridge Design & Replacement to Prevent Flooding	Road Department	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 24 – Russell	Provide Roadway Improvements to Prevent Flooding	Road Department	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 25 – Russell	Provide Bridge Design & Replacement to Prevent Flooding	Road Department	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 26 – Taylor	Identify and Locate Bridge and Roadway Subject to Flooding for Flooding Prevention	Road Department	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 27 – Wayne	Provide Roadway Improvements to Prevent	Road Department	Unknown	Local Funding & FEMA Grant	2-5 years

			Landslides				
Public Information and Communications	To Be Determined By City Council or Fiscal Court						
	To Be Determined By City Council or Fiscal Court	Action Item 28 – Clinton	Replacement of Generators at City of Albany City Building to Manage Emergency Incidents	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 29 – Casey	Emergency Operations Center to Manage Emergency Incidents	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 30 – McCreary	Code Red/Reverse 911System – Communications and Mitigation Efforts	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 31 – McCreary	Threat and Hazard Identification and Risk	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	2-5 years

			Assessment – Mitigation Efforts				
	To Be Determined By City Council or Fiscal Court	Action Item 32 – Wayne	911 Emergency Operations Center to Manage Emergency Incidents	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	2-5 years
	To Be Determined By City Council or Fiscal Court	Action Item 33 – Wayne	Purchase of Generator at Wayne County Courthouse to Manage Emergency Incidents	Emergency Management Agency	Unknown	Local Funding & FEMA Grant	2-5 years

9.0 PLAN ADOPTION

At the conclusion of planning efforts, the Lake Cumberland Regional Hazard Mitigation Plan was reviewed and endorsed by the Lake Cumberland Hazard Mitigation Regional Planning Committee (LCHMRPC). The Plan was then sent to the State Hazard Mitigation Officer (SHMO) of the Kentucky Emergency Management Agency (KEMA) and the FEMA for approval. Upon receiving approval from KEMA and FEMA, the plan received final approval from the LCHMRPC and was adopted by formal resolution by each jurisdiction within the Lake Cumberland Area Development District. Proof of final approval will be included in **Appendix B**. Following final adoption, the Plan will be implemented as outlined in Section 10.0.

10.0 PLAN MAINTENANCE PROCESS

10.1 Plan Monitoring, Evaluation and Updates

The Lake Cumberland Hazard Mitigation Regional Planning Committee (LCHMRPC) will conduct an annual maintenance meeting during the second quarter of each year to review and update of the plan. The LCHMRPC will review the goals and objectives, community profile information, potential hazards, hazard-prone areas, risk assessments, and mitigation strategies. The regional committee will accept recommendations from the local committees to update and modify the plan as needed to ensure its continued relevance and effectiveness.

The Mayors and Judge-Executives will schedule local committee meetings during the first quarter of each year, prior to the LCHMRPC annual maintenance meeting to review and update the plan as it affects their jurisdiction. Mayors and Judge-Executives will then report to the suggested changes to the regional committee. Upon request from a jurisdiction, the Chairman of the regional committee may call a special meeting at any time. Additionally, at his discretion, the Chairman has the authority to approve any imminent revisions until the next LCHMRPC meeting convenes.

Lake Cumberland ADD staff will assist the LCHMRPC as funding is available. Lake Cumberland ADD staff will be proactive in obtaining funding for administrative activities as well as funding for mitigation actions as outlined in the plan.

10.2 Incorporation of Mitigation Strategies

Upon adoption of this plan, local jurisdictions accept the responsibility to implement the mitigation strategies and actions outlined in this plan. The mitigation strategies will be incorporated into existing bylaws, zoning regulations and other community development plans as applicable. The Mayor or Judge-Executive of each jurisdiction will report annually to the LCHMRPC regarding the progress of implementation.

The LCHMRPC encourages its members to especially identify any specific post-disaster projects and resources needed (capital projects, bridge replacements, etc.), thus giving the community greater access to post-disaster federal funding if/when such a disaster occurs.

10.3 Continued Public Involvement

The Lake Cumberland Regional Hazard Mitigation Plan has been created with great input from the local citizens of each jurisdiction. The Lake Cumberland Regional Hazard Mitigation Planning Committee is dedicated to provide opportunities to facilitate continued public involvement.

The Regional Mitigation Committee will conduct an annual maintenance meeting during the second quarter of every year. Concerned citizens will be invited to make any additional recommendations for improving the plan. Notice of this meeting will be sent to the newspaper and radio in each county to inform the public. The meeting will be conducted at an accessible location.

The Local Mitigation Committees in each jurisdiction will meet during the first quarter of each year prior to the Regional Committee meeting. The local jurisdiction is responsible for notifying the public of this meeting.

The Lake Cumberland Regional Hazard Mitigation Plan will be made available to the public through a variety of means. Copies will be provided to the public libraries in each county. Copies will be available for public review during the regular business hours in the Mayors' and County Judge-Executives' offices. The plan will be available on the Lake Cumberland Area Development District's website (www.lcadd.org).

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
October 2016

APPENDIX A – PLANNING PROCESS AGENDAS

Lake Cumberland Regional Mitigation Committee Planning Meeting
2015 Annual Plan Update Meeting and 2016 Plan Update Kick-off

March 26, 2015

AGENDA

Welcome
Mayor John "Nicky" Smith

Topics for Discussion/Activities
LCADD Staff

- Review Mitigation Strategy and Action Plan Additions
- Review of Local Committee suggested changes
- Review Plan Maintenance: Recommend moving annual meeting from Feb. to March
- Discuss/Comment on Plan Updates

Action Items
Mayor John "Nicky" Smith

- Adoption of Plan Maintenance Changes
- Adoption of Plan Mitigation Strategy Changes

2016 Regional Hazard Mitigation Plan 5 Year Update
LCADD Staff

- Overview of Requirements
- Community Participation

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
October 2016

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update - 2016

Meeting 1 – May 21, 2015, 9:00 AM (CT)

1) **Introductions**

2) **Review Scope of Work**

3) **Identify Local Planning Team (worksheet)**

4) **Questions & Comments**

Future Meetings Activities:

Identify Critical Infrastructure (worksheet and GIS)
Discuss and Evaluation Hazards and Hazard Areas (worksheet and GIS)
Discuss Recent Disasters (worksheet)
Identify existing emergency procedures in place
- Emergency plans
- Evacuation routes
- Emergency shelter access
- Public information dissemination
- Mutual aid agreements
- Bylaws and regulations
- Problem area studies or evaluations
- Training or drills

Identify recent and proposed hazard protection measures
- Go over goals and actions in current plan
- Any of the above listed under existing procedures
- Drainage improvements
- Culvert upgrades
- Equipment purchases
- Funding increases

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
October 2016

Lake Cumberland Regional Hazard Mitigation Plan Update - 2016

Meeting 2 – August 19, 2015, 10:00 AM (CT)

1. Introductions

2. Review Scope of Work

3. Identify Local Planning Team (continued)

4. Define and Rate The Potential Natural Hazards That Could Affect Lake Cumberland Region

5. Identify Critical Infrastructure (worksheet and GIS)

6. Discuss and Evaluation Hazards and Hazard Areas (worksheet and GIS)

7. Discuss Recent Disasters (worksheet)

8. Identify existing emergency procedures in place
   - ≠ Emergency plans
   - ≠ Evacuation routes
   - ≠ Emergency shelter access
   - ≠ Public information dissemination
   - ≠ Mutual aid agreements
   - ≠ Bylaws and regulations
   - ≠ Problem area studies or evaluations
   - ≠ Training or drills

9. Identify recent and proposed hazard protection measures
- ≠ Go over goals and actions in current plan
- ≠ Any of the above listed under existing procedures
- ≠ Drainage improvements
- ≠ Culvert upgrades
- ≠ Equipment purchases
- ≠ Funding increases
- ≠ Other

10. Discuss Info Needed (worksheet)

11. Next Steps

Future Meetings Activities:

- ≠ Step 1: Map the Hazards - Where Are they?
- ≠ Step 2: Determine Potential Damage - What Are the Risks?
- ≠ Step 3: Identify What's Already in Place - What Are We Already Doing?
- ≠ Step 4: Identify What's Not Being Done - Where Are the Gaps in Our Protection?
- ≠ Step 5: Brainstorm Alternatives - What Actions Can Be Taken?
- ≠ Step 6: Evaluate Actions - What is Feasible?
- ≠ Step 7: Coordinate with Others - Who Else is Doing This?
- ≠ Step 8: Select Actions - What Are Our Priorities?
- ≠ Step 9: Develop a Strategy - How Do We Implement Actions?
- ≠ Step 10: Adopt and Monitor the Plan - Putting It All Together

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
October 2016

Lake Cumberland Regional Hazard Mitigation Plan Update - 2016

Meeting 2 – August 19, 2015, 10:00 AM (CT)

12. Introductions

13. Review Scope of Work

14. Identify Local Planning Team (continued)

15. Define and Rate The Potential Natural Hazards That Could Affect Lake Cumberland Region

16. Identify Critical Infrastructure (worksheet and GIS)

17. Discuss and Evaluation Hazards and Hazard Areas (worksheet and GIS)

18. Discuss Recent Disasters (worksheet)

19. Identify existing emergency procedures in place

- ≠ Emergency plans
- ≠ Evacuation routes
- ≠ Emergency shelter access
- ≠ Public information dissemination
- ≠ Mutual aid agreements
- ≠ Bylaws and regulations
- ≠ Problem area studies or evaluations
- ≠ Training or drills

20. Identify recent and proposed hazard protection measures

- ≠ Go over goals and actions in current plan
- ≠ Any of the above listed under existing procedures
- ≠ Drainage improvements
- ≠ Culvert upgrades
- ≠ Equipment purchases
- ≠ Funding increases
- ≠ Other

21. Discuss Info Needed (worksheet)

22. Next Steps

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
October 2016

Future Meetings Activities:

- ≠ Step 1: Map the Hazards - Where Are they?
- ≠ Step 2: Determine Potential Damage - What Are the Risks?
- ≠ Step 3: Identify What's Already in Place - What Are We Already Doing?
- ≠ Step 4: Identify What's Not Being Done - Where Are the Gaps in Our Protection?
- ≠ Step 5: Brainstorm Alternatives - What Actions Can Be Taken?
- ≠ Step 6: Evaluate Actions - What is Feasible?
- ≠ Step 7: Coordinate with Others - Who Else is Doing This?
- ≠ Step 8: Select Actions - What Are Our Priorities?
- ≠ Step 9: Develop a Strategy - How Do We Implement Actions?
- ≠ Step 10: Adopt and Monitor the Plan - Putting It All Together

Lake Cumberland Regional Hazard Mitigation Plan Update - 2016

Meeting 3 – Oct 21, 2015, 1:00 pm (CT)

1. Introductions
2. Identify existing emergency procedures in place (Follow-up both jurisdiction and agency/business)

2a.Emergency plans

- Evacuation routes
- Emergency shelter access
- Public information dissemination
- Mutual aid agreements
- Bylaws and regulations
- Problem area studies or evaluations
- Training or drills

3. Go over goals and actions items in current plan
    - Any of the above listed under existing procedures
    - Drainage improvements
    - Culvert upgrades
    - Equipment purchases
    - Funding increases
    - Other Projects Listed or Completed
4. Identify recent and proposed hazard protection measures (Follow-up)
5. Identify Existing Hazard Mitigation Measures in Place (worksheet)
    - Structural Improvement Projects
    - Regulations and Bylaws
    - Preventative Maintenance and Inspection Operations
    - Emergency Operations

- Existing Plans

6. Identify Proposed Hazard Protection Measures (worksheet - Goals and Objective Action Form)
    - Fill out form if you have any ongoing or needed Hazard Protection Projects

Future Meetings Activities:

- Step 1: Map the Hazards - Where Are they?
- Step 2: Determine Potential Damage - What Are the Risks?
- Step 3: Identify What's Already in Place - What Are We Already Doing?
- Step 4: Identify What's Not Being Done - Where Are the Gaps in Our Protection?
- Step 5: Brainstorm Alternatives - What Actions Can Be Taken?
- Step 6: Evaluate Actions - What is Feasible?
- Step 7: Coordinate with Others - Who Else is Doing This?
- Step 8: Select Actions - What Are Our Priorities?
- Step 9: Develop a Strategy - How Do We Implement Actions?
- Step 10: Adopt and Monitor the Plan - Putting It All Together

Meeting times 1:00 pm to 2:30 pm (1.5 hrs.)

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
October 2016

Lake Cumberland Regional Hazard Mitigation Plan Update - 2016

Meeting 4 – Feb. 23, 2016, 10:00 am (CT)

Meeting 4 Agenda*

1. Review Mapping Efforts to Date
- Critical Infrastructure within Hazard Areas

2. Prioritization of Critical Infrastructure
3. Identify Existing Hazard Mitigation Measures in Place (Worksheets)
- Structural Improvement Projects
- Regulations and Bylaws
- Preventative Maintenance and Inspection Operations
- Emergency Operations
- Existing Plans

4. Identify Proposed Hazard Protection Measures (worksheet)

5. Review Mapping Efforts to Date
6. Next Steps
- Vulnerability Assessment
- Implementation of Mitigation Actions
- Public Participation and Input

*Please note that agenda items may be covered over multiple meetings.

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
October 2016

Lake Cumberland Regional Hazard Mitigation Plan Update - 2016
Meeting 5 – March 31, 2016, 10:00 am (CT)

Meeting 5 Agenda

1. **Mileage In-kind**
2. **Regional Annual Plan Update Meeting**
   - ≠ Review of Kentucky's 2015 FEMA Disaster Declarations

Number	Date	State	Incident Description
4239	08/12/2015	Kentucky	Severe Storms, Tornadoes, Straight-line Winds, Flooding, Landslides, and Mudslides
4218	05/12/2015	Kentucky	Severe Winter Storm, Snowstorm, Flooding, Landslides, and Mudslides
4217	05/01/2015	Kentucky	Severe Storms, Tornadoes, Flooding, Landslides, and Mudslides
4216	04/30/2015	Kentucky	Severe Winter Storms, Snowstorms, Flooding, Landslides, and Mudslides

   - ≠ Review of Local Committee suggested changes
   - ≠ Review Mitigation Strategy
   - ≠ Review Plan Maintenance
   - ≠ Discuss/Comment on Plan Updates
3. **Flood Hazard**
   - ≠ Committee Identified Locations
4. **Review of Existing Mitigation Measures (worksheet)**
   - ≠ Any additional items?
5. **Proposed Mitigation Measures Goal Statements**
6. **Review of Proposed Mitigation Measures (worksheet)**
   - ≠ Any additional items?
7. **Prioritization of Proposed Mitigation Measures**
8. **Plan Maintenance**

Next Steps

- ≠ Plan Draft public participation and input

*Please note that agenda items may be covered over multiple meetings.

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
October 2016

Lake Cumberland Regional Hazard Mitigation Plan Update - 2016
Meeting 6 – May 26, 2016, 10:30 am (CT)

Meeting 6 Agenda

1. **Mileage In-kind**

2. **Flood Hazard**
   - ≠ Committee Identified Locations

3. **Review of Existing Mitigation Measures**
   - ≠ Any additional items?

4. **Proposed Mitigation Measures Goal Statements (Suggestions)**
   - ≠ Provide residents with adequate access to emergency shelters equipped with provisions, climate control and electricity;
   - ≠ Improve communications before, during and after a natural disaster;
   - ≠ Maintain adequate access to public utilities such as electricity, drinking water, and communications;
   - ≠ Maintain an adequate service on all roadways, particularly on major roadways;
   - ≠ Reduce or eliminate preventable flood damage to buildings and infrastructure;
   - ≠ Improve public education to inform residents on what may happen during a natural disasters

5. **Review of Proposed Mitigation Measures (worksheet)**
   - ≠ None submitted.

6. **Prioritization of Proposed Mitigation Measures**

7. **Plan Maintenance**

Next Steps

- ≠ Individual County/City Meetings
- ≠ Plan Draft public participation and input

*Please note that agenda items may be covered over multiple meetings.

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
October 2016

Lake Cumberland Regional Hazard Mitigation Plan Update - 2016
Meeting 7 – March 23, 2017, 10:00 am (CT)

Meeting 7 Agenda

The Lake Cumberland Regional Hazard Mitigation Planning Committee (RHMPC) is in the process of completing the final hazard mitigation plan 5yr. update. This is the seventh RHMPC/public meeting and is being held prior to final Lake Cumberland Regional Hazard Mitigation Plan Update–2016 approval by the Kentucky Division of Emergency Management and FEMA for their review and approval.

1. **Introductions and Overview**

2. **Public Questions, Comments and Input**

3. **Next Steps**

4. **Adjournment**

Next Steps

- ≠ State and FEMA Review
- ≠ Plan Revisions and public participation and review.
- ≠ Final approval and adoption by local governments.
- ≠

*Please note that agenda items may be covered over multiple meetings.
The draft plan can be reviewed online at ***LCADD.ORG.***

Lake Cumberland Regional Hazard Mitigation Plan Update - 2016
Meeting 7 – March 23, 2017, 10:00 am (CT)

Meeting 7 Agenda

The Lake Cumberland Regional Hazard Mitigation Planning Committee (RHMPC) is in the process of completing the final hazard mitigation plan 5yr. update. This is the seventh RHMPC/public meeting and is being held prior to final Lake Cumberland Regional Hazard Mitigation Plan Update–2016 approval by the Kentucky Division of Emergency Management and FEMA for their review and approval.

1) **Introductions and Overview**
   a) Sections 1.0, 2.0 (Chari)
   b) Sections 3.0, 4.0, 5.0, 6.0 (David)
   c) Sections 7.0, 8.0 (Martina)
   d) Sections 9.0, 10.0, Appendices (Chari)

2) **Public Questions, Comments and Input**

3) **Next Steps**
   a) Public Comments
   b) Final Draft Approval (4/12/17)
   c) State and FEMA Review
   d) Plan Revisions and public participation and review.
   e) Final approval and adoption by local governments.

4) **Adjournment**

*Please note that agenda items may be covered over multiple meetings.

The draft plan can be reviewed online at ***LCADD.ORG (http://lcadd.com/index.php/publications-documents-for-review/hazard-mitigation-plan)***

Meeting times 10:00 am to 11:30 am (1.5 hrs.)

Lake Cumberland Regional Hazard Mitigation Plan Update - 2016
Meeting 8 and Annual Review Meeting
April 12, 2017, 10:00 am (CT)

Lake Cumberland Regional Mitigation Committee Planning Meeting 2017 Annual Plan Review & Update Meeting

Welcome

Mayor John "Nicky" Smith

Topics for Discussion/Activities

LCADD Staff

1. **Review Mitigation Strategy and Action Plan Additions (submitted and incorporated into 2016 Plan Update)**
2. **Review of Local Committee suggested changes (any additional suggestions)**
3. **Discuss/Comment on Plan Updates**
4. **Review emergency plan request procedures**
5. **Readiness: Training Identification Preparedness Planning Classes (Don Franklin contact person)**

Update Meeting 8 Agenda

The Lake Cumberland Regional Hazard Mitigation Planning Committee (RHMPC) is in the process of completing the final hazard mitigation plan 5yr. update. This is the eighth RHMPC/public meeting and is being held to approve Lake Cumberland Regional Hazard Mitigation Plan Update – 2016 Draft Plan to be submitted for approval to the Kentucky Division of Emergency Management and FEMA for review and approval.

1) **Introductions and Overview**
    a) Sections 1.0, 2.0 (Chari)
    b) Sections 3.0, 4.0, 5.0, 6.0 (David)
    c) Sections 7.0, 8.0 (Martina)
    d) Sections 9.0, 10.0, Appendices (Chari)

2) **Public Questions, Comments and Input Received**

3) **Next Steps**
    a) Final Draft Approval (4/12/17)
    b) Submission for State and FEMA Review
    c) State and FEMA Plan Revisions
    d) Final approval and adoption by local governments.

4) **Adjournment**

*Please note that agenda items may be covered over multiple meetings.

The approved draft plan can be reviewed online at ***LCADD.ORG*** ***(http://lcadd.com/index.php/publications-documents-for-review/hazard-mitigation-plan)***

Meeting times 10:00 am to 11:00 am (1.0 hrs.)

Lake Cumberland Regional Hazard Mitigation Plan Update - 2016
Meeting 9 Agenda
July 27, 2017, 10:00 am (CT)

Welcome

Mayor John "Nicky" Smith

Topics for Discussion/Activities

LCADD Staff

1. **Review KYEM Recommended Changes**
2. **Prioritize Mitigation Actions**
3. **LCRHM Committee Resolution to adopt final draft**
4. **Local Jurisdiction Resolutions**
5. **Kentucky Association of Mitigation Managers 2017 Annual Conference**
   August 29-31 at Kentucky Dam Village State Resort Park
   Registration fees: $175 for members or $200 for non-members
   http://www.kymitigation.org/2017-kamm-conference/

The approved draft plan can be reviewed online at ***LCADD.ORG***
(http://lcadd.com/index.php/publications-documents-for-review/hazard-mitigation-plan)

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
October 2016

Lake Cumberland Regional Hazard Mitigation Plan Update - 2016
County Meetings

County Meeting Agenda

1. Existing Mitigation Measures

2. Proposed Mitigation Measures

3. Other Business
- Don Franklin, KYEM Area 10 Manager

Adair	June 22, 2016
Casey	June 21, 2016
Clinton	June 29, 2016
Cumberland	June 21, 2016
Green	By Phone
McCreary	June 28, 2016
Pulaski	June 20, 2016
Russell	June 14, 2016
Taylor	By Phone
Wayne	By Phone

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
October 2016

APPENDIX B – DOCUMENTATION OF PLAN ADOPTION

ADAIR COUNTY, KENTUCKY
Resolution No. 2017-7(1)

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of Adair County, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the County of Adair desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the County of Adair fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including Adair County, Kentucky;

NOW, therefore, be it resolved, that the Adair County Fiscal Court hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to Adair County, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance, of the plan and that any needed adjustment to the plan be developed and presented to the Adair County's Local County/City Hazard Mitigation Committee and to the Adair County Fiscal Court for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for Adair County, Kentucky and Lake Cumberland Area Development District Region.

Adopted on July 11, 2017

Certified by: Michael Lee Stephens

Michael Lee Stephens
Adair County Judge Executive

Attested by: Dale Cowan

Date: 7-11-2017

CITY OF COLUMBIA (ADAIR COUNTY), KENTUCKY
Resolution No. 2018-03

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of the City of Columbia, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the City of Columbia desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the City of Columbia fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including the City of Columbia, Kentucky;

NOW, therefore, be it resolved, that the City of Columbia City Council hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to the City of Columbia, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance of the plan and that any needed adjustment to the plan be developed and presented to the Adair County's Local County/City Hazard Mitigation Committee and to the City of Columbia City Council for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for the City of Columbia, Kentucky and Lake Cumberland Area Development District Region.

Adopted on 6-4-18

Certified by: Curtis Hardwick

Curtis Hardwick
Mayor

Attested by: Lynda Loy

Date: 6-5-18

CASEY COUNTY, KENTUCKY
Resolution No. 18-R-001

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of Casey County, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the County of Casey desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the County of Casey fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including Casey County, Kentucky;

NOW, therefore, be it resolved, that the Casey County Fiscal Court hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to Casey County, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
   a) Inform all concerned parties of this action.
   b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance, of the plan and that any needed adjustment to the plan be developed and presented to Casey County's Local County/City Hazard Mitigation Committee and to the Casey County Fiscal Court for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for Casey County, Kentucky and Lake Cumberland Area Development District Region.

Adopted on 7/17/2017

Certified by: _____
Randy Dial
County Judge/Executive

Attested by: _____

Date: 7-28-17

CITY OF LIBERTY (CASEY COUNTY), KENTUCKY
Resolution No. 17-R-03

Resolution of Adoption of the
Lake Cumberland Area Development District
Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of the City of Liberty, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the City of Liberty desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the City of Liberty fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including the City of Liberty, Kentucky;

NOW, therefore, be it resolved that the City of Liberty City Council hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to the City of Liberty, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance of the plan and that any needed adjustment to the plan be developed and presented to the Casey County's Local County/City Hazard Mitigation Committee and to the City of Liberty's City Council for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for the City of Liberty, Kentucky and Lake Cumberland Area Development District Region.

Adopted on July 10, 2017

Certified by: _____
Steven Brown, Mayor

Attested by: Bridgett Blake
Bridgett Blake, City Clerk

Date: _____

CLINTON COUNTY, KENTUCKY
Resolution No. 7-26-17 RHM

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of Clinton County, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the County of Clinton desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the County of Clinton fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including Clinton County, Kentucky;

NOW, therefore, be it resolved, that the Clinton County Fiscal Court hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to Clinton County, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance, of the plan and that any needed adjustment to the plan be developed and presented to the Clinton County's Local County/City Hazard Mitigation Committee and to the Clinton County Fiscal Court for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for Clinton County, Kentucky and Lake Cumberland Area Development District Region.

Adopted on 7-20-17

Certified by: _____
Richard C Armstrong
County Judge Executive

Attested by: _____

Date: 7-21-2017.

CITY OF ALBANY, KENTUCKY
Resolution No. R-2017-7-05-01

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of the City of Albany, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the City of Albany desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the City of Albany fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including the City of Albany, Kentucky;

NOW, therefore, be it resolved, that the City of Albany City Council hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to the City of Albany, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
   a) Inform all concerned parties of this action.
   b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance of the plan and that any needed adjustment to the plan be developed and presented to the Clinton County's Local County/City Hazard Mitigation Committee and to the City of Albany City Council for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for the City of Albany, Kentucky and Lake Cumberland Area Development District Region.

Adopted on July 5th 2017

Certified by: _____
John N. Smith
Mayor

Attested by: _____
Melissa P. Smith
City Clerk

Date: July 5, 2017

CUMBERLAND COUNTY, KENTUCKY
Resolution No. 2017/18-02

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of Cumberland County, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the County of Cumberland desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the County of Cumberland fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including Cumberland County, Kentucky;

NOW, therefore, be it resolved, that the Cumberland County Fiscal Court hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to Cumberland County, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance, of the plan and that any needed adjustment to the plan be developed and presented to the Cumberland County's Local County/City Hazard Mitigation Committee and to the Cumberland County Fiscal Court for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for Cumberland County, Kentucky and Lake Cumberland Area Development District Region.

Adopted on 09/12/17

Certified by: _____

John A. Phelps Jr.
Judge Executive
Cumberland County

Attested by: _____

Date: 09/13/17

CITY OF BURKESVILLE (CUMBERLAND COUNTY), KENTUCKY
Resolution No. 2017-2

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of the City of Burkesville, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the City of Burkesville desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the City of Burkesville fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including the City of Burkesville, Kentucky;

NOW, therefore, be it resolved, that the City of Burkesville City Council hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to the City of Burkesville, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibllity and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance of the plan and that any needed adjustment to the plan be developed and presented to the Russell County's Local County/City Hazard Mitigation Committee and to the City of Jamestown City Council for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for the City of Jamestown, Kentucky and Lake Cumberland Area Development District Region.

Adopted on 7/20/17

Certified by: Keith Riddle
KEITH RIDDLE, Mayor

Attested by: Brenda Spears
BRENDA SPEARS, City Clerk

Green COUNTY, KENTUCKY
Resolution No. 02-15-2018

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of Green County, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the County of Green desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the County of Green fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including Green County, Kentucky;

NOW, therefore, be it resolved, that the Green County Fiscal Court hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to Green County, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance, of the plan and that any needed adjustment to the plan be developed and presented to the Green County's Local County/City Hazard Mitigation Committee and to the Green County Fiscal Court for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for Green County, Kentucky and Lake Cumberland Area Development District Region.

Adopted on 2/15/2018

Certified by: _____
XXXXXXXXXX
Green County Judge Executive

Attested by: Bill Durham

Date: 2/15/2018

CITY OF GREENSBURG, KENTUCKY
Resolution No. 2018-0514R6

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of the City of Greensburg, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the City of Greensburg desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the City of Greensburg fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including the City of Greensburg, Kentucky;

NOW, therefore, be it resolved, that the City of Greensburg City Council hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to the City of Greensburg, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
   a) Inform all concerned parties of this action.
   b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance of the plan and that any needed adjustment to the plan be developed and presented to the Green County's Local County/City Hazard Mitigation Committee and to the City of Greensburg City Council for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for the City of Greensburg, Kentucky and Lake Cumberland Area Development District Region.

Adopted on 5/14/2018

Certified by: _____ Attest: _____
Mayor, George C. Cheatham, II — Jane Blakeman Casey, CKMC, CMC

OFFICE OF THE JUDGE/EXECUTIVE
McCREARY COUNTY
1 NORTH MAIN STREET • P.O. BOX 579
WHITLEY CITY, KENTUCKY 42653
(606) 376-2413

DOUGLAS E. STEPHENS
County Judge/Executive

Fax: (606) 376-9499
TDD: 1-800-247-2510

MCCREARY COUNTY, KENTUCKY
Resolution No. 170713-1

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of McCreary County, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the County of McCreary desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the County of McCreary fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation

Plan covering member jurisdictions of the Lake Cumberland Area Development District including McCreary County, Kentucky;

NOW, therefore, be it resolved, that the McCreary County Fiscal Court hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to McCreary County, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
   a) Inform all concerned parties of this action.
   b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance, of the plan and that any needed adjustment to the plan be developed and presented to the McCreary County's Local County/City Hazard Mitigation Committee and to the McCreary County Fiscal Court for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for McCreary County, Kentucky and Lake Cumberland Area Development District Region.

Adopted on 7-13-17

Certified by: Douglas E. Stephens

Douglas E. Stephens
County Judge Executive

Attested by: _____

Date: 7-13-17

PULASKI COUNTY, KENTUCKY
Resolution No. 221.17

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of Pulaski County, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the County of Pulaski desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the County of Pulaski fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region lV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including Pulaski County, Kentucky;

NOW, therefore, be it resolved, that the Pulaski County Fiscal Court hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to Pulaski County, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance, of the plan and that any needed adjustment to the plan be developed and presented to the Pulaski County's Local County/City Hazard Mitigation Committee and to the Pulaski County Fiscal Court for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for Pulaski County, Kentucky and Lake Cumberland Area Development District Region.

Adopted on August 8, 2017

Certified by: _____
Stephen B. Kelley, Jr.
County Judge Executive

Attested by: Leslie Cummins

Date: August 8, 2017

17-09

CITY OF SOMERSET, KENTUCKY

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of the City of Somerset, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the City of Somerset desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the City of Somerset fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including the City of Somerset, Kentucky;

NOW, therefore, be it resolved, that the City of Somerset City Council hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to the City of Somerset, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:

a) Inform all concerned parties of this action.
b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance of the plan and that any needed adjustment to the plan be developed and presented to the Local County/City Hazard Mitigation Committee and to the City of Somerset City Council for review.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for the City of Somerset, Kentucky and Lake Cumberland Area Development District Region.

Adopted on July 10, 2017

Certified by: _____
Mayor

Attested by: _____

Date: 7-10-17

CITY OF FERGUSON, (PULASKI COUNTY), KENTUCKY
Resolution No. 2017-1

Resolution of Adoption of the
Lake Cumberland Area Development District
Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of the City of Ferguson, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the City of Ferguson desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the City of Ferguson fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including the City of Ferguson, Kentucky;

NOW, therefore, be it resolved, that the City of Ferguson City Council hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to the City of Ferguson, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:

   a) Inform all concerned parties of this action.

   b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance of the plan and that any needed adjustment to the plan be developed and presented to the Russell County's Local County/City Hazard Mitigation Committee and to the City of Ferguson City Council for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for the City of Ferguson, Kentucky and Lake Cumberland Area Development District Region.

Adopted on _____

Certified by: Allen Dobbs
Allen Dobbs
Mayor

Attested by: Debbie Lake
Debbie Lake
City Clerk

Date: 8-7-17

City of Science Hill (Pulaski County), KENTUCKY
Resolution No. __7-18,2017_____

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of the City of Science Hill, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the City of Science Hill desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the City of Science Hill fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region lV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including the City of Science hill Kentucky;

NOW, therefore, be it resolved, that the City of Science Hill City Commissioners hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to the,City of Science Hill, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance of the plan and that any needed adjustment to the plan be developed and presented to the Russell County's Local County/City Hazard Mitigation Committee and to the City of Science Hill, City Commissioners for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for theCity of Science Hill , Kentucky and Lake Cumberland Area Development District Region.

Adopted on _July 18,2017_____

Certified by: _____
William J Dick
Mayor
Attested by: Vanda Hines
Vanda Hines
City Clerk
Date: 7-18-2017

CITY OF EUBANK (PULASKI COUNTY), KENTUCKY
Resolution No. 7-3-2017

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of the City of Eubank, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the City of Eubank desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the City of Eubank fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including the City of Eubank, Kentucky;

NOW, therefore, be it resolved, that the City of Eubank City Council hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to the City of Eubank, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance of the plan and that any needed adjustment to the plan be developed and presented to the Russell County's Local County/City Hazard Mitigation Committee and to the City of Jamestown City Council for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for the City of Jamestown, Kentucky and Lake Cumberland Area Development District Region.

Adopted on July 3, 2017

Certified by: _____
Eddie Hicks, Mayor

Attested by: _____
Bobby Daws, City Clerk

Date: 7-3-17

CITY OF BURNSIDE (PULASKI COUNTY), KENTUCKY
Resolution No 2017-002

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of the City of Burnside, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the City of Burnside desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the City of Burnside fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including the City of Burnside, Kentucky;

NOW, therefore, be it resolved, that the City of Burnside City Council hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to the City of Burnside, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance of the plan and that any needed adjustment to the plan be developed and presented to the Pulaski County's Local County/City Hazard Mitigation Committee and to the City of Burnside City Council for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for the City of Burnside, Kentucky and Lake Cumberland Area Development District Region.

Adopted on 7/10/17

Certified by: _____
Ronald Jones
Mayor

Attested by: Crissa Morris

Date: 7/11/17

RUSSELL COUNTY, KENTUCKY
Resolution No. 17-08

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of Russell County, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the County of Russell desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the County of Russell fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including Russell County, Kentucky;

NOW, therefore, be it resolved, that the Russell County Fiscal Court hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to Russell County, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance, of the plan and that any needed adjustment to the plan be developed and presented to the Russell County's Local County/City Hazard Mitigation Committee and to the Russell County Fiscal Court for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for Russell County, Kentucky and Lake Cumberland Area Development District Region.

Adopted on July 10, 2017

Certified by: Gary D. Robertson

Gary Robertson
County Judge Executive

Attested by: Kim Jenkins

Date: 7/10/17

CITY OF JAMESTOWN, (RUSSELL COUNTY), KENTUCKY
Resolution No. 2017-03

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of the City of Jamestown, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the City of Jamestown desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the City of Jamestown fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region lV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including the City of Jamestown, Kentucky;

NOW, therefore, be it resolved, that the City of Jamestown City Council hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to the City of Jamestown, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance of the plan and that any needed adjustment to the plan be developed and presented to the Russell County's Local County/City Hazard Mitigation Committee and to the City of Jamestown City Council for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for the City of Jamestown, Kentucky and Lake Cumberland Area Development District Region.

Adopted on July 20th 2017

Certified by: _____
Nick Shearer
Mayor, City of Jamestown

Attested by: _____

Date: 7/20/17

CITY OF RUSSELL SPRINGS (RUSSELL COUNTY), KENTUCKY
Resolution No. 2017-04

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of the City of Russell Springs, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the City of Russell Springs desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the City of Russell Springs fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including the City of Russell Springs, Kentucky;

NOW, therefore, be it resolved, that the City of Russell Springs City Council hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to the City of Russell Springs, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance of the plan and that any needed adjustment to the plan be developed and presented to the Russell County's Local County/City Hazard Mitigation Committee and to the City of Russell Springs City Council for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for the City of Russell Springs, Kentucky and Lake Cumberland Area Development District Region.

Adopted on 7-13-17

Certified by: _____
Eric Selby
Mayor

Attested by: Wendy Burton

Date: 7-13-17

TAYLOR COUNTY, KENTUCKY
Resolution No. 170711-01

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of Taylor County, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the County of Taylor desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the County of Taylor fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including Taylor County, Kentucky;

NOW, therefore, be it resolved, that the Russell County Fiscal Court hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to Taylor County, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance, of the plan and that any needed adjustment to the plan be developed and presented to the Taylor County's Local County/City Hazard Mitigation Committee and to the Taylor County Fiscal Court for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for Taylor County, Kentucky and Lake Cumberland Area Development District Region.

Adopted on July 11, 2017

Certified by: _____
Eddie Rogers
County Judge Executive

Attested by: Annetta Reynolds

Date: 7/11/17

CITY OF CAMPBELLSVILLE (TAYLOR COUNTY), KENTUCKY
Resolution No. 18 - 07

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of the City of Campbellsville, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the City of Campbellsville desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the City of Campbellsville fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigatio n Plan covering member jurisdictions of the Lake Cumberland Area Development District including the City of Campbellsville, Kentucky;

NOW, therefore, be it resolved, that the City of Campbellsville City Council hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to the City of Campbellsville, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance of the plan and that any needed adjustment to the plan be developed and presented to the Adair County's Local County/City Hazard Mitigation Committee and to the City of Campbellsville City Council for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for the City of Campbellsville, Kentucky and Lake Cumberland Area Development District Region.

Adopted on 6-4-18

Certified by: _____
Tony Young
Mayor

Attested by: _____

Date: 6-6-18

WAYNE COUNTY, KENTUCKY
Resolution No. 2018-02-01

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of Wayne County, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the County of Wayne desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the County of Wayne fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region lV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including Wayne County, Kentucky;

NOW, therefore, be it resolved, that the Wayne County Fiscal Court hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to Wayne County, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
    a) Inform all concerned parties of this action.
    b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance, of the plan and that any needed adjustment to the plan be developed and presented to the Wayne County's Local County/City Hazard Mitigation Committee and to the Wayne County Fiscal Court for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for Wayne County, Kentucky and Lake Cumberland Area Development District Region.

Adopted on February 27, 2018

Certified by: _____
Mike Anderson
County Judge Executive

Attested by: _____

Date: 2-28-18

CITY OF MONTICELLO (WAYNE COUNTY), KENTUCKY
Resolution No. 2017-0814.01

Resolution of Adoption of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of the City of Monticello, Kentucky are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the City of Monticello desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the City of Monticello fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District including the City of Monticello, Kentucky;

NOW, therefore, be it resolved, that the City of Monticello City Council hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to the City of Monticello, Kentucky; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
   a) Inform all concerned parties of this action.
   b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance of the plan and that any needed adjustment to the plan be developed and presented to the Russell County's Local County/City Hazard Mitigation Committee and to the City of Monticello City Council for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard

Mitigation Action Plan for the City of Monticello, Kentucky and Lake Cumberland Area Development District Region.

Adopted on August 14, 2017.

Certified by: _____
Jeffrey E. Edwards
Mayor

Attested by: Gregory E. Latham
Gregory E. Latham
City Clerk/Treasurer

Date: 8/14/17

Lake Cumberland Regional Hazard Mitigation Committee
Resolution of Adoption of the
Lake Cumberland Regional Hazard Mitigation Committee
Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of Lake Cumberland Region are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the Lake Cumberland Regional Hazard Mitigation Committee desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the Lake Cumberland Regional Hazard Mitigation Committee fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region lV officials have reviewed the Lake Cumberland Regional Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Regional Hazard Mitigation Committee has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Regional Hazard Mitigation Committee;

NOW, therefore, be it resolved, that the Lake Cumberland Regional Hazard Mitigation Committee hereby:

1. Adopts those portions of the Lake Cumberland Regional Hazard Mitigation Committee's Regional Hazard Mitigation Plan that pertain to Lake Cumberland Regional Hazard Mitigation Committee; and its counties/cities.

2. Vest the Lake Cumberland Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
   a) Inform all concerned parties of this action.
   b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance, of the plan and that any needed adjustment to the plan be developed and presented to the Local County/City Hazard Mitigation Committee(s) and to the Lake Cumberland Regional Hazard Mitigation Committee for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Regional Hazard Mitigation Committee's Regional Hazard Mitigation Action Plan for the Lake Cumberland Regional Hazard Mitigation Committee Region.

Adopted on 7/27/17

Certified by: Jeff Smith
Chairman of the Board of Directors

Attested by:
Executive Director

Date: 7/27/17

Lake Cumberland Area Development District
Resolution of Adoption of the
Lake Cumberland Area Development District
Regional Hazard Mitigation Plan 5-Year Update

WHEREAS, certain areas of Lake Cumberland Area Development District are subject to periodic flooding, tornados, severe winter storms, severe thunderstorms, and landslides and other natural hazards that have potential to cause damages to people and properties within the area; and

WHEREAS, the Lake Cumberland Area Development District desires to prepare and mitigate for such natural hazards; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, the Lake Cumberland Area Development District Regional Hazard Mitigation Plan was developed in accordance with the regulations of the Disaster Mitigation Act of 2000 and the guidance provided by the Federal Emergency Management Agency; and

WHEREAS, the Lake Cumberland Area Development District fully participated in the FEMA-prescribed mitigation planning process to prepare this Multi-Hazard Mitigation Plan; and

WHEREAS, the Kentucky Division of Emergency Management and Federal Emergency Management Agency, Region IV officials have reviewed the Lake Cumberland Area Development District Regional Hazard Mitigation Plan 5 Year Update (October, 2016) and approved it contingent upon this official adoption of the participating governments and entities;

WHEREAS, to assist cities and counties in meeting this requirement, the Lake Cumberland Area Development District has facilitated the development of a multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of the Lake Cumberland Area Development District;

NOW, therefore, be it resolved, that the Lake Cumberland Area Development District hereby:

1. Adopts those portions of the Lake Cumberland Area Development District Regional Hazard Mitigation Plan that pertain to Lake Cumberland Area Development District; and

2. Vest the Lake Cumberland Area Development District Regional Hazard Mitigation Committee, Local County/City Hazard Mitigation Subcommittees and local emergency management officials with the responsibility and authority to:
   a) Inform all concerned parties of this action.
   b) Develop an addendum to this Hazard Mitigation Plan if the jurisdiction's unique situation warrants such an addendum.

3. Directs the Lake Cumberland Area Development District Regional Hazard Mitigation Committee to assure that the Hazard Mitigation Plan be reviewed according to the Plan Maintenance Procedures in Section 9.0-10.0 Plan Adoption-Maintenance, of the plan and that any needed adjustment to the plan be developed and presented to the Local County/City Hazard Mitigation Committee(s) and to the Lake Cumberland Area Development District for consideration.

4. Agrees to consider any other official actions as may be reasonably necessary to carry out the objectives of the Lake Cumberland Area Development District Regional Hazard Mitigation Action Plan for the Lake Cumberland Area Development District Region.

Adopted on 7/27/17

Certified by: _____
Chairman of the Board of Directors

Attested by: _____
Executive Director

Date: 7/27/17

U.S. Department of Homeland Security
FEMA Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341

FEMA

April 10, 2018

Ms. Geneva J. Brawner
State Hazard Mitigation Officer
Kentucky Emergency Management
100 Airport Road, Third Floor
Frankfort, KY 40601

Reference: Multi-Jurisdictional Hazard Mitigation Plan: Lake Cumberland ADD

Dear Ms. Brawner:

We are pleased to inform you that the revisions to the Lake Cumberland Area Development District (ADD) Hazard Mitigation Multi-jurisdictional Plan are in compliance with the Federal hazard mitigation planning requirements resulting from the Disaster Mitigation Act of 2000, as contained in 44 CFR 201.6. The plan is approved for a period of five (5) years, to April 9, 2023.

This plan approval extends to the following participating jurisdictions that provided copies of their resolutions adopting the plan:

- Adair County, Unincorporated
- Casey County, Unincorporated
- City of Liberty (Casey County)
- Clinton County, Unincorporated
- City of Albany (Clinton County)
- City of Burkesville (Cumberland County)
- McCreary County, Unincorporated
- Pulaski County, Unincorporated
- City of Burnside (Pulaski County)
- City of Eubank (Pulaski County)
- City of Ferguson (Pulaski County)
- City of Science Hill (Pulaski County)
- City of Somerset (Pulaski County)
- Russell County, Unincorporated
- City of Jamestown (Russell County)
- City of Russell Springs (Russell County)
- Taylor County, Unincorporated

The approved participating jurisdictions are hereby eligible applicants through the Commonwealth for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.

We commend the participants of the Lake Cumberland ADD Hazard Mitigation Plan for development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note, all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific

mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years. We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development. When you prepare a comprehensive plan update, it must be resubmitted through the Commonwealth as a "plan update" and is subject to a formal review and approval process by our office. If the plan is not updated prior to the required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan approval.

The Commonwealth and the participants of the Lake Cumberland ADD Hazard Mitigation Plan should be commended for their close coordination and communications with our office in the review and subsequent approval of the plan. If you or the Lake Cumberland ADD have any questions or need any additional information please do not hesitate to contact Ashanti Smith, of the Hazard Mitigation Assistance Branch or Edwardine S. Marrone, of my staff, at (770) 220-5582.

Sincerely,

Kristen Martinenza

Kristen M. Martinenza, P.E., CFM
Branch Chief
Risk Analysis
FEMA Region IV

U.S. Department of Homeland Security
FEMA Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341

FEMA

April 12, 2018

Ms. Geneva J. Brawner
State Hazard Mitigation Officer
Kentucky Division of Emergency Management
100 Airport Road
Frankfort, Kentucky 40601-6168

Reference: Multi-jurisdictional Hazard Mitigation Plan: Lake Cumberland Area Development District (LCADD) Regional

Dear Ms. Brawner:

This is a follow-up to our previous correspondence of April 10, 2018, in which we approved the Lake Cumberland Area Development District (LCADD) Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolution for inclusion within this plan and subsequently have approved the community under the approved LCADD Regional Multi-jurisdictional Hazard Mitigation Plan:

- Cumberland County (Unincorporated)

The approved participating community is hereby an eligible applicant through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.

We commend the participants in LCADD Regional Multi-jurisdictional Hazard Mitigation Plan for the development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note that all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years. We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development. When the Plan is amended or revised, the amendments and revisions should be incorporated into the next plan update. If the Plan is not updated prior to the required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan approval.

If you or the participants in LCADD Regional Multi-jurisdictional Hazard Mitigation Plan have any further questions or need any additional information please do not hesitate to contact Ashanti Smith, of the Hazard Mitigation Assistance Branch, at (770) 220-5236 or Darlene Booker, of my staff, at (770) 220-5404.

Sincerely,

Kristen M. Martinenza, P.E., CFM
Branch Chief
Risk Analysis
FEMA Region IV

U.S. Department of Homeland Security
FEMA Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341

FEMA

July 6, 2018

Ms. Geneva J. Brawner
State Hazard Mitigation Officer
Kentucky Division of Emergency Management
100 Airport Road
Frankfort, Kentucky 40601-6168

Reference: Multi-jurisdictional Hazard Mitigation Plan: Lake Cumberland Area Development District (LCADD) Regional

Dear Ms. Brawner:

This is a follow-up to our previous correspondence of April 10, 2018, in which we approved the Lake Cumberland Area Development District (LCADD) Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolutions for inclusion within this plan and subsequently have approved the communities under the approved LCADD Regional Multi-jurisdictional Hazard Mitigation Plan:

- Wayne County, Unincorporated
- City of Monticello (Wayne County)
- City of Campbellsville (Taylor County)
- City of Greensburg (Green County)
- City of Columbia (Adair County)

The approved participating communities are hereby eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.

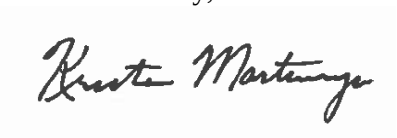
We commend the participants in LCADD Regional Multi-jurisdictional Hazard Mitigation Plan for the development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note that all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years.

We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development. When the Plan is amended or revised, the amendments and revisions should be incorporated into the next plan update. If the Plan is not updated prior to the required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan approval.

If you or the participants in LCADD Regional Multi-jurisdictional Hazard Mitigation Plan have any further questions or need any additional information please do not hesitate to contact Ashanti Smith, of the Hazard Mitigation Assistance Branch, at (770) 220-5236 or Darlene Booker, of my staff, at (770) 220-5404.

Sincerely,



Kristen M. Martinenza, P.E., CFM
Branch Chief
Risk Analysis
FEMA Region IV

U.S. Department of Homeland Security
FEMA Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341

FEMA

July 11, 2018

Ms. Geneva J. Brawner
State Hazard Mitigation Officer
Kentucky Division of Emergency Management
100 Airport Road
Frankfort, Kentucky 40601-6168

Reference: Multi-jurisdictional Hazard Mitigation Plan: Lake Cumberland Area Development District (LCADD) Regional

Dear Ms. Brawner:

This is a follow-up to our previous correspondence of April 10, 2018, in which we approved the Lake Cumberland Area Development District (LCADD) Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolution for inclusion within this plan and subsequently have approved the community under the approved LCADD Regional Multi-jurisdictional Hazard Mitigation Plan:

- Green County, Unincorporated

The approved participating community is hereby an eligible applicant through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.

We commend the participants in LCADD Regional Multi-jurisdictional Hazard Mitigation Plan for the development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note that all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years. We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development.

When the Plan is amended or revised, the amendments and revisions should be incorporated into the next plan update. If the Plan is not updated prior to the required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan approval.

If you or the participants in LCADD Regional Multi-jurisdictional Hazard Mitigation Plan have any further questions or need any additional information please do not hesitate to contact Ashanti Smith, of the Hazard Mitigation Assistance Branch, at (770) 220-5236 or Darlene Booker, of my staff, at (770) 220-5404.

Sincerely,

Kristen M. Martinenza, P.E., CFM
Branch Chief
Risk Analysis
FEMA Region IV

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
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APPENDIX C

Progress of 2011 Local Mitigation Efforts

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Progress of 2011 Local Mitigation Efforts

Table3.4.4(2)
Implementation of Mitigation Measures: Action Implementation and Agency Responsible

Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Expansive Soil	All	No Action Planned	N/A	N/A	N/A	No Action Proposed	No Progress	No Action Planned Originally. Expansive Soil is not a natural hazard exclusive from other identified hazards.
Hailstorm	All	1.10.1: Review current zoning regulations for amendment of, or addition of regulations to mitigate community hazards	Annually	N/A	Emergency Management	All Jurisdictions	Ongoing	N/A
Land Subsidence	All	1.3.1: Explore and examine possibilities of combining current GIS projects to a regional GIS database	Within 3 Years of Plan Approval	Very High	Emergency Management; Lake Cumberland ADD	Clinton County; Albany	Underway	N/A
		1.5.1: Review annually inter-local agreements that cover disaster assistance and update as needed	Annually	Very High	Emergency Management	Clinton County; Albany	Ongoing	N/A
		1.10.1: Review current zoning regulations for amendment or addition of regulations to mitigate community hazards	Annually	High	Local Planning Commissions	Clinton County; Albany	Ongoing	N/A
		1.13.1: Provide sinkhole location maps.	Within 1 Year of Plan Approval	Medium	Emergency Management	Clinton County; Albany	Underway	N/A

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Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Land Subsidence (Continued)	All	2.1.1: Incorporate information on available alternate energy sources into hazard preparedness programs.	Annually	Medium	Emergency Management	Clinton County; Albany	No Progress	Became a very low priority for local governments administratively. Education, outreach, integration provided through other sources.
		2.2.1: Incorporate information on NOAA "All Hazards" radios and outdoor warning sirens into hazard preparedness programs.	Annually, within 5 Years of Plan Approval	High	Emergency Management	Clinton County; Albany	No Progress	Became a very low priority for local governments administratively. State (KYEM) has been successful in performing this integration function on behalf of the region's jurisdictions.
		2.2.2: Examine need for additional community warning sirens and/or encourage all residents to have NOAA "All Hazards" radios.	Annually, within 5 Years of Plan Approval	Very High	Emergency Management	Clinton County; Albany	Ongoing	N/A
		2.4.1: Continue severe weather public education programs and expand audience where funding is available	Annually	Medium	Emergency Management	Clinton County; Albany	Ongoing	N/A
		2.3.1: Local emergency managers to pre-record public service announcements for winter storms, extreme summer weather, and flooding	Continual until Hazard is no Longer Applicable	Medium	Emergency Management	Clinton County; Albany	No Progress	This action generally is unnecessary. KYEM offers pre-recorded PSAs for all hazards (https://kyem.ky.gov/news/Pages/Public-Service-Announcements.aspx.) and law requires that all Emergency Management Directors run 2 PSAs per quarter.

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Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Landslides	All	1.3.1: Explore and examine possibilities of combining current GIS projects to a regional GIS database	Within 3 Years of Plan Approval	Very High	Emergency Management; Lake Cumberland ADD	Greensburg	Ongoing	N/A
		1.5.1: Review annually inter-local agreements that cover disaster assistance and update as needed	Annually	Very High	Emergency Management	Greensburg	Ongoing	N/A
		1.10.1: Review current zoning regulations for amendment or addition of regulations to mitigate community hazards	Annually	Very High	Local Planning Commissions	Greensburg	No Progress	The past five years has seen the City of Greensburg de facto reduce the priority of this action to a Low or Very Low priority in favor of focusing its administration on structural mitigation of the landslide risk.
		2.1.1: Incorporate information on available alternate energy sources into hazard preparedness programs.	Annually	Medium	Emergency Management	Greensburg	No Progress	Became a very low priority for local governments administratively. Education, outreach, integration provided through other sources.
		2.2.1: Incorporate information on NOAA "All Hazards" radios and outdoor warning sirens into hazard preparedness programs.	Annually, within 5 Years of Plan Approval	High	Emergency Management	Greensburg	No Progress	Became a very low priority for local governments administratively. State (KYEM) has been successful in performing this integration function on behalf of the region's jurisdictions.
		2.2.2: Examine need for additional community warning sirens and/or encourage all residents to have NOAA "All Hazards" radios.	Annually, within 5 Years of Plan Approval	Very High	Emergency Management	Greensburg	Ongoing	N/A
		2.4.1: Continue severe weather public education programs and expand audience where funding is available	Annually	Medium	Emergency Management	Greensburg	Ongoing	N/A

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Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Landslides (Continued)	All	2.3.1: Local emergency managers to pre-record public service announcements for winter storms, extreme summer weather, and flooding	Annually	Medium	Emergency Management	Greensburg	No Progress	This action generally is unnecessary. KYEM offers pre-recorded PSAs for all hazards (https://kyem.ky.gov/news/Pages/Public-Service-Announcements.aspx.) and law requires that all Emergency Management Directors run 2 PSAs per quarter.

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Progress of 2011 Local Mitigation Efforts

Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Drought	All	1.3.1: Explore and examine possibilities of combining current GIS projects to a regional GIS database	Within 3 Years of Plan Approval	Very High	Emergency Management; Lake Cumberland ADD	Green County; Greensburg	Underway	N/A
		1.5.1: Review annually inter-local agreements that cover disaster assistance and update as needed	Annually	Very High	Emergency Management	Green County; Greensburg	Ongoing	N/A
		1.10.1: Review current zoning regulations for amendment or addition of regulations to mitigate community hazards	Annually	High	Local Planning Commissions	Green County; Greensburg	Ongoing	N/A
		1.12.1: Submit project profile to Lake Cumberland ADD Regional Water Supply/Management Planning Council for funding review and needs evaluation.	Within 5 Years of Plan Approval	Medium	Local Government	Green County; Greensburg	Complete	N/A
		2.1.1: Incorporate information on available alternate energy sources into hazard preparedness programs.	Annually	Medium	Emergency Management	Green County; Greensburg	No Progress	Became a very low priority for local governments administratively. Education, outreach, integration provided through other sources.
		2.2.1: Incorporate information on NOAA "All Hazards" radios and outdoor warning sirens into hazard preparedness programs.	Annually, within 5 Years of Plan Approval	High	Emergency Management	Green County; Greensburg	Complete	N/A
		2.2.2: Examine need for additional community warning sirens and/or encourage all residents to have NOAA "All Hazards" radios.	Annually, within 5 Years of Plan Approval	Very High	Emergency Management	Green County; Greensburg	Ongoing	N/A

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Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Drought (Continued)	All	2.4.1: Continue severe weather public education programs and expand audience where funding is available	Annually	Medium	Emergency Management	Green County; Greensburg	Ongoing	N/A
		2.3.1: Local emergency managers to pre-record public service announcements for winter storms, extreme summer weather, and flooding	Annually	Medium	Emergency Management	Green County; Greensburg	No Progress	This action generally is unnecessary. KYEM offers pre-recorded PSAs for all hazards (https://kyem.ky.gov/news/Pages/Public-Service-Announcements.aspx.) and law requires that all Emergency Management Directors run 2 PSAs per quarter.

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Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Wildfires	McCreary County	1.3.1: Explore and examine possibilities of combining current GIS projects to a regional GIS database	Within 3 Years of Plan Approval	Very High	Emergency Management; Lake Cumberland ADD	McCreary County	Underway	N/A
		1.5.1: Review annually inter-local agreements that cover disaster assistance and update as needed	Annually	Very High	Emergency Management	McCreary County	Ongoing	N/A
		1.8.1: Continue participation in Firewise program and obtain additional grant funding for dead timber removal.	Continual until Hazard is No Longer Applicable	Medium	Local Government	McCreary County	No Progress	McCreary County did not renew its Firewise certification given administrative constraints in meeting the requirement for a permanent Firewise Task Force and continual submission of homes in the Wildland/Urban Interface.
		1.10.1: Review current zoning regulations for amendment or addition of regulations to mitigate community hazards	Annually	High	Local Planning Commissions	McCreary County	Ongoing	N/A
		2.1.1: Incorporate information on available alternate energy sources into hazard preparedness programs.	Annually	Medium	Emergency Management	McCreary County	No Progress	Became a very low priority for local governments administratively. Education, outreach, integration provided through other sources.
		2.2.2: Examine need for additional community warning sirens and/or encourage all residents to have NOAA "All Hazards" radios.	Annually, within 5 Years of Plan Approval	Very High	Emergency Management	McCreary County	Complete	N/A
		2.4.1: Continue severe weather public education programs and expand audience where funding is available	Annually	Medium	Emergency Management	McCreary County	Ongoing	N/A

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Progress of 2011 Local Mitigation Efforts

Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Wildfires (Continued)	McCreary County	2.3.1: Local emergency managers to pre-record public service announcements for winter storms, extreme summer weather, and flooding	Annually	Medium	Emergency Management	McCreary County	No Progress	This action generally is unnecessary. KYEM offers pre-recorded PSAs for all hazards (https://kyem.ky.gov/news/Pages/Public-Service-Announcements.aspx.) and law requires that all Emergency Management Directors run 2 PSAs per quarter.
		3.1.1: Continue participation in Firewise program and obtain additional grant funding for dead timber removal.	Continual until Hazard is No Longer Applicable	Medium	Local Government	McCreary County	No Progress	McCreary County did not renew its Firewise certification given administrative constraints in meeting the requirement for a permanent Firewise Task Force and continual submission of homes in the Wildland/Urban Interface.

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Progress of 2011 Local Mitigation Efforts

Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Extreme Summer Weather	All	1.3.1: Explore and examine possibilities of combining current GIS projects to a regional GIS database	Within 3 Years of Plan Approval	Very High	Emergency Management; Lake Cumberland ADD	All Jurisdictions	Underway	N/A
		1.5.1: Review annually inter-local agreements that cover disaster assistance and update as needed	Annually	Very High	Emergency Management	All Jurisdictions	Ongoing	N/A
		2.1.1: Incorporate information on available alternate energy sources into hazard preparedness programs.	Annually	Medium	Emergency Management	All Jurisdictions	No Progress	Became a very low priority for local governments administratively. Education, outreach, integration provided through other sources.
		2.2.1: Incorporate information on NOAA "All Hazards" radios and outdoor warning sirens into hazard preparedness programs.	Annually, within 5 Years of Plan Approval	High	Emergency Management	All Jurisdictions	Complete	N/A
		2.2.2: Examine need for additional community warning sirens and/or encourage all residents to have NOAA "All Hazards" radios.	Annually, within 5 Years of Plan Approval	Very High	Emergency Management	All Jurisdictions	Ongoing	N/A
		2.4.1: Continue severe weather public education programs and expand audience where funding is available	Annually	Medium	Emergency Management	All Jurisdictions	Ongoing	N/A
		2.3.1: Local emergency managers to pre-record public service announcements for winter storms, extreme summer weather, and flooding	Annually	Medium	Emergency Management	All Jurisdictions	No Progress	This action generally is unnecessary. KYEM offers pre-recorded PSAs for all hazards (https://kyem.ky.gov/news/Pages/Public-Service-Announcements.aspx.) and law requires that all Emergency Management Directors run 2 PSAs per quarter.

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Progress of 2011 Local Mitigation Efforts

Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Flooding	All	1.1.1: Work with utility companies to trim trees and debris away from overhead power lines.	Annually	High	Utility Companies	All Jurisdictions	Ongoing	N/A
		1.3.1: Explore and examine possibilities of combining current GIS projects to a regional GIS database	Within 3 Years of Plan Approval	Very High	Emergency Management; Lake Cumberland ADD	All Jurisdictions	Underway	N/A
		1.4.1: Develop an inventory of bridges and other road structures that cause flash-flooding.	Annually	High	Road Departments	All Jurisdictions	Complete	N/A
		1.4.2: Once identified bridges and other road structures will be included in city, county, and state roadway maintenance plans.	Annually	High	Road Departments	All Jurisdictions	Complete	N/A
		1.4.3: Develop a replacement schedule as funding becomes available and perform an annual review of flash-flooding susceptible roadway locations and availability of signs and traffic control devices needed.	Annually	High	Road Departments	All Jurisdictions	No Progress	Funding or funding sources have not been made available for this ambitious undertaking to develop replacement schedules. Annual reviews of flash-flooding susceptible roadway locations and their signage and traffic control needs does occur through local road departments, however.
		1.5.1: Review annually inter-local agreements that cover disaster assistance and update as needed	Annually	Very High	Emergency Management	All Jurisdictions	Ongoing	N/A
		1.6.1: NFIP participants will review program requirements annually with Floodplain Manager or appropriate personnel to ensure compliance.	Annually	High	Emergency Management	All Jurisdictions	Ongoing	N/A
Flooding	All	1.7.1: Local officials will	Within 5 Years	High	Emergency	All	Ongoing	N/A

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Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
(Continued)		encourage mapping/updating of all jurisdictions that do not currently have floodplain maps.	of Plan Approval		Management	Jurisdictions		
		1.10.1: Review current zoning regulations for amendment or addition of regulations to mitigate community hazards	Annually	High	Local Planning Commissions	All Jurisdictions	Ongoing	N/A
		1.11.1: Identify structures that would qualify for relocation.	Within 2 Years of Plan Approval	High	Local Planning Commissions	All Jurisdictions	Complete	N/A
		1.11.2: Apply for funding to relocate identified structures.	Within 5 Years of Plan Approval	High	Local Planning Commissions	All Jurisdictions	No Progress	HMA applications for structures identified for relocation have all substituted for acquisition/demolition.
		2.1.1: Incorporate information on available alternate energy sources into hazard preparedness programs.	Annually	Medium	Emergency Management	All Jurisdictions	No Progress	Became a very low priority for local governments administratively. Education, outreach, integration provided through other sources.
		2.2.1: Incorporate information on NOAA "All Hazards" radios and outdoor warning sirens into hazard preparedness programs.	Annually, within 5 Years of Plan Approval	High	Emergency Management	All Jurisdictions	Complete	N/A
		2.2.2: Examine need for additional community warning sirens and/or encourage all residents to have NOAA "All Hazards" radios.	Annually, within 5 Years of Plan Approval	Very High	Emergency Management	All Jurisdictions	Ongoing	N/A
		2.4.1: Continue severe weather public education programs and expand audience where funding is available	Annually	Medium	Emergency Management	All Jurisdictions	Ongoing	N/A
Flooding	All	2.3.1: Local emergency	Annually	Medium	Emergency	All	No	This action generally is unnecessary. KYEM

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Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
(Continued)		managers to pre-record public service announcements for winter storms, extreme summer weather, and flooding			Management	Jurisdictions	Progress	offers pre-recorded PSAs for all hazards (https://kyem.ky.gov/news/Pages/Public-Service-Announcements.aspx.) and law requires that all Emergency Management Directors run 2 PSAs per quarter.

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Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Severe Winter Storm/Ice Storm	All	1.1.1: Work with utility companies to trim trees and debris away from overhead power lines.	Annually	High	Utility Companies	All Jurisdictions	Ongoing	N/A
		1.3.1: Explore and examine possibilities of combining current GIS projects to a regional GIS database	Within 3 Years of Plan Approval	Very High	Emergency Management; Lake Cumberland ADD	All Jurisdictions	Underway	N/A
		1.5.1: Review annually inter-local agreements that cover disaster assistance and update as needed	Annually	Very High	Emergency Management	All Jurisdictions	Ongoing	N/A
		1.10.1: Review current zoning regulations for amendment or addition of regulations to mitigate community hazards	Annually	High	Local Planning Commissions	All Jurisdictions	Ongoing	N/A
		2.1.1: Incorporate information on available alternate energy sources into hazard preparedness programs.	Annually	Medium	Emergency Management	All Jurisdictions	No Progress	Became a very low priority for local governments administratively. Education, outreach, integration provided through other sources.
		2.2.1: Incorporate information on NOAA "All Hazards" radios and outdoor warning sirens into hazard preparedness programs.	Annually, within 5 Years of Plan Approval	High	Emergency Management	All Jurisdictions	Complete	N/A
		2.2.2: Examine need for additional community warning sirens and/or encourage all residents to have NOAA "All Hazards" radios.	Annually, within 5 Years of Plan Approval	Very High	Emergency Management	All Jurisdictions	Ongoing	N/A

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Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Severe Winter Storm/Ice Storm (Continued)	All	2.4.1: Continue severe weather public education programs and expand audience where funding is available	Annually	Medium	Emergency Management	All Jurisdictions	Ongoing	N/A
		2.3.1: Local emergency managers to pre-record public service announcements for winter storms, extreme summer weather, and flooding	Annually	Medium	Emergency Management	All Jurisdictions	No Progress	This action generally is unnecessary. KYEM offers pre-recorded PSAs for all hazards (https://kyem.ky.gov/news/Pages/Public-Service-Announcements.aspx.) and law requires that all Emergency Management Directors run 2 PSAs per quarter.

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Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Thunderstorm, Lightning, Windstorms	All	1.1.1: Work with utility companies to trim trees and debris away from overhead power lines.	Annually	High	Utility Companies	All Jurisdictions	Ongoing	N/A
		1.3.1: Explore and examine possibilities of combining current GIS projects to a regional GIS database	Within 3 Years of Plan Approval	Very High	Emergency Management; Lake Cumberland ADD	All Jurisdictions	Underway	N/A
		1.5.1: Review annually inter-local agreements that cover disaster assistance and update as needed	Annually	Very High	Emergency Management	All Jurisdictions	Ongoing	N/A
		1.9.1: Encourage the construction of safe rooms in all public buildings.	Continual until Hazard is No Longer Applicable	High	Emergency Management	All Jurisdictions	Complete	N/A
		1.10.1: Review current zoning regulations for amendment or addition of regulations to mitigate community hazards	Annually	High	Local Planning Commissions	All Jurisdictions	Ongoing	N/A
		2.1.1: Incorporate information on available alternate energy sources into hazard preparedness programs.	Annually	Medium	Emergency Management	All Jurisdictions	No Progress	Became a very low priority for local governments administratively. Education, outreach, integration provided through other sources.
		2.2.1: Incorporate information on NOAA "All Hazards" radios and outdoor warning sirens into hazard preparedness programs.	Annually, within 5 Years of Plan Approval	High	Emergency Management	All Jurisdictions	Complete	N/A
		2.2.2: Examine need for additional community warning sirens and/or encourage all residents to have NOAA "All Hazards" radios.	Annually, within 5 Years of Plan Approval	Very High	Emergency Management	All Jurisdictions	Ongoing	N/A

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Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Thunderstorm, Lightning, Windstorm (Continued)	All	2.4.1: Continue severe weather public education programs and expand audience where funding is available	Annually	Medium	Emergency Management	All Jurisdictions	Ongoing	N/A
		2.3.1: Local emergency managers to pre-record public service announcements for winter storms, extreme summer weather, and flooding	Annually	Medium	Emergency Management	All Jurisdictions	No Progress	This action generally is unnecessary. KYEM offers pre-recorded PSAs for all hazards (https://kyem.ky.gov/news/Pages/Public-Service-Announcements.aspx.) and law requires that all Emergency Management Directors run 2 PSAs per quarter.

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Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Earthquakes	All	1.3.1: Explore and examine possibilities of combining current GIS projects to a regional GIS database	Within 3 Years of Plan Approval	Very High	Emergency Management; Lake Cumberland ADD	All Jurisdictions	Underway	N/A
		1.5.1: Review annually inter-local agreements that cover disaster assistance and update as needed	Annually	Very High	Emergency Management	All Jurisdictions	Ongoing	N/A
		1.10.1: Review current zoning regulations for amendment or addition of regulations to mitigate community hazards	Annually	High	Local Planning Commissions	All Jurisdictions	Ongoing	N/A
		2.1.1: Incorporate information on available alternate energy sources into hazard preparedness programs.	Annually	Medium	Emergency Management	All Jurisdictions	No Progress	Became a very low priority for local governments administratively. Education, outreach, integration provided through other sources.
		2.2.1: Incorporate information on NOAA "All Hazards" radios and outdoor warning sirens into hazard preparedness programs.	Annually, within 5 Years of Plan Approval	High	Emergency Management	All Jurisdictions	Complete	N/A
		2.2.2: Examine need for additional community warning sirens and/or encourage all residents to have NOAA "All Hazards" radios.	Annually, within 5 Years of Plan Approval	Very High	Emergency Management	All Jurisdictions	Ongoing	N/A
		2.4.1: Continue severe weather public education programs and expand audience where funding is available	Annually	Medium	Emergency Management	All Jurisdictions	Ongoing	N/A

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Progress of 2011 Local Mitigation Efforts

Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Earthquakes (Continued)	All	2.3.1: Local emergency managers to pre-record public service announcements for winter storms, extreme summer weather, and flooding	Annually	Medium	Emergency Management	All Jurisdictions	No Progress	This action generally is unnecessary. KYEM offers pre-recorded PSAs for all hazards (https://kyem.ky.gov/news/Pages/Public-Service-Announcements.aspx.) and law requires that all Emergency Management Directors run 2 PSAs per quarter.

Appendix C
Progress of 2011 Local Mitigation Efforts

Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Tornadoes	All	1.1.1: Work with utility companies to trim trees and debris away from overhead power lines.	Annually	High	Utility Companies	All Jurisdictions	Ongoing	N/A
		1.3.1: Explore and examine possibilities of combining current GIS projects to a regional GIS database	Within 3 Years of Plan Approval	Very High	Emergency Management; Lake Cumberland ADD	All Jurisdictions	Underway	N/A
		1.5.1: Review annually inter-local agreements that cover disaster assistance and update as needed	Annually	Very High	Emergency Management	All Jurisdictions	Ongoing	N/A
		1.9.1: Encourage the construction of safe rooms in all public buildings.	Continual until Hazard is No Longer Applicable	High	Emergency Management	All Jurisdictions	Complete	N/A
		1.10.1: Review current zoning regulations for amendment or addition of regulations to mitigate community hazards	Annually	High	Local Planning Commissions	All Jurisdictions	Ongoing	N/A
		2.1.1: Incorporate information on available alternate energy sources into hazard preparedness programs.	Annually	Medium	Emergency Management	All Jurisdictions	No Progress	Became a very low priority for local governments administratively. Education, outreach, integration provided through other sources.
		2.2.1: Incorporate information on NOAA "All Hazards" radios and outdoor warning sirens into hazard preparedness programs.	Annually, within 5 Years of Plan Approval	High	Emergency Management	All Jurisdictions	Complete	N/A
		2.2.2: Examine need for additional community warning sirens and/or encourage all residents to have NOAA "All Hazards" radios.	Annually, within 5 Years of Plan Approval	Very High	Emergency Management	All Jurisdictions	Ongoing	N/A

Appendix C
Progress of 2011 Local Mitigation Efforts

Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Tornadoes (Continued)	All	2.4.1: Continue severe weather public education programs and expand audience where funding is available	Annually	Medium	Emergency Management	All Jurisdictions	Ongoing	N/A
		2.3.1: Local emergency managers to pre-record public service announcements for winter storms, extreme summer weather, and flooding	Annually	Medium	Emergency Management	All Jurisdictions	No Progress	This action generally is unnecessary. KYEM offers pre-recorded PSAs for all hazards (https://kyem.ky.gov/news/Pages/Public-Service-Announcements.aspx.) and law requires that all Emergency Management Directors run 2 PSAs per quarter.
Hazardous Materials	All	No Action Planned	N/A	N/A	N/A	No Actions Proposed	No Progress	No Action Planned Originally. Hazardous Materials planning is superfluous to the natural hazards mitigation plan.

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Appendix C
Progress of 2011 Local Mitigation Efforts

Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Dams and Levees	Clinton, Cumberland, Green, Russell, Taylor Counties	1.2.1: Review dam emergency evacuation plans with emergency response agencies annually.	Annually	High	Emergency Management	Clinton, Cumberland, Green, Russell, Taylor Counties	Ongoing	N/A
		1.3.1: Explore and examine possibilities of combining current GIS projects to a regional GIS database	Within 3 Years of Plan Approval	Very High	Emergency Management; Lake Cumberland ADD	Clinton, Cumberland, Green, Russell, Taylor Counties	Underway	N/A
		1.5.1: Review annually inter-local agreements that cover disaster assistance and update as needed	Annually	Very High	Emergency Management	Clinton, Cumberland, Green, Russell, Taylor Counties	Ongoing	N/A
		1.10.1: Review current zoning regulations for amendment or addition of regulations to mitigate community hazards	Annually	High	Local Planning Commissions	Clinton, Cumberland, Green, Russell, Taylor Counties	Ongoing	N/A
		2.1.1: Incorporate information on available alternate energy sources into hazard preparedness programs.	Annually	Medium	Emergency Management	Clinton, Cumberland, Green, Russell, Taylor Counties	No Progress	Became a very low priority for local governments administratively. Education, outreach, integration provided through other sources.
		2.2.1: Incorporate information on NOAA "All Hazards" radios and outdoor warning sirens into hazard preparedness programs.	Annually, within 5 Years of Plan Approval	High	Emergency Management	Clinton, Cumberland, Green, Russell, Taylor Counties	Complete	N/A

Appendix C
Progress of 2011 Local Mitigation Efforts

Hazard	Region Effected by Hazard	Action	Implementation Timeline	Overall Priority from Benefit Review	Agency Responsible	Mitigation Action Jurisdiction	Status	If Status is "No Progress," then Why?
Dams and Levees (Continued)	Clinton, Cumberland, Green, Russell, Taylor Counties	2.2.2: Examine need for additional community warning sirens and/or encourage all residents to have NOAA "All Hazards" radios.	Annually, within 5 Years of Plan Approval	Very High	Emergency Management	Clinton, Cumberland, Green, Russell, Taylor Counties	Ongoing	N/A
		2.4.1: Continue severe weather public education programs and expand audience where funding is available	Annually	Medium	Emergency Management	Clinton, Cumberland, Green, Russell, Taylor Counties	Ongoing	N/A
		2.3.1: Local emergency managers to pre-record public service announcements for winter storms, extreme summer weather, and flooding	Annually	Medium	Emergency Management	Clinton, Cumberland, Green, Russell, Taylor Counties	No Progress	This action generally is unnecessary. KYEM offers pre-recorded PSAs for all hazards (https://kyem.ky.gov/news/Pages/Public-Service-Announcements.aspx.) and law requires that all Emergency Management Directors run 2 PSAs per quarter.

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APPENDIX D
A Note on the Changes in Prioritization from the 2011 to the 2017 Plan

Appendix D
A Note on the Changes in Prioritization from the 2011 to the 2017 Plan

It is described within this 2017 multi-jurisdictional, multi-hazard mitigation plan document how the current list of mitigation actions is prioritized. Namely:

In order to identify, evaluate, and prioritize specific mitigation actions and projects to reduce the effects from a natural disaster, the LCHMRPC (Lake Cumberland Hazard Mitigation Regional Planning Committee) prioritized the actions for each jurisdiction into two (2) categories – Funding Available and Funding Unavailable – and then into three (3) priority levels within each of the two (2) categories – High (1), Medium (2), and Low (3).

In order to receive a "High (1)" Priority rating within each category, an action had to possess ALL THREE of the following criteria. The action was found to be:

- Cost-effective,
- Environmentally Sound, AND
- Technically Feasible

In order to receive a "Medium (2)" Priority rating within each category, an action only needed TWO of the three criteria listed for "High (1)" Priority. The action was found to be:

- Cost-effective AND Environmentally Sound,
- Cost-effective AND Technically Feasible, OR
- Environmentally Sound AND Technically Feasible

In order to receive a "Low (3)" Priority rating within each category, an action needed only ONE of the three criteria listed for "High (1)" Priority. The action was found to be:

- Cost-effective, OR
- Environmentally Sound, OR
- Technically Feasible.

For those mitigation actions that were categorized as "Funding Available" and were of "High (1)" Priority were then subject to additional evaluation and prioritization using FEMA's STAPLE+E method. (This method is described in detail within its own subsection.)

Change in Prioritization Strategy from 2011

The above prioritization strategy admittedly seems different from the strategy used to prioritize mitigation actions that was used for the 2011 hazard mitigation plan update.

In 2011, the Lake Cumberland ADD multi-jurisdictional, multi-hazard mitigation plan prioritized all mitigation actions according to the following criteria:

- The Action's Effect on the Overall Risk to Life and Property,
- Its Ease of Implementation,
- Its Community Support, and
- Funding Availability

Appendix D
A Note on the Changes in Prioritization from the 2011 to the 2017 Plan

It is assumed that this change in prioritization strategy from 2011 to 2017 is one of form and not of function. Essentially, the 2011 multi-jurisdictional, multi-hazard mitigation plan used a simplified form of FEMA's STAPLE+E method, which asks that each mitigation action for a community be considered according to the following (usually subjective) considerations:

- S – Social (e.g., Community Support)
- T – Technical (e.g., Ease of Implementation; Effect on Overall Risk to Life and Property)
- A – Administrative (e.g., Ease of Implementation)
- P – Political (e.g., Community Support)
- L – Legal
- E – Economic (e.g., Funding Availability)
- E – Environmental (e.g., Effect on Overall Risk to Life and Property)

However, the 2011 mitigation plan's actions were far more generalized toward all of Lake Cumberland ADD's counties and cities and far more process-oriented. So, a simplified, subjective, de facto STAPLE+E method was satisfactory for prioritizing those actions.

The 2017 planning process introduced a far more diverse and tailored array of structural and process-oriented mitigation actions. A more objective use of FEMA's STAPLE+E method of prioritization thusly was relevant. Specifically, the Lake Cumberland jurisdictions' prioritization strategy was, first, to organize (categorize) all mitigation actions according to the most objective of FEMA's STAPLE+E criteria: Economic. Part of the Economic consideration in the STAPLE+E formula involves a simple "yes-no" question: Is there Funding Available for the mitigation action?

Second, after piling all mitigation actions into either a "yes" or "no" for funding availability, Lake Cumberland ADD communities continued the de facto STAPLE+E method, again concentrating on those STAPLE+E criteria that were the most objectively justifiable:

- Economic: Was the action cost-effective, or cost-beneficial (i.e., benefits were expected to outweigh the action's cost)?
- Environmental: Was the action going to affect the environment adversely either obviously or with a probability of unintentionally? If there were adverse effects to the environment, would these effects be outweighed by benefits?
- Technical: Again, nearly a "yes-no" question. Was the action feasible to implement?

Finally, if an action had known Funding Available and was essentially an obvious nearly shovel-ready action with its high probability of cost-effectiveness, its objective lack of adverse environmental consequences (at least when compared with the environmental benefits), and its technical feasibility, then the action would be formally subject to the entire FEMA STAPLE+E criteria, which includes highly subjective, community-specific, "you just know" criteria, like:

- Would the community pony up cost share resources for the action, if necessary, i.e., is there sufficient community demand for the action? (S)
- Does the county or city have the administrative capability (i.e., staff and time) to administer a potentially large project? (A)
- Would the current local political environment support the action? (P)
- Does the county or city have the legal authority to implement the action? (L)

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APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

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APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Within the Lake Cumberland Area Development District multi-jurisdictional, multi-hazard mitigation plan update for 2017 document itself are anecdotes of flooding events that were severe enough in terms of depth (and damages) to warrant news coverage during this plan update's planning period. These anecdotes represented how bad flooding could get for the entire Lake Cumberland ADD region within the past five years (i.e., since the last mitigation plan update).

Still, FEMA requires that the "extent" of flooding be addressed individually for each county within the Lake Cumberland ADD region. To address this, the plan update relies upon historic peak flow from flood gage data produced by the United States Geological Survey (USGS).

This appendix will rely upon peak flow data recorded from USGS flood gages that have been placed in major bodies of water within each of the Lake Cumberland ADD region's counties.

It should be noted the constraints to the use of USGS flood gage data for the Lake Cumberland ADD region:

1) Some gage sites have not had recorded peak flow data for years:
   - Adair County's site has not recorded peak flow data since 2014.
   - Casey County's site has not recorded peak flow data since 1986.
   - Cumberland County has a site that has not recorded peak flow data since 1986.
   - Clinton County's site has not recorded peak flow data since 1986.
   - Green County's site has not recorded peak flow data since 2008.
   - Russell County's site has not recorded peak flow data since 1992.
   - Taylor County's site has not recorded peak flow data since 1994.

2) Of the sites where peak flow data is current, the following county's sites only have a couple or some observations:
   - Cumberland County's site records only two (2) observations, 2016-2017.
   - One of McCreary County's sites records only two (2) observations, 2016-2017.

3) In those counties where USGS had placed flood gages in multiple locations, only the locations where the recorded peak flow data was current were used.

Despite the abovementioned constraints, the data still is useful and relevant. This has to do with the definition of "peak flow" and FEMA's interpretation of "extent":

Peak flow is *"the maximum instantaneous discharge of a stream or river at a given location. It usually occurs at or near the time of maximum stage*[1]*."*

[1] https://water.usgs.gov/edu/dictionary.html

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Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

FEMA interprets "extent" as "magnitude of the event," or as the worst or most severe a hazard event can get according to some measure or scale.

Consequently, the "maximum instantaneous discharge of a stream or river at a given location" assumed to occur "at or near the time of maximum stage" acts as the worst the flooding hazard can get according to a measurement via a scale. Further, "extent" would be a meaningless risk analysis variable if the worst an event could get was constrained by five-year time intervals: For example, how severe an earthquake can get by some measurement or scale is best represented for Kentucky by the New Madrid earthquakes of 1811-1812.

So, this is what the following peak flow data from USGS site gages within each county of the Lake Cumberland ADD region are intended to illustrate for the purpose of a risk analysis that informs mitigation actions: The best representation (available) of how severe (how deep in feet and how fast in cubic feet per second) flooding can get for each county, regardless of time.

Some additional definitions will illustrate the following analysis:

- **Gage Datum:** This is the "zero point" or base of the gage. The following illustrations will inform where the base of the flood gage is.

- **NGVD29:** This is related to Gage Datum. NGVD29 literally means National Geodetic Vertical Datum of 1929. This roughly translates to "sea level" or, more accurately, "mean sea level." The "mean sea level" estimate referenced as NGVD29 was the result of the recording of average sea level over a period of many years at 26 tide stations along the Atlantic and Pacific Coasts and along the Gulf of Mexico. NGVD29 does not represent (necessarily) local mean sea level at any particular point.

- **NGVD:** There exists a term "NGVD29" because after 1929, the National Geodetic Vertical Datum was corrected to more accurately account for varying elevations by using a vertical control measure that, prior to 1929, was not available. For standardization purposes, however, all of the sites flood gage placement sites within each of Lake Cumberland ADD's counties still used NGVD29 as its definition of "sea level."

- **Gage Height:** the height of the water surface above the gage datum (zero point). Gage height is often used interchangeably with the more general term, stage, although gage height is more appropriate when used with a gage reading.

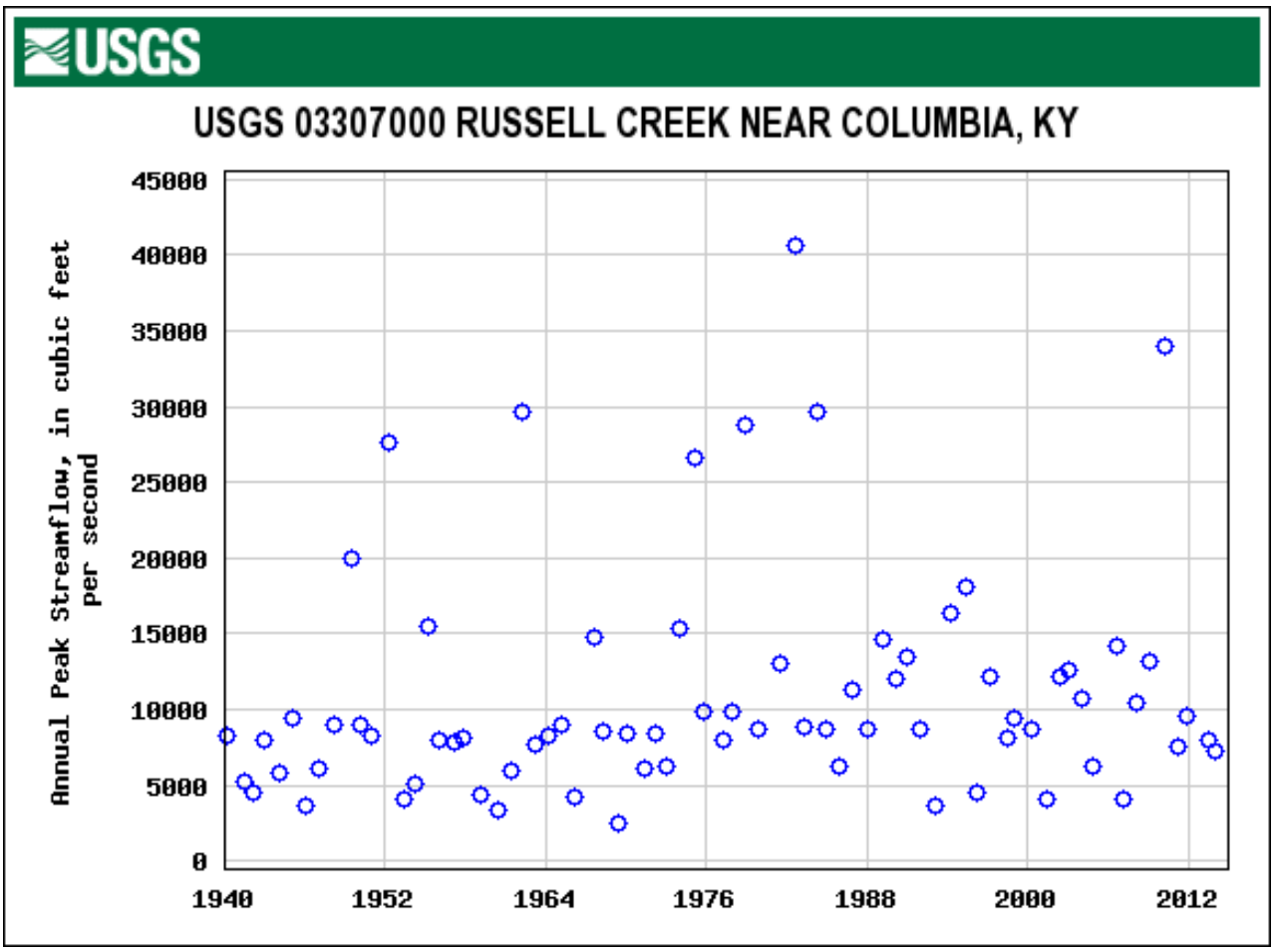
- **Streamflow:** the water discharge that occurs in a natural channel. A more general term than runoff, streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Finally, while gage height generally is what FEMA guidance references as a scale for extent for flooding, this Appendix E will also show peak streamflow because peak streamflow says more about the flood event along the entire body of water than can be conveyed by only reporting one point.

APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Adair County

Site: Russell Creek near Columbia, KY
Latitude: 37.11916667; *Longitude:* -85.39388889
Drainage Area: 188.0 mi^2
Contributing Drainage Area: 173.0 mi^2
Gage Datum: **610.96 feet above NGVD29**
Max. Gage Height within Period: **26.12 ft. (September 1, 1982)**
Max. Peak Streamflow within Period: **40,600 $ft.^3$/sec (September 1, 1982)**



APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Adair County (@ Russell Creek near Columbia, KY)

Water Year	Date	Gage Height (ft.)	Streamflow (ft.^{3}/sec)
1937	January 1937	23.00	Not Available
1940	March 30, 1940	17.70	8,280
1941	July 19, 1941	14.70	5,190
1942	February 17, 1942	13.50	4,500
1943	December 30, 1942	17.40	7,980
1944	February 29, 1944	15.10	5,820
1945	January 1, 1945	18.90	9,490
1946	January 7, 1946	11.60	3,580
1947	January 2, 1947	15.20	6,060
1948	February 14, 1948	18.50	9,010
1949	June 16, 1949	21.60	20,000
1950	January 31, 1950	18.50	9,010
1951	December 7, 1950	17.80	8,310
1952	March 22, 1952	23.80	27,600
1953	May 19, 1953	12.47	4,060
1954	April 16,1954	13.98	5,100
1955	March 22, 1955	20.00	15,500
1956	January 30, 1956	17.52	8,030
1957	January 29, 1957	17.28	7,790
1958	November 18, 1957	17.58	8,090
1959	February 15, 1959	13.15	4,340
1960	June 23, 1960	11.20	3,300
1961	June 9, 1961	15.30	5,990
1962	February 27, 1962	24.34	29,700
1963	March 12, 1963	17.19	7,700
1964	March 5, 1964	17.75	8,260
1965	March 29, 1965	18.21	9,030
1966	February 13, 1966	12.78	4,270
1967	August 1, 1967	19.70	14,700
1968	April 4, 1968	17.79	8,590
1969	June 23, 1969	9.46	2,430
1970	December 30, 1969	17.55	8,350
1971	May 13, 1971	15.19	6,070
1972	February 25, 1972	17.62	8,420
1973	December 9, 1972	15.37	6,230
1974	January 11, 1974	19.94	15,300
1975	March 12, 1975	23.53	26,600
1976	October 18, 1975	17.52	9,790
1977	March 13, 1977	16.36	7,950
1978	December 5, 1977	17.54	9,830
1979	December 9, 1978	24.12	28,800
1980	December 13, 1979	16.81	8,630
1981	June 7, 1981	19.07	13,000
1982	September 1, 1982	26.12	40,600
1983	May 16, 1983	16.96	8,840
1984	May 7, 1984	24.41	29,600
1985	November 19, 1984	16.96	8,750
1986	November 27, 1985	14.58	6,190
1987	November 9, 1986	18.29	11,300
1988	January 20, 1988	16.79	8,630
1989	February 21, 1989	19.72	14,600

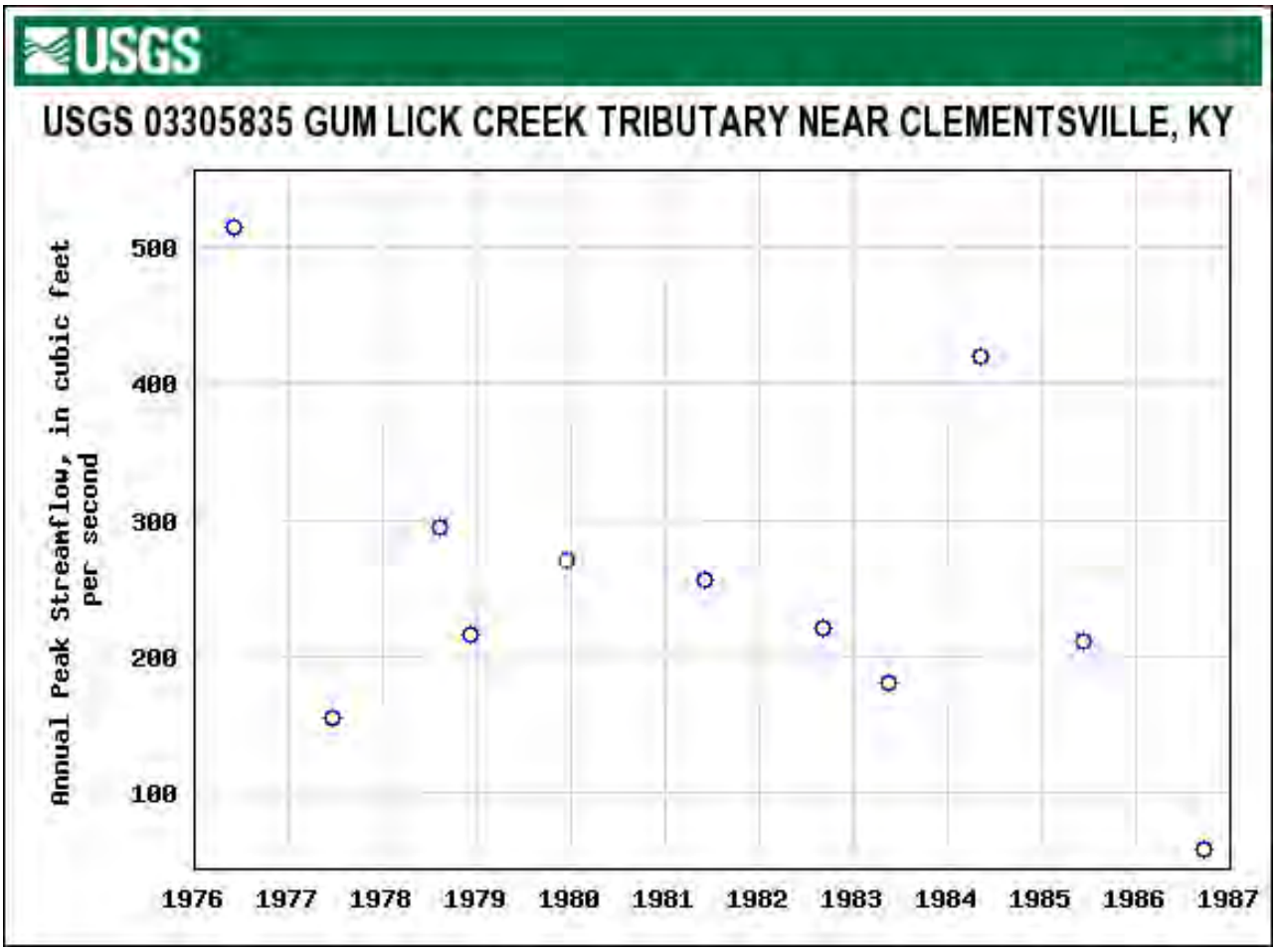
APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Water Year	Date	Gage Height (ft.)	Streamflow ($ft.^3/sec$)
1990	February 3, 1990	18.72	12,000
1991	December 31, 1990	19.38	13,400
1992	December 3, 1991	17.58	8,690
1993	February 21, 1993	11.54	3,580
1994	March 10, 1994	20.37	16,400
1995	May 14, 1995	20.93	18,100
1996	March 7, 1996	13.03	4,490
1997	March 1, 1997	18.75	12,100
1998	June 1, 1998	16.87	8,140
1999	January 9, 1999	17.54	9,430
2000	March 20, 2000	17.20	8,760
2001	June 4, 2001	12.27	4,050
2002	May 18, 2002	18.74	12,100
2003	February 16, 2003	18.96	12,600
2004	February 6, 2004	18.13	10,700
2005	December 1, 2004	15.51	6,290
2006	September 23, 2006	19.60	14,200
2007	March 2, 2007	12.43	4,140
2008	February 6, 2008	17.99	10,400
2009	January 28, 2009	19.21	13,200
2010	May 3, 2010	25.10	34,000
2011	April 12, 2011	16.34	7,610
2012	November 29, 2011	17.81	9,560
2013	July 6, 2013	16.70	7,980
2014	February 5, 2014	15.96	7,240

APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Casey County

Site: Gum Lick Creek Tributary near Clementsville, KY
Latitude: 37.35083333; *Longitude:* -85.07138889
Drainage Area: 0.71 mi^2
Gage Datum: **NGVD29**
Max. Gage Height within Period: **8.56 ft. (June 3, 1976)**
Max. Peak Streamflow within Period: **515 $ft.^3$/sec (June 3, 1976)**



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Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

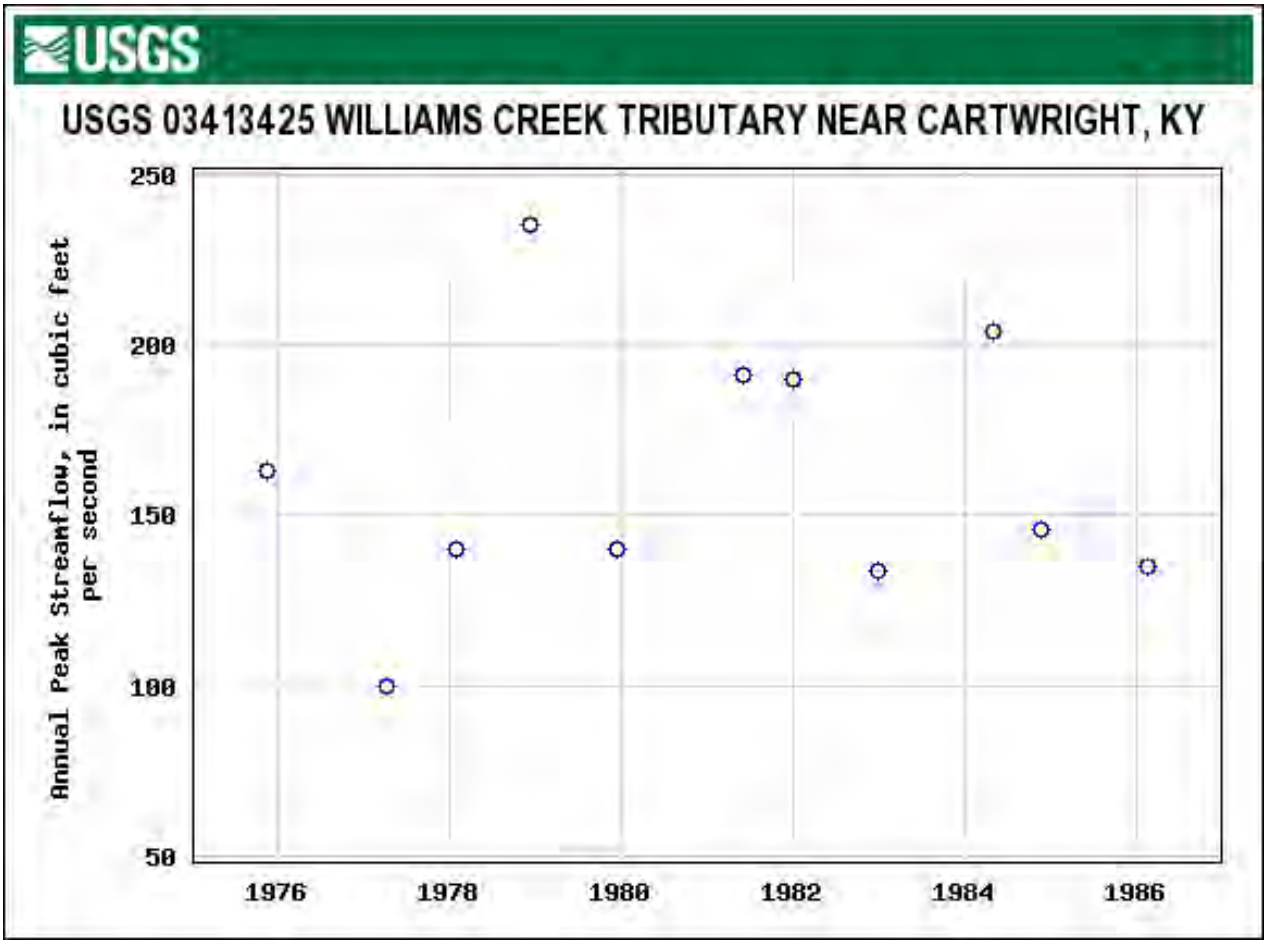
Casey County (@ Gum Lick Creek Tributary near Clementsville, KY)

Water Year	Date	Gage Height (ft.)	Streamflow (ft.^{3}/sec)
1976	June 3, 1976	8.56	515
1977	June 20, 1977	4.96	154
1978	August 11, 1978	6.63	295
1979	December 8, 1978	5.67	215
1980	December 13, 1979	6.45	270
1981	June 6, 1981	6.19	255
1982	September 1, 1982	5.75	220
1983	May 13, 1983	5.23	180
1984	May 7, 1984	7.74	420
1985	June 11, 1985	5.59	210
1986	September 24, 1986	3.85	58

APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Clinton County

Site: Williams Creek Tributary near Cartwright, KY
Latitude: 36.74944444; *Longitude:* -85.07888889
Drainage Area: 0.76 mi^2
Gage Datum: **NGVD29**
Max. Gage Height within Period: **8.62 ft. (December 9, 1978)**
Max. Peak Streamflow within Period: **235 $ft.^3$/sec (December 9, 1978)**



APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Clinton County (@ Williams Creek Tributary near Cartwright, KY)

Water Year	Date	Gage Height (ft.)	Streamflow ($ft.^3/sec$)
1976	November 12, 1975	8.05	163
1977	April 4, 1977	7.41	100
1978	January 25, 1978	7.84	140
1979	December 9, 1978	8.62	235
1980	December 14, 1979	7.81	140
1981	June 6, 1981	8.30	191
1982	January 4, 1982	8.29	190
1983	December 26, 1982	7.74	134
1984	May 7, 1984	8.41	204
1985	November 19, 1984	7.89	146
1986	February 18, 1986	7.75	135

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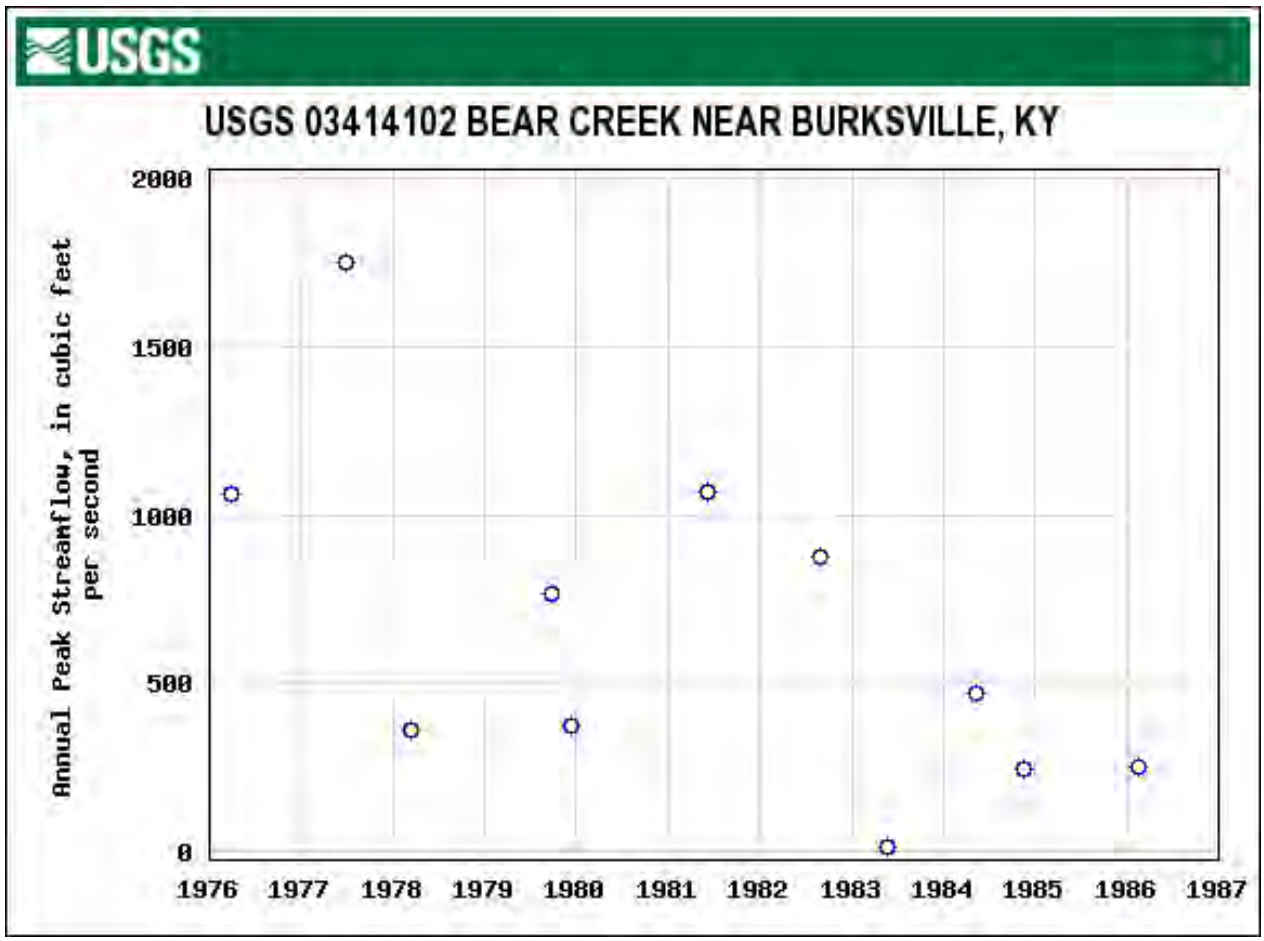
APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Cumberland County

Site: Bear Creek near Burksville, KY
Latitude: 36.77055556; *Longitude:* -85.27500000
Drainage Area: 3.52 mi^2
Gage Datum: **NGVD29**
Max. Gage Height within Period: **12.39 ft. (July 1, 1977)**
Max. Peak Streamflow within Period: **1,750 $ft.^3$/sec (July 1, 1977)**



APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

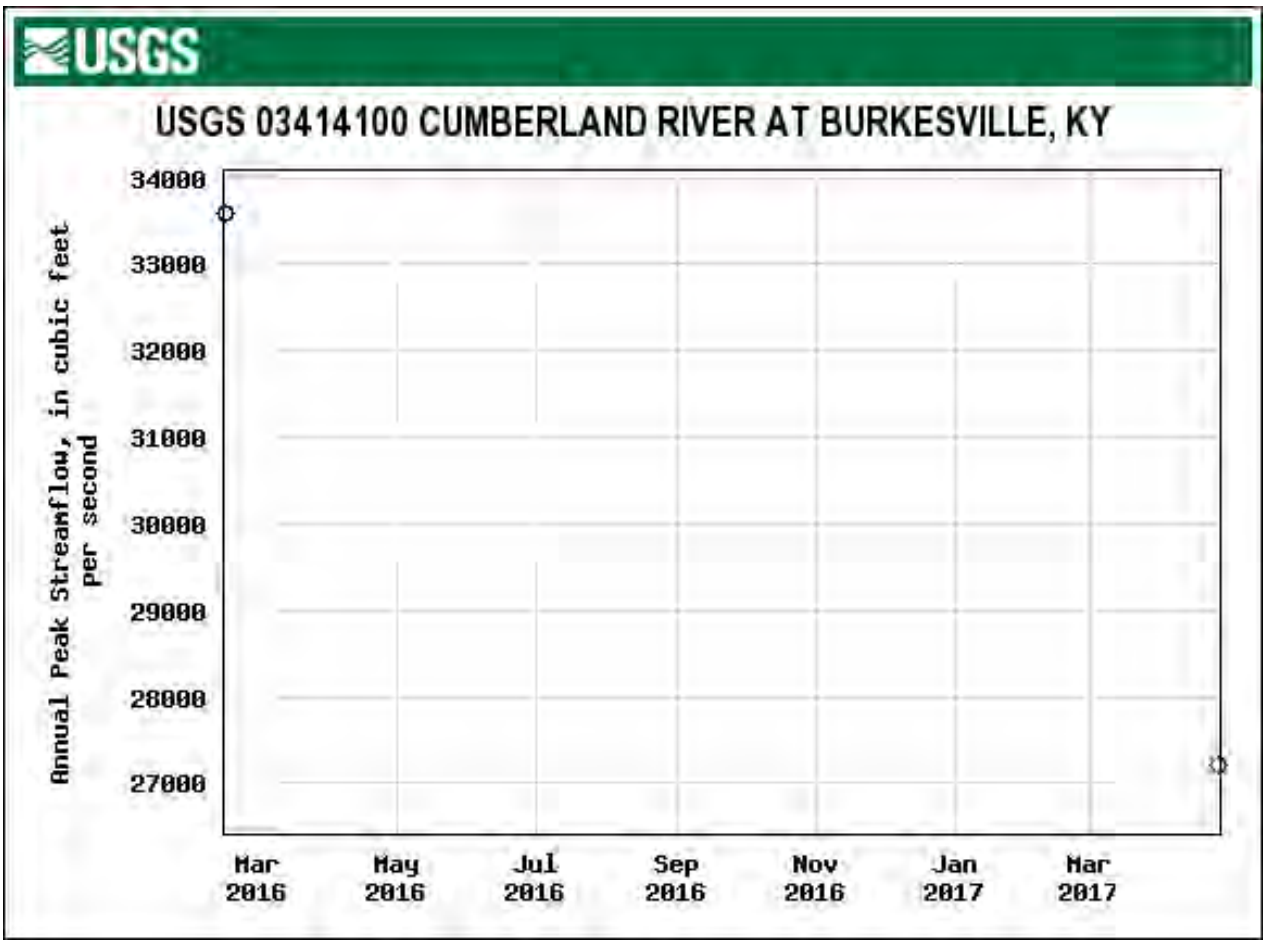
Cumberland County (@ Bear Creek near Burkesville, KY)

Water Year	Date	Gage Height (ft.)	Streamflow (ft.^{3}/sec)
1976	March 30, 1976	10.58	1,060
1977	July 1, 1977	12.39	1,750
1978	March 14, 1978	8.22	360
1979	September 22, 1979	9.62	765
1980	December 14, 1979	8.27	375
1981	June 6, 1981	10.56	1,070
1982	September 1, 1982	10.01	874
1983	May 22, 1983	6.55	16
1984	May 7, 1984	8.66	468
1985	November 19, 1984	7.92	246
1986	February 18, 1986	7.94	252

APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Cumberland County (Continued)

Site: Cumberland River at Burkesville, KY
Latitude: 36.78666667; *Longitude:* -85.36527778
Gage Datum: **NGVD29**
Max. Gage Height within Period: **44.25 ft. (February 16, 2016)**
Max. Peak Streamflow within Period: **33,600 ft.^{3}/sec (February 16, 2016)**



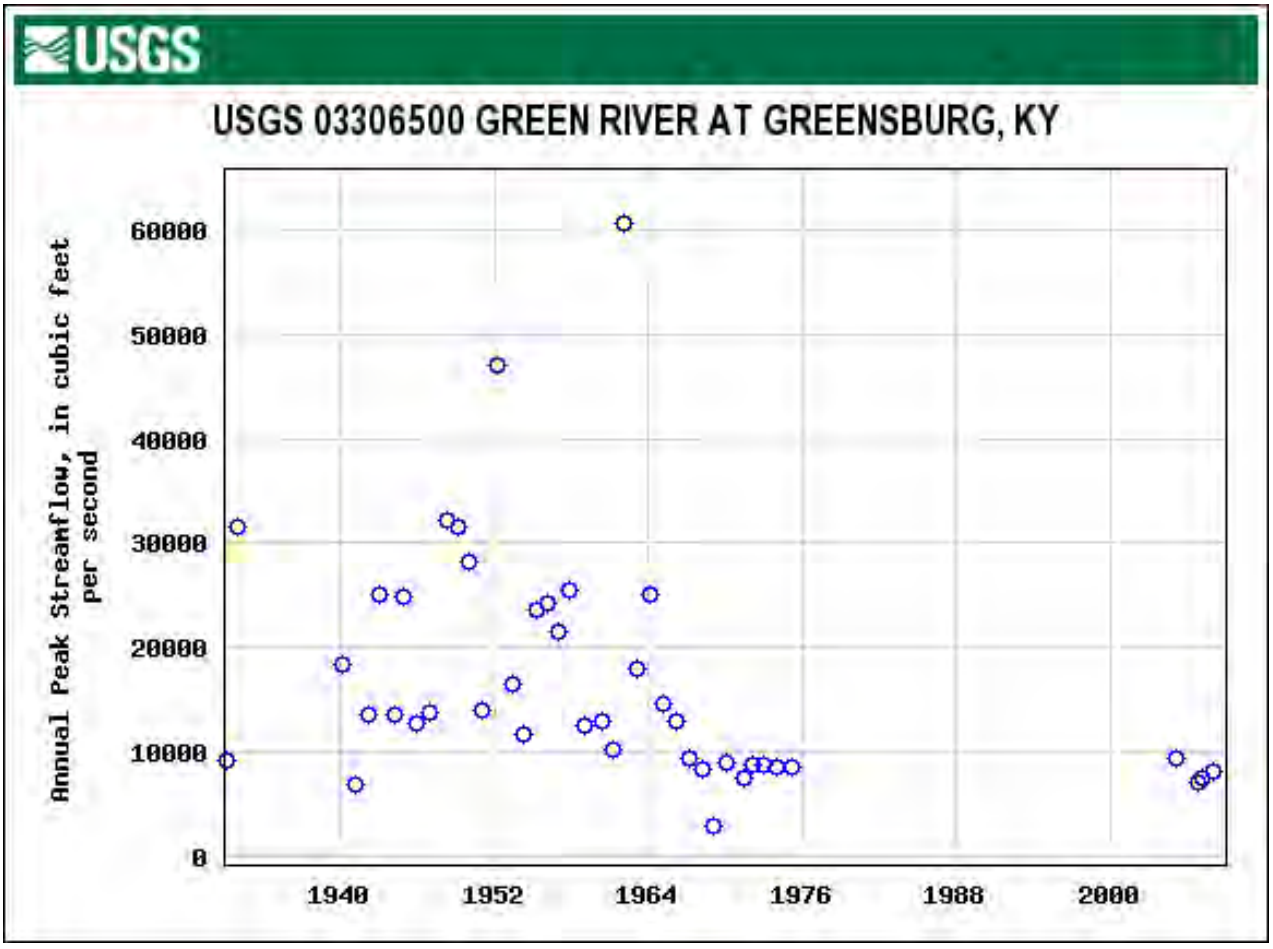
Cumberland County (@ Cumberland River at Burkesville, KY)

Water Year	Date	Gage Height (ft.)	Streamflow (ft.^{3}/sec)
2016	February 16, 2016	44.25	33,600
2017	April 26, 2017	40.89	27,200

APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Green County

Site: Green River at Greensburg, KY
Latitude: 37.25361111; *Longitude:* -85.50305556
Drainage Area: 736.0 mi^2
Gage Datum: **531.81 feet above NGVD29**
Max. Gage Height within Period: **37.17 ft. (February 28, 1962)**
Max. Peak Streamflow within Period: **60,600 $ft.^3$/sec (February 28, 1962)**



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Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Green County (@ Green River at Greensburg, KY)

Water Year	Date	Gage Height (ft.)	Streamflow (ft.^{3}/sec)
1913	1913	36.20	Not Available
1931	March 29, 1931	Not Available	9,120
1932	January 30, 1932	Not Available	31,500
1940	April 1, 1940	22.80	18,400
1941	April 5, 1941	14.44	6,920
1942	April 10, 1942	20.03	13,600
1943	December 31, 1942	28.20	25,100
1944	April 13, 1944	20.60	13,600
1945	January 2, 1945	27.26	24,800
1946	January 9, 1946	19.57	12,800
1947	January 3, 1947	20.85	13,700
1948	April 14, 1948	29.92	32,100
1949	February 16, 1949	29.72	31,500
1950	January 7, 1950	28.77	28,200
1951	February 2, 1951	21.95	14,000
1952	March 23, 1952	33.50	47,000
1953	May 20, 1953	22.63	16,500
1954	April 17, 1954	19.27	11,700
1955	March 23, 1955	26.33	23,600
1956	February 19, 1956	26.59	24,200
1957	January 30, 1957	25.65	21,500
1958	November 20, 1957	27.21	25,600
1959	January 22, 1959	19.85	12,500
1960	June 25, 1960	19.59	13,000
1961	March 1, 1961	18.42	10,300
1962	February 28, 1962	37.17	60,600
1963	March 13, 1963	23.55	18,000
1964	March 10, 1964	26.80	25,000
1965	March 27, 1965	22.44	14,700
1966	February 14, 1966	20.68	12,900
1967	March 8, 1967	17.82	9,350
1968	April 6, 1968	Not Available	8,360
1969	January 22, 1969	7.65	2,880
1970	January 9, 1970	15.80	8,990
1971	May 13, 1971	14.31	7,560
1972	January 28, 1972	16.05	8,700
1973	December 08, 1972	Not Available	8,730
1974	January 23, 1974	Not Available	8,680
1975	March 12, 1975	Not Available	8,560
2005	January 23, 2005	14.11	9,310
2006	September 23, 2006	11.77	7,200
2007	March 6, 2007	12.26	7,630
2008	January 15, 2008	12.78	8,090

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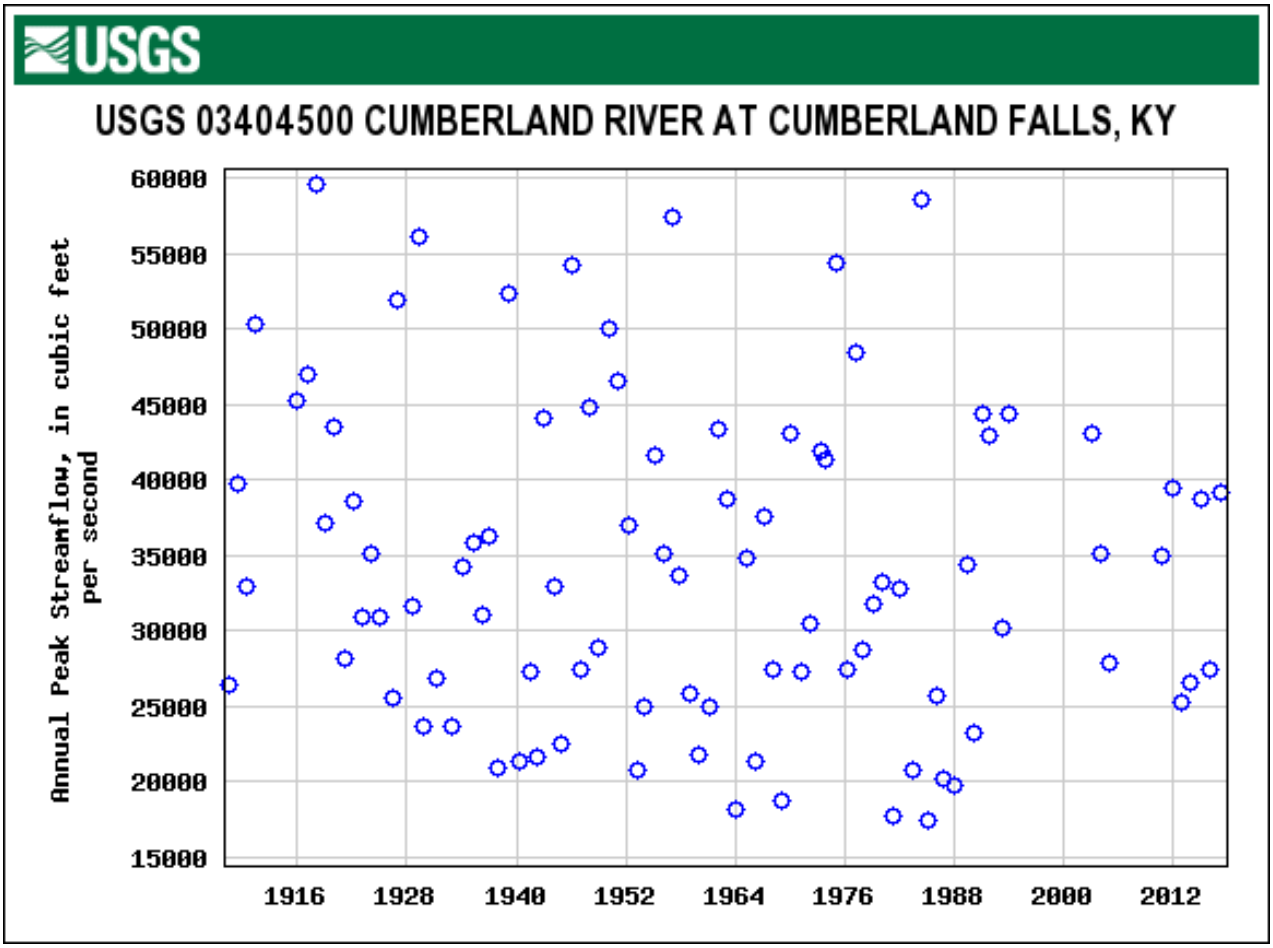
APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

McCreary County

Site: Cumberland River at Cumberland Falls, KY
Latitude: 36.83722222; *Longitude:* -84.34333333
Drainage Area: 1,977.0 mi^2
Gage Datum: **825.49 feet above NGVD29**
Max. Gage Height within Period: **14.72 ft. (May 7, 1984)**
Max. Peak Streamflow within Period: **59,600 $ft.^3$/sec (January 28, 1918)**



APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

McCreary County (@ Cumberland River at Cumberland Falls, KY)

Water Year	Date	Gage Height (ft.)	Streamflow (ft.^{3}/sec)
1908	1908	Not Available	26,400
1909	1909	Not Available	39,700
1910	1910	Not Available	33,000
1911	1911	Not Available	50,300
1916	December 18, 1915	Not Available	45,200
1917	March 4, 1917	Not Available	47,000
1918	January 28, 1918	Not Available	59,600
1919	January 3, 1919	Not Available	37,200
1920	January 23, 1920	Not Available	43,500
1921	April 17, 1921	Not Available	28,200
1922	February 21, 1922	Not Available	38,600
1923	February 4, 1923	Not Available	30,900
1924	January 3, 1924	Not Available	35,100
1925	February 16, 1925	Not Available	30,900
1926	May 17, 1926	Not Available	25,600
1927	December 25, 1926	Not Available	51,900
1928	June 30, 1928	Not Available	31,600
1929	March 23, 1929	Not Available	56,100
1930	November 18, 1929	Not Available	23,600
1931	April 23, 1931	Not Available	26,800
1933	December 29, 1932	8.80	23,600
1934	March 3, 1934	10.90	34,200
1935	March 28, 1935	11.20	35,800
1936	April 6, 1936	10.26	31,000
1937	January 2, 1937	11.27	36,300
1938	January 25, 1938	8.30	20,900
1939	February 3, 1939	14.15	52,300
1940	April 21, 1940	8.37	21,400
1941	July 6, 1941	9.60	27,300
1942	March 18, 1942	8.51	21,700
1943	December 30, 1942	12.58	44,100
1944	February 29, 1944	10.77	33,000
1945	January 1, 1945	8.82	22,500
1946	January 8, 1946	14.10	54,200
1947	January 2, 1947	9.78	27,500
1948	February 14, 1948	12.67	44,800
1949	January 6, 1949	10.07	28,900
1950	February 2, 1950	13.50	50,100
1951	February 1, 1951	12.96	46,500
1952	March 22, 1952	11.48	37,000
1953	May 20, 1953	8.43	20,700
1954	January 23, 1954	9.30	24,900
1955	March 22, 1955	12.21	41,600
1956	February 18, 1956	11.16	35,100
1957	January 29, 1957	14.55	57,400
1958	November 19, 1957	10.92	33,700
1959	January 23, 1959	9.50	25,900
1960	December 20, 1959	8.67	21,800
1961	February 28, 1961	9.30	25,000
1962	February 28, 1962	12.47	43,300
1963	March 12, 1963	11.78	38,800

Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
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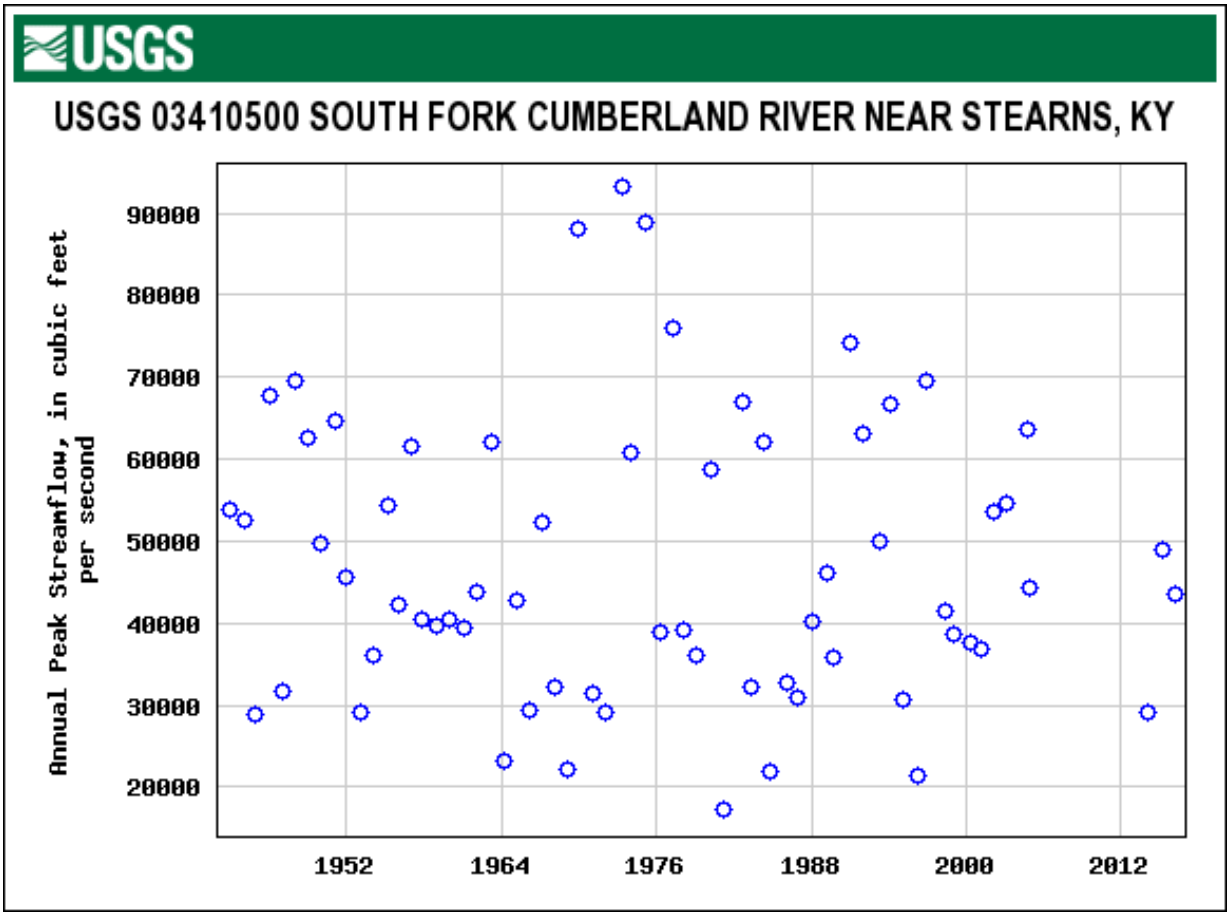
APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Water Year	Date	Gage Height (ft.)	Streamflow (ft.^{3}/sec)
1964	February 17, 1964	7.77	18,200
1965	March 29, 1965	11.11	34,800
1966	May 2, 1966	8.54	21,400
1967	March 7, 1967	11.58	37,600
1968	March 13, 1968	9.79	27,400
1969	February 3, 1969	7.89	18,700
1970	December 30, 1969	12.44	43,100
1971	May 14, 1971	9.77	27,300
1972	April 13, 1972	10.36	30,500
1973	May 28, 1973	12.27	41,900
1974	November 28, 1973	12.17	41,300
1975	March 14, 1975	14.12	54,400
1976	March 31, 1976	9.79	27,400
1977	April 5, 1977	13.26	48,500
1978	January 26, 1978	10.06	28,800
1979	February 26, 1979	10.59	31,800
1980	March 21, 1980	10.80	33,200
1981	April 21, 1981	7.72	17,800
1982	January 4, 1982	10.73	32,800
1983	May 22, 1983	8.38	20,700
1984	May 7, 1984	14.72	58,600
1985	February 2, 1985	7.66	17,500
1986	February18, 1986	9.41	25,700
1987	November 11, 1986	8.26	20,200
1988	January 21, 1988	8.18	19,800
1989	June 16, 1989	11.02	34,400
1990	February 4, 1990	8.90	23,200
1991	February 20, 1991	12.68	44,400
1992	December 3, 1991	12.43	42,900
1993	March 24, 1993	10.26	30,200
1994	February 12, 1994	12.68	44,400
2003	February 16, 2003	12.46	43,100
2004	February 6, 2004	11.14	35,100
2005	December 9, 2004	9.84	27,900
2011	December 1, 2010	10.26	35,000
2012	November 29, 2011	11.52	39,400
2013	January 16, 2013	8.90	25,200
2014	December 9, 2013	9.16	26,500
2015	March 5, 2015	11.39	38,700
2016	February 16, 2016	9.35	27,500
2017	April 24, 2017	11.49	39,200

APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

McCreary County (Continued)

Site: South Fork Cumberland River near Stearns, KY
Latitude: 36.62694444; *Longitude:* -84.53333333
Drainage Area: 954.0 mi^2
Gage Datum: **764.81 feet above NGVD29**
Max. Gage Height within Period: **52.90 ft. (March 1929)**
Max. Peak Streamflow within Period: **93,200 $ft.^3$/sec (May 28, 1973)**



APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

McCreary County (@ South Fork Cumberland River near Stearns, KY)

Water Year	Date	Gage Height (ft.)	Streamflow (ft.^{3}/sec)
1929	March 1929	52.90	Not Available
1943	December 29, 1942	32.40	53,900
1944	February 18, 1944	31.97	52,600
1945	January 1, 1945	23.27	28,900
1946	January 8, 1946	37.90	67,800
1947	January 3, 1947	24.50	31,800
1948	February 13, 1948	38.50	69,600
1949	January 5, 1949	36.20	62,600
1950	January 30, 1950	31.80	49,800
1951	February 1, 1951	37.30	64,700
1952	December 15, 1951	30.86	45,500
1953	February 21, 1953	24.31	29,200
1954	January 21, 1954	27.19	36,100
1955	March 22, 1955	33.90	54,300
1956	February 18, 1956	29.62	42,200
1957	January 29, 1957	36.25	61,500
1958	November 18, 1957	28.95	40,500
1959	January 22, 1959	28.58	39,600
1960	December 19, 1959	28.92	40,400
1961	March 8, 1961	28.50	39,400
1962	February 27, 1962	30.25	43,900
1963	March 12, 1963	36.45	62,100
1964	March 13, 1964	21.50	23,200
1965	March 26, 1965	29.70	42,800
1966	March 14, 1966	24.40	29,400
1967	March 7, 1967	33.28	52,400
1968	March 12, 1968	25.60	32,200
1969	February 2, 1969	21.00	22,200
1970	December 30, 1969	44.00	88,000
1971	February 5, 1971	25.28	31,500
1972	January 2, 1972	24.30	29,200
1973	May 28, 1973	45.31	93,200
1974	January 11, 1974	35.97	60,900
1975	March 13, 1975	44.15	88,900
1976	March 30, 1976	28.26	38,900
1977	April 5, 1977	40.52	75,900
1978	January 26, 1978	28.47	39,200
1979	February 26, 1979	27.17	36,000
1980	March 21, 1980	35.48	58,800
1981	April 5, 1981	17.95	17,200
1982	September 2, 1982	37.81	67,000
1983	April 6, 1983	25.30	32,200
1984	May 7, 1984	36.30	62,200
1985	November 19, 1984	20.56	22,000
1986	February 18, 1986	25.20	32,700
1987	November 9, 1986	24.77	31,000
1988	January 20, 1988	28.56	40,200
1989	March 6, 1989	31.13	46,200
1990	October 1, 1989	27.16	35,800
1991	December 23, 1990	40.12	74,300
1992	December 3, 1991	36.72	63,000

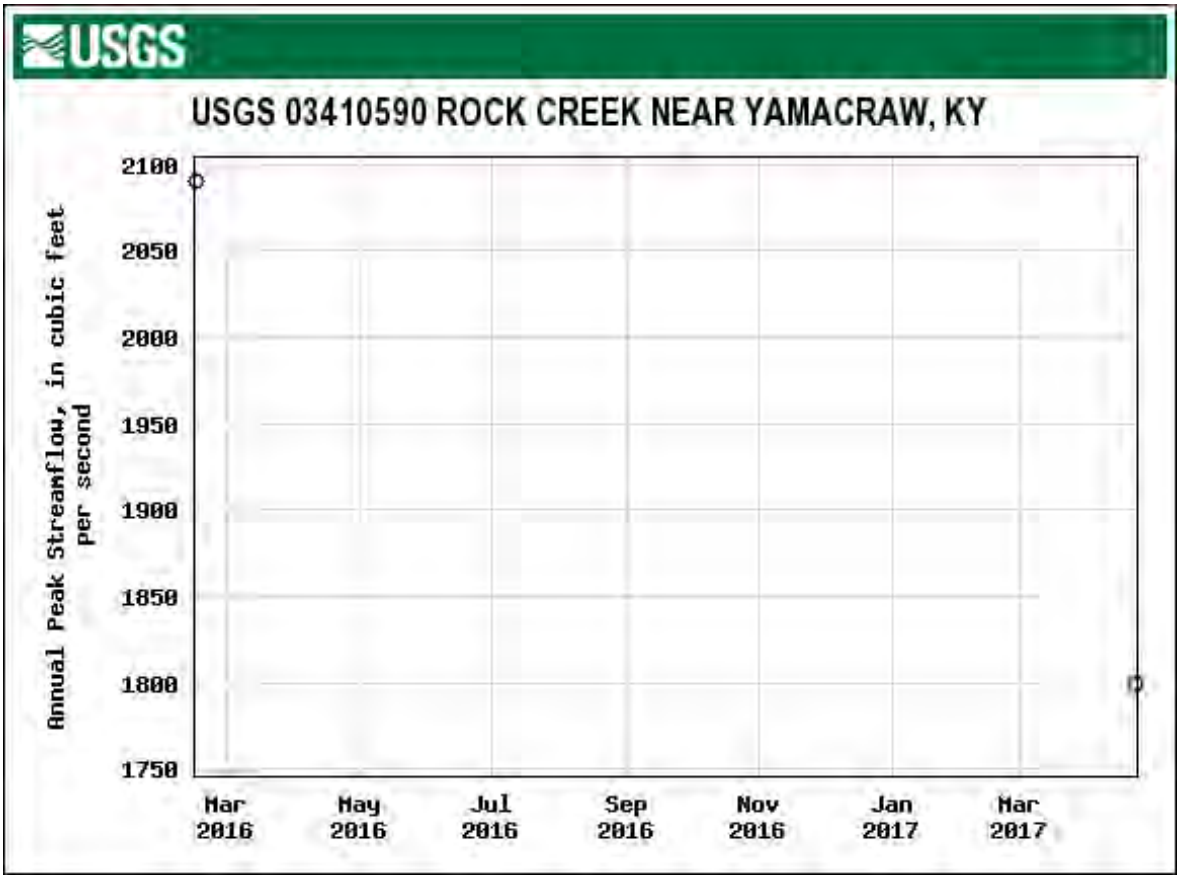
APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Water Year	Date	Gage Height (ft.)	Streamflow ($ft.^3/sec$)
1993	March 24, 1993	32.47	50,100
1994	February 11, 1994	37.86	66,700
1995	March 8, 1995	24.97	30,700
1996	March 7, 1996	Not Available	21,300
1997	December 1, 1996	38.68	69,500
1998	April 19, 1998	29.26	41,400
1999	January 24, 1999	28.20	38,700
2000	April 4, 2000	27.81	37,700
2001	February 17, 2001	27.47	36,800
2002	March 18, 2002	33.65	53,700
2003	February 16, 2003	34.00	54,700
2004	September 17, 2004	36.88	63,600
2005	December 1, 2004	30.34	44,300
2014	February 21, 2014	24.16	29,000
2015	March 5, 2015	31.99	48,900
2016	February 16, 2016	30.04	43,500
2017	April 24, 2017	35.50	Not Available

APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

McCreary County (Continued)

Site: Rock Creek near Yamacraw, KY
Latitude: 36.70277778; *Longitude:* -84.56305556
Drainage Area: 152.6 mi^2
Gage Datum: **NGVD29**
Max. Gage Height within Period: **12.01 ft. (February 16, 2016)**
Max. Peak Streamflow within Period: **2,090 $ft.^3$/sec (February 16, 2016)**



McCreary County (@ Rock Creek near Yamacraw, KY)

Water Year	Date	Gage Height (ft.)	Streamflow ($ft.^3$/sec)
2016	February 16, 2016	12.01	2,090
2017	April 23, 2017	11.33	1,800

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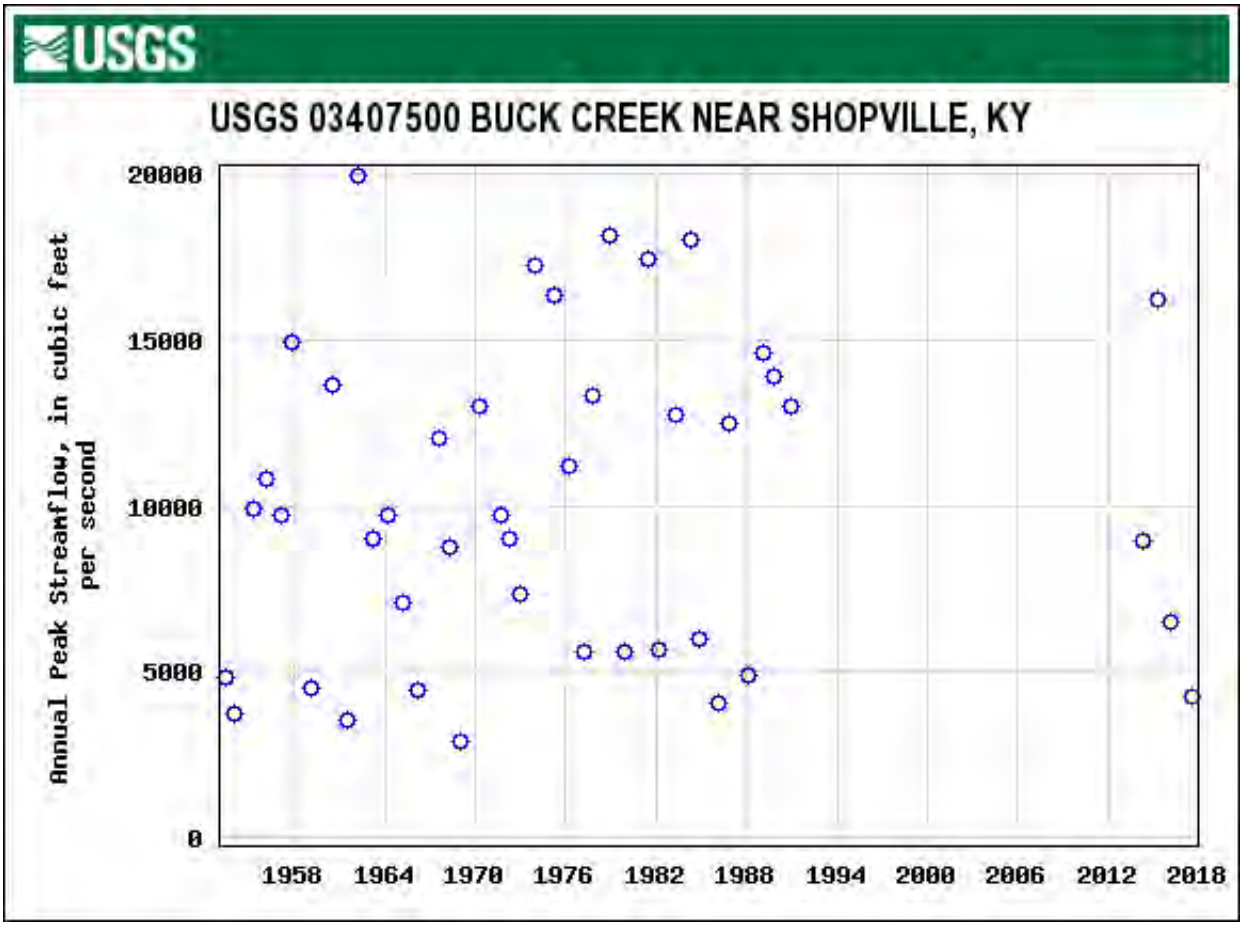
APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Pulaski County

Site: Buck Creek near Shopville, KY
Latitude: 37.21055556; *Longitude:* -84.46444444
Drainage Area: 165.00 mi^2
Gage Datum: **831.59 feet above NGVD29**
Max. Gage Height within Period: **23.21 ft. (February 27, 1962)**
Max. Peak Streamflow within Period: **19,900 $ft.^3$/sec (February 27, 1962)**



Lake Cumberland Regional Multi-Hazard Mitigation Plan Update
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APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

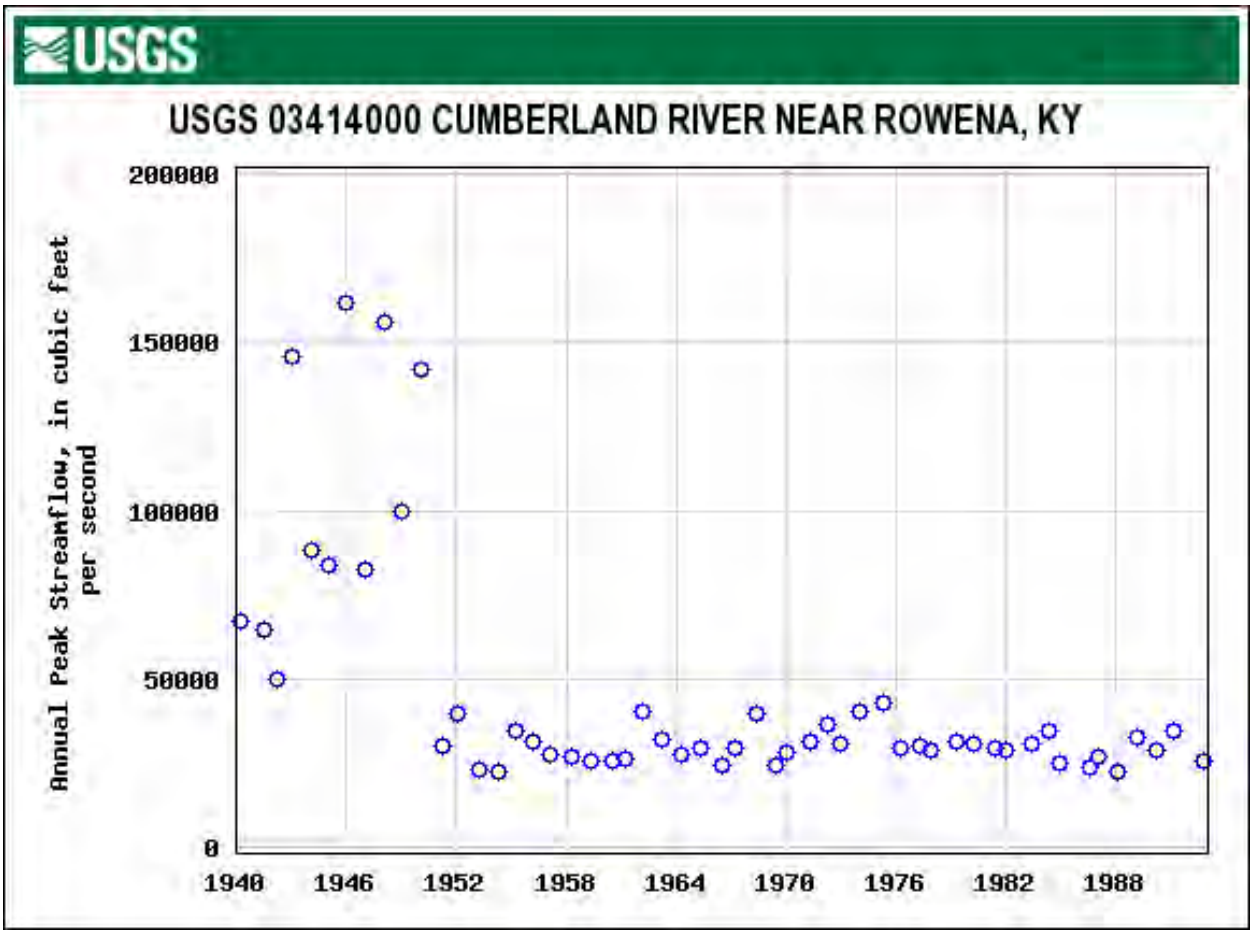
Pulaski County (@ Buck Creek near Shopville, KY)

Water Year	Date	Gage Height (ft.)	Streamflow (ft.^{3}/sec)
1953	May 18, 1953	9.40	4,850
1954	January 21, 1954	8.41	3,710
1955	March 22, 1955	14.93	9,920
1956	February 18, 1956	15.72	10,800
1957	January 29, 1957	15.19	9,710
1958	November 19, 1957	19.55	14,900
1959	February 15, 1959	9.61	4,490
1960	June 23, 1960	18.51	13,600
1961	June 9, 1961	8.45	3,560
1962	February 27, 1962	23.21	19,900
1963	March 12, 1963	14.50	9,000
1964	March 8, 1964	15.18	9,700
1965	March 26, 1965	12.56	7,060
1966	February 13, 1966	9.52	4,420
1967	July 10, 1967	17.14	12,000
1968	April 4, 1968	14.23	8,730
1969	January 20, 1969	7.57	2,890
1970	April 28, 1970	17.96	13,000
1971	September 26, 1971	15.17	9,690
1972	April 12, 1972	14.48	8,980
1973	December 9, 1972	12.81	7,310
1974	January 10, 1974	21.27	17,200
1975	March 12, 1975	20.63	16,300
1976	March 29, 1976	16.47	11,200
1977	April 5, 1977	11.02	5,620
1978	October 1, 1977	18.25	13,300
1979	December 8, 1978	21.94	18,100
1980	December 13, 1979	10.97	5,570
1981	June 6, 1981	21.42	17,400
1982	February 9, 1982	11.06	5,650
1983	May 16, 1983	17.72	12,700
1984	May 7, 1984	21.87	18,000
1985	November 19, 1984	11.44	6,010
1986	February 18, 1986	9.10	4,070
1987	November 9, 1986	17.61	12,500
1988	January 20, 1988	10.14	4,880
1989	February 21, 1989	19.00	14,600
1990	October 17, 1989	18.40	13,900
1991	December 31, 1990	17.68	13,000
2014	April 30, 2014	13.30	8,970
2015	April 14, 2015	17.91	16,200
2016	February 3, 2016	11.05	6,470
2017	July 6, 2017	8.49	4,240

APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Russell County

Site: Cumberland River near Rowena, KY
Latitude: 36.88388889; *Longitude:* -85.13944444
Drainage Area: 5,790.00 mi^2
Gage Datum: **540.81 feet above NGVD29**
Max. [2] ***Gage Height within Period:*** **64.82 ft. (January 9, 1946)**
Max. Peak Streamflow within Period: **162,000 ft.^{3}/sec (January 9, 1946)**



[2] The consecutive or continuous time period recorded for this gage begins in 1940. However, there is one datum for March 1826. It is Water Year 1826. It is in March of 1826 that the gage reached its maximum peak height: 69.50 feet.

APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Russell County (@ Cumberland River near Rowena, KY)

Water Year	Date	Gage Height (ft.)	Streamflow (ft.^{3}/sec)
1826	March 1826	69.50	Not Available
1940	April 1, 1940	40.52	67,200
1941	July 6, 1941	40.07	64,300
1942	March 18, 1942	32.78	49,900
1943	December 31, 1942	61.70	146,000
1944	February 19, 1944	48.57	88,200
1945	January 2, 1945	47.14	83,800
1946	January 9, 1946	64.82	162,000
1947	January 4, 1947	46.64	82,200
1948	February 15, 1948	63.78	156,000
1949	January 7, 1949	52.10	100,000
1950	February 2, 1950	61.48	142,000
1951	April 5, 1951	23.01	29,700
1952	January 9, 1952	28.50	39,800
1953	April 13, 1953	19.04	22,900
1954	May 8, 1954	18.50	22,000
1955	April 8, 1955	25.42	34,700
1956	March 15, 1956	23.47	31,100
1957	February 22, 1957	21.43	27,500
1958	April 28, 1958	21.12	26,900
1959	April 17, 1959	20.20	25,300
1960	June 28, 1960	20.25	25,400
1961	March 18, 1961	20.80	26,400
1962	March 20, 1962	28.40	40,300
1963	March 28, 1963	23.70	31,600
1964	April 20, 1964	21.51	27,600
1965	April 17, 1965	22.56	29,500
1966	July 12, 1966	19.54	24,200
1967	March 21, 1967	23.34	29,100
1968	May 10, 1968	27.97	39,400
1969	May 29, 1969	19.55	24,200
1970	January 9, 1970	21.70	28,000
1971	May 13, 1971	23.58	31,300
1972	March 11, 1972	26.37	36,400
1973	December 20, 1972	23.17	30,600
1974	January 14, 1974	28.34	40,200
1975	March 29, 1975	29.55	42,600
1976	March 31, 1976	22.39	29,200
1977	April 9, 1977	22.77	29,900
1978	December 6, 1977	22.15	28,800
1979	April 12, 1979	23.48	31,100
1980	March 31, 1980	23.11	30,500
1981	June 11, 1981	22.63	29,600
1982	January 13, 1982	22.29	29,000
1983	May 19, 1983	23.00	30,300
1984	May 7, 1984	25.38	34,600
1985	December 7, 1984	19.75	24,600
1986	July 30, 1986	19.32	23,800
1987	January 7, 1987	21.07	26,900
1988	January 27, 1988	18.48	22,400
1989	March 5, 1989	24.43	32,800

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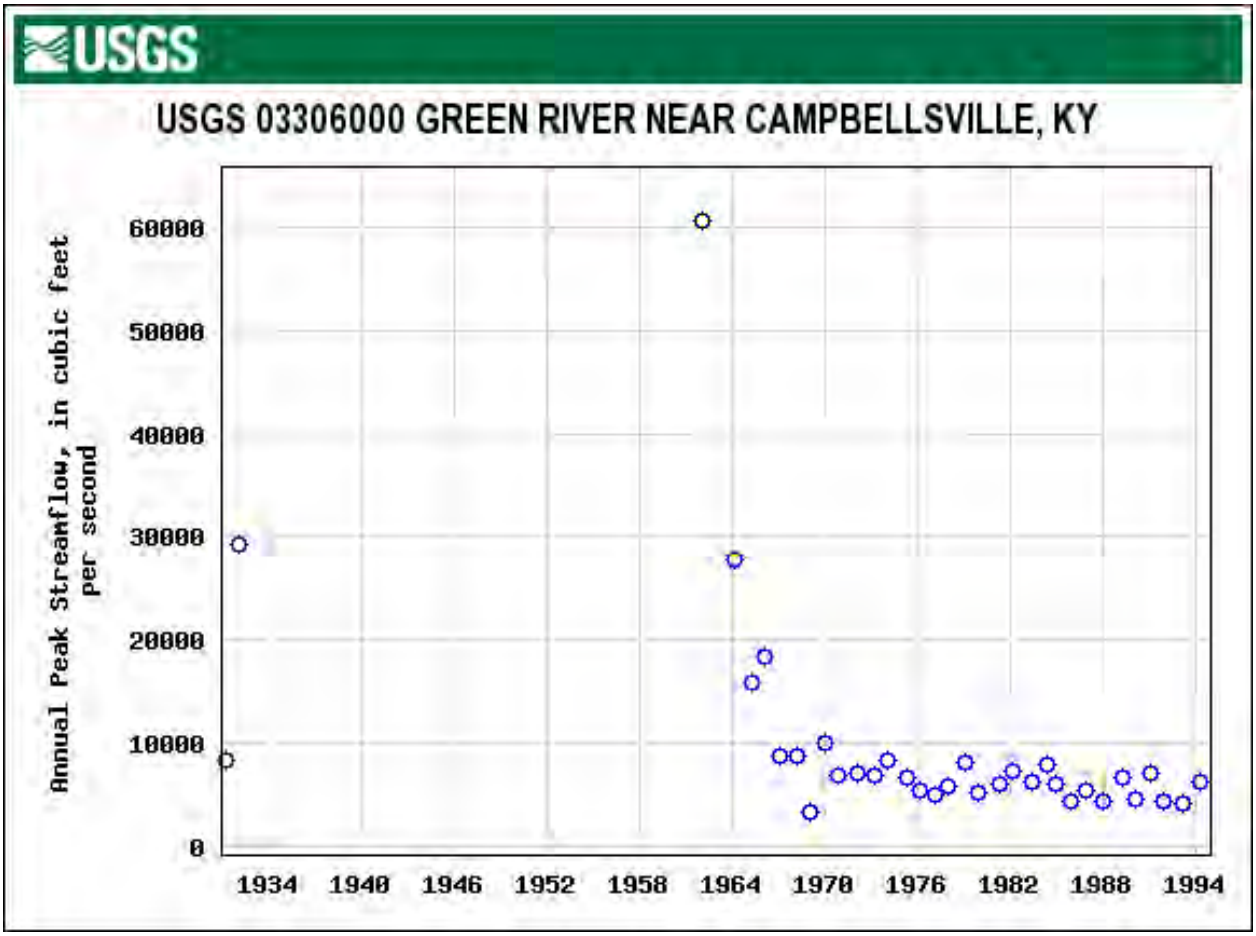
APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Water Year	Date	Gage Height (ft.)	Streamflow ($ft.^3/sec$)
1990	February 18, 1990	22.08	28,600
1991	March 4, 1991	25.26	34,400
1992	September 17,1992	20.40	25,700

APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Taylor County

Site: Green River near Campbellsville, KY
Latitude: 37.24027778; *Longitude:* -85.34722222
Drainage Area: 682.00 mi^2
Gage Datum: **500.00 feet above NGVD29**
Max. Gage Height within Period: **113.68 ft. (April 11, 1989)**
Max. Peak Streamflow within Period: **60,700 $ft.^3$/sec (February 28, 1962)**



APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Taylor County (@ Green River near Campbellsville, KY)

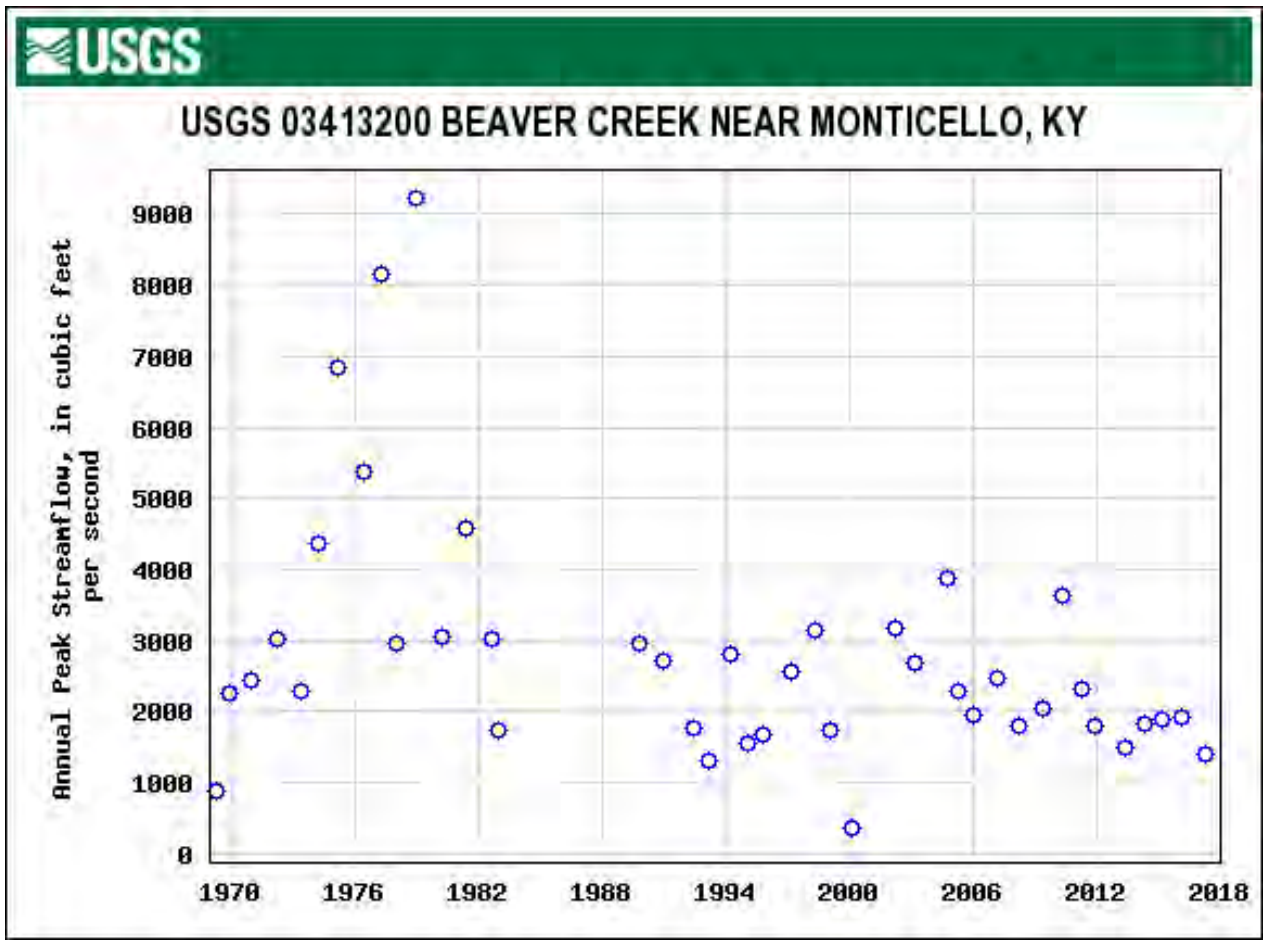
Water Year	Date	Gage Height (ft.)	Streamflow (ft.^{3}/sec)
1931	March 29, 1931	Not Available	8,450
1932	January 30, 1932	Not Available	29,200
1962	February 28, 1962	72.60	60,700[3]
1964	March 10, 1964	66.54	27,700
1965	March 26, 1965	62.12	15,900
1966	February 13, 1966	63.19	18,300
1967	March 8, 1967	55.84	8,820
1968	April 6, 1968	55.83	8,810
1969	February 13, 1969	50.22	3,280
1970	January 8, 1970	56.97	10,100
1971	November 5, 1970	54.15	6,960
1972	March 10, 1972	54.38	7,220
1973	March 27, 1973	14.39	6,840
1974	January 22, 1974	16.11	8,470
1975	April 25, 1975	14.33	6,740
1976	February 24, 1976	12.91	5,360
1977	March 18, 1977	12.24	4,970
1978	January 1, 1978	3.47	5,860
1979	February 5, 1979	105.09	8,190
1980	December 3, 1979	102.29	5,320
1981	May 27, 1981	103.00	6,000
1982	February 9, 1982	104.23	7,260
1983	May 24, 1983	103.18	6,180
1984	May 15, 1984	104.67	7,870
1985	January 8, 1985	102.98	5,980
1986	December 9, 1985	101.20	4,330
1987	December 15, 1986	102.34	5,370
1988	January 25, 1988	101.16	4,300
1989	April 11, 1989	113.68	6,730
1990	February 18, 1990	101.54	4,640
1991	January 22, 1991	104.02	7,040
1992	December 6, 1991	101.39	4,490
1993	February 23, 1993	101.05	4,200
1994	April 20, 1994	103.71	6,270

[3] USGS labels this streamflow discharge on February 28, 1962 as an historic peak.

APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Wayne County

Site: Beaver Creek near Monticello, KY
Latitude: 36.79750000; *Longitude:* -84.89611111
Drainage Area: 43.40 mi^2
Gage Datum: **804.72 feet above NGVD29**
Max. Gage Height within Period: **10.05 ft. (September 17, 2004)**
Max. Peak Streamflow within Period: **9,240 $ft.^3$/sec (December 9, 1978)**



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APPENDIX E
Flood Extent for Each County Using USGS Flood Gage Data on Peak Flow

Wayne County (@ Beaver Creek near Monticello, KY)

Water Year	Date	Gage Height (ft.)	Streamflow (ft.^{3}/sec)
1969	April 18, 1969	4.09	890
1970	December 30, 1969	5.30	2,260
1971	December 22, 1970	5.46	2,450
1972	April 12, 1972	5.81	3,020
1973	May 28, 1973	5.33	2,300
1974	April 4, 1974	6.53	4,380
1975	March 13, 1975	7.60	6,850
1976	June 2, 1976	7.01	5,390
1977	April 4, 1977	8.04	8,160
1978	January 26, 1978	5.76	2,950
1979	December 9, 1978	8.37	9,240
1980	April 8, 1980	5.83	3,060
1981	June 6, 1981	6.64	4,570
1982	September 1, 1982	5.76	3,030
1983	December 15, 1982	4.93	1,730
1990	October 17, 1989	8.37	2,970
1991	December 23, 1990	7.89	2,710
1992	June 18, 1992	6.01	1,760
1993	February 21, 1993	5.27	1,310
1994	April 11, 1994	8.10	2,820
1995	February 15, 1995	5.62	1,540
1996	November 7, 1995	5.88	1,690
1997	March 3, 1997	7.61	2,570
1998	April 17, 1998	8.67	3,140
1999	January 23, 1999	5.99	1,740
2000	February 14, 2000	3.83	371
2002	March 18, 2002	8.79	3,180
2003	February 16, 2003	7.91	2,680
2004	September 17, 2004	10.05	3,880
2005	April 30, 2005	7.21	2,290
2006	January 23, 2006	6.57	1,960
2007	March 2, 2007	7.57	2,480
2008	April 4, 2008	6.32	1,810
2009	May 4, 2009	6.74	2,040
2010	May 3, 2010	9.59	3,620
2011	April 28, 2011	7.27	2,330
2012	November 28, 2011	6.32	1,810
2013	April 28, 2013	5.77	1,480
2014	April 30, 2014	6.54	1,820
2015	March 5, 2015	6.64	1,890
2016	February 16, 2016	6.71	1,930
2017	April 23, 2017	5.87	1,400

October 2016

APPENDIX F

Lake Cumberland Regional Hazard Mitigation Plan
Annual Maintenance Meeting

Meeting Minutes

May 23, 2019, 9:30 A.M.

The Lake Cumberland Regional Hazard Mitigation Committee met at 9:30 a.m. on May 23, 2019 in the large conference room of the Lake Cumberland Area Development District. Ten people were in attendance. The sign-in sheet is attached.

Chari Bennett, Community Development Specialist with the Lake Cumberland Area Development District, explained the Lake Cumberland Regional Hazard Mitigation Plan has been approved until April 9, 2023. Projects must be included in the plan to be eligible to receive FEMA grant funding. The purpose of the annual maintenance meeting is to provide an opportunity to add projects or make revisions to the plan.

Ms. Bennett asked if any changes needed to be made. A motion was made by Greg Cary, Cumberland County Emergency Manager, to change the following proposed disaster mitigation measures: add Cumberland County to Action Item 4, "Provide Emergency Outdoor Warning Sirens at Key Locations;" add Cumberland County to Action Item 12, "Provide Roadway Improvements to Prevent Flooding;" and change the description of Action Item 9 to "Provide Emergency Power Generators at Critical Infrastructure, Courthouses, Temporary Emergency Shelters, Water and Wastewater Pump Stations." The motion was seconded by Mike Keltner, Adair County Emergency Manager. The motion passed unanimously.

Ms. Bennett stated that the Hazard Mitigation Grant Program is currently open. Applications must be submitted through CHAMPS by June 28, 2019. Several trainings have been scheduled, with the closest one being held on May 31st at the Cumberland Valley ADD in London.

Ms. Bennett introduced guest speaker Nick Grinstead, Hazard Mitigation Assistance Planning Manager, and Karen Howard, the Kentucky Emergency Management Hazard Mitigation Grant Manager for the Lake Cumberland region. Mr. Grinstead presented an overview of FEMA grants and the application process. The meeting adjourned at 10:40 A.M.

Chari Bennett

Signature

Prepared by Chari Bennett

Instructors/Facilitators **MUST sign each page of the Event Roster**

Kentucky Division of Emergency Management
Event Roster

Name of Event: HMA Presentation for Hazard Mitigation Plan Maintenance
Location: Lake Cumberland Area Development District (LCADD)
Address: 2384 Lakeway Drive
City/Community: Russell Springs, KY 42642
EDBS#/NEXS#:

Is This An Exercise? ☐ Yes **X No**
If so, what type:
☐ Seminar ☐ Workshop ☐ TTX ☐ Game
☐ Drill ☐ Functional ☐ Full-Scale

Event Start Date: 05/23/19
Event End Date: 05/23/19
Instructor/Facilitator (1): W. Nick Grinstead
Instructor/Facilitator (2): Karen Howard
Total Event Hours:

Event Hours: Day 1:____ Day 2:____ Day 3:____ Day 4: Day 5: ____

If registering day-of, please print your name and email address legibly. The name on your certificate will appear as written.

Initials Only, Each Day

	FirstName	MI	Last Name	Title	Agency	Are you being Paid to attend?	If Yes, By Whom?	Email	Job Category	Day 1	Day 2	Day 3	Day 4	Day 5	Total Hrs.
0	*John*	*Q*	*Doe*	*SAR Coordinator*	*XYZ County*	*Yes*	*Local*	*JQD@xyzcorporation.bus*	*SAR Supervisor*						0
1	Gale		Cowan	CJE	Adair	✓		ccem@cchospital.org							
2	Greg		Cary	Em Director	Cumberland					DC					
3	Mike		Heltner	Addis EM Director	Addis	✓		Mike.Heltner@yahoo.com		MH					
4	Jim		BOTTOM	EM Director	Russell Co	—		fcEM@duo-county.com		JBB					
5	Ricky		Craig	County Judge	Clinton Co	✓		rickyemc@clintonky.gov		RC					
6	Nick		Hazel		LCADD			nick@lcadd.org		.					
7	Chari		Bennett		LCADD	✓		Chari@lcadd.org		CB					
8	Judy		Keltner		LCADD	✓		judy@lcadd.org		JK					
9	Londie		Scott	Clinton Em Director	Clinton County		—	ccems@hotmail.com		[illegible]					
10	Mike		Anderson	Wayne Judge Exec	Wc Fiscal Ct			judgeexecutive@wcfiscalcourt.com		MA					
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Instructor/Facilitator Signature:_____

Co-Instructor/Facilitator Signature:_____