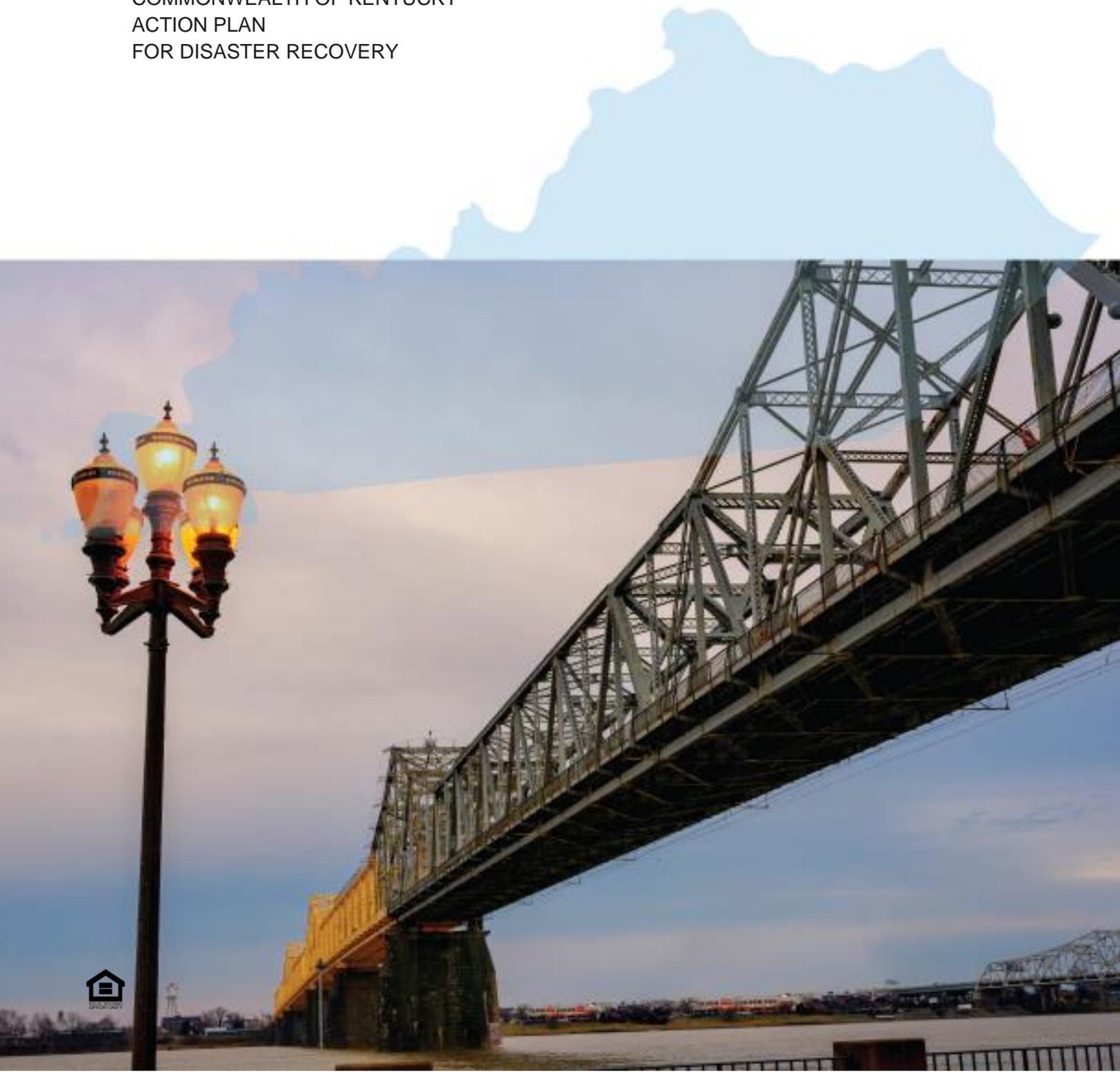




COMMONWEALTH OF KENTUCKY
ACTION PLAN
FOR DISASTER RECOVERY



Submitted to HUD:
Approved by HUD:

SEPTEMBER 2022

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1 Executive Summary

1 Executive Summary

1.1 Overview

In February 2022, the U.S. Department of Housing and Urban Development (HUD) announced that the Commonwealth of Kentucky would receive \$74,953,000 in funding to support long-term recovery and mitigation efforts following the 2021 severe storms, flooding, landslides, and mudslides (DR-4595)¹ and the 2021 severe storms, straight-line winds, flooding, and tornadoes (DR-4630)² through the Kentucky Department of Local Government (DLG). Community Development Block Grant – Disaster Recovery (CDBG-DR) funding is designed to address the needs that remain after all other assistance has been exhausted. This plan details how funds will be allocated to address the remaining unmet needs in Kentucky.

To meet disaster recovery needs, enhance flexibility, and allow for quicker recovery, the statutes that make CDBG-DR funds available now have additional requirements and authorize HUD to modify the rules that apply to the annual CDBG program. HUD has allocated \$74,953,000 in CDBG-DR funds to the Commonwealth of Kentucky in response to the 2021 severe storms (DR-4595 and DR-4630) through publication in the Federal Register, Vol. 87, No. 100, May 24, 2022 (87 FR 6326).³ This allocation was made available through the Disaster Relief Supplemental Appropriations Act of 2022 (Pub. L. 117-43)⁴ and approved on September 30, 2021 (the Appropriations Act).

1.2 Disaster-Specific Overview

1.2.1 2021 Severe Storms, Flooding, Landslides, and Mudslides (DR-4595)

A disaster was presidentially declared on June 25, 2021, (DR-4595), but the 2021 severe storms, flooding, landslides, and mudslides impacted the Commonwealth from February 27, 2021, through March 14, 2021. In total, 50 out of Kentucky's 120 counties were included in the disaster declaration under DR-4595. These counties were eligible for different Federal Emergency Management Agency (FEMA) programs based on the impacts of the disaster, as demonstrated in Figure 1.

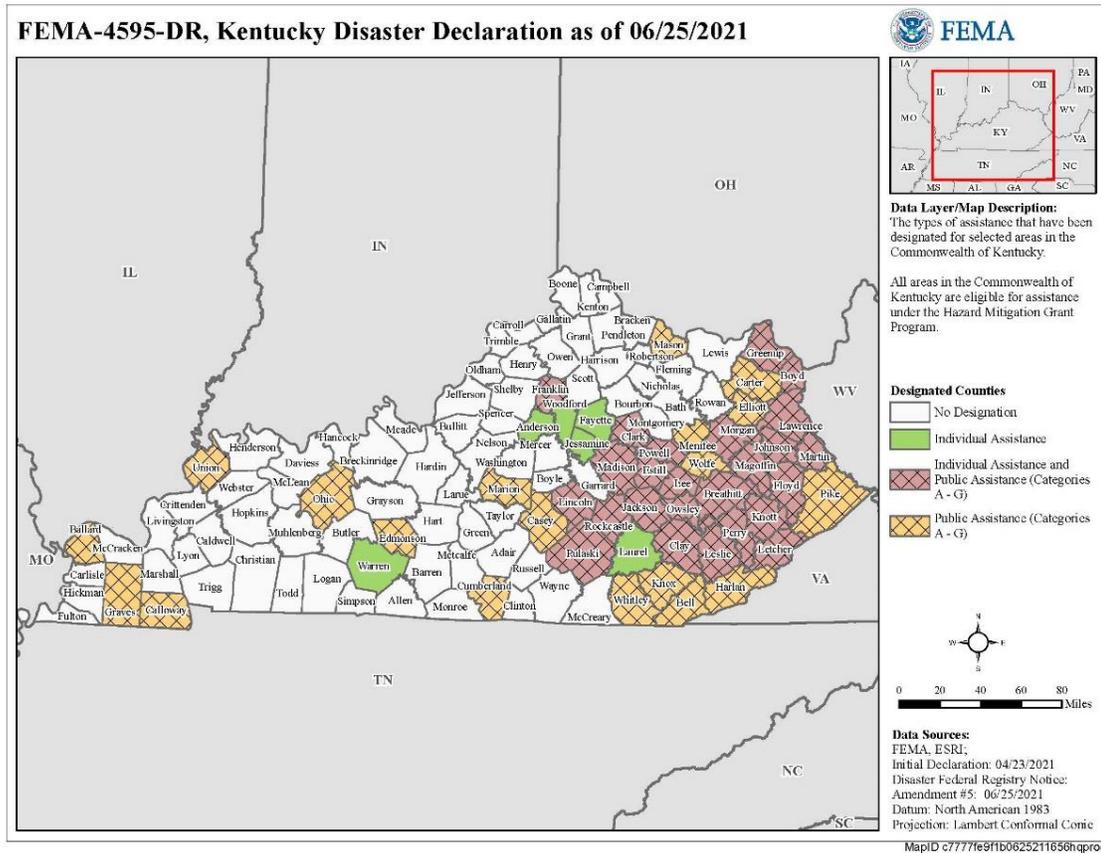
¹ United States. Federal Emergency Management Agency. (2021). *DR-4595: Kentucky Severe, Storms, Flooding, Landslides, and Mudslides*. Retrieved from <https://www.fema.gov/disaster/4595>

² United States. Federal Emergency Management Agency. (2021). *DR-4630: Kentucky Severe Storms, Straight-line Winds, Flooding, and Tornadoes*. Retrieved from <https://www.fema.gov/disaster/4630>

³ United States. Department of Housing and Urban Development. (May 24, 2022). Federal Register / Vol. 87, No. 100: Allocations for Community Development Block Grant Disaster Recovery and Implementation of the CDBG-DR Consolidated Waivers and Alternative Requirements Notice. Retrieved from <https://www.govinfo.gov/content/pkg/FR-2022-05-24/pdf/2022-10969.pdf>

⁴ United States. 117th Congress. (September 30, 2021). *Public Law 117-43: Extending Government Funding and Delivering Emergency Assistance Act*. Retrieved from <https://www.congress.gov/117/plaws/publ43/PLAW-117publ43.pdf>

Figure 1. FEMA DR-4595 Presidentially Declared Disasters, by County



Heavy rain moved across eastern Kentucky from February 26 through March 1.⁵ The heavy rainfall led to significant flooding across central and eastern Kentucky. For some counties, this was the most significant flooding in the last 60 years or more. FEMA estimates that this event cost \$350–400 million in damages, including both individual and public infrastructure. The periods of heavy rain and flooding led to mudslides and rockslides. Many areas were cut off or blocked due to the flooding, with major roadways across the Commonwealth becoming inaccessible. Officials, including the Kentucky National Guard, conducted water rescues across disaster-declared counties.⁶ Power outages were also noted. As many as 12,000 customers were impacted during the peak of the flash flooding on February 28. Initial FEMA damage assessments indicated that 74 homes were destroyed, and 548 residential structures suffered major damage.

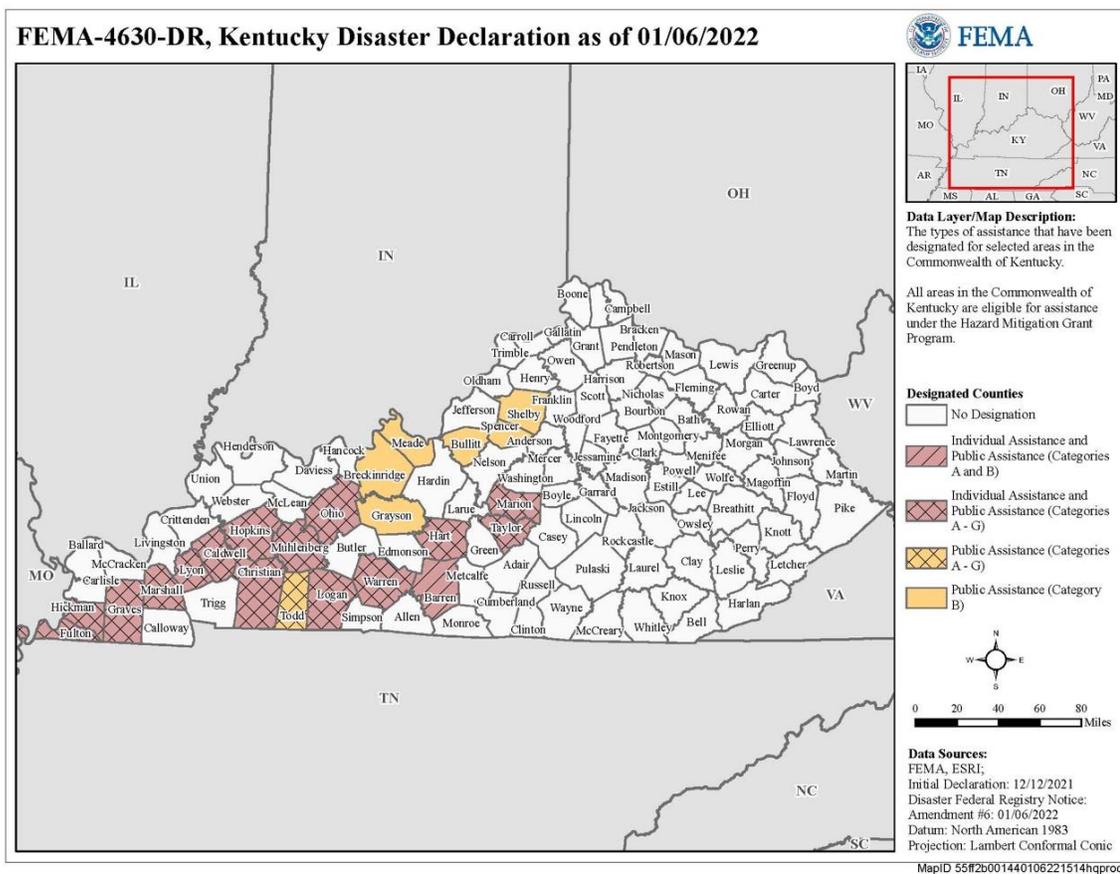
⁵ United States. National Oceanic and Atmosphere Administration. (March 1, 2021). *Storm Events Database*. Retrieved from <https://www.ncdc.noaa.gov/stormevents/eventdetails.jsp?id=938492>

⁶ U.S. News. (March 1, 2021). *Images show flooded Kentucky communities as storms trigger state of emergency*. Retrieved from <https://www.nbcnews.com/news/us-news/images-show-flooded-kentucky-communities-storms-trigger-state-emergency-n1259219>

1.2.2 2021 Severe Storms, Straight-Line Winds, Flooding, and Tornadoes (DR-4630)

A disaster was presidentially declared on January 6, 2022, (DR-4630) for the 2021 severe storms, straight-line winds, flooding, and tornadoes that impacted the Commonwealth from December 10, 2021, through December 11, 2021. In total, 23 out of Kentucky’s 120 counties were included in the disaster declaration under DR-4630. These counties were eligible⁷ for different FEMA programs based on the impacts of the disaster, as shown in Figure 2.

Figure 2. FEMA DR-4630 Presidentialy Declared Disasters, by County



On the evening of Friday, December 10, 2021, a potent storm system moved across the central United States, resulting in significant long-track tornadoes. A violent EF4 tornado moved across western Kentucky,⁸ resulting in dozens of lost lives and a swath of destruction. The tornado was on the ground for 128 miles within the NWS Paducah

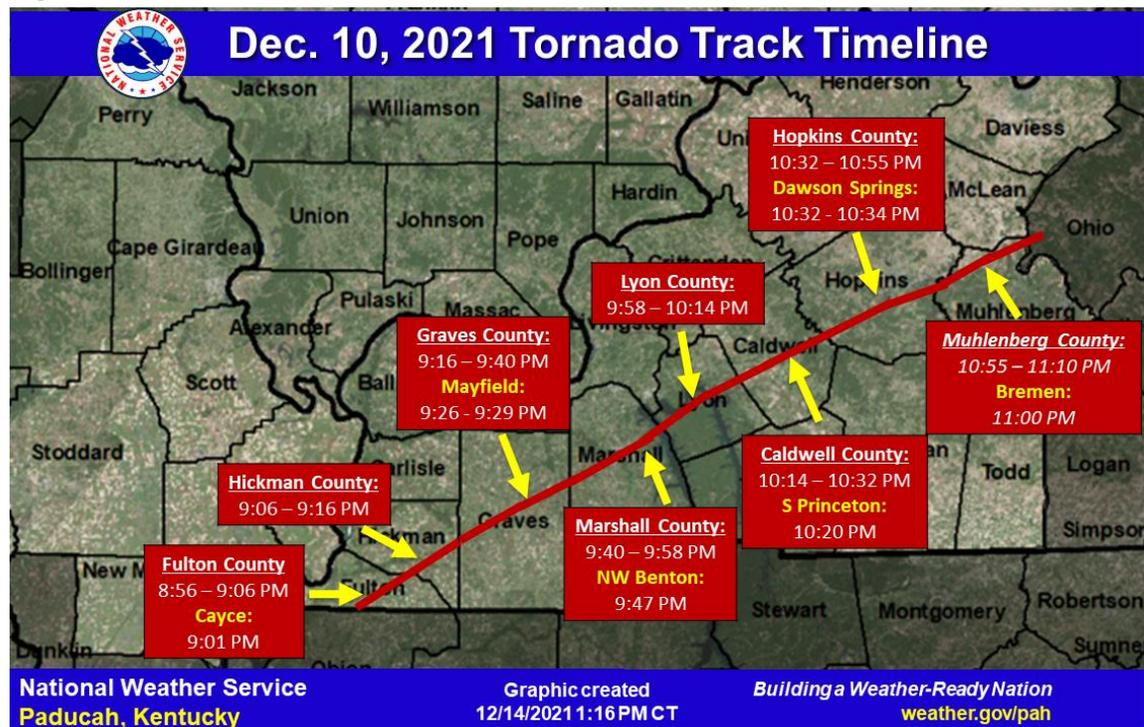
⁷ <https://www.census.gov/data.html>

⁸ United States. National Oceanic and Atmosphere Administration. (March 1, 2021). *Violent Tornadoes in Kentucky*. Retrieved from https://www.weather.gov/lmk/violent_tornadoes_kentucky

forecast area, and the total path length was about 165 miles from Obion County, Tennessee, to Breckinridge County, Kentucky. Another long-track EF3 tornado started in Dyer County, Tennessee, and traveled about 125 miles through northwest Tennessee and into Christian and Todd Counties in western Kentucky. Record high temperatures were recorded, including a high of 73 degrees in Paducah, Kentucky. The combination of very strong winds, unseasonably warm conditions, and a strong low-pressure system were ideal for this tornado outbreak.

In total, central Kentucky saw 18 tornadoes that injured 617 and killed 80.⁹ ¹⁰ The tornadoes destroyed more than 15,000 structures and caused \$3.5 billion in damage.¹¹ The EF4 tornado alone damaged more than 3,000 structures and destroyed more than 2,100 structures.¹²

Figure 3. December 10 EF4 Tornado Track¹³



⁹ ABC, WHAS11. (January 10, 2022). *80 killed, 160+ miles of terror and destruction | It's been one month since the deadly western Kentucky tornadoes*. Retrieved from <https://www.whas11.com/article/news/kentucky/western-kentucky-tornadoes-one-month-later-mayfield-dawson-springs-bowling-green/417-747e25ae-1dc3-41f8-9e5b-2ca0d0098921>

¹⁰ United States. National Oceanic and Atmosphere Administration. (December 10–11, 2021). *NWS Storm Damage Summaries: Tornado Outbreak*. Retrieved from <https://www.weather.gov/crh/dec112021>

¹¹ <https://www.theguardian.com/us-news/2021/dec/26/tornadoes-mayfield-kentucky-caused-profound-losses>

¹² <https://www.weather.gov/pah/December-10th-11th-2021-Tornado>

¹³ <https://www.weather.gov/pah/December-10th-11th-2021-Tornado>

Figure 4. December 10–11 Tornadoes in Central Kentucky¹⁴

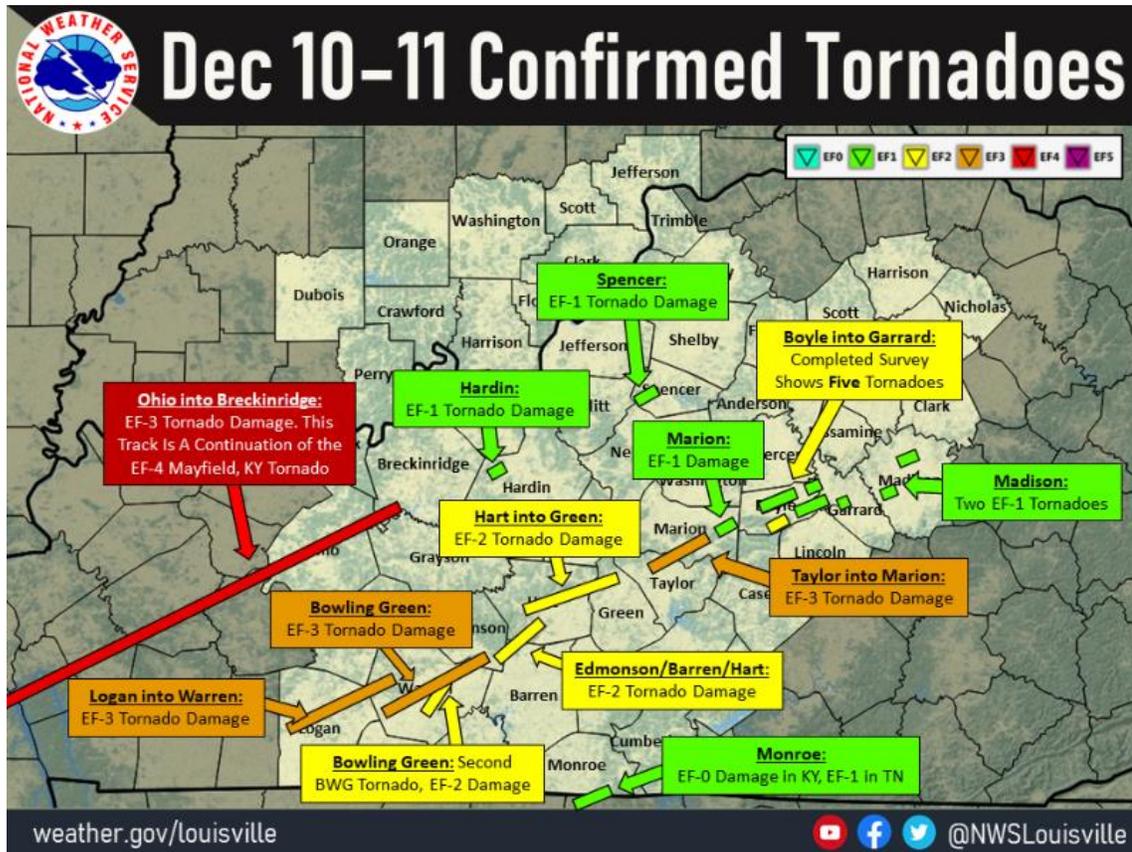


Table 1. December 10–11 Tornadoes in Kentucky¹⁵

County	City	EF Rating	Wind Speed (mph)	Path Length (Miles)
Fulton to Breckinridge	Mayfield, Dawson Springs	EF4	190	165.7
Warren to Edmonson	Bowling Green	EF3	165	-
Logan, Warren	Gordonsville, Hadley	EF3	140	28
Marion, Taylor	Saloma, Bradfordsville	EF3	145	14.7
Edmonson, Barren, Hart	Rock Hill, Horse Cave	EF2	130	16.6
Hart, Green	Horse Cave, Summersville	EF2	125	24
Boyle	Junction City	EF2	135	0.63
Warren	South Bowling Green	EF2	115	-

¹⁴ <https://www.weather.gov/lmk/December112021Tornadoes>

¹⁵ <https://www.weather.gov/crh/dec112021>

County	City	EF Rating	Wind Speed (mph)	Path Length (Miles)
Spencer	Mt. Washington	EF1	95	1.5
Boyle	Danville	EF1	110	3.63
Eastern Marion	Bradfordsville	EF1	100	1.9
Boyle	Chrisman Lane	EF1	93	0.61
Boyle, Gerrard	Bryantsville	EF1	94	2.93
Boyle, Gerrard	Hedgeville	EF1	110	1.93
Madison	Richmond	EF1	90	-
Madison	Kirksville	EF1	-	-
Hardin		EF1	-	-
Garrard		EF1	-	-

1.3 Summary

To develop the CDBG-DR Action Plan, the Kentucky Department for Local Government (DLG) engaged State and federal agencies, local governments, nonprofit organizations, community-based organizations, and other ad hoc work groups focused on recovery. Coordinated efforts from some of these organizations resulted in the development of a housing assessment that has been valuable to better understand the impacts of the 2021 storms and assess the remaining needs. The assessment includes data collected immediately after the disaster from FEMA, U.S. Small Business Administration (SBA), the American Red Cross, and other agencies. When applicable, this Action Plan makes use of this assessment to ensure that housing recovery efforts advance equity and support underserved and marginalized communities.

The Commonwealth of Kentucky has been gathering data for the unmet needs assessment and engaging local communities since the disasters. To fulfill the requirements of this allocation, the Commonwealth must submit to HUD an Action Plan for Disaster Recovery that identifies its unmet recovery and resilience needs. This Action Plan outlines the proposed use of the CDBG-DR funds and eligible activities available to assist impacted counties meet unmet housing, infrastructure, planning, and other needs that have resulted from the February and December 2021 storms. Specifically, this plan aims to promote and ensure fair access to housing for all residents, expand sustainable home ownership opportunities for low- to moderate-income (LMI) persons, and strengthen neighborhoods impacted by the disaster by investing in infrastructure.

As part of the development of the Action Plan, there are opportunities for communities to review and provide feedback on program design and comment on how the Commonwealth and municipalities implement the CDBG-DR funds.

The Commonwealth will convene at least one public hearing in the HUD-identified most impacted and distressed (MID) areas on the draft CDBG-DR Action Plan after being posted on its website for public comment and prior to submission to HUD. Notice of all hearings will be posted a minimum of 10 business days prior to public hearings. The Commonwealth has published this draft CDBG-DR Action Plan in a manner that affords citizens, units of general local governments (UGLGs), public agencies, and other interested parties a reasonable opportunity to examine its contents and to submit comments. The plan will remain available on the DLG website throughout the 30-day comment period.

1.4 Unmet Needs and Proposed Allocation

The Federal Register Notice requires grantees to demonstrate a reasonably proportionate allocation of resources relative to areas and categories (e.g., housing, economic revitalization, and infrastructure) of greatest need as identified in the impact and unmet needs assessment or provide an acceptable justification for a disproportionate allocation.

DLG worked with multiple agencies to collect the best available data to calculate the remaining needs from both disasters. However, the data collected may not represent the entire impact and need across the HUD-identified MID and other presidentially declared disaster areas. To address this gap, DLG will continue to work with the public to refine program policies and procedures to ensure that CDBG-DR programs are accessible to and benefit households and individuals who have not yet been included in the needs assessment and who may be marginalized from accessing resources.

Based on the unmet needs assessment presented in this document, the Commonwealth has calculated total unmet needs of \$202,335,054 attributable to the 2021 December tornadoes. The Commonwealth used available data sources to perform the analyses of demographic characteristics of the areas of impact, the losses sustained, and the available resources in response to housing, infrastructure, and economic revitalization. To adequately distribute CDBG-DR funding, the Commonwealth will manage a competitive process for municipalities to submit applications for funding. The Commonwealth will allocate 80% to the HUD-designated MID areas and the remaining 20% to the Commonwealth's identified MID counties.

The notice also includes the following expenditure requirements:

- Program administration costs: Limited to 5%—or \$3,747,650—of the total allocation.
- HUD-identified Most Impacted and Distressed (MID) areas: At least 80%—or \$59,962,400—of the total allocation must benefit the HUD-identified areas. This includes 80% of expenditures for program administration.

- Benefit to Low to Moderate Income (LMI) persons: At least 70%—or \$48,793,745—of the allocation (less planning and administration costs) must be used for activities that benefit LMI persons.

The table below summarizes how the Commonwealth estimates it will meet or exceed HUD's expenditure requirements. Actual expenditures will be tracked and reported publicly on the CDBG-DR website. Descriptions of how these funding decisions reflect the unmet and mitigation needs assessments are included within each of the program descriptions further below in the Action Plan. The table below considers losses across all categories (housing, planning, economic revitalization, and infrastructure) before and after adjusting for identified funding sources. The unmet needs are calculated by subtracting the resources available from the value of the total damages. The housing unmet needs number represents the impact on housing that requires rehabilitation, reconstruction, or a new build. This Action Plan includes new housing initiatives for both rental properties and owner-occupied properties. To increase the housing stock of the disaster-affected areas, DLG intends to initiate programs that will result in building new homes and rental properties that will address the unmet housing needs of the public. These new housing programs, along with the existing home rehabilitation and reconstruction programs, will address the entirety of the housing unmet needs.

DLG is allocating funds to programs to align with the need. The discrepancies between the need and the funding are the result of the increased need for affordable housing. DLG has identified existing programs and resources for mitigation and economic revitalization to supplement the recovery. For example, DLG will work with its partner agencies that conduct mitigation activities to determine which projects should be pursued and what funding is available for those projects.

Table 2. Unmet Need and Program Allocation

Category	Remaining Unmet Need (\$)	Unmet Need (%)	Program Allocation Amount (\$)	Program Allocation (%)
Administration	N/A	N/A	\$3,747,650	5.00%
Planning	N/A	N/A	\$1,500,000	2.00%
Housing	\$110,156,908	54.44%	\$39,905,350	53.24%
Infrastructure	\$21,844,475	10.80%	\$25,000,000	33.35%
Economic Revitalization	\$69,533,671	34.37%	\$4,000,000	5.34%
Public Services	\$800,000	0.40%	\$800,000	1.07%
TOTAL	\$202,335,054	100.00%	\$74,953,000	100.00%

2 Unmet Needs Assessment

2 Unmet Needs Assessment

2.1 Overview

HUD requires the Commonwealth to detail the losses and needs resulting from the impacts of the two 2021 severe storms. The unmet needs categories that HUD will review include housing, infrastructure, economic revitalization, public services, and mitigation needs. Data were collected from multiple sources and used to assess unmet recovery and mitigation needs; this information will assist the Commonwealth to design and fund impactful CDBG-DR programs.

To prepare the unmet needs assessment, Kentucky consulted with the following agencies:

- U.S. Department of Housing and Urban Development (HUD)
- Federal Emergency Management Agency (FEMA)
- U.S. Small Business Administration (SBA)
- U.S. Department of Agriculture
- Economic Development Administration
- Kentucky Housing Corporation (KHC)
- Kentucky Emergency Management
- Kentucky Public Protection Cabinet
- Kentucky Department of Insurance
- Kentucky Cabinet for Health and Family Services
- Kentucky Division of Water
- Local Public Housing Authorities
- Local Section 8 Housing Programs
- Local Area Development Districts

2.1.1 HUD-Identified Most Impacted and Distressed Areas (MIDs)

HUD requires funds to be used for costs related to unmet needs in the MID areas resulting from qualifying disasters. Kentucky is required to spend at least 80% of all CDBG-DR funds, or \$59,962,400, to benefit the HUD-identified MID areas. HUD provided Kentucky with the following HUD-identified MID areas in the Allocation Announcement Notice:

- Graves County
- Hopkins County
- Breathitt County (41339)
- Warren County (42101)

Kentucky has decided to expand the HUD-identified MID areas in ZIP codes 41339 and 42101 to include the entire counties of Breathitt and Warren.

2.1.2 Grantee-Identified MIDs

The Consolidated Notice allows Kentucky to determine where to use up to 20% of the remaining amount of the CDBG-DR grant. The funds must be used to address unmet needs within areas that received a presidential disaster declaration. In addition to HUD's identified MIDs, Kentucky has identified the following counties that will receive CDBG-DR funding:

Boyd County	Hart County	Letcher County	Morgan County
Caldwell County	Hickman County	Lincoln County	Muhlenburg County
Christian County	Jackson County	Logan County	Ohio County
Clark County	Johnson County	Lyon County	Owsley County
Clay County	Knott County	Madison County	Perry County
Estill County	Laurel County	Magoffin County	Powell County
Floyd County	Lawrence County	Marion County	Pulaski County
Fulton County	Lee County	Marshall County	Rockcastle County
Greenup County	Leslie County	Martin County	Taylor County

2.2 Housing Unmet Need

2.2.1 Disaster Damage and Impacts

Pre-disaster housing conditions: The disasters took place in a Commonwealth that was already suffering from an outdated and shrinking housing stock. Many Kentuckians were already facing health and economic difficulties from the ongoing COVID-19 pandemic. Illness and lost jobs have severely impacted many families' ability to pay rent and mortgages. While the Centers for Disease Control and Prevention (CDC) did issue an order to temporarily prevent evictions, renters have still struggled more than homeowners to cover rising housing costs.¹⁶ Additionally, the pandemic imposed significant strains on the supply chain for housing construction. This has made it difficult for the Commonwealth to replenish its diminished housing stock.

Prior to the 2021 disasters, Kentucky's housing stock was primarily concentrated in the Commonwealth's western counties. Low levels of pre-disaster stock in rural areas are particularly relevant to survivors displaced from rural counties who need to be rehoused within a reasonable commuting distance to maintain a connection to employment, healthcare, and school networks. This stands in contrast to survivors displaced from counties located within the metropolitan areas who would be in closer proximity to a larger housing market and may have greater access to permanent rehousing options. In

¹⁶ University of Kentucky Center for Business and Economic Research. *Impact of the Coronavirus Pandemic on Housing*. Retrieved from https://cber.uky.edu/sites/cber/files/publications/COVID%20Housing_Final.pdf

2018, the Kentucky Housing Corporation conducted a statewide housing needs assessment. The assessment found that only 2.44% of Kentucky's housing stock was built after 2010, with 45% of the housing being constructed between 1980 and 2009, and 52% being constructed before 1979. Statewide, there was only a 0.82% increase in total housing units in the Commonwealth from 2010 to 2020. An older housing stock is typically associated with issues related to energy efficiency, deferred maintenance and required repairs, health violations, and the preservation of affordable housing. This also means that no recent construction has taken place to meet increasing national demands for new affordable housing options.

In 2021, the Commonwealth created the Healthy at Home Eviction Relief Fund. The purpose of these funds was to follow similar efforts to keep Kentuckians safe and housed during the pandemic, with an emphasis on protecting renters from possible eviction. This program helped renters by covering rent and offering utility assistance via direct payments to landlords and utility providers. More recently, the Commonwealth launched the Team Kentucky Homeowner Assistance Fund in partnership with the Kentucky Housing Corporation. This program aims to help homeowners impacted by the pandemic avoid foreclosure of their homes.

The table below shows homeowner and renter vacancy rates for impacted communities. Statewide, census data indicate that there is a total housing stock of 1,994,554, with an average 2016–2020 rental vacancy rate of approximately 5.6% and an owner-occupied vacancy rate of approximately 1.4%. This is compared with national averages of 6.7% and 1.4%, respectively.

Table 3. Pre-Disaster Residential Percentages

(a) Pre-Disaster Vacancy Rates of Renter and Owner-Occupied Housing, by County

County	Renter-Occupied Vacancy Rate (%)	Owner-Occupied Vacancy Rate (%)
HUD and Grantee MIDs	4.4	1.6
Breathitt	3.9	1.4
Graves	1.1	1.4
Hopkins	7.3	2.4
Warren	5.3	1.0
Impacted Counties	5.6	1.6
Anderson	4.1	0.3
Barren	6.5	0.9
Boyd	5.6	2.8
Caldwell	5.6	1.6
Christian	9.9	0.8
Clark	1.1	1.6
Clay	6.9	1.4
Estill	6.5	0.6
Fayette	1.1	4.8
Floyd	2.7	1.3
Franklin	3	1.5
Fulton	5.1	4.2
Greenup	6.3	2.8
Hart	6.2	0.2
Jackson	7.8	0.7
Jessamine	4.1	0.3
Johnson	6.4	3.8
Knott	2.4	1.7
Laurel	9.3	0.7
Lawrence	10.2	1.3
Lee	5.0	0.6
Leslie	3.3	0.7
Letcher	7.0	1.5
Lincoln	11.4	1.4
Logan	6.0	2.2
Lyon	5.5	4.8
Madison	3.2	1.6

County	Renter-Occupied Vacancy Rate (%)	Owner-Occupied Vacancy Rate (%)
Magoffin	6.7	0.6
Marion	0.7	0.8
Marshall	0	0.3
Martin	11.1	1.4
Morgan	7.4	1.2
Muhlenberg	11.5	1.9
Ohio	2.9	0.2
Perry	11.2	2.8
Powell	6.0	4.4
Pulaski	8.5	1.5
Rockcastle	3.2	1.8
Taylor	1.7	1.1
Woodford	2.5	1.1

Source: U.S. Census Bureau's 2020 American Community Survey 5-Year Estimates

The table below shows the distribution of housing units across the impacted counties. In total, there are approximately 1,983,949 housing units across the Commonwealth. Of these units, 88% are occupied by either renters or owners. Thirty-three percent of occupied housing units are occupied by renters. The majority of impacted counties consist of owner-occupied housing units, with Graves County having the highest percentage of owner-occupied units (74.23%) among HUD MIDs. Warren County is the MID with the highest percentage of renter-occupied units (42.35%).

(b) Pre-Disaster Renter and Owner-Occupied Housing, by County

County	Owner Occupied (#)	Owner Occupied (%)	Renter Occupied (#)	Renter Occupied (%)
HUD and Grantee MIDs	55,192	63.41%	32,270	36.59%
Breathitt	3,789	71.75%	1,492	28.25%
Graves	10,690	74.23%	3,712	25.77%
Hopkins	12,679	68.10%	5,940	31.90%
Warren	28,754	57.65%	21,126	42.35%
Impacted Counties	372,073	66.15%	190,387	33.85%
Anderson	6,610	75.48%	2,147	24.52%
Barren	11,403	65.56%	5,989	34.44%
Boyd	12,319	67.64%	5,894	32.36%
Caldwell	3,876	74.32%	1,339	25.68%

County	Owner Occupied (#)	Owner Occupied (%)	Renter Occupied (#)	Renter Occupied (%)
Christian	12,240	46.90%	13,857	53.10%
Clark	10,057	69.00%	4,519	31.00%
Clay	5,122	68.92%	2,310	31.08%
Estill	3,926	69.61%	1,714	30.39%
Fayette	71,547	54.65%	59,379	45.35%
Floyd	10,497	71.41%	4,203	28.59%
Franklin	13,270	62.36%	8,008	37.64%
Fulton	1,680	65.88%	870	34.12%
Greenup	11,172	78.05%	3,142	21.95%
Hart	5,378	74.12%	1,878	25.88%
Hickman	1,383	80.22%	341	19.78%
Jackson	4,198	77.50%	1,219	22.50%
Jessamine	12,704	67.26%	6,184	32.74%
Johnson	6,044	70.87%	2,484	29.13%
Knott	4,623	73.16%	1,696	26.84%
Laurel	15,976	70.49%	6,689	29.51%
Lawrence	4,206	75.34%	1,377	24.66%
Lee	1,981	68.69%	903	31.31%
Leslie	3,544	85.27%	612	14.73%
Letcher	7,096	73.92%	2,503	26.08%
Lincoln	7,573	78.26%	2,104	21.74%
Logan	7,423	70.97%	3,036	29.03%
Lyon	2,732	83.65%	534	16.35%
Madison	20,518	60.57%	13,358	39.43%
Magoffin	3,706	74.28%	1,283	25.72%
Marion	5,446	73.27%	1,987	26.73%
Marshall	10,926	83.28%	2,193	16.72%
Martin	3,121	77.16%	924	22.84%
Morgan	3,677	76.67%	1,119	23.33%
Muhlenberg	9,360	81.12%	2,179	18.88%
Ohio	7,177	77.79%	2,049	22.21%
Owsley	1,051	63.50%	604	36.50%
Perry	8,783	77.49%	2,551	22.51%
Powell	3,292	70.07%	1,406	29.93%
Pulaski	18,015	70.45%	7,557	29.55%

County	Owner Occupied (#)	Owner Occupied (%)	Renter Occupied (#)	Renter Occupied (%)
Rockcastle	5,059	76.55%	1,550	23.45%
Taylor	6,139	63.56%	3,520	36.44%
Woodford	7,223	69.46%	3,176	30.54%

Source: U.S. Census Bureau's 2020 American Community Survey 5-Year Estimates

The median home value for homeowners in Kentucky is \$147,100.¹⁷ Across Kentucky, there is a shortage of rental homes that are affordable and available to extremely low-income households whose incomes are at or below the poverty guideline or 30% of their area median income (AMI). Many of these households (62%) are severely cost-burdened, spending more than half of their income on housing. Severely cost-burdened households are more likely than other renters to sacrifice other necessities such as healthy food and healthcare to pay the rent, and they are more likely to experience unstable housing situations and eviction. According to Kentucky's 2020–2024 consolidated plan, the high cost of housing is the “most frequently documented housing problem reported by all Kentucky households.”¹⁸ The data from the plan show that renter households are “disproportionately severely cost-burdened,”¹⁹ with about 60% of all severely cost-burdened households being renters. A study conducted by Surgo Ventures, a nonprofit based in Washington, D.C., analyzed U.S. Census Bureau Household Pulse Survey data and found that roughly 48,325 households owed more than \$110 million in rent.²⁰ According to Kentucky's most recent Asset Limited, Income Constrained, Employed (ALICE) report, 24.5% of Kentuckians are in households that do not earn enough to afford basic necessities.

In 2020, Kentucky published the 2019 Analysis of Impediments to Fair Housing Choice. The report found that the poverty rate in Kentucky was 18.3% in 2017—up from 17.7% in 2010—and six percentage points higher than the national rate. The only racial groups with below-average poverty rates were White and Asian. In 2017, the poverty rates among Black and Hispanic persons were 29.2% and 29.5%, respectively. A lack of income severely restricts housing choices. Kentucky's consolidated plan finds that African American and American Indian/Alaskan Native households are disproportionately affected by housing costs that exceed 30% of their income. Data from Kentucky's consolidated plan show that “very low-income elderly households are more

¹⁷ U.S. Census Bureau. *QuickFacts, Kentucky*. Retrieved from https://www.census.gov/quickfacts/fact/table/KY_US/PST045221

¹⁸ Kentucky Housing Corporation. Kentucky Consolidated Plan 2020–2024. Retrieved from <https://www.kyhousing.org/Planning-Documents/Documents/Updated%202020%20Consolidated%20Plan%20Needs%20Assessment.pdf>

¹⁹ Kentucky Housing Corporation. Kentucky Consolidated Plan 2020–2024. Retrieved from <https://www.kyhousing.org/Planning-Documents/Documents/Updated%202020%20Consolidated%20Plan%20Needs%20Assessment.pdf>

²⁰ Surgo Ventures, *U.S. County-Level Rental Arrears Estimates – Kentucky*. Retrieved from https://precisionforcovid.org/rental_arrears

affected by high housing costs” due to fixed incomes²¹. These circumstances increase the risk of housing instability.

The table below shows the median home value, median gross rent, and building permits issued in the various impacted counties. While the median home values in impacted counties are significantly lower than the average U.S. home value (\$229,800), the average income for those living in counties impacted by the 2021 tornado disaster is significantly lower than the rest of the nation.

Table 4. Evidence of Cost Burden by County

County	Median Home Value	Median Gross Rent (in \$ per month)	Building Permits Issued (2021)
HUD MIDs			
Breathitt	\$53,000	\$473	0
Graves	\$109,000	\$660	7
Hopkins	\$107,100	\$745	62
Warren	\$180,000	\$822	1,128
Grantee MIDs			
Anderson	\$158,100	\$729	178
Barren	\$127,100	\$681	302
Boyd	\$110,000	\$694	0
Caldwell	\$89,600	\$340	9
Christian	\$121,000	\$858	91
Clark	\$151,300	\$453	165
Clay	\$61,300	\$285	0
Estill	\$78,200	\$610	0
Fayette	\$200,900	\$920	1,655
Floyd	\$74,000	\$644	7
Franklin	\$149,900	\$792	114
Fulton	\$63,800	\$593	0
Greenup	\$114,900	\$731	21
Hart	\$93,000	\$559	63
Hickman	\$85,000	\$572	-
Jackson	\$83,100	\$526	0
Jessamine	\$186,400	\$812	367
Johnson	\$115,800	\$623	0
Knott	\$52,300	\$509	-

²¹ Same as #18

County	Median Home Value	Median Gross Rent (in \$ per month)	Building Permits Issued (2021)
Laurel	\$116,300	\$680	11
Lawrence	\$91,800	\$632	-
Lee	\$65,800	\$504	-
Leslie	\$69,000	\$491	-
Letcher	\$54,700	\$529	0
Lincoln	\$106,100	\$604	71
Logan	\$108,900	\$622	12
Lyon	\$149,100	\$602	14
Madison	\$161,400	\$728	455
Magoffin	\$71,100	\$604	-
Marion	\$112,900	\$656	39
Marshall	\$138,000	\$724	93
Martin	\$78,100	\$611	-
Morgan	\$79,900	\$581	3
Muhlenberg	\$96,000	\$610	6
Ohio	\$90,400	\$633	5
Owsley	\$67,400	\$325	-
Perry	\$78,900	\$703	0
Powell	\$105,000	\$693	2
Pulaski	\$113,900	\$706	0
Rockcastle	\$88,500	\$573	-
Taylor	\$122,800	\$650	10
Woodford	\$212,100	\$800	124

Source: U.S. Census Bureau's 2020 American Community Survey 5-Year Estimates

Prior to the 2021 disasters, rural areas in the Commonwealth suffered from pandemic-related impacts that greatly affected economic and health conditions. Both renters and homeowners experienced severe levels of cost-burden that has now worsened following the most recent series of disasters. For impacted counties to fully recover, further assistance is needed to reconstruct, replace, and build affordable housing that is stronger and more resilient against future disasters.

2.2.2 Single Family vs. Multifamily Needs; Owner-Occupied vs. Tenant

Of all the housing units in Kentucky, 88% are occupied by either renters or owners. Of the occupied housing, 67% of occupied housing units are occupied by homeowners, and

33% are occupied by renters.²² Post-disaster, the availability of adequate rental units has been reduced due to the number impacted individuals and families needing units and the number of available rentals not being livable.

More rental housing units are needed to support potential growth in impacted counties and to assist individuals and families who need stable housing. As such, the CDBG-DR program is allocating nearly a quarter of the funding to rental rehabilitation, reconstruction, or new construction. More housing is also needed to increase the stock of owner-occupied housing lost during the disasters. Single family homes, duplexes, and mobile homes accounted for the higher percentage of residences destroyed.

DLG will work with other State agencies to ensure that these programs address needs and can provide residents with access to housing opportunities.

The following tables outline information related FEMA Individual Assistance (IA) for owner-occupied housing units and tenant occupied housing units for each disaster in the counties eligible to receive the assistance. The number of applications and unit inspections including those with damage is tabulated along with the number of households that received assistance. The total FEMA verified loss is also calculated. The information is further broken down into types of housing and type of damage per unit.

2.2.2.1 FEMA Individual Assistance (IA) Owner-Occupied Units

Table 5. Owner-Occupied Unit Applications, DR-4595

County	Applicants	Inspections	Inspected With Damage	Received Assistance	Total FEMA Verified Loss	Average FEMA Verified Loss
Anderson	9	7	7	5	\$101,860	\$11,318
Boyd	35	15	11	8	\$110,570	\$3,159
Breathitt	456	312	279	241	\$2,975,456	\$6,525
Clark	35	17	17	16	\$970,712	\$27,735
Clay	250	130	115	96	\$439,768	\$1,759
Estill	166	113	94	84	\$2,066,317	\$12,448
Fayette	26	12	7	6	\$294,483	\$11,326
Floyd	313	181	148	123	\$1,263,962	\$4,038
Franklin	21	14	13	12	\$309,015	\$14,715
Greenup	49	26	22	20	\$80,711	\$1,647
Jackson	57	29	25	23	\$112,422	\$1,972
Jessamine	10	7	6	6	\$55,353	\$5,535

²² DR-4630 Draft Housing Impact Assessment 05-31-2022

County	Applicants	Inspections	Inspected With Damage	Received Assistance	Total FEMA Verified Loss	Average FEMA Verified Loss
Johnson	232	114	91	78	\$631,642	\$2,723
Knott	36	25	22	20	\$85,128	\$2,365
Laurel	42	14	12	10	\$74,361	\$1,771
Lawrence	61	34	29	26	\$145,376	\$2,383
Lee	103	74	39	37	\$382,953	\$3,718
Leslie	39	16	15	13	\$16,126	\$413
Letcher	21	10	8	6	\$207,877	\$9,899
Lincoln	5	3	3	2	\$27,277	\$5,455
Madison	29	15	13	11	\$109,623	\$3,780
Magoffin	150	82	70	58	\$388,961	\$2,593
Martin	243	136	124	110	\$838,182	\$3,449
Morgan	35	14	13	12	\$157,750	\$4,507
Owsley	50	30	28	24	\$133,084	\$2,662
Perry	79	51	42	36	\$621,582	\$7,868
Powell	84	59	48	38	\$712,354	\$8,480
Pulaski	47	27	24	22	\$339,576	\$7,225
Rockcastle	56	37	33	32	\$181,786	\$3,246
Warren	63	22	19	16	\$198,905	\$3,157
Woodford	16	11	7	4	\$113,637	\$7,102

Source: FEMA data for owners impacted by DR-4595

Table 6. Owner-Occupied Unit Applications, DR-4630

County	Applicants	Inspections	Inspected With Damage	Received Assistance	Total FEMA Verified Loss	Average FEMA Verified Loss
Barren	81	48	25	21	\$452,914	\$5,592
Caldwell	468	229	102	63	\$24,040,911	\$51,369
Christian	355	221	39	27	\$1,579,834	\$4,450
Fulton	172	97	33	30	\$2,753,246	\$16,007
Graves	1,602	847	312	245	\$10,398,514	\$6,491
Hart	83	42	23	17	\$620,846	\$7,480
Hickman	74	41	24	22	\$194,954	\$2,635
Hopkins	924	499	251	199	\$27,286,406	\$29,531
Logan	173	96	46	29	\$1,898,897	\$10,976

County	Applicants	Inspections	Inspected With Damage	Received Assistance	Total FEMA Verified Loss	Average FEMA Verified Loss
Lyon	125	48	18	12	\$3,252,048	\$26,016
Marion	52	22	12	11	\$525,181	\$10,100
Marshall	669	331	152	81	\$25,039,032	\$37,428
Muhlenberg	376	202	63	44	\$8,774,204	\$23,336
Ohio	159	90	45	39	\$3,159,463	\$19,871
Taylor	199	94	21	15	\$2,116,018	\$10,633
Warren	1,712	744	244	123	\$2,924,417	\$1,708

Source: FEMA data for owners impacted by DR-4630

2.2.2.2 FEMA IA Tenant Applications

Table 7. Tenant Applications, DR-4595

County	Applicants	Inspections	Inspected With Damage	Received Assistance	Total FEMA Verified Loss	Average FEMA Verified Loss
Anderson	2	2	1	2	\$260	\$130
Boyd	4	2	1	4	\$735	\$184
Breathitt	76	49	40	76	\$169,709	\$2,233
Clark	9	5	3	9	\$16,860	\$1,873
Clay	30	16	4	30	\$9,571	\$319
Estill	33	18	12	33	\$62,682	\$1,899
Fayette	25	18	5	25	\$20,963	\$839
Floyd	63	33	23	63	\$84,199	\$1,336
Franklin	5	2	-	5	-	-
Greenup	7	5	1	7	\$4,883	\$698
Jackson	8	2	1	8	\$456	\$57
Jessamine	6	3	1	6	\$2,763	\$461
Johnson	46	30	11	46	\$20,045	\$436
Knott	5	3	-	5	-	-
Laurel	7	4	-	7	-	-
Lawrence	2	-	-	2	-	-
Lee	33	18	15	33	\$93,856	\$2,844
Leslie	3	2	1	3	\$46	\$15
Letcher	3	2	1	3	\$90	\$30
Lincoln	1	-	-	1	-	-

County	Applicants	Inspections	Inspected With Damage	Received Assistance	Total FEMA Verified Loss	Average FEMA Verified Loss
Madison	13	8	1	13	\$5,455	\$420
Magoffin	21	10	5	21	\$7,061	\$336
Martin	18	7	5	18	\$16,186	\$899
Morgan	2	1	1	2	\$262	\$131
Owsley	3	2	2	3	\$11,043	\$3,681
Perry	15	9	4	15	\$6,977	\$465
Powell	15	8	7	15	\$22,476	\$1,498
Pulaski	8	4	-	8	-	-
Rockcastle	4	2	-	4	-	-
Warren	12	6	3	12	\$1,941	\$162
Woodford	3	1	-	3	-	-

Source: FEMA data for renters impacted by DR-4595

Table 8. Tenant Applications, DR-4630

County	Applicants	Inspections	Inspected With Damage	Received Assistance	Total FEMA Verified Loss	Average FEMA Verified Loss
Barren	79	61	11	79	\$17,309	\$219
Caldwell	227	183	14	227	\$55,865	\$246
Christian	459	344	22	459	\$47,060	\$103
Fulton	185	148	7	185	\$40,482	\$219
Graves	2,370	1,885	537	2,370	\$1,588,538	\$670
Hart	46	28	6	46	\$13,632	\$296
Hickman	34	27	-	34	-	-
Hopkins	814	648	196	814	\$911,570	\$1,120
Logan	136	104	13	136	\$43,777	\$322
Lyon	48	33	1	48	\$240	\$5
Marion	18	12	4	18	\$10,553	\$586
Marshall	368	275	19	368	\$84,228	\$229
Muhlenberg	387	306	19	387	\$69,297	\$179
Ohio	100	74	10	100	\$47,849	\$478
Taylor	193	166	8	193	\$48,653	\$252
Warren	2,241	1,595	399	2,241	\$883,668	\$394

Source: FEMA data for renters impacted by DR-4630

2.2.2.3 FEMA IA Applications by Housing Type

Table 9. Applications by Housing Type

Residence Type	Applicants	Owner Occupied	Tenants	Unknown	Type
Apartment	1,640	0.10%	19.84%	8.82%	8.96%
Assisted Living Facility	254	0.00%	3.10%	0.00%	1.39%
Boat	10	0.04%	0.07%	0.00%	0.05%
College Dorm	3	0.00%	0.04%	0.00%	0.02%
Condominium	113	0.63%	0.61%	0.00%	0.62%
Correctional Facility	3	0.00%	0.04%	0.00%	0.02%
House/Duplex	12,856	76.83%	62.37%	51.47%	70.26%
Military Housing	2	0.00%	0.02%	0.00%	0.01%
Mobile Home	1,805	14.27%	4.41%	16.18%	9.87%
Other	1,082	5.59%	6.24%	14.71%	5.91%
Townhouse	386	1.42%	2.92%	5.88%	2.11%
Travel Trailer	143	1.13%	0.34%	2.94%	0.78%

Source: FEMA IA data for DR-4595 and DR-4630

2.2.2.4 FEMA Real Property Damage Owner-Occupied Units

Table 10. Owner-Occupied Units Real Property Damage, DR-4595

County	Units with Minor-Low	Units with Minor-High	Units with Major-Low	Units with Major-High	Units with Severe
Anderson	2	1	2	4	-
Boyd	28	2	2	3	-
Breathitt	240	84	53	72	7
Clark	19	2	3		11
Clay	207	27	12	4	
Estill	85	17	24	27	13
Fayette	21	1	1	1	2
Floyd	206	49	35	20	3
Franklin	9	2	1	4	5
Greenup	42	3	3	1	-
Jackson	49	2		3	3
Jessamine	6	2	1	1	-
Johnson	183	21	19	9	-
Knott	30	3	1	2	-

County	Units with Minor-Low	Units with Minor-High	Units with Major-Low	Units with Major-High	Units with Severe
Laurel	33	6	1	1	1
Lawrence	49	6	2	3	1
Lee	78	4	5	15	1
Leslie	38	1	-	-	-
Letcher	14	3	1	1	2
Lincoln	3		1	1	-
Madison	24	1	-	3	1
Magoffin	109	25	11	3	2
Martin	167	50	12	10	4
Morgan	27	2	2	2	2
Owsley	38	6	4	2	-
Perry	55	9	12	1	2
Powell	47	8	18	8	3
Pulaski	31	3	4	5	4
Rockcastle	43	2		11	-
Warren	52	3	5	1	2
Woodford	10	1	4		1

Source: FEMA data for owners impacted by DR-4595

Table 11. Owner-Occupied Units Real Property Damage, DR-4630

County	Units with Minor-Low	Units with Minor-High	Units with Major-Low	Units with Major-High	Units with Severe
Barren	62	4	11	1	3
Caldwell	380	3	11	15	59
Christian	323	1	8	6	17
Fulton	145	5	1	4	17
Graves	1,381	73	50	37	61
Hart	73	3	2		5
Hickman	67	2		2	3
Hopkins	709	29	26	38	122
Logan	139	11	11	5	7
Lyon	109	1	3	1	11
Marion	42	2	6	1	1
Marshall	526	6	19	22	96
Muhlenberg	320	4	7	11	34
Ohio	124	4	8	5	18

County	Units with Minor-Low	Units with Minor-High	Units with Major-Low	Units with Major-High	Units with Severe
Taylor	183		5	2	9
Warren	1,579	66	31	24	12

Source: FEMA data for owners impacted by DR-4630

2.2.2.5 FEMA Real Property Damage Rental Units

Table 12. Rental Units Real Property Damage, DR-4595

County	Units with Minor-Low	Units with Minor-High	Units with Major-Low	Units with Major-High	Units with Severe
Anderson	2				
Boyd	4				
Breathitt	43	2	10	16	5
Clark	6		1	2	
Clay	29			1	
Estill	22	2		8	1
Fayette	22		1	1	1
Floyd	44	4	4	11	
Franklin	5				
Greenup	6			1	
Jackson	8				
Jessamine	5		1		
Johnson	38	3	4	1	
Knott	5				
Laurel	7				
Lawrence	2				
Lee	19			9	5
Leslie	3				
Letcher	3				
Lincoln	1				
Madison	12			1	
Magoffin	19	1		1	
Martin	15	1		1	1
Morgan	2				
Owsley	1			2	
Perry	12	2		1	
Powell	9	2	1	2	1

County	Units with Minor-Low	Units with Minor-High	Units with Major-Low	Units with Major-High	Units with Severe
Pulaski	8				
Rockcastle	4				
Warren	11	1			
Woodford	3				

Source: FEMA data for renters impacted by DR-4595

Table 13. Rental Units Real Property Damage, DR-4630

County	Units with Minor-Low	Units with Minor-High	Units with Major-Low	Units with Major-High	Units with Severe
Barren	76	1		2	
Caldwell	219	1	1	2	4
Christian	451	2	2	2	2
Fulton	180			2	3
Graves	1,999	112	84	135	40
Hart	42	2	1	1	
Hickman	34				
Hopkins	655	23	27	68	41
Logan	128	2	1	2	3
Lyon	48				
Marion	15	1	1	1	
Marshall	351	5	2	6	4
Muhlenberg	374	4	2	3	4
Ohio	94	2		1	3
Taylor	185		2	3	3
Warren	2,022	72	62	69	16

Source: FEMA data for renters impacted by DR-4630

2.2.3 Public Housing and Affordable Housing

DLG was able to collect limited data on multifamily HUD-assisted housing. The table below shows the number of properties, number of units assisted, and unmet needs as related to disaster DR-4630 (2021 severe storms, straight-line winds, flooding and tornadoes). DLG made use of the best available data through the Kentucky Housing Corporation. DLG attempted to get more information by reaching out to the HUD local office, but additional data were not available.

2.2.3.1 Multifamily HUD-Assisted Housing

Table 14. Multifamily HUD-Assisted Housing, DR-4630

Type of Damage	Properties	Units	Units Assisted	Units Awaiting Assistance	Remaining Unmet Need
No Damage	76	3,779	2,893	-	-
Minor Damage	2	80	40	-	-
Severe Damage – Red Tagged	1	46	0	0	46 residents

Source: Kentucky Housing Corporation

2.2.3.2 Public Housing Authorities Damaged

Data for damaged Public Housing Authorities (PHAs) came directly from impacted housing authorities in the HUD-designated MID areas. Again, DLG reached out to the HUD local office, but better data were not available. If the Commonwealth can access better data on PHAs, the table below will be updated.

Table 15. Public Housing Authorities Damaged

County/ Municipality	Total PHAs	Total PHAs Damaged	Units Damaged	Remaining Unmet Need
Graves County (Mayfield)	1	1	141	\$2,000
Warren County (Bowling Green)	1	0	0	0

Source: Kentucky Public Housing Authorities (Mayfield and Bowling Green)

2.2.3.3 Owners With Unmet Need in a Floodplain

Below is a table with information about participants in the National Flood Insurance Program. The table includes counties that were impacted by the disasters.

Table 16. Owners With Unmet Need in a Floodplain

Income Category	Count	Without Flood Insurance (#)	Without Flood Insurance (%)
Less than \$15,000	1,260	1,201	16.91%
\$15,000–\$30,000	1,632	1,582	22.27%
\$30,001–\$60,000	2,381	2,243	31.57%
\$60,001–\$120,000	1,909	1,631	22.96%
\$120,001–\$175,000	348	298	4.19%
More than \$175,000	179	149	2.10%

Income Category	Count	Without Flood Insurance (#)	Without Flood Insurance (%)
TOTAL	7,709	7,104	100.00%

Source: FEMA IA data for DR-4595 and DR-4630

2.2.3.4 Insurance Claims and Losses in Disaster-Impacted Areas

The following tables show the number of individuals whose property was damaged by disasters DR-4595 and DR-4630 and were eligible to apply for insurance claims. Insurance companies typically categorize claims differently and/or do not report them to a central database. The Commonwealth worked with the Kentucky Public Protection Cabinet to collect information on insurance claims (individual homeowners, renters, commercial, and farm claims) through a data call to insurance providers.

Insurance Claims and Losses DR-4595

Table 17. Insurance Claims and Losses, DR-4595

County	Claims (#)	Claims Resulting in Loss (#)	Direct Incurred Losses (\$)	Disaster #
Anderson	25	11	\$108,337	DR- 4595
Boyd	51	29	\$150,816	DR- 4595
Breathitt	103	66	\$1,436,188	DR- 4595
Clark	27	10	\$92,778	DR- 4595
Clay	21	8	\$172,007	DR- 4595
Estill	51	19	\$124,470	DR- 4595
Fayette	170	122	\$863,127	DR- 4595
Floyd	38	14	\$55,802	DR- 4595
Franklin	51	34	\$316,178	DR- 4595
Greenup	27	15	\$672,253	DR- 4595
Jackson	25	19	\$141,401	DR- 4595
Jessamine	30	18	\$117,973	DR- 4595
Johnson	35	12	\$108,298	DR- 4595
Knott	10	4	\$166,861	DR- 4595
Laurel	98	64	\$600,511	DR- 4595
Lawrence	19	5	\$23,881	DR- 4595
Lee	15	5	\$66,800	DR- 4595
Leslie	8	3	\$20,362	DR- 4595
Letcher	9	4	\$25,153	DR- 4595
Lincoln	45	27	\$204,308	DR- 4595
Madison	83	50	\$705,032	DR- 4595

County	Claims (#)	Claims Resulting in Loss (#)	Direct Incurred Losses (\$)	Disaster #
Magoffin	22	14	\$130,527	DR- 4595
Martin	49	24	\$275,978	DR- 4595
Morgan	11	5	\$31,317	DR- 4595
Owsley	13	7	\$46,709	DR- 4595
Perry	28	15	\$128,180	DR- 4595
Powell	23	9	\$100,670	DR- 4595
Pulaski	140	100	\$992,674	DR- 4595
Rockcastle	27	15	\$335,984	DR- 4595
Warren	208	110	\$967,793	DR- 4595
Woodford	21	12	\$97,356	DR- 4595
TOTAL	1,483	850	\$9,279,739	DR- 4595

Source: FEMA data on insurance claims for DR-4595

Insurance Claims and Losses DR-4630

Table 18. Insurance Claims and Losses, DR-4630

County	Claims (#)	Direct Incurred Losses (\$)	Disaster #
Barren	2	\$3,500	DR - 4630
Caldwell	252	\$322,619	DR - 4630
Calloway	1	\$1,500	DR - 4630
Carlisle	2	\$2,000	DR - 4630
Christian	51	\$108,500	DR - 4630
Daviess	7	\$5,264	DR - 4630
Edmonson	1	\$2,500	DR - 4630
Fulton	202	\$233,171	DR - 4630
Graves	929	\$1,112,812	DR - 4630
Hancock	2	\$2,496	DR - 4630
Hart	2	\$5,000	DR - 4630
Hickman	68	\$76,988	DR - 4630
Hopkins	689	\$772,614	DR - 4630
Logan	4	\$8,000	DR - 4630
Lyon	158	\$236,874	DR - 4630
Marion	1	\$1,000	DR - 4630
Marshall	37	\$74,959	DR - 4630
McCracken	1	\$1,000	DR - 4630
Mclean	33	\$36,997	DR - 4630

County	Claims (#)	Direct Incurred Losses (\$)	Disaster #
Monroe	1	\$1,000	DR - 4630
Muhlenberg	177	\$203,413	DR - 4630
Ohio	139	\$147,828	DR - 4630
Taylor	2	\$3,760	DR - 4630
Warren	2,346	\$2,852,074	DR - 4630
Webster	2	\$2,500	DR - 4630
TOTAL	5,109	\$6,218,369	DR - 4630

Source: FEMA data on insurance claims for DR-4630

2.2.3.5 Total Home Loans Approved by SBA

The SBA provides low-interest, long-term disaster loans to homeowners and renters to repair or replace uninsured or underinsured disaster-damaged property. As part of the loan process, SBA conducts a credit review. For home loans, SBA regulations limit home loans to \$200,000 for the repair or replacement of real estate and \$40,000 to repair or replace personal property. Subject to these maximums, loan amounts cannot exceed the verified uninsured disaster loss. Interest rates for the term of the loan are determined by formulas set by law and vary from disaster to disaster. Interest rates will not exceed 4%, and the maximum term is 30 years.

The table below shows how many home loans were applied for and approved by SBA for both 2021 severe storms. The data show that of the HUD MIDs, Hopkins and Warren Counties had the highest number of home loans approved.

Table 19. Total Home Loans Approved by SBA

County	Home Loans	County	Home Loan
Barren	5	Lawrence	3
Boyd	2	Lee	4
Breathitt	24	Leslie	2
Caldwell	68	Letcher	2
Christian	15	Logan	15
Clark	7	Lyon	9
Clay	3	Madison	1
Estill	21	Magoffin	4
Fayette	6	Marion	6
Floyd	12	Marshall	78
Franklin	5	Martin	6
Fulton	9	Morgan	3

County	Home Loans	County	Home Loan
Graves	74	Muhlenberg	31
Greenup	1	Ohio	9
Hart	3	Owsley	1
Hickman	1	Perry	7
Hopkins	114	Powell	4
Jackson	1	Pulaski	3
Jessamine	2	Rockcastle	4
Johnson	14	Taylor	8
Knott	3	Warren	142
Laurel	2	Woodford	1
		TOTAL	735

Source: SBA Statistics for KY Declarations #16932 (KY-00084/FEMA 4595) and #17286 (KY-00087/FEMA 4630)

2.2.3.6 Social Equity, Fair Housing, and Civil Rights

2.2.3.6.1 *Addressing Impediments to Accessible Housing*

An impediment to fair housing choice is defined by HUD as any action, omission, or decision that restricts or has the effect of restricting the availability of housing choices to members of the protected classes. Discriminatory housing practices essentially deny equal access to or benefit of a housing opportunity. Section 109 of Title I of the Housing and Community Development Act of 1974 prohibits discrimination on the basis of race, color, national origin, sex, or religion in programs and activities receiving financial assistance from HUD's CDBG program. In addition, the affirmatively furthering fair housing (AFFH) goals include analyzing and eliminating housing discrimination, promoting fair housing choice for all persons, providing opportunities for inclusive patterns of housing occupancy, promoting housing that is structurally accessible, and fostering compliance with the nondiscrimination provisions of the Fair Housing Act.

The Commonwealth of Kentucky understands that access to fair housing correlates to access to affordable housing. DLG and the Kentucky Housing Corporation conducted a 2019 Analysis of Impediments to Fair Housing Choice that examined how a jurisdiction's laws, regulations, and administrative policies, procedures, and practices affect the location, availability, and accessibility of housing.²³ The study was also an assessment of conditions, both public and private, that affect fair housing choice.

The data utilized were primarily from the U.S. Census Bureau's American Community Survey for 2013–2017. Some of the study's results concluded that:

²³ [2019 Analysis of Impediments to Fair Housing Choice, April 2020](#)

- Kentucky's rate of new housing (2%) has not kept pace with the national average (5%).
- Between 2010 and 2017, incomes have declined or stagnated for all racial/ethnic groups except those selecting multiracial and Other Race identities.
- By 2017, the State homeownership rate decreased slightly by 1.7 percentage points.
- Non-White households tend to be larger than White households and are in the rental market at higher rates.
- Even in the absence of discrimination, persons with disabilities often experience greater obstacles in securing affordable housing that is accessible due to the potential for lower wages and rates of employment.

Some of the barriers identified in the study that still exist and can prevent impacted communities from obtaining housing include:

- Inadequate or inaccessible housing exists for families with children, the elderly, refugees and immigrants, and individuals with disabilities.
- Emphasis on credit scores that negatively impacts minorities and protected classes.
- Appraisal processes that contribute to increased devaluation of minority neighborhoods.
- Education on homeownership and renters' rights often remains available only in English, such that persons with limited English proficiency (LEP) may encounter obstacles to fair housing by virtue of language and cultural barriers. Providing language access, mainly in western Kentucky, will be essential to ensure that grantee-identified MID areas see higher participation rates due to having a higher percentage of LEP persons and a foreign-born population.

Figure 5. Percent of LEP Residents, HUD and Grantee MID Areas

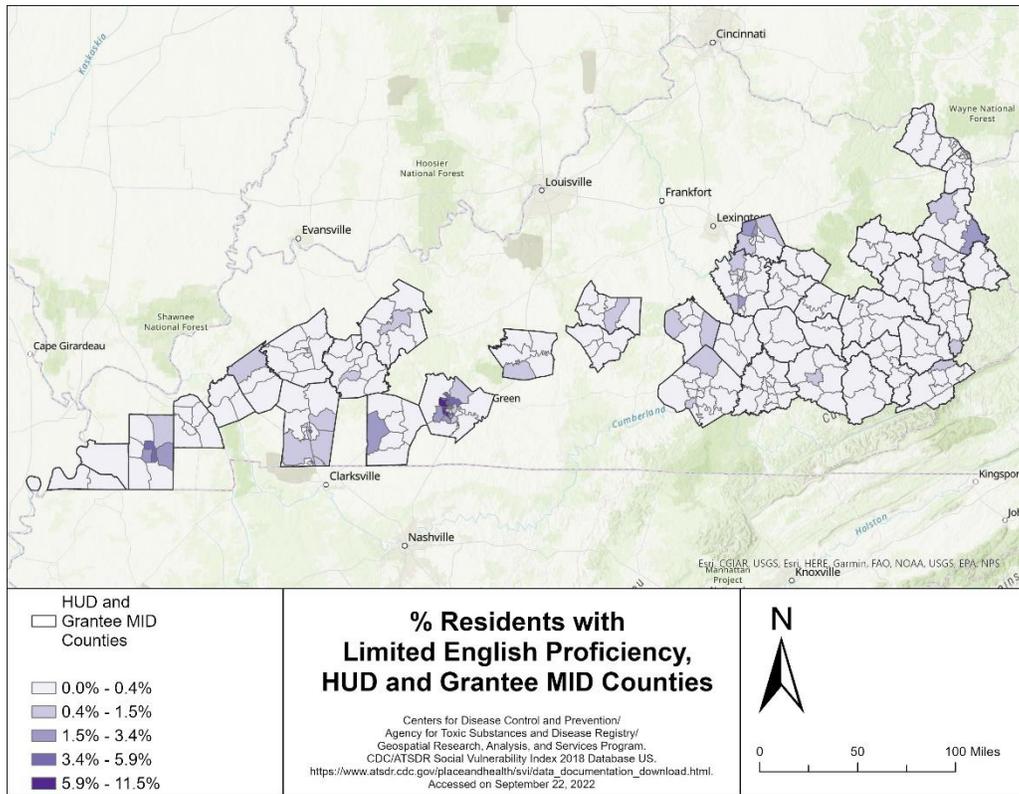
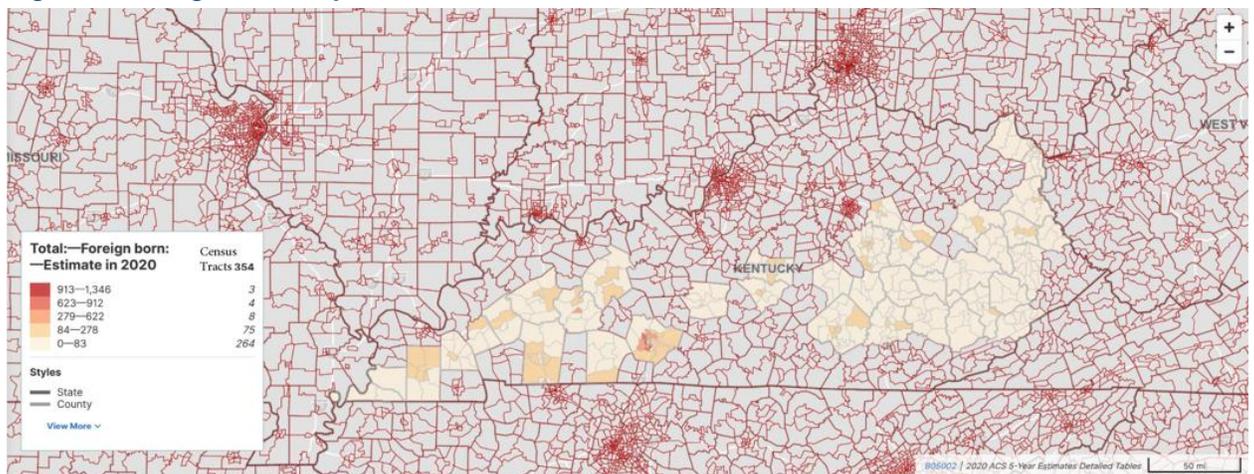


Figure 6. Foreign-Born Population, HUD and Grantee MID Areas



In accordance with federal and State laws, Kentucky defines the following characteristics as federally protected against housing discrimination: race, color, religion, sex, gender, national origin, familial status, and disability status. Through this funding, the Commonwealth will respond to the needs of impacted residents and communities, with a particular emphasis on vulnerable populations. Vulnerable populations are defined as a

group or community whose circumstances present barriers to obtaining or understanding information or accessing resources. Vulnerable populations can include LEP persons, persons experiencing homelessness, elderly, persons with disabilities, victims of domestic violence, and public housing residents.

From the study results, DLG and its subrecipients will increase efforts in outreach and fair housing education to municipalities and institutions across Kentucky, focusing on the expansion and preservation of affordable housing across Kentucky, enforcement of design and construction standards, and updates to the Language Access Plan to ensure that LEP populations are made aware of housing opportunities. The combination of these efforts should address unmet recovery needs in impacted communities, reduce any unjustified discriminatory effects on vulnerable populations, and increase participation in Kentucky's housing and infrastructure programs.

DLG will ensure that the proposed housing programs not only address the disaster recovery needs of the community but are also consistent with the goals of AFFH and remove barriers to building inclusive communities. The Commonwealth will implement the following strategies to reduce barriers that individuals may face when enrolling in and accessing CDBG-DR assistance. These strategies will also prevent the CDBG-DR housing programs from having an unjust discriminatory effect on individuals with disabilities and racial and ethnic minorities in proportion to their communities' needs. The Commonwealth will:

- Provide a Housing Counseling and Legal Aid program. The program will provide funds to subrecipients to help guide housing applicants through the program implementation and complement the proposed housing activities. With outreach and promotion, DLG and subrecipients will ensure access for individuals with disabilities including but not limited to mobility, sensory, developmental, emotional, cognitive, and other impairments.
- Coordinate with the Kentucky Commission on Human Rights, Lexington Fair Housing Council, and other organizations (e.g., Bowling Green Human Rights Commission, Kentucky Housing Corporation) to address or eliminate any discriminatory practices against persons based on race, skin color, national origin, religion, sex, gender, gender identity, sexual orientation, disability, and familial status.
- Develop a network of points of contact for organizations and programs that serve minority, elderly, women, disabled persons and ethnic groups and make sure that program information is given to these groups for dissemination beyond standard newspaper and public notice channels.
- Maximize choice within the community's total housing supply by ensuring that administrative practices do not have a discriminatory effect.
- Lessen racial, ethnic, and economic concentrations of housing by developing a nondiscrimination checklist to review policies, plans and actions, and documented reviews.

- Provide regular technical assistance to subrecipients who need support related to adhering to AFFH regulations and provide support to subrecipients who are struggling with a lack of outreach to their community.

As part of its ongoing effort to monitor subrecipients, DLG will determine if additional steps are needed to address fair housing requirements. DLG will evaluate whether subrecipients have (1) designated a fair housing and equal opportunity coordinator to be the prime liaison with DLG, (2) passed a fair housing resolution prior to release of grant funds, and (3) conducted one or more AFFH activities, depending on local conditions and needs to ensure that all citizens in the community are aware that AFFH is a priority (e.g., launched counseling services, provided assistance to fair housing groups).

If substantial efforts are not being made to support AFFH, DLG may determine that additional technical assistance to subrecipients is necessary or may provide more outreach to all residents in a community to ensure that housing needs are being addressed.

Program homeowners and renters will be informed that if they believe their rights may have been violated, they can [file a complaint with FHEO](#) by online submission, email, phone, or mail.

HUD Form 903 [Online Complaint](#)
Atlanta Regional Office of FHEO
U.S. Department of Housing and Urban Development
Five Points Plaza
40 Marietta Street, 16th Floor
Atlanta, GA 30303-2806
Phone: 678-732-2493
Email: ComplaintsOffice04@hud.gov

2.2.3.6.2 The Use of Data to Make Funding Decisions to Advance Equity and Reduce Barriers

DLG is committed to using data, performance metrics, and qualitative and quantitative information to ensure programs help advance equity and reduce barriers. This section outlines DLG's analysis of impacts to vulnerable populations,²⁴ including analysis of members of protected classes under fair housing and civil rights laws, racially and ethnically concentrated areas of poverty, socially vulnerable areas, and historically underserved communities.²⁵

²⁴ HUD defined vulnerable populations as: "A group or community whose circumstances present barriers to obtaining or understanding information or accessing resources."

²⁵ HUD defines underserved communities as: "Refers to populations sharing a particular characteristic,

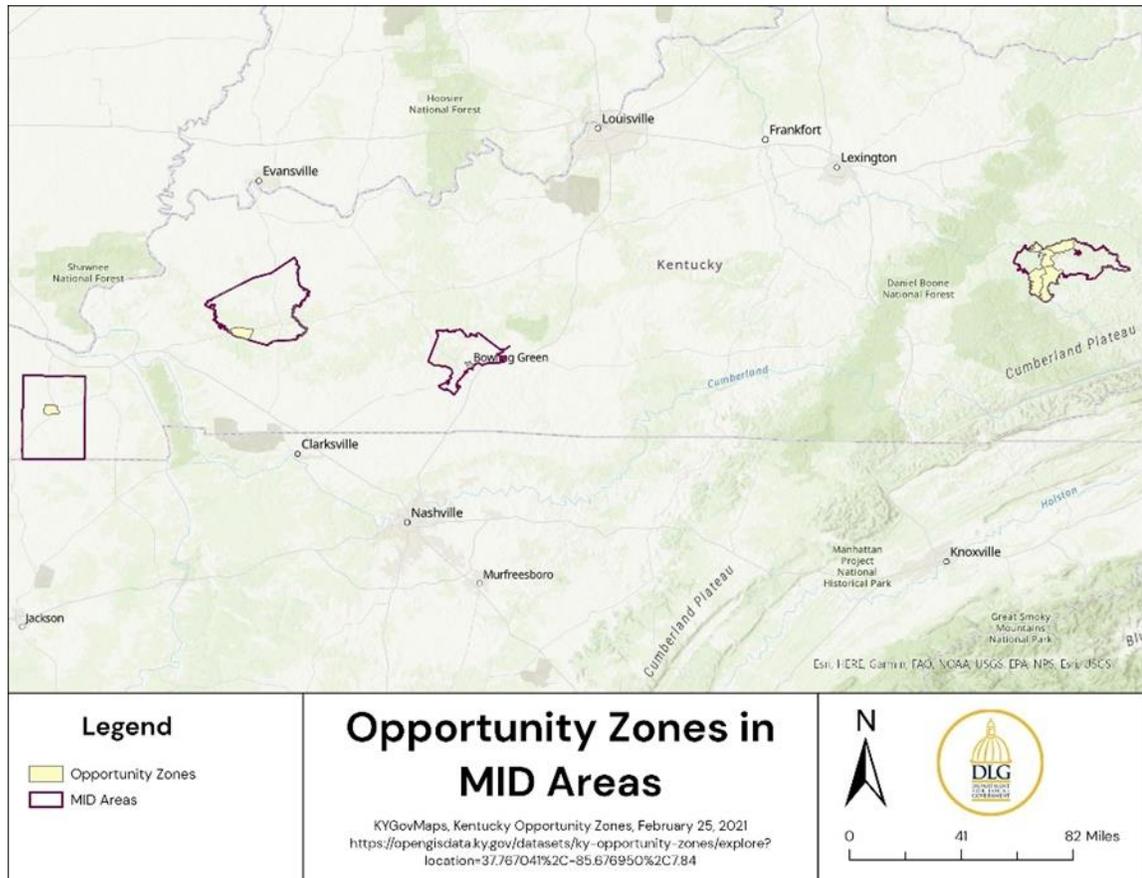
This information provides a foundation for understanding the additional needs of survivors and for ensuring programs are implemented equitably or in a manner that understands and addresses disparities and additional needs across race, ability, class, age, ethnicity, gender, and other characteristics.

2.2.3.6.3 Underserved Communities

The Commonwealth has mapped the MID areas with the geographic boundaries of Opportunity Zones . These maps delineate areas that HUD has identified as underserved communities at the census tract level (“Opportunity Zones”). DLG has researched the diverse impacts from the two declared disasters across the Commonwealth, identifying disparate challenges both across communities and stemming from different hazards. DLG will use a more refined and focused method of data analysis, mapping, and examination of community data gathered through the Action Plan and the program-designed stakeholder consultation process to understand which neighborhoods and communities have been historically underserved. In this way, DLG can better identify and target unmet needs in underserved communities. The Commonwealth will also review other information that may indicate whether a community is underserved, including reviewing census tracts that were eligible for Opportunity Zone designation and areas eligible for New Market Tax Credits.

as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life. Underserved communities that were economically distressed before the disaster include, but are not limited to, those areas that were designated as a Promise Zone, Opportunity Zone, a Neighborhood Revitalization Strategy Area, a tribal area, or those areas that meet at least one of the distress criteria established for the designation of an investment area of Community Development Financial Institution at 12 CFR 1805.201(b)(3)(ii)(D)”

Figure 7. Opportunity Zones



2.2.3.6.4 Opportunity Zones

Opportunity Zones were created under the Tax Cuts and Jobs Act of 2017. They are low-income communities and certain neighboring areas that are first defined by population census tract, then nominated by states for the Opportunity Zone designation and certified by the U.S. Department of the Treasury. Their purpose is to spur economic growth and job creation in low-income communities while providing tax benefits to investors.²⁶

As demonstrated in the map above, the 2021 disaster-impacted areas that are either within or border Opportunity Zones fall in the following counties:

- Breathitt County
- Graves County
- Hopkins County
- Warren County

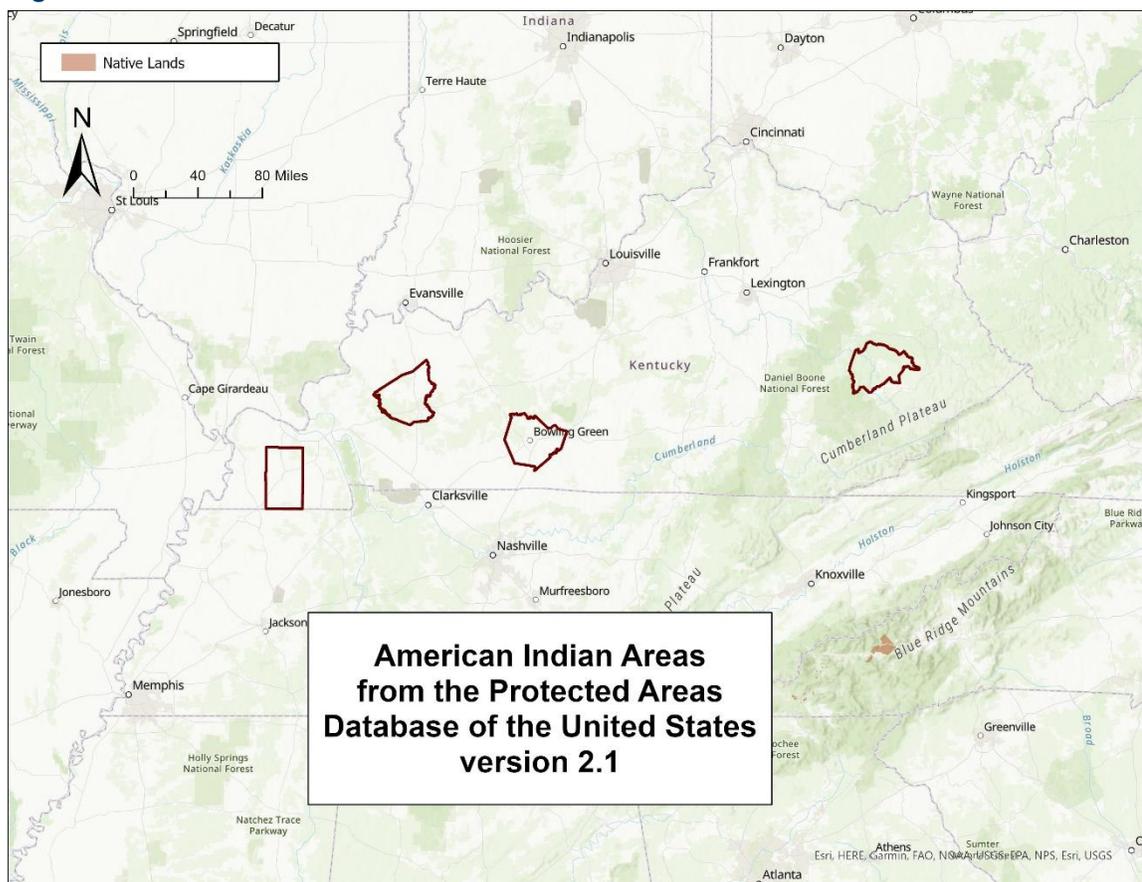
²⁶ <https://www.irs.gov/credits-deductions/businesses/opportunity-zones>

2.2.3.6.5 Tribal Areas

Tribal lands representing seven American Indian Tribes are located within the impacted areas. They are the Cherokee Nation, the Chickasaw Nation, the Delaware Nation (Oklahoma), the Eastern Band of Cherokee Indians, the Eastern Shawnee Tribe of Oklahoma, the Osage Nation, and the Quapaw Tribe of Indians.²⁷

None of these seven tribes that are in or near the severe storm, flooding, landslides, or mudslide disaster areas have large reservations or tracts of native-owned lands or housing that sustained damage by the 2021 severe weather disasters. Rather, their enrolled tribal members live throughout the Commonwealth and nationally. The figure below, from the U.S. Geological Survey (USGS), shows that there are no defined tribal areas for the American Indian population in Kentucky.

Figure 8. Native Lands



²⁷ [HUD's Tribal Directory Assessment Tool \(TDAT\)](#)

2.2.3.6.6 R/ECAPs

Racially/ethnically concentrated areas of poverty (R/ECAPs) are census tracts determined by HUD to have a non-White population of 50% or more and where more than 40% of the population live in poverty. One HUD MID, Warren County, contains census tracts that are identified as R/ECAP areas.

2.2.3.6.7 Social Vulnerability Index and Disadvantaged Communities

In 2021, President Joe Biden signed Executive Order 14008 “Tackling the Climate Crisis at Home and Abroad.” The executive order states that “40 percent of the overall benefits” of federal investments from covered programs should flow to disadvantaged communities.²⁸ This ensures that any federal funds directed toward climate mitigation and adaptation largely benefit historically underserved communities. One way that agencies and covered programs benefit disadvantaged communities is by identifying target populations with the CDC’s Social Vulnerability Index (SVI).

The CDC’s Agency for Toxic Substances and Disease Registry’s (ATSDR) SVI ranks counties and census tracts on 15 social factors, including unemployment, minority status, and disability, and then further groups them into four related themes. The SVI ranking variables for the four themes include socioeconomic status, household composition and disability, minority status and language, and housing type and transportation. These indicators help support analysis of the relative vulnerability of a given census tract and help identify communities that will need continued support to recover following an emergency or natural disaster. Table 21 Census Tracts in MID Areas with SVI Percentil >0.90 shows the overall ranking, which is a percentile ranking that represents the proportion of tracts that are equal to or lower than a tract of interest in terms of social vulnerability. For example, a CDC/ATSDR SVI ranking of 0.60 signifies that 60% of tracts in the State or nation are less vulnerable than the tract of interest, and 40% of tracts in the Commonwealth or nation are more vulnerable.

The overall SVI percentile for census tracts in the MID areas is 0.56, indicating that 56% of tracts in the Commonwealth or nation are less vulnerable. The 10 census tracts with the highest SVI percentiles (above 0.90) are included in the table below; four of the 10 census tracts are in Warren County. The county with census tracts having the highest overall SVI percentile is Breathitt County, with an overall SVI percentile of 0.76 (see figure 6 for further details).

²⁸ <https://www.whitehouse.gov/wp-content/uploads/2021/07/M-21-28.pdf>

Table 20. Census Tracts in HUD MID Areas with SVI Percentile >0.90

Census Tract	County	Overall SVI Percentile
Census Tract 102	Warren	0.9973
Census Tract 203	Graves	0.9828
Census Tract 201	Graves	0.9819
Census Tract 112	Warren	0.9719
Census Tract 110.01	Warren	0.9683
Census Tract 9704	Hopkins	0.9655
Census Tract 9706	Hopkins	0.9383
Census Tract 9206	Breathitt	0.9193
Census Tract 202	Graves	0.9093
Census Tract 103	Warren	0.9030

Figure 9. Overall SVI Percentile in HUD MID Areas

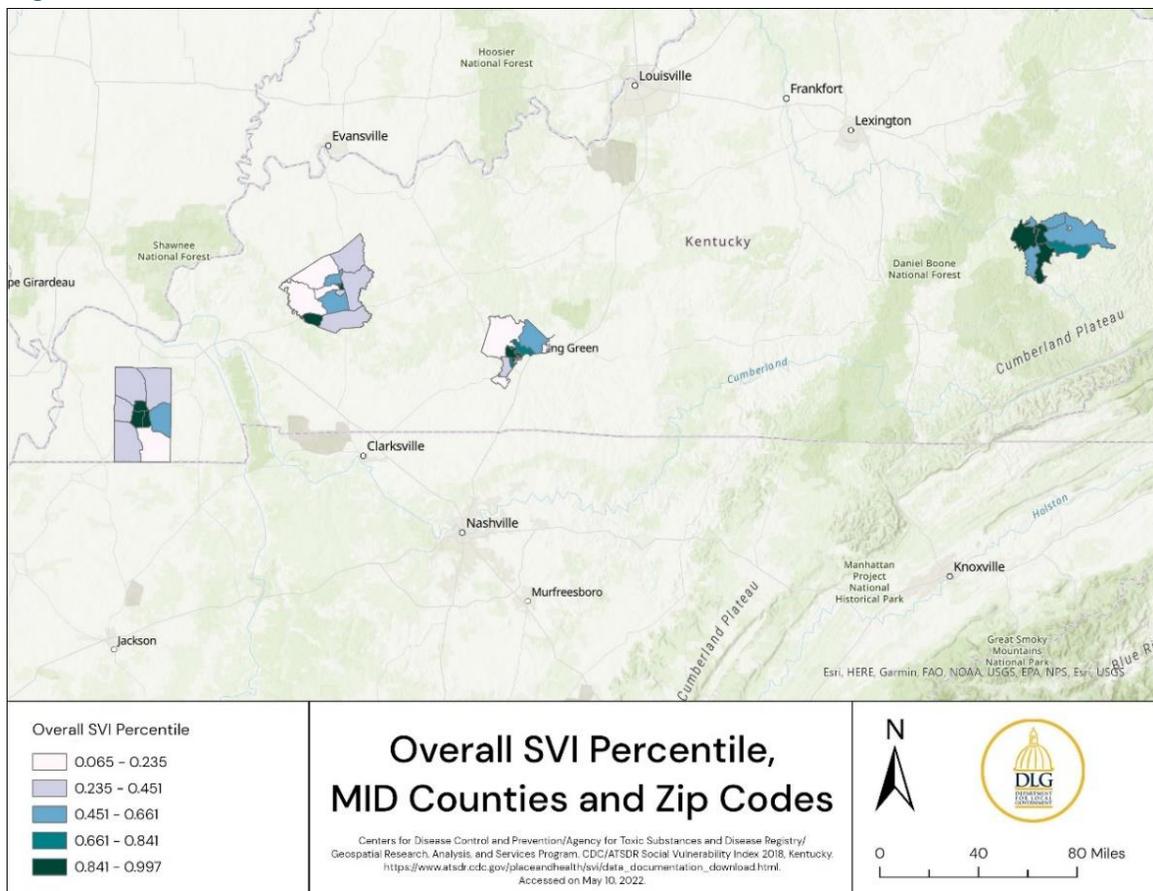
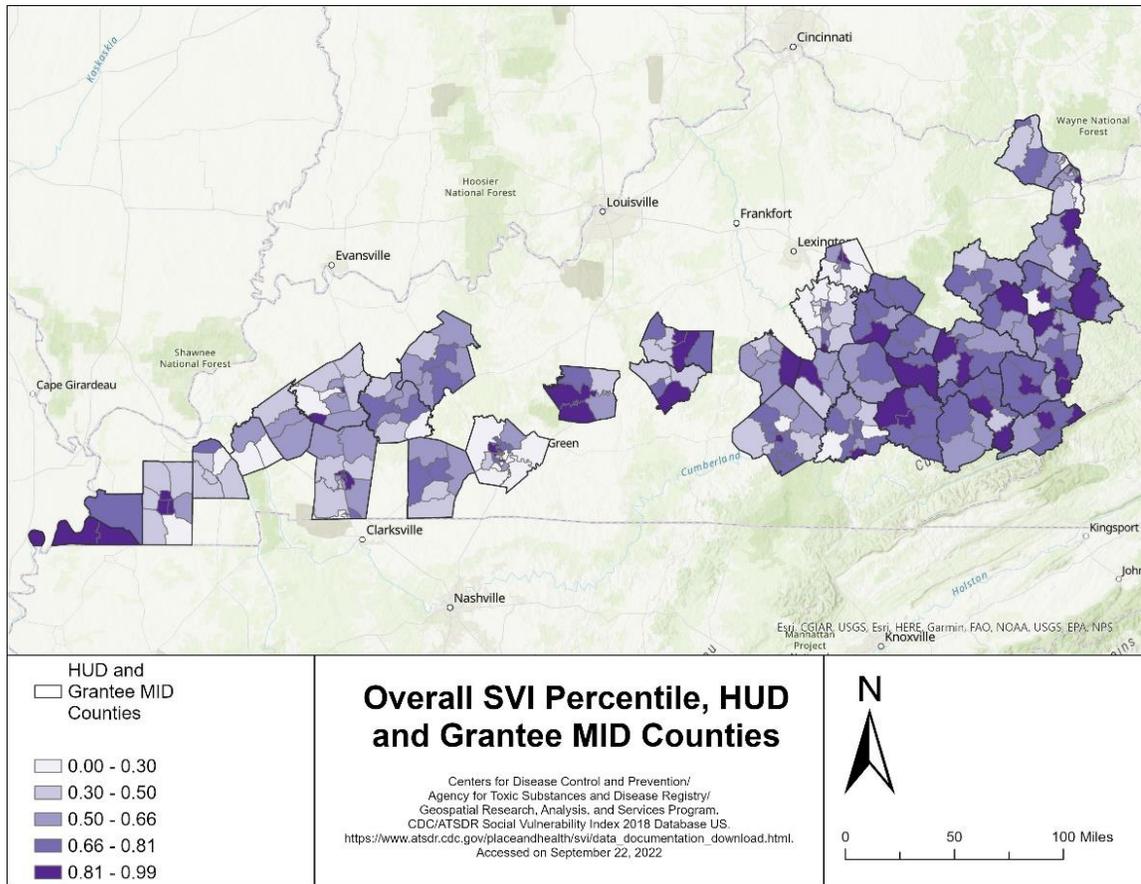


Figure 10. Overall SVI Percentile in Grantee MID Areas



2.2.3.6.8 Race and Ethnicity

2.2.3.6.8.1 Black or African American Residents

The largest minority population group in the MID areas are residents who identify as Black or African American. The 2020 Decennial Census redistricting data, from the U.S. Census Bureau, indicates that 6.74% of residents in the MID areas identify as Black or African American. The MID area containing census tracts with the highest percentage of residents who identify as Black or African American is the 42101 ZIP code in Warren County. Census tract 112 in Warren County has the highest concentration of Black or African American residents within the MID area, with 1,685 residents (34.73%) identifying as Black or African American.

Using data with mapping, DLG can start to address the disproportionate impact of poverty on housing ownership and maintenance. Knowing which areas are impacted and have greater proportions of Black or African American residents will allow DLG and its subrecipients to target outreach for the CDBG-DR programs to ensure that residents in those areas are able to participate and receive the help they need. This will be a step

forward in making sure that the programs do not have an unjustified discriminatory effect on or failure to benefit racial and ethnic minorities in proportion to their communities' needs.

Figure 11. Percentage of Population That is Black or African American, 41339 ZIP Code

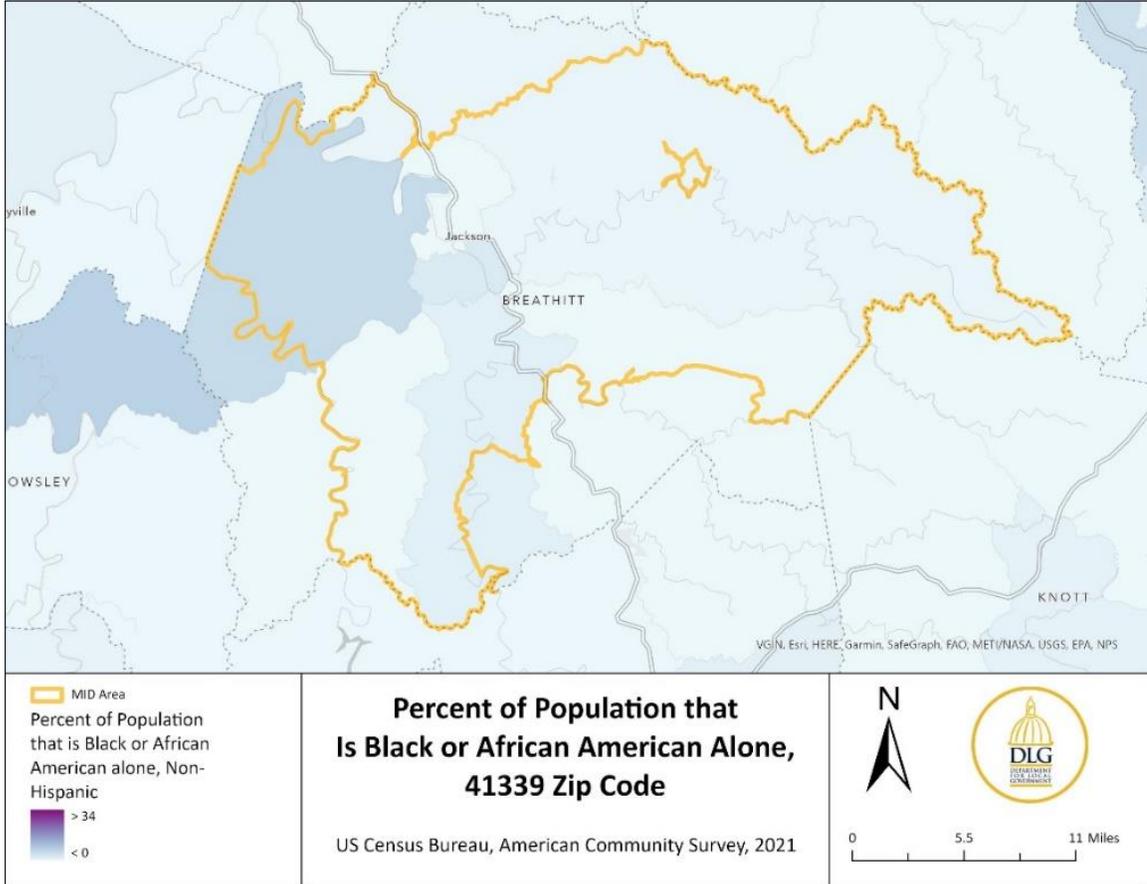


Figure 13. Percentage of Population That is Black or African American, Hopkins County

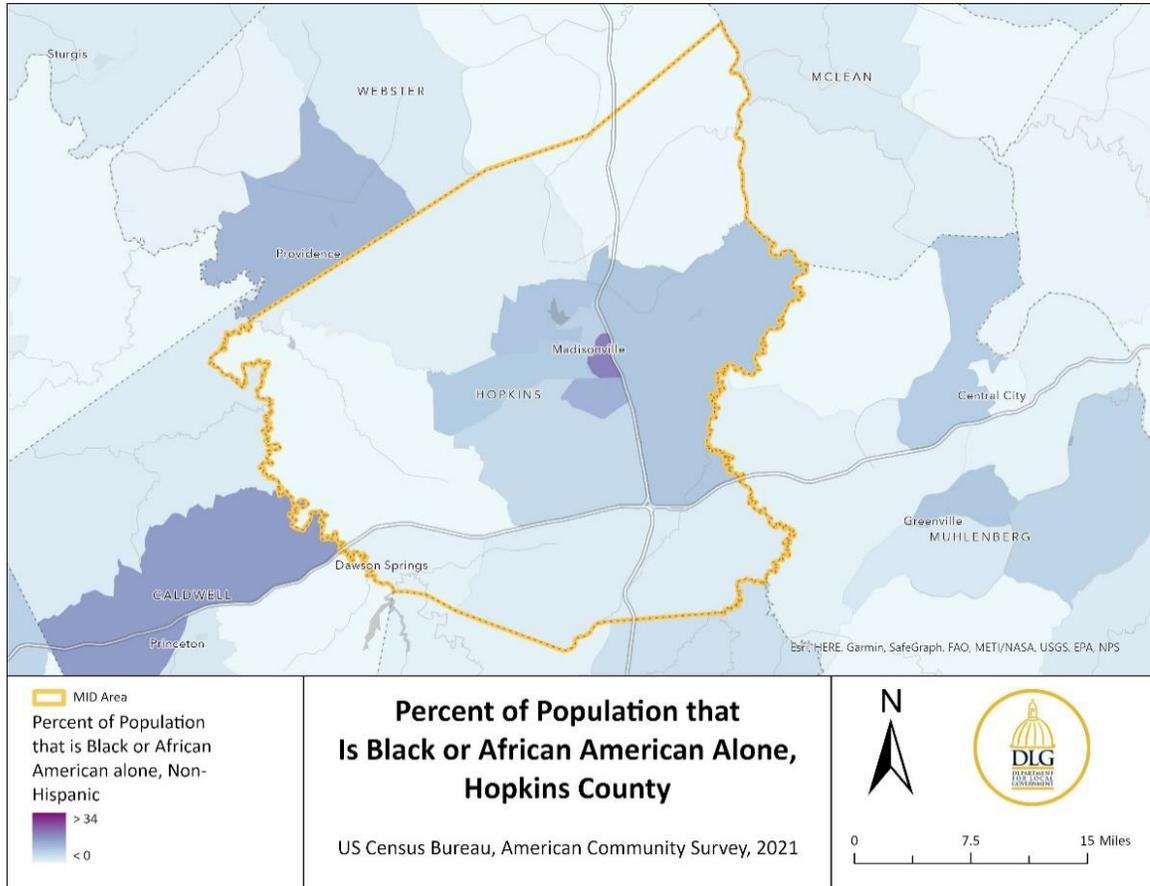


Figure 15. Percentage of Black or African American Population, Grantee MID Areas

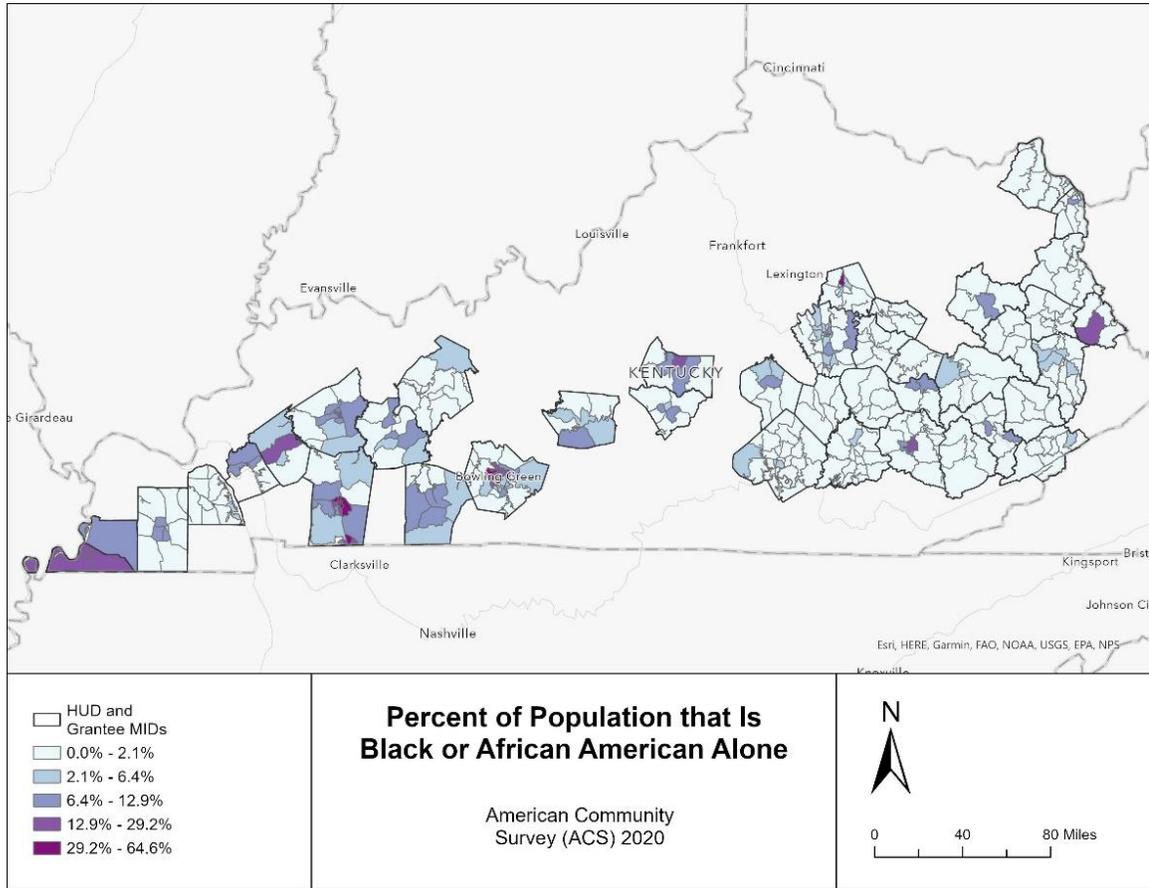


Table 21. Percentage of Population That is Black or African American, HUD MID Areas

County	Census Tract Number	Total Population (#)	White Alone (#)	White Alone (%)	Black or African American Alone (#)	Black or African American Alone (%)
Breathitt	9202	2,048	1,934	94.43%	114	5.57%
Breathitt	9203.01	2,112	2,089	98.91%	0	0.00%
Breathitt	9203.02	1,096	1,043	95.16%	30	2.74%
Breathitt	9205	1,547	1,523	98.45%	0	0.00%
Breathitt	9206	1,616	1,562	96.66%	26	1.61%
Breathitt	9207	1,869	1,864	99.73%	0	0.00%
Breathitt	9208	2,514	2,441	97.10%	15	0.60%
Graves	201	4,039	3,329	82.42%	476	11.79%
Graves	202	4,721	3,784	80.15%	417	8.83%
Graves	203.01	4,149	3,495	84.24%	308	7.42%

County	Census Tract Number	Total Population (#)	White Alone (#)	White Alone (%)	Black or African American Alone (#)	Black or African American Alone (%)
Graves	203.02	1,878	1,613	85.89%	78	4.15%
Graves	204	2,978	2,663	89.42%	0	0.00%
Graves	205	3,878	3,583	92.39%	74	1.91%
Graves	206	2,568	2,542	98.99%	0	0.00%
Graves	207	4,957	4,742	95.66%	58	1.17%
Graves	208	4,668	4,259	91.24%	0	0.00%
Graves	209	3,289	3,014	91.64%	61	1.85%
Hopkins	9701	2,995	2,920	97.50%	9	0.30%
Hopkins	9702	3,378	3,246	96.09%	48	1.42%
Hopkins	9703.01	1,733	1,566	90.36%	126	7.27%
Hopkins	9703.02	5,311	4,548	85.63%	514	9.68%
Hopkins	9704	2,108	1,839	87.24%	153	7.26%
Hopkins	9705	4,601	3,999	86.92%	396	8.61%
Hopkins	9706	2,714	1,804	66.47%	544	20.04%
Hopkins	9707	4,801	4,190	87.27%	452	9.41%
Hopkins	9708	2,772	2,284	82.40%	364	13.13%
Hopkins	9709	3,548	3,293	92.81%	205	5.78%
Hopkins	9710	2,950	2,930	99.32%	0	0.00%
Hopkins	9711	3,302	3,128	94.73%	41	1.24%
Hopkins	9713	4,831	4,665	96.56%	113	2.34%
Warren	101	3,002	1,950	64.96%	318	10.59%
Warren	102	3,480	1,636	47.01%	1,308	37.59%
Warren	103	4,503	2,888	64.14%	939	20.85%
Warren	104	5,824	4,903	84.19%	501	8.60%
Warren	105	2,666	2,291	85.93%	162	6.08%
Warren	106	4,493	3,970	88.36%	164	3.65%
Warren	107.01	5,589	4,529	81.03%	342	6.12%
Warren	107.02	6,607	4,829	73.09%	320	4.84%
Warren	108.01	2,935	2,563	87.33%	213	7.26%
Warren	108.02	8,642	7,691	89.00%	158	1.83%
Warren	108.04	3,156	2,290	72.56%	462	14.64%
Warren	108.05	3,278	2,822	86.09%	136	4.15%
Warren	109	4,625	4,261	92.13%	111	2.40%
Warren	110.01	4,391	2,092	47.64%	724	16.49%

County	Census Tract Number	Total Population (#)	White Alone (#)	White Alone (%)	Black or African American Alone (#)	Black or African American Alone (%)
Warren	110.02	7,607	5,289	69.53%	1,323	17.39%
Warren	111	6,752	5,837	86.45%	349	5.17%
Warren	112	4,852	2,368	48.80%	1,685	34.73%
Warren	113	4,994	3,299	66.06%	805	16.12%
Warren	114.01	6,939	6,445	92.88%	306	4.41%
Warren	114.02	3,653	3,359	91.95%	178	4.87%
Warren	115	7,358	6,677	90.74%	133	1.81%
Warren	116	5,327	4,684	87.93%	287	5.39%
Warren	117.01	4,462	3,646	81.71%	503	11.27%
Warren	117.02	3,919	3,713	94.74%	51	1.30%
Warren	118.01	2,968	2,941	99.09%	0	0.00%
Warren	118.02	2,844	2,844	100.00%	0	0.00%
Warren	119	5,970	5,724	95.88%	12	0.20%

Source: U.S. Census Bureau's 2020 American Community Survey 5-Year Estimates

2.2.3.6.8.2 Some Other Race

The second-largest minority population group in the MID areas are residents who identify as “Some Other Race” according to the 2020 Decennial Census, from the U.S. Census Bureau. The 2020 Decennial Census redistricting data indicate that 4.62% of residents in the MID areas identify as Some Other Race. The MID area containing census tracts with the highest percentage of residents who identify as Some Other Race is the 42101 ZIP code in Warren County. Census tract 103 in Warren County has the highest concentration of residents identifying as Some Other Race (926 residents or 20.6%) within the MID area.

Using mapping data, DLG will ensure that outreach occurs in these areas and that programs do not have an unjustified discriminatory effect on or failure to benefit racial and ethnic minorities in proportion to their communities’ needs.

Figure 16. Percent of Population Identifying as Some Other Race, 41339 ZIP Code

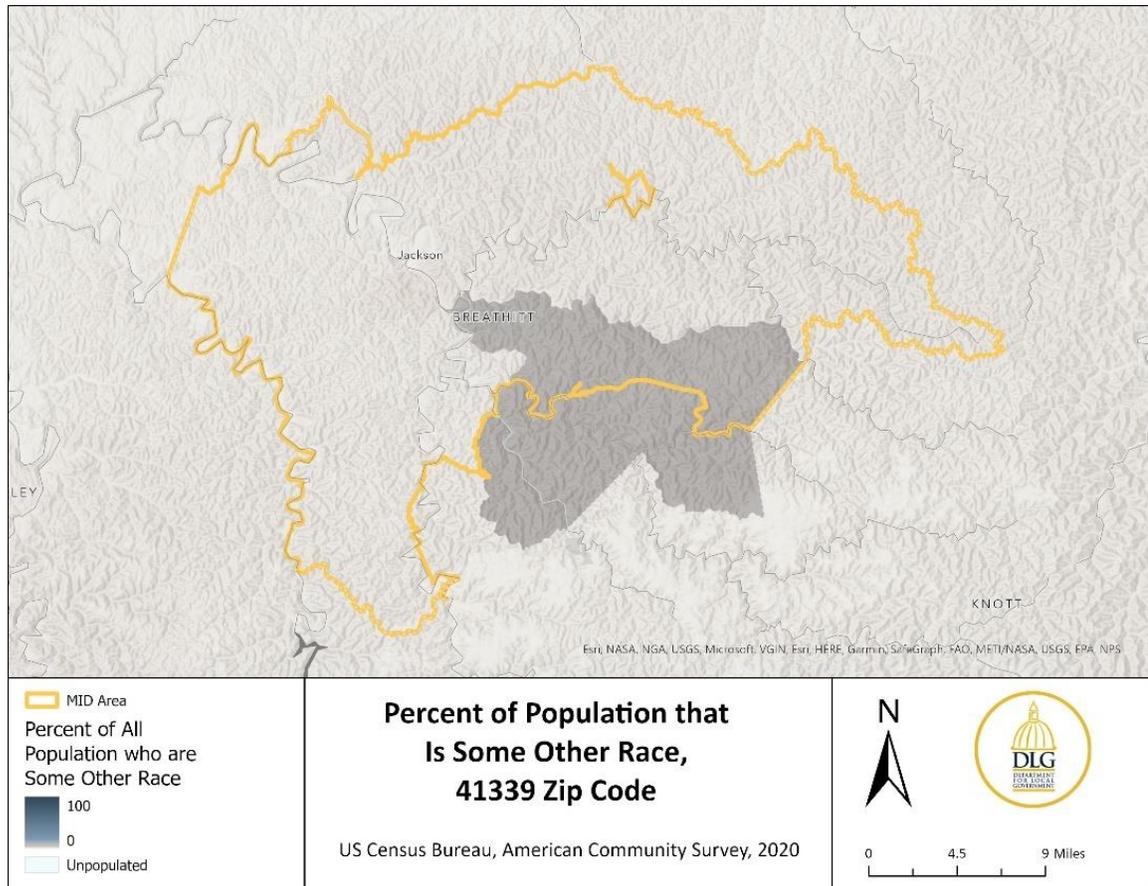


Figure 17. Percent of Population Identifying as Some Other Race, 42101 ZIP Code

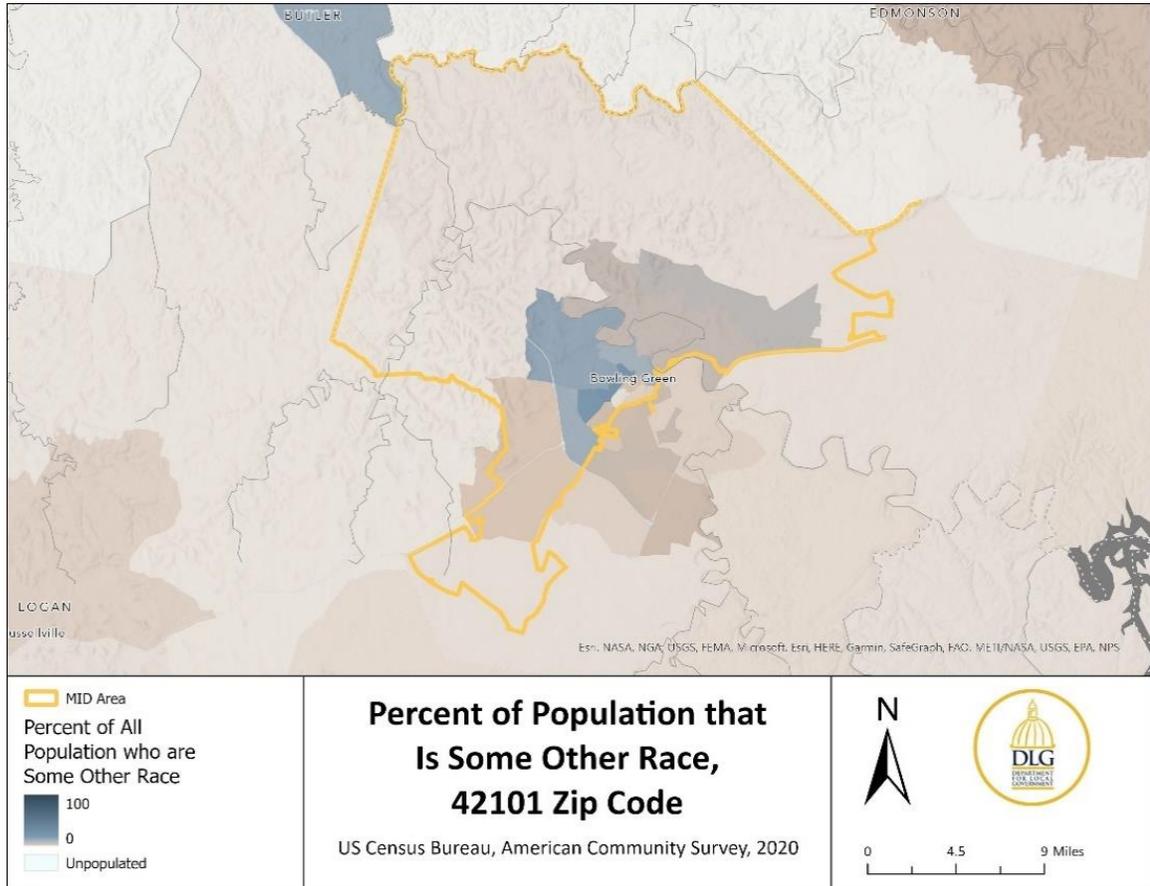


Figure 18. Percent of Population Identifying as Some Other Race, Hopkins County

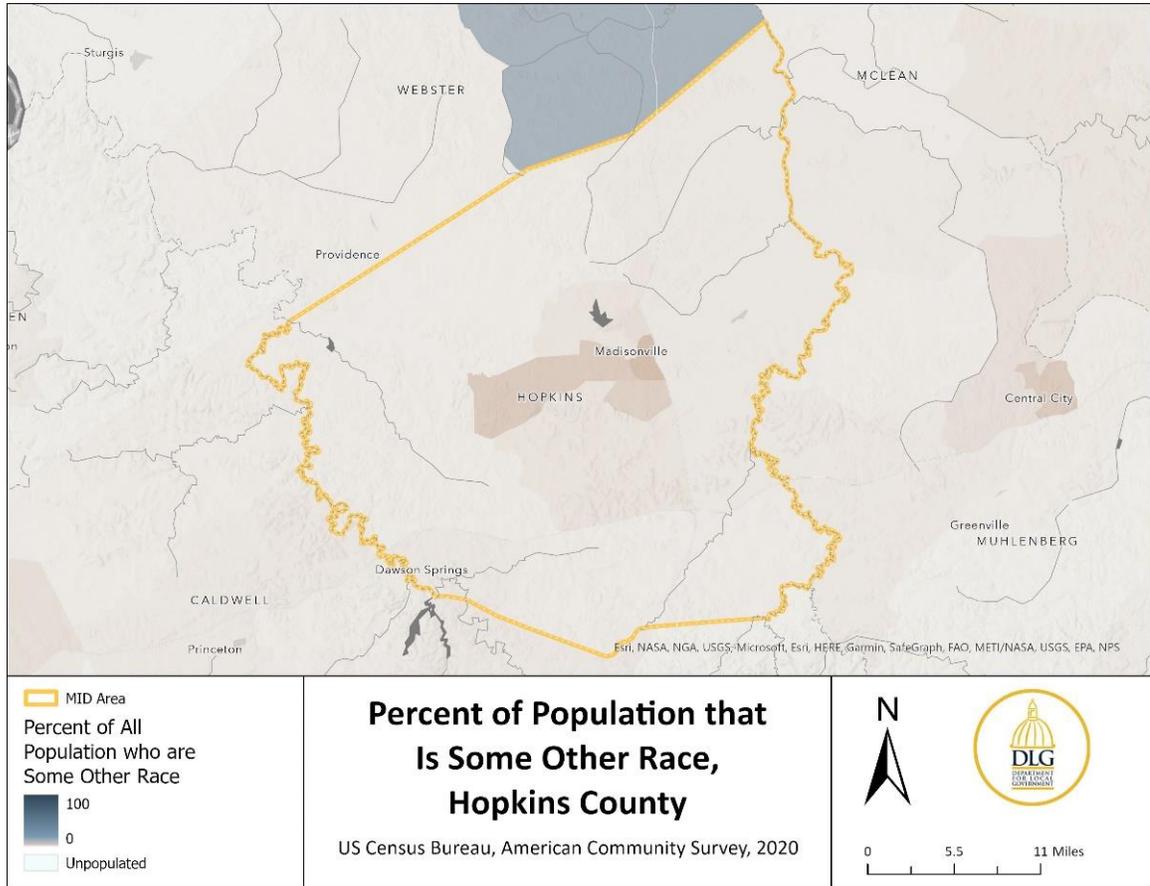


Figure 19. Percent of Population Identifying as Some Other Race, Graves County

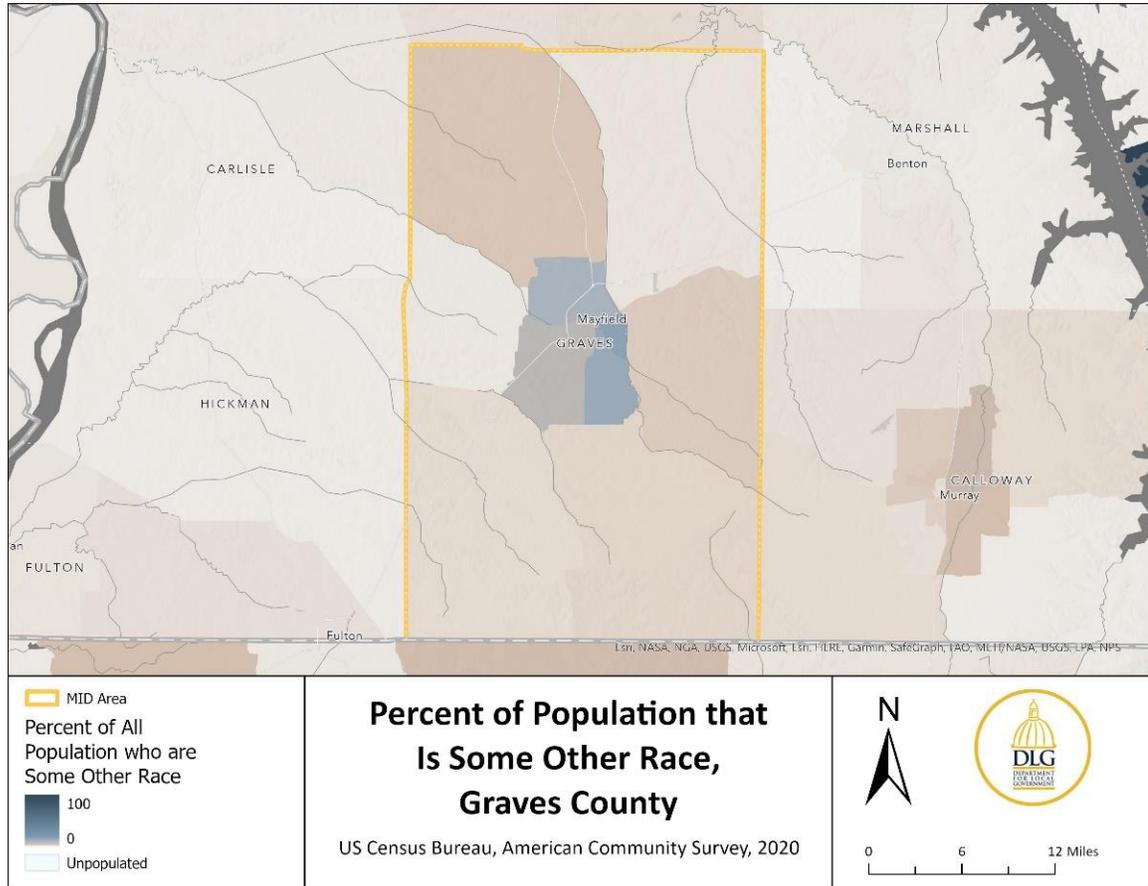


Table 22. Some Other Race, HUD MID Areas

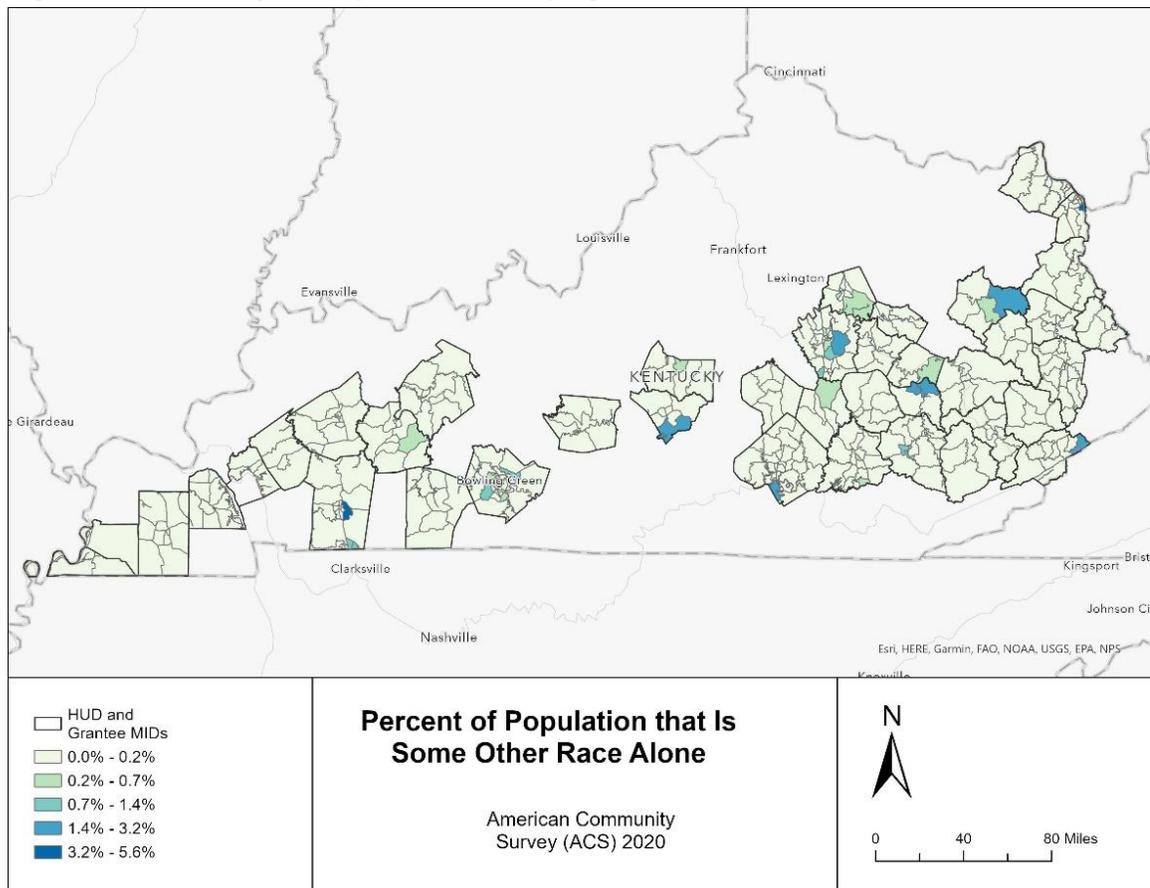
County	Census Tract Number	Some Other Race (#)	Some Other Race (%)
Breathitt	9202	0	0.00%
Breathitt	9203.01	0	0.00%
Breathitt	9203.02	0	0.00%
Breathitt	9205	24	1.55%
Breathitt	9206	0	0.00%
Breathitt	9207	0	0.00%
Breathitt	9208	36	1.43%
Graves	201	7	0.17%
Graves	202	90	1.91%
Graves	203.01	307	7.40%
Graves	203.02	179	9.53%
Graves	204	19	0.64%

County	Census Tract Number	Some Other Race (#)	Some Other Race (%)
Graves	205	3	0.08%
Graves	206	0	0.00%
Graves	207	116	2.34%
Graves	208	152	3.26%
Graves	209	0	0.00%
Hopkins	9701	0	0.00%
Hopkins	9702	0	0.00%
Hopkins	9703.01	0	0.00%
Hopkins	9703.02	17	0.32%
Hopkins	9704	0	0.00%
Hopkins	9705	0	0.00%
Hopkins	9706	77	2.84%
Hopkins	9707	0	0.00%
Hopkins	9708	0	0.00%
Hopkins	9709	3	0.08%
Hopkins	9710	0	0.00%
Hopkins	9711	0	0.00%
Hopkins	9713	0	0.00%
Warren	101	16	0.53%
Warren	102	329	9.45%
Warren	103	372	8.26%
Warren	104	8	0.14%
Warren	105	47	1.76%
Warren	106	0	0.00%
Warren	107.01	0	0.00%
Warren	107.02	0	0.00%
Warren	108.01	52	1.77%
Warren	108.02	11	0.13%
Warren	108.04	0	0.00%
Warren	108.05	10	0.31%
Warren	109	127	2.75%
Warren	110.01	654	14.89%
Warren	110.02	37	0.49%
Warren	111	71	1.05%
Warren	112	300	6.18%
Warren	113	286	5.73%

County	Census Tract Number	Some Other Race (#)	Some Other Race (%)
Warren	114.01	27	0.39%
Warren	114.02	0	0.00%
Warren	115	0	0.00%
Warren	116	2	0.04%
Warren	117.01	102	2.29%
Warren	117.02	0	0.00%
Warren	118.01	0	0.00%
Warren	118.02	0	0.00%
Warren	119	0	0.00%

Source: U.S. Census Bureau's 2020 American Community Survey 5-Year Estimates

Figure 20. Percentage of Population Identifying as Some Other Race, Grantee MID Areas



2.2.3.6.8.3 Hispanic or Latino

The U.S. Census Bureau’s 2020 Decennial Census redistricting data indicate that 4.53% of residents in the MID areas identify as Hispanic or Latino. The MID area containing census tracts with the highest percentage of residents who identify as Hispanic or Latino is the 42101 ZIP code in Warren County. Census tract 103 in Warren County has the highest concentration of residents identifying as Hispanic or Latino (1,070 residents or 23.8%) within the MID area.

Using mapping data, DLG will ensure that outreach occurs in these areas and that programs do not have an unjustified discriminatory effect on or failure to benefit racial and ethnic minorities in proportion to their communities’ needs.

Figure 21. Percentage of Population That is Hispanic or Latino, Graves County

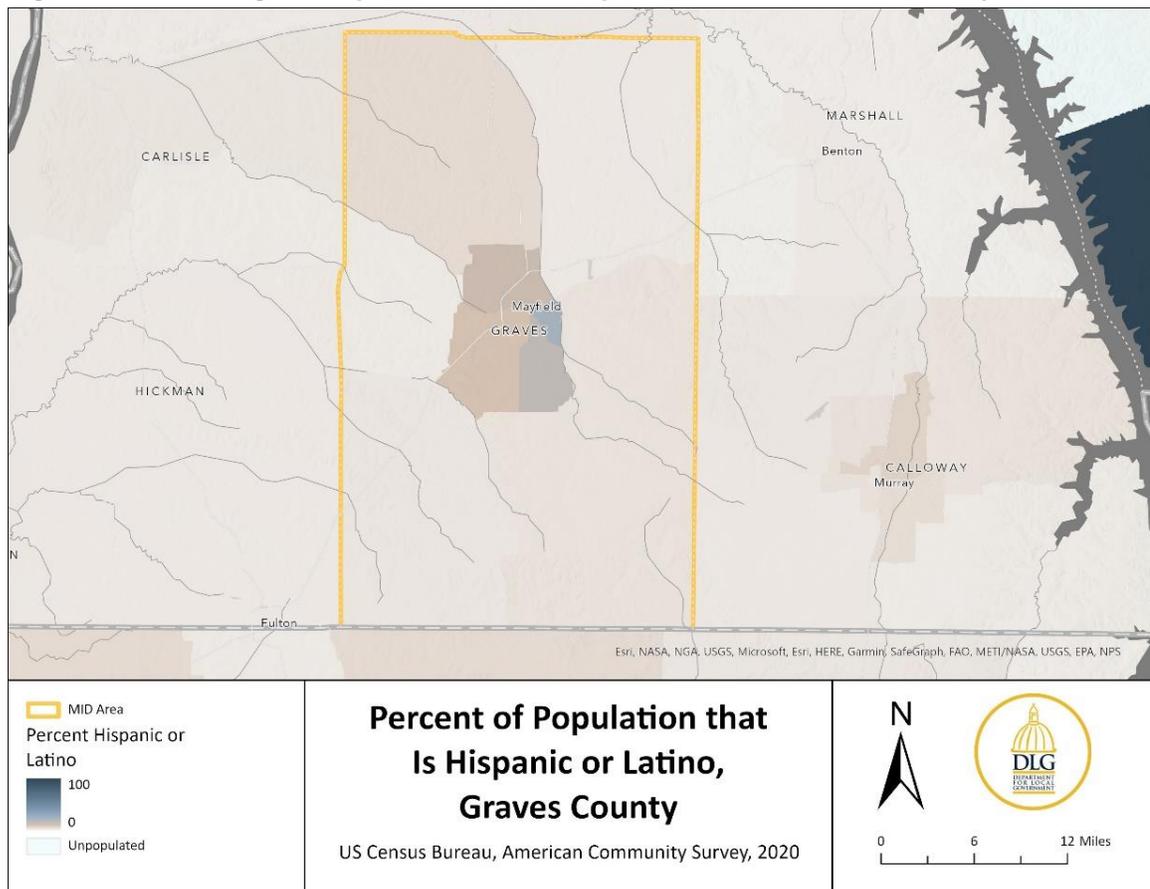


Figure 22. Percentage of Population That is Hispanic or Latino, Hopkins County

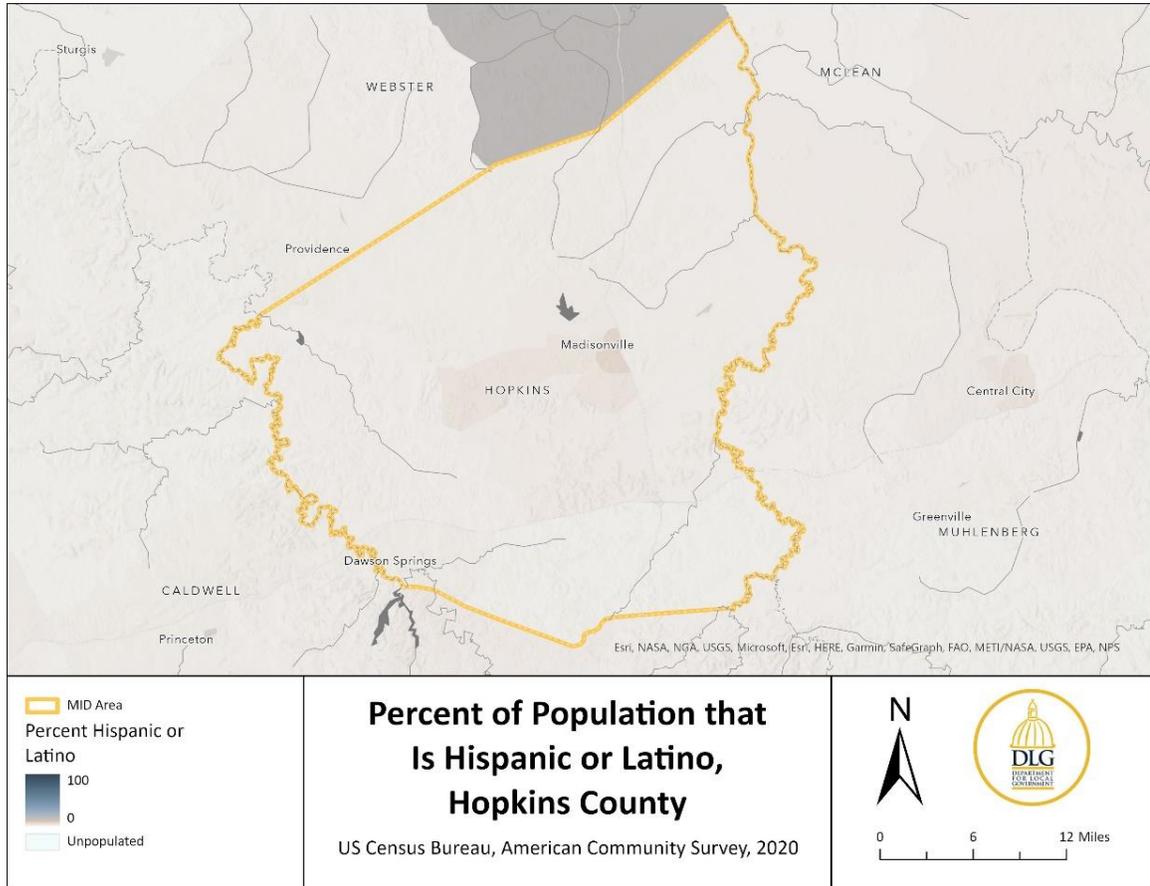


Figure 23. Percentage of Population That is Hispanic or Latino, 42101 ZIP Code

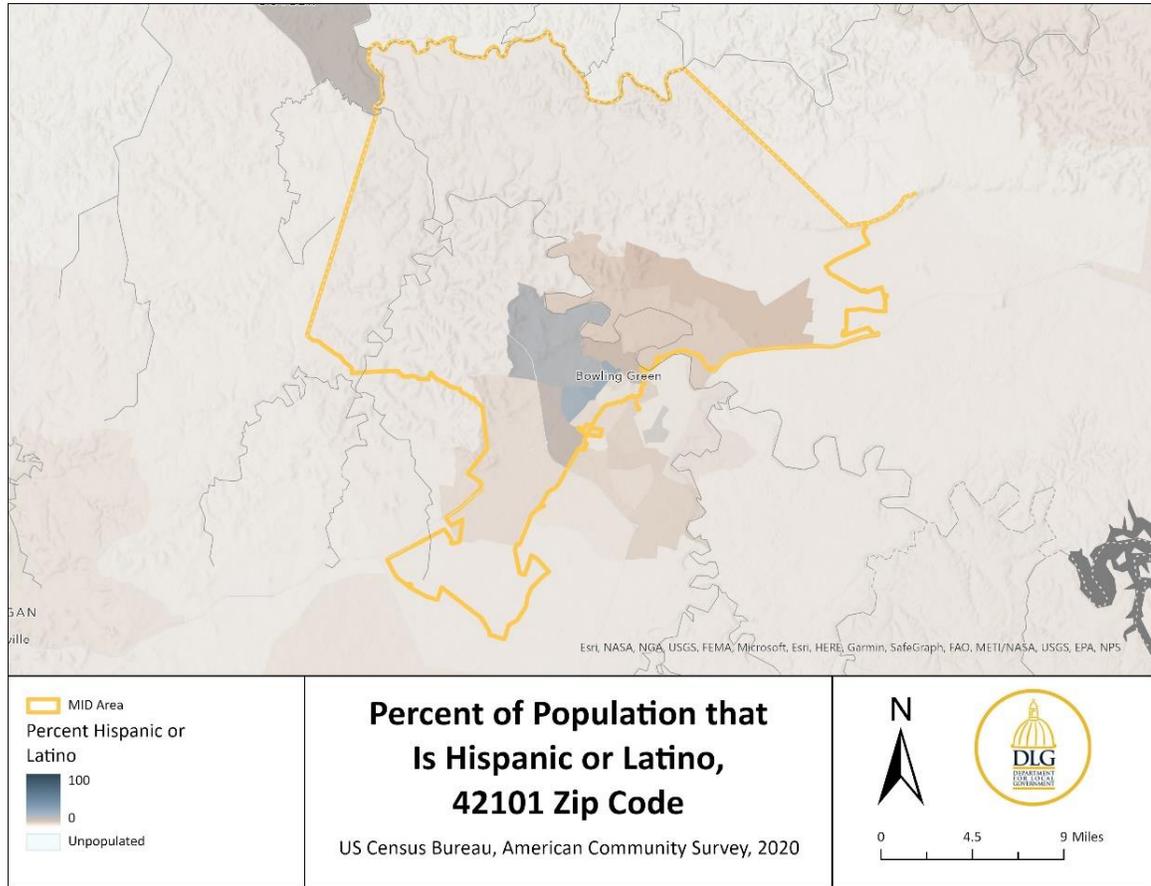


Figure 24. Percentage of Population That is Hispanic or Latino, 41339 ZIP Code

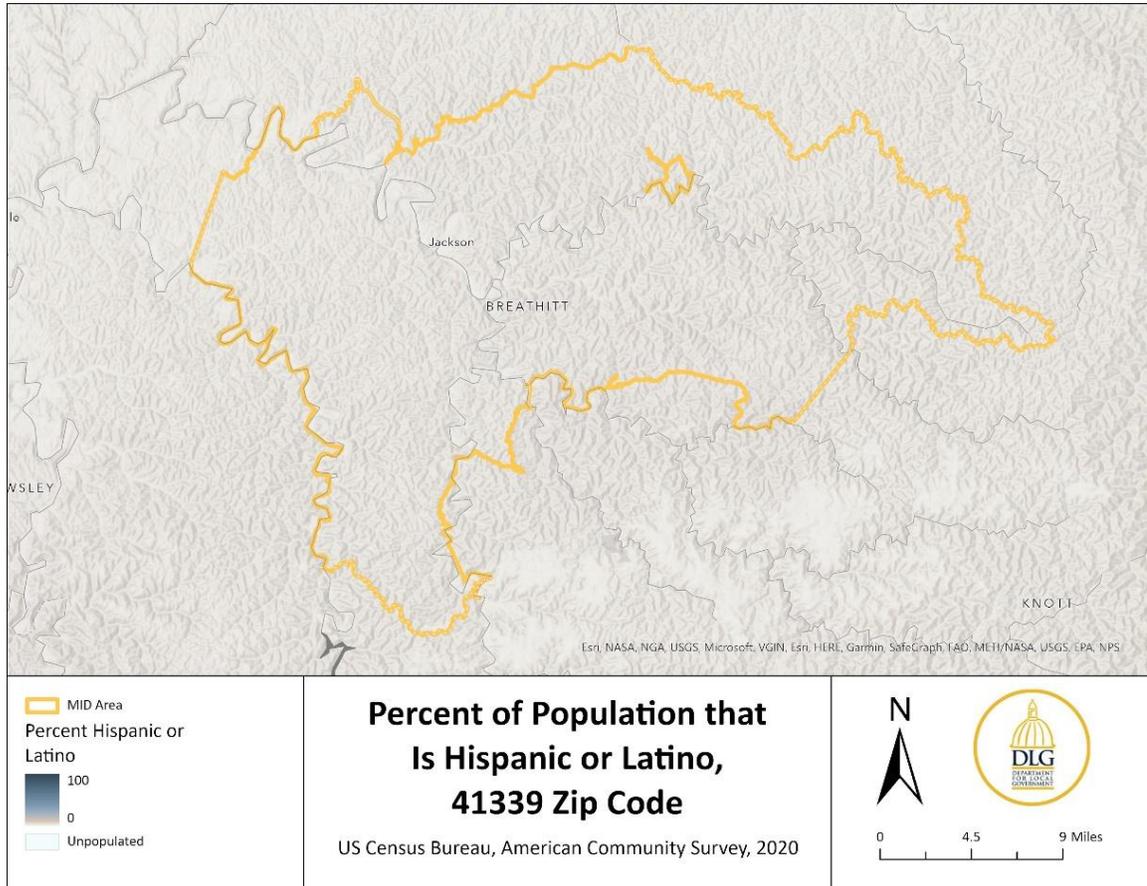


Table 23. Percentage of Population That is Hispanic or Latino, HUD MID Areas

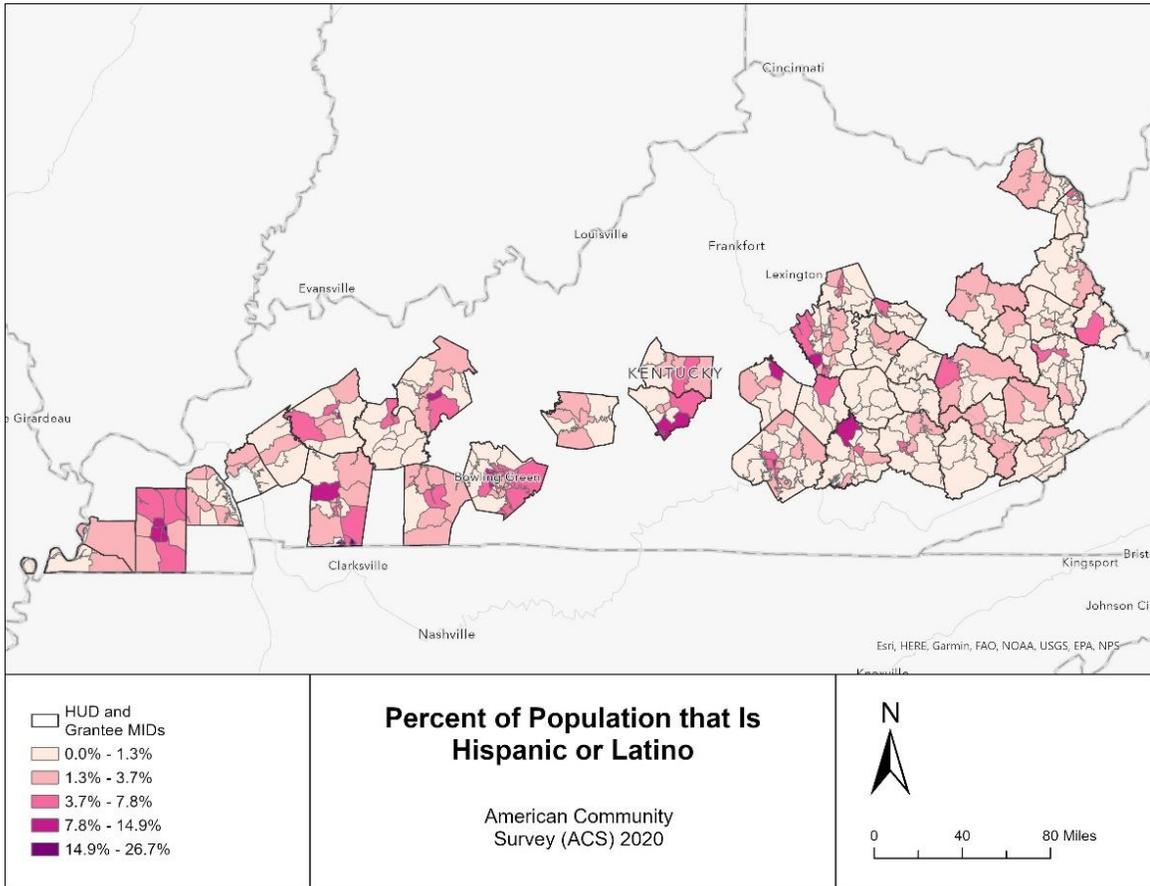
County	Census Tract Number	Total (#)	Hispanic or Latino (#)	Hispanic or Latino (%)	Not Hispanic or Latino (#)	Not Hispanic or Latino (%)
Breathitt	9202	2,170	18	0.83%	2,152	99.17%
Breathitt	9203.01	1,893	10	0.53%	1,883	99.47%
Breathitt	9203.02	1,668	8	0.48%	1,660	99.52%
Breathitt	9205	1,692	6	0.35%	1,686	99.65%
Breathitt	9206	1,950	11	0.56%	1,939	99.44%
Breathitt	9207	1,986	24	1.21%	1,962	98.79%
Breathitt	9208	2,359	16	0.68%	2,343	99.32%
Graves	201	4,050	500	12.35%	3,550	87.65%
Graves	202	4,391	409	9.31%	3,982	90.69%
Graves	203.01	4,721	720	15.25%	4,001	84.75%
Graves	203.02	1,857	409	22.02%	1,448	77.98%

County	Census Tract Number	Total (#)	Hispanic or Latino (#)	Hispanic or Latino (%)	Not Hispanic or Latino (#)	Not Hispanic or Latino (%)
Graves	204	2,709	102	3.77%	2,607	96.23%
Graves	205	3,708	106	2.86%	3,602	97.14%
Graves	206	2,307	36	1.56%	2,271	98.44%
Graves	207	4,969	267	5.37%	4,702	94.63%
Graves	208	4,915	113	2.30%	4,802	97.70%
Graves	209	3,022	111	3.67%	2,911	96.33%
Hopkins	9701	3,008	47	1.56%	2,961	98.44%
Hopkins	9702	3,455	57	1.65%	3,398	98.35%
Hopkins	9703.01	1,885	50	2.65%	1,835	97.35%
Hopkins	9703.02	5,226	114	2.18%	5,112	97.82%
Hopkins	9704	2,062	69	3.35%	1,993	96.65%
Hopkins	9705	5,071	189	3.73%	4,882	96.27%
Hopkins	9706	3,205	189	5.90%	3,016	94.10%
Hopkins	9707	4,798	79	1.65%	4,719	98.35%
Hopkins	9708	2,949	111	3.76%	2,838	96.24%
Hopkins	9709	3,205	75	2.34%	3,130	97.66%
Hopkins	9710	2,674	38	1.42%	2,636	98.58%
Hopkins	9711	3,068	53	1.73%	3,015	98.27%
Hopkins	9713	4,817	55	1.14%	4,762	98.86%
Warren	101	2,755	157	5.70%	2,598	94.30%
Warren	102	3,524	417	11.83%	3,107	88.17%
Warren	103	4,503	1,070	23.76%	3,433	76.24%
Warren	104	4,168	157	3.77%	4,011	96.23%
Warren	105	2,271	95	4.18%	2,176	95.82%
Warren	106	4,302	292	6.79%	4,010	93.21%
Warren	107.01	5,422	384	7.08%	5,038	92.92%
Warren	107.02	6,647	355	5.34%	6,292	94.66%
Warren	108.01	3,984	268	6.73%	3,716	93.27%
Warren	108.02	8,708	307	3.53%	8,401	96.47%
Warren	108.04	2,882	86	2.98%	2,796	97.02%
Warren	108.05	3,998	239	5.98%	3,759	94.02%
Warren	109	4,703	246	5.23%	4,457	94.77%
Warren	110.01	4,305	914	21.23%	3,391	78.77%
Warren	110.02	7,852	1,063	13.54%	6,789	86.46%
Warren	111	7,759	418	5.39%	7,341	94.61%

County	Census Tract Number	Total (#)	Hispanic or Latino (#)	Hispanic or Latino (%)	Not Hispanic or Latino (#)	Not Hispanic or Latino (%)
Warren	112	5,369	911	16.97%	4,458	83.03%
Warren	113	4,733	359	7.59%	4,374	92.41%
Warren	114.01	7,233	245	3.39%	6,988	96.61%
Warren	114.02	3,501	150	4.28%	3,351	95.72%
Warren	115	7,550	192	2.54%	7,358	97.46%
Warren	116	5,964	150	2.52%	5,814	97.48%
Warren	117.01	5,749	513	8.92%	5,236	91.08%
Warren	117.02	3,705	98	2.65%	3,607	97.35%
Warren	118.01	3,187	99	3.11%	3,088	96.89%
Warren	118.02	2,721	67	2.46%	2,654	97.54%
Warren	119	7,059	189	2.68%	6,870	97.32%

Source: 2020 Decennial Census, U.S. Census Bureau

Figure 25. Percentage of Hispanic or Latino Population, Grantee MID Areas



2.2.3.6.9 Poverty and LMI Status

2.2.3.6.9.1 Poverty

Data from the U.S. Census Bureau’s 2020 American Community Survey indicate that 19% of residents in the HUD MID areas are below the federal poverty level. The county within the MID area with the highest percentage of residents living in poverty is Breathitt County, where 4,367 residents (44.2%) have incomes below the federal poverty level. The county with the greatest number of residents living in poverty is Warren County, with 20,285 residents (16.8% of the county’s population) living in poverty.

DLG is required to meet LMI requirements, meaning that programs need to serve primarily persons who are classified as LMI. The maps below are helpful in determining how DLG and subrecipients can address remaining unmet needs and target funds to ensure that people who lack resources are provided the opportunity to recover.

Figure 26. Percentage of Population Living in Poverty, 41339 ZIP Code

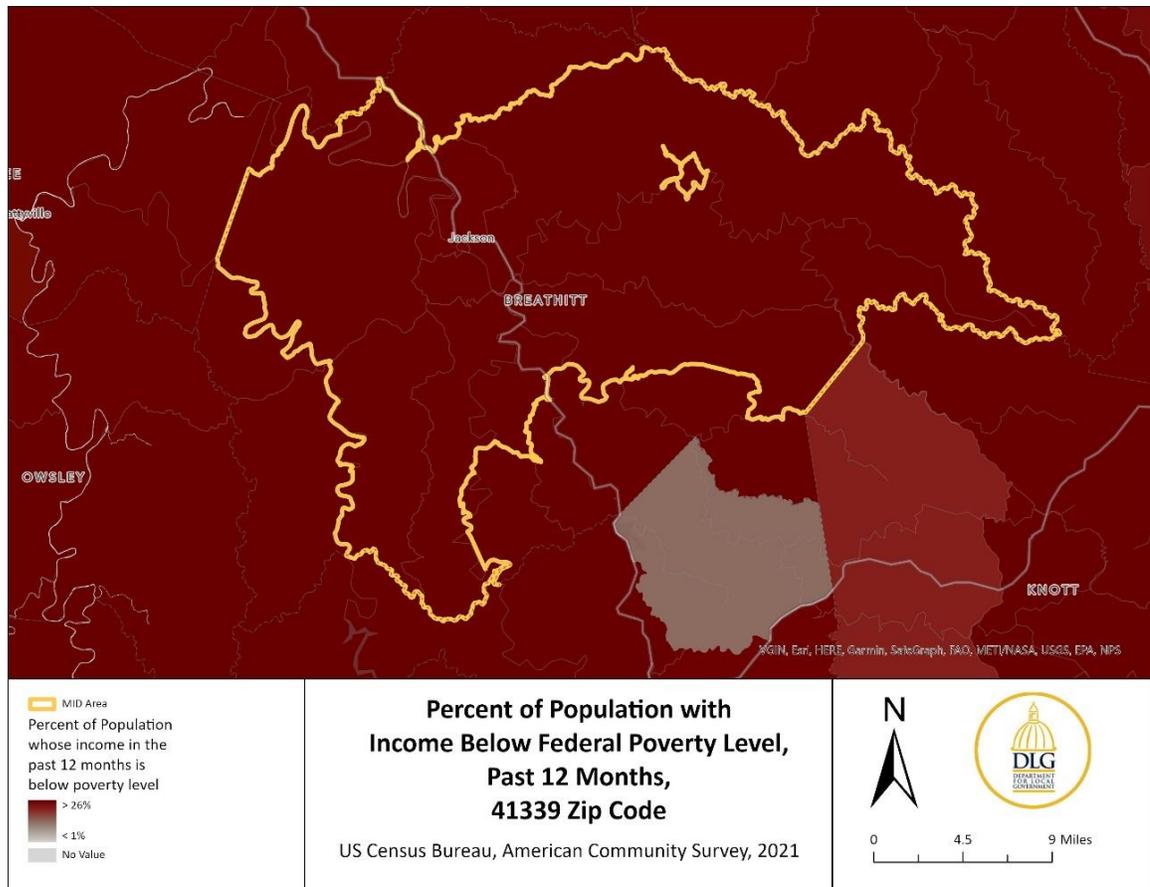


Figure 27. Percentage of Population Living in Poverty, 42101 ZIP Code

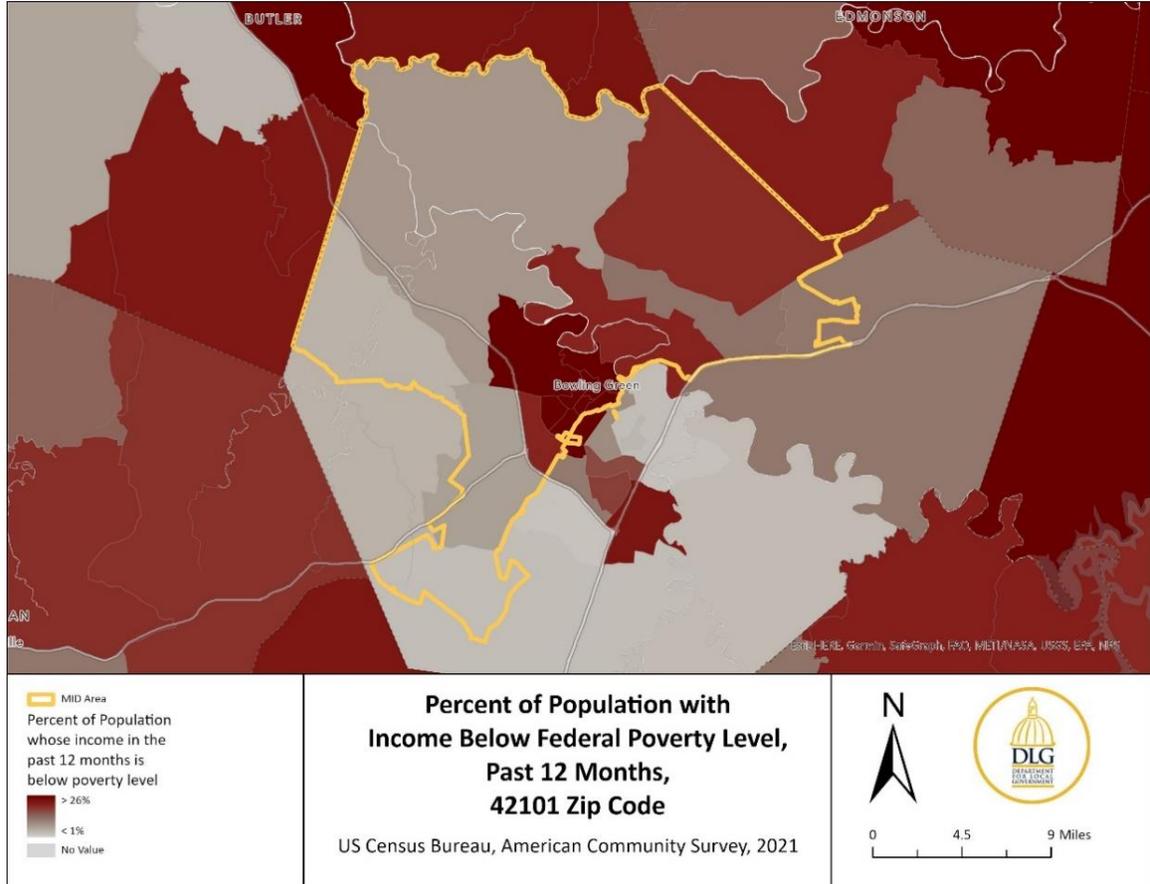


Figure 28. Percentage of Population Living in Poverty, Hopkins County

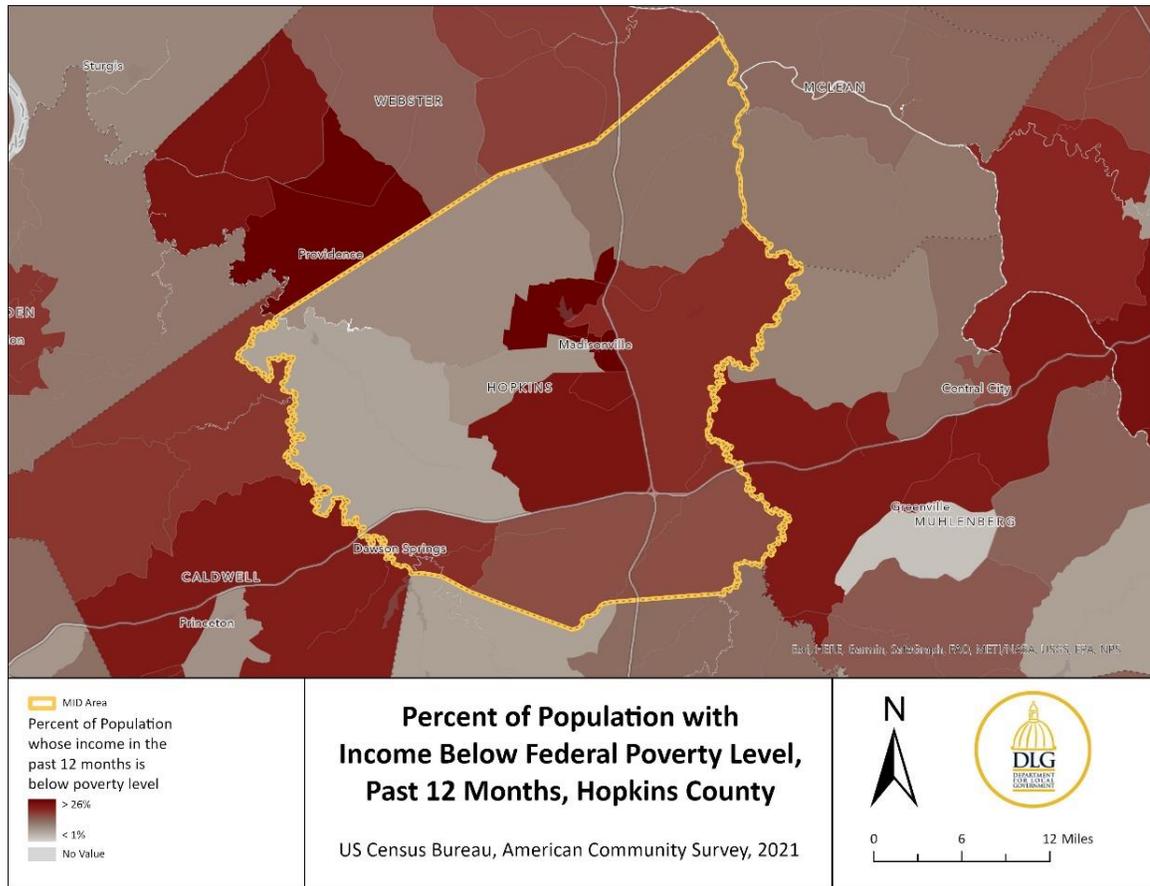


Figure 29. Percentage of Population Living in Poverty, Graves County

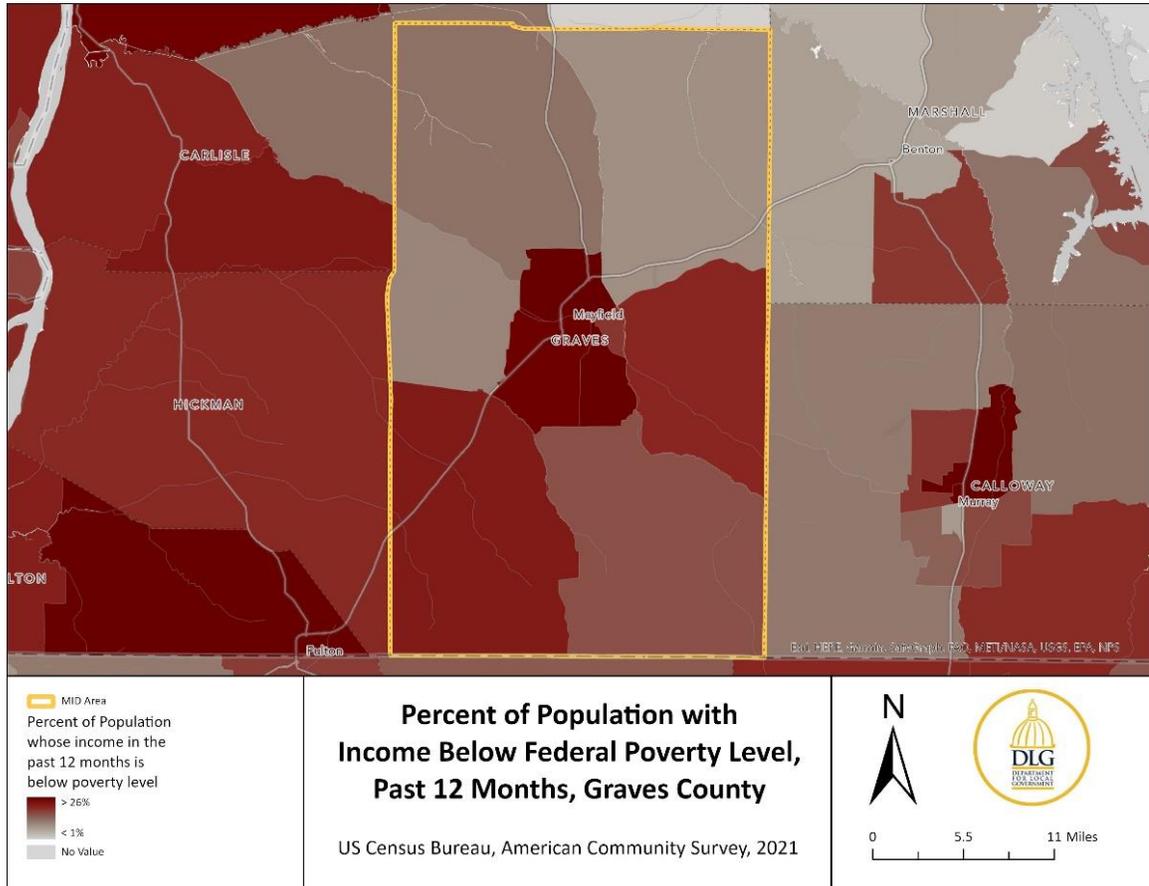


Table 24. Percentage of Population Living in Poverty

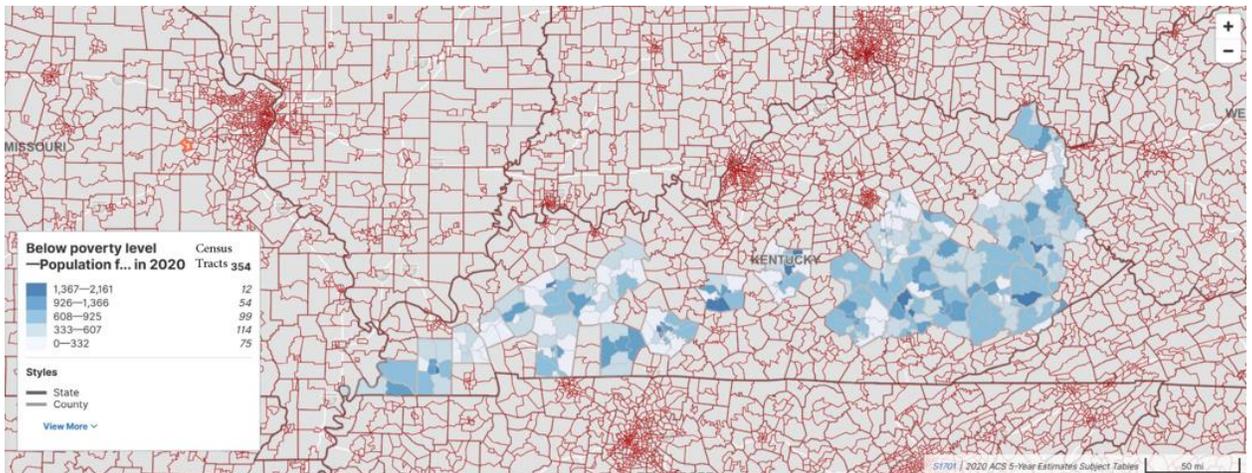
County	Census Tract Number	Total (#)	Below Poverty Level (#)	Below Poverty Level (%)
Breathitt	9202	2,032	582	28.60%
Breathitt	9203.01	2,012	513	25.50%
Breathitt	9203.02	1,040	421	40.50%
Breathitt	9205	1,547	454	29.30%
Breathitt	9206	1,585	728	45.90%
Breathitt	9207	1,863	717	38.50%
Breathitt	9208	2,438	765	31.40%
Graves	201	3,791	1,070	28.20%
Graves	202	4,526	1,117	24.70%
Graves	203.01	4,149	1,606	38.70%
Graves	203.02	1,795	330	18.40%
Graves	204	2,978	471	15.80%

County	Census Tract Number	Total (#)	Below Poverty Level (#)	Below Poverty Level (%)
Graves	205	3,870	839	21.70%
Graves	206	2,542	261	10.30%
Graves	207	4,742	599	12.60%
Graves	208	4,668	430	9.20%
Graves	209	3,278	653	19.90%
Hopkins	9701	2,881	367	12.70%
Hopkins	9702	3,378	324	9.60%
Hopkins	9703.01	1,522	300	19.70%
Hopkins	9703.02	4,895	1,581	32.30%
Hopkins	9704	2,012	698	34.70%
Hopkins	9705	4,570	391	8.60%
Hopkins	9706	2,714	1,072	39.50%
Hopkins	9707	4,690	901	19.20%
Hopkins	9708	2,743	619	22.60%
Hopkins	9709	3,538	801	22.60%
Hopkins	9710	2,931	203	6.90%
Hopkins	9711	3,183	606	19.00%
Hopkins	9713	4,718	757	16.00%
Warren	101	2,233	1,356	60.70%
Warren	102	3,298	1,366	41.40%
Warren	103	4,423	2,161	48.90%
Warren	104	230	152	66.10%
Warren	105	2,504	1,088	43.50%
Warren	106	4,392	411	9.40%
Warren	107.01	5,525	906	16.40%
Warren	107.02	6,607	1,153	17.50%
Warren	108.01	2,794	626	22.40%
Warren	108.02	8,626	261	3.00%
Warren	108.04	3,156	1,092	34.60%
Warren	108.05	3,278	377	11.50%
Warren	109	4,544	1,319	29.00%
Warren	110.01	4,340	1,362	31.40%
Warren	110.02	7,592	1,534	20.20%
Warren	111	6,695	488	7.30%
Warren	112	4,819	1,632	33.90%

County	Census Tract Number	Total (#)	Below Poverty Level (#)	Below Poverty Level (%)
Warren	113	4,956	1,001	20.20%
Warren	114.01	6,931	243	3.50%
Warren	114.02	3,653	112	3.10%
Warren	115	7,284	274	3.80%
Warren	116	5,293	628	11.90%
Warren	117.01	4,407	548	12.40%
Warren	117.02	3,831	740	19.30%
Warren	118.01	2,928	246	8.40%
Warren	118.02	2,844	138	4.90%
Warren	119	5,917	210	3.50%

Source: U.S. Census Bureau's 2020 American Community Survey 5-Year Estimates

Figure 30. Percentage of Population Living in Poverty, Grantee MID Areas

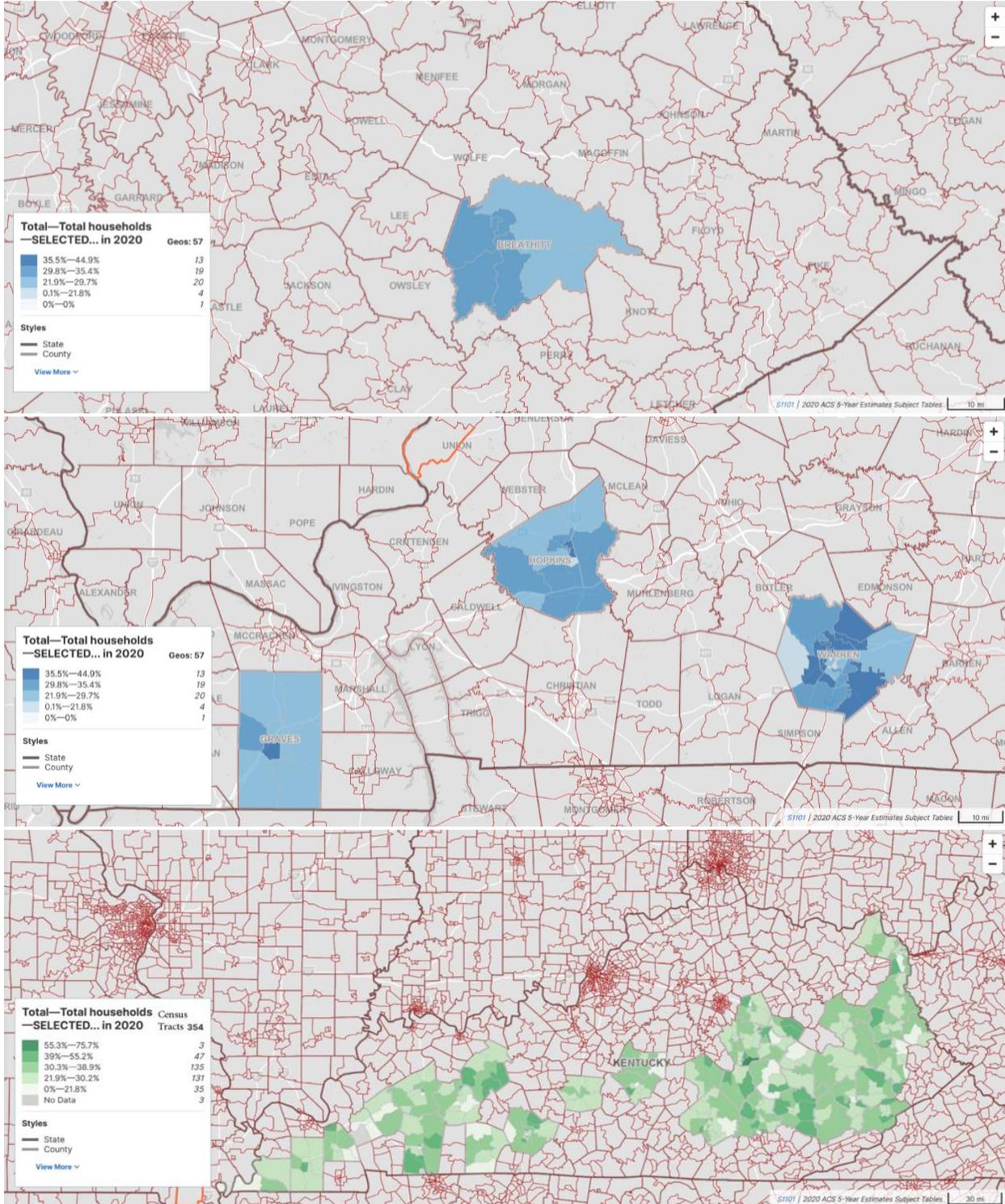


2.2.3.6.10 Familial Status

2.2.3.6.10.1 Household Composition

Families need an income equal to about twice the federal poverty threshold to meet the most basic needs, and many households are one financial emergency away from taking on costly credit card debt. The more children in a family, the more income is needed. Looking at data on households with children can be a proxy for highlighting areas of potential economic insecurity if there is an economic downturn and median household incomes fall. Using available data from the U.S. Census Bureau's 2020 American Community Survey, the number of households with one or more children is dispersed across Kentucky but slightly overrepresented in eastern Kentucky (see Figure 31).

Figure 31. Households With One or More People Under 18, HUD and Grantee MID Areas



2.2.3.6.11 *Environmental Justice*

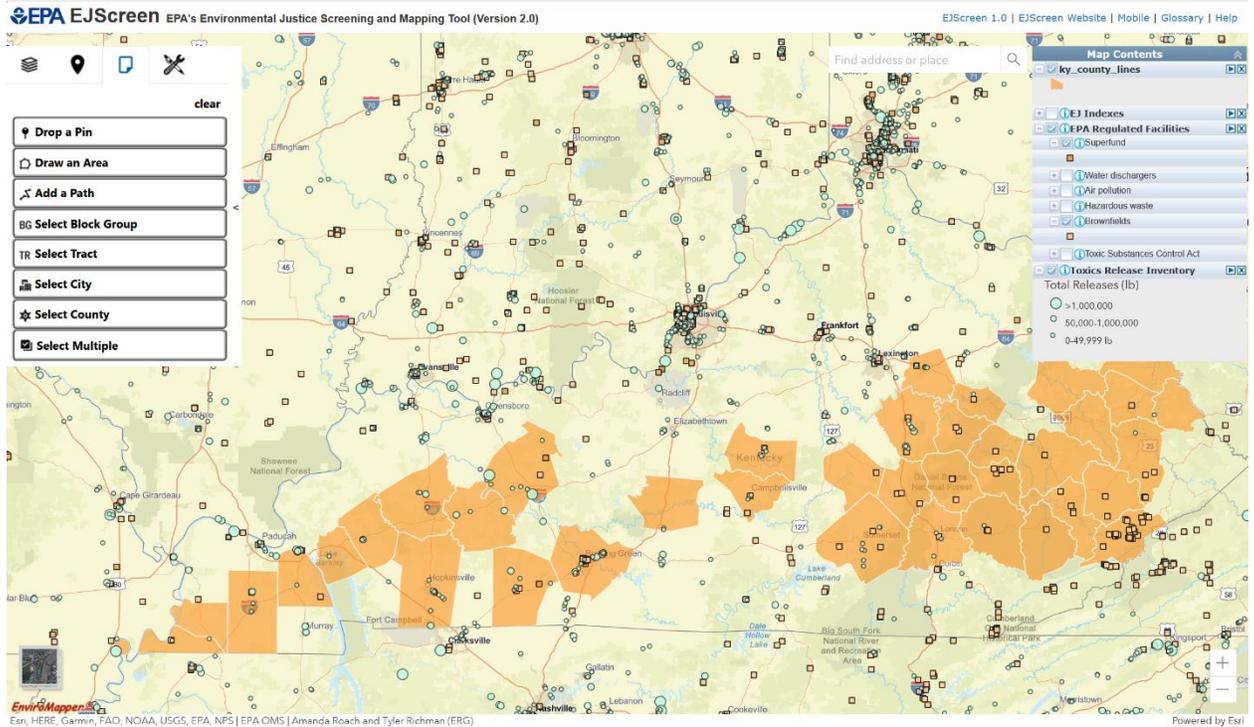
EPA's environmental justice screening and mapping tool provides EPA with a nationally consistent dataset and approach for combining environmental and demographic indicators. The EJScreen evaluates 12 environmental and seven demographic indicators and consolidates the two indicators into 12 environmental justice (EJ) indicators. Each EJ index combines demographic indicators with a single environmental indicator.

Figure 32 shows where the superfund, brownfield, and toxic release sites are in the Commonwealth. Eastern Kentucky has primarily superfund and brownfield sites, and western Kentucky has mostly sites that release toxic chemicals.

- Superfunds: Contaminated sites due to hazardous waste being dumped, left out in the open, or otherwise improperly managed. These sites include manufacturing facilities, processing plants, landfills, and mining sites.
- Brownfields: Properties for which expansion, redevelopment, or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.
- Toxic Releases: Sites that release toxic chemicals into the environment or sites otherwise managed as waste by certain industrial and federal facilities.

Using the scoring criteria, DLG will evaluate scope in the applications to consider the specific location of projects and plan accordingly for the specific hazards and natural features that would affect impacted and vulnerable populations. For the housing programs in particular, DLG will aim to mitigate the negative impact of sites by limiting the proximity of new housing to these sites and informing homeowners or renters about proximity to sites. DLG may also work with the Superfund Branch of the [Kentucky Energy and Environmental Cabinet](#) to assist with the management of specific sites, providing oversight and working with contractors on remediation of properties.

Figure 32. EPA’s EJ Concerns (Superfunds, Brownfields, Toxic Releases) for MID Areas



2.2.3.7 Statewide Demographics and Disaster-Impacted Populations

The table below demonstrates that in the MID areas, Black or African American individuals represent 7% of the total population, Hispanic or Latino individuals represent 6% of the total population, and minorities represent 15% of the population. This information allows Kentucky to design programs that help minority populations overcome barriers that may exclude them from housing opportunities.

Table 25. Race and Ethnicity

Demographic	State Estimates	State Percentage	Disaster Declaration Estimates	Disaster Declaration Percentage	MID Estimates	MID Percentage
Total Population	4,461,952	100.00%	1,432,689	100.00%	225,807	100.00%
Single Race	4,337,236	97.20%	1,394,572	97.34%	218,368	96.71%
White or Caucasian	3,848,305	86.25%	1,258,537	87.84%	191,433	84.78%
Minority	613,647	13.75%	174,152	12.16%	34,374	15.22%
Black or African American	361,230	8.10%	94,795	6.62%	16,112	7.14%

Demographic	State Estimates	State Percentage	Disaster Declaration Estimates	Disaster Declaration Percentage	MID Estimates	MID Percentage
American Indian and/or Alaska Native	8,364	0.19%	2,913	0.20%	534	0.24%
Asian	68,139	1.53%	20,701	1.44%	6,144	2.72%
Native Hawaiian and Other Pacific Islander	3,033	0.07%	835	0.06%	664	0.29%
Some Other Race	48,164	1.08%	16,791	1.17%	3,481	1.54%
Two or More Races	124,716	2.80%	38,117	2.66%	7,439	3.29%
Hispanic or Latino	207,854	4.66%	61,577	4.30%	13,433	5.95%

Source: 2020 Decennial Census redistricting data

Table 26. Age and Sex

The table below shows the number of children and seniors living in the disaster-impacted counties. There are more than 50,000 children under the age of 18 and more than 30,000 seniors living in MID areas.

Demographic	State Estimates	State Percentage	Disaster Declaration Estimates	Disaster Declaration Percentage	MID Estimates	MID Percentage
Total Population	4,461,952	100.00%	1,432,689	100.00%	225,807	100.00%
Under Age 5	273,575	6.13%	72,160	5.04%	14,221	6.30%
Under Age 18	1,007,619	22.58%	316,104	22.06%	51,633	22.87%
Over Age 65	729,928	16.36%	235,922	16.47%	34,064	15.09%
Male	2,196,522	49.23%	706,645	49.32%	110,719	49.03%
Female	2,265,430	50.77%	726,044	50.68%	115,088	50.97%

Source: U.S. Census Bureau's American Community Survey 5-Year Estimates (2015–2019)

Table 27. Social Vulnerability and Protected Classes

Demographic	State Estimates	State Percentage	Disaster Declaration Estimates	Disaster Declaration Percentage	MID Estimates	MID Percentage
Total Households	1,734,618	100.00%	599,630	100.00%	86,486	100.00%
Persons with Disabilities	768,194	17.22%	267,832	18.69%	38,227	16.93%
Single-Parent Households	116,812	6.73%	38,502	6.42%	6,187	7.15%
Foreign-Born	176,323	3.95%	52,583	3.67%	13,645	6.04%

Source: U.S. Census Bureau's American Community Survey 5-Year Estimates (2019 and 2020)

The table below illustrates the number and percentages of socially vulnerable persons living in MID areas within the disaster-declared counties. People with disabilities represent 16% of the population, single-parent households represent 7% of the population, and foreign-born residents represent 6% of the population. The data inform the design of programs to make communities more resilient for any future disasters.

2.2.3.8 Education Demographics

The table below illustrates the educational levels for individuals aged 25 and older in the disaster-declared counties. In these counties, roughly 26% of individuals 25 and older have a high school graduate or equivalent education, and approximately 16% have some college education but no degree. More than 35% have an associate's degree or higher living in MID areas compared to 29% of individuals with a bachelor's degree or higher within the State.

Table 28. Education Demographics

Education (population age 25 and older)	State Estimates	State Percentage	Disaster Declaration Estimates	Disaster Declaration Percentage	MID Estimates	MID Percentage
High School Graduate or Equivalent	3,034,491	100.00%	793,913	26.16%	155,725	5.13%
Some College, No Degree	389,642	12.84%	127,229	16.03%	20,913	13.43%
Associate's Degree	990,196	32.63%	284,651	35.85%	51,122	32.83%
Bachelor's Degree or Higher	895,321	29.50%	230,378	29.02%	45,703	29.35%

Source: U.S. Census Bureau's American Community Survey 5-Year Estimates (2015–2019)

2.2.3.9 Income Demographics

The table below shows a comparison of the median household income and the per capita income (mean income calculated for all individuals in a specific area), demonstrating that more than 200,000 persons living in the disaster-declared counties have incomes below the poverty level. Persons living in poverty have a difficult time finding affordable housing that meets the needs of their families and tend to live on meager means. The proposed programs prioritize low-income persons to improve their access to affordable housing.

Table 29. Income

Income/Economic Demographics	Statewide	Counties Impacted by Disaster	MID Areas
Median Household Income	\$52,238	\$45,456	\$48,715
Per Capita Income	\$29,123	\$25,099	\$27,214
Persons With Income Below the Poverty Level in the Past 12 Months	717,895	227,143	46,031

Source: U.S. Census Bureau's American Community Survey 5-Year Estimates (2015–2019)

2.2.3.10 LMI Analysis – Statewide

Table 30 and Table 31 below illustrate the number of LMI persons living in disaster- and nondisaster-impacted counties. The information will inform how funds are used to benefit LMI households through the housing, infrastructure, and planning programs.

Table 30. Statewide LMI

	Total LMI Persons	Total Population	Percentage of LMI
Statewide	1,813,568	4,268,483	42.50%
Breathitt County	7,405	13,250	55.90%
Graves County	13,800	36,860	37.40%
Hopkins County	17,605	45,535	38.70%
Warren County	46,970	112,345	41.80%

Source: U.S. Census Bureau's American Community Survey 5-Year Estimates (2015–2019)

2.2.3.11 LMI Analysis – Federally Declared Disaster Areas

Table 31. LMI by County (HUD and Grantee MID Areas)

County	Non-MID Total LMI Persons	Non-MID Total Population	Non-MID Percentage LMI	MID Total LMI Persons	MID Total Population	MID Percentage LMI
HUD and Grantee MIDs						
Breathitt	–	–	–	7,405	13,250	55.90%
Graves	–	–	–	13,800	36,860	37.40%
Hopkins	–	–	–	17,605	45,535	38.70%
Warren	–	–	–	46,970	112,345	41.80%
Other Impacted Counties						
Boyd	17,975	46,700	38.50%	–	–	–
Caldwell	4,500	12,670	35.50%	–	–	–
Christian	30,115	68,060	44.20%	–	–	–
Clark	15,515	35,230	44.00%	–	–	–
Clay	11,395	19,535	58.30%	–	–	–
Estill	6,865	14,345	47.90%	–	–	–
Floyd	18,645	37,785	49.30%	–	–	–
Fulton	2,820	5,990	47.10%	–	–	–
Greenup	12,840	36,055	35.60%	–	–	–
Hart	8,175	18,180	45.00%	–	–	–
Hickman	1,925	4,520	42.60%	–	–	–
Jackson	7,025	13,245	53.00%	–	–	–
Johnson	9,905	22,830	43.40%	–	–	–
Knott	–	–	–	7,375	15,350	48.00%
Laurel	24,995	58,590	42.66%	–	–	–
Lawrence	6,745	15,710	42.90%	–	–	–
Lee	3,515	6,275	56.00%	–	–	–
Leslie	5,265	10,750	49.00%	–	–	–
Letcher	10,730	23,420	45.80%	–	–	–
Lincoln	10,674	24,275	44.00%	–	–	–
Logan	10,250	26,560	38.60%	–	–	–
Lyon	2,720	7,065	38.50%	–	–	–
Madison	35,235	79,835	44.10%	–	–	–
Magoffin	6,715	12,830	52.30%	–	–	–
Marion	7,435	18,565	40.00%	–	–	–
Marshall	11,060	30,640	36.10%	–	–	–

County	Non-MID Total LMI Persons	Non-MID Total Population	Non-MID Percentage LMI	MID Total LMI Persons	MID Total Population	MID Percentage LMI
Martin	5,725	11,115	51.50%	–	–	–
Morgan	5,940	11,775	50.40%	–	–	–
Muhlenburg	11,685	30,005	38.90%	–	–	–
Ohio	9,065	23,710	38.20%	–	–	–
Owsley	2,290	4,530	50.60%	–	–	–
Perry	12,145	27,345	44.40%	–	–	–
Powell	5,680	12,225	46.50%	–	–	–
Pulaski	26,845	62,610	42.90%	–	–	–
Rockcastle	7,490	16,610	45.10%	–	–	–
Taylor	11,075	23,885	46.40%	–	–	–

Source: U.S. Census Bureau's American Community Survey 5-Year Estimates (2011–2015)

2.2.3.12 Manufactured Housing Units Impacted by Disaster

The table below shows the manufactured home inventory for the disaster-impacted HUD and grantee-identified MID counties. Several of the MID counties, such as Breathitt, Floyd, Graves, and Hopkins, have more than 100 manufactured homes units and have substantial remaining unmet needs.

Table 32. Manufactured Housing Units Impacted

Disaster	County/Municipality	Number of Units	Percent of Total Units in County/Municipality	Remaining Unmet Need
DR-4595	Boyd	10	0.57%	\$45,005
DR-4595	Breathitt	239	10.86%	\$343,017
DR-4595	Clark	5	0.44%	\$2,788
DR-4595	Clay	97	4.30%	\$56,051
DR-4595	Estill	39	3.45%	\$129,670
DR-4595	Floyd	109	2.49%	\$236,364
DR-4595	Greenup	19	0.98%	-
DR-4595	Jackson	22	1.58%	-
DR-4595	Johnson	72	3.48%	\$4,834
DR-4595	Knott	16	0.70%	-
DR-4595	Laurel	10	0.18%	-
DR-4595	Lawrence	21	1.00%	-
DR-4595	Lee	35	4.64%	-
DR-4595	Leslie	18	1.21%	-

Disaster	County/Municipality	Number of Units	Percent of Total Units in County/Municipality	Remaining Unmet Need
DR-4595	Letcher	6	0.22%	\$118,120
DR-4595	Madison	5	0.21%	\$4,105
DR-4595	Magoffin	71	2.87%	\$51,693
DR-4595	Martin	98	6.70%	\$60,470
DR-4595	Morgan	16	0.93%	\$73,246
DR-4595	Owsley	18	4.36%	-
DR-4595	Perry	34	1.02%	\$93,797
DR-4595	Powell	17	1.80%	\$149,940
DR-4595	Pulaski	7	0.16%	\$2,987
DR-4595	Rockcastle	18	0.92%	-
DR-4595	Warren	6	0.20%	\$5,202
DR-4630	Caldwell	51	7.14%	\$3,258,927
DR-4630	Christian	24	1.25%	\$398,823
DR-4630	Fulton	16	8.04%	\$515,986
DR-4630	Graves	115	5.84%	\$349,534
DR-4630	Hart	23	1.67%	\$162,562
DR-4630	Hickman	10	4.20%	-
DR-4630	Hopkins	197	7.70%	\$5,539,618
DR-4630	Logan	36	3.51%	\$346,815
DR-4630	Lyon	22	5.67%	\$754,892
DR-4630	Marion	12	1.35%	\$17,818
DR-4630	Marshall	77	4.82%	\$3,874,151
DR-4630	Muhlenberg	67	2.89%	\$2,178,997
DR-4630	Ohio	40	2.15%	\$253,061
DR-4630	Taylor	23	2.65%	\$673,080
DR-4630	Warren	59	2.00%	-

Source: FEMA IA data, ACS data (S2504) – Physical Housing Characteristics For Occupied Housing Units

2.2.3.13 SNAP and D-SNAP Applicants Impacted by the Disaster

The SNAP program offers food benefits to low-income individuals and families. When a disaster occurs, individuals and families may be eligible for additional nutrition assistance through the Disaster Supplemental Nutrition Assistance Program (D-SNAP). The table below shows that in the disaster-declared counties, more than 1,000 households received additional food benefits.

Table 33. SNAP and D-SNAP Applicants Impacted

County	SNAP Households Impacted	SNAP Individuals Impacted	Households Issued D-SNAP Benefits	Individuals Issued D-SNAP Benefits
Anderson	821	2,110	0	0
Ballard	343	875	0	0
Barren	2,778	6,917	3	10
Bell	2,735	6,646	0	0
Boyd	3,193	7,983	0	0
Breathitt	1,767	4,170	0	0
Breckenridge	1,167	3,011	0	0
Bullitt	1,968	5,294	0	0
Caldwell	810	1,944	79	220
Calloway	1,505	3,431	0	0
Carter	1,981	5,408	0	0
Casey	1,205	3,085	0	0
Christian	3,704	9,186	121	294
Clark	2,168	5,312	0	0
Clay	2,548	6,421	0	0
Cumberland	410	1,021	0	0
Edmonson	580	1,369	0	0
Elliot	712	1,759	0	0
Estill	1,490	3,710	0	0
Fayette	12,357	29,163	0	0
Floyd	3,729	8,875	0	0
Franklin	2,164	4,956	0	0
Fulton	533	1,178	29	80
Graves	1,740	4,402	468	1,118
Grayson	1,767	4,718	0	0
Greenup	1,964	4,792	0	0
Harlan	2,993	7,123	0	0
Hart	1,197	3,064	2	9
Hickman	161	404	24	78
Hopkins	2,717	6,439	217	564
Jackson	1,596	3,910	0	0
Jessamine	2,218	6,077	0	0
Johnson	1,914	4,881	0	0
Knott	1,884	4,277	0	0

County	SNAP Households Impacted	SNAP Individuals Impacted	Households Issued D-SNAP Benefits	Individuals Issued D-SNAP Benefits
Knox	3,756	9,503	0	0
Laurel	4,168	10,962	0	0
Lawrence	1,292	3,592	0	0
Lee	1,098	2,525	0	0
Leslie	1,023	2,404	0	0
Letcher	2,853	6,448	0	0
Lincoln	1,682	4,205	0	0
Logan	1,212	3,091	14	50
Lyon	529	1,127	3	7
Madison	4,461	11,286	0	0
Magoffin	1,643	4,025	0	0
Marion	1,339	3,281	0	0
Marshall	1,072	2,498	50	167
Martin	780	1,966	0	0
Mason	1,228	3,168	0	0
Meade	1,669	4,389	0	0
Menifee	651	1,680	0	0
Morgan	1,123	2,729	0	0
Mulhenberg	1,472	3,827	40	110
Ohio	995	2,567	9	32
Owsley	604	1,582	0	0
Perry	2,709	6,122	0	0
Pike	6,684	15,039	0	0
Powell	1,095	2,803	0	0
Pulaski	4,198	10,495	0	0
Rockcastle	1,420	3,536	0	0
Shelby	1,425	3,947	0	0
Spencer	427	1,166	0	0
Taylor	1,366	3,442	13	33
Todd	850	2,219	0	0
Union	595	1,499	0	0
Warren	6,164	15,287	233	602
Whitley	2,353	6,377	0	0
Wolfe	1,087	2,554	0	0
Woodford	970	2,435	0	0

County	SNAP Households Impacted	SNAP Individuals Impacted	Households Issued D-SNAP Benefits	Individuals Issued D-SNAP Benefits
TOTAL	136,812	337,685	1,305	3,374

Source: U.S. Census Bureau's 2020 American Community Survey 5-Year Estimates

2.2.3.14 Limited English Proficiency Breakdown

Tables 34 and 35 show the languages spoken by LEP persons who are living in the disaster-declared HUD MID counties; Spanish-speaking persons represent the highest percentage. The State uses this information for its Citizen Participation Plan and will consider it in the implementation of its recovery programs to ensure that any language barrier is removed. Public information is translated into Spanish, and interpreters are available to assist with communication. For all other languages, translation and interpreters will be made available as needed.

Table 34. Breakdown of LEP Persons

County	Estimate of Persons Who Speak English Less Than "Very Well"	Percentage of Persons Who Speak English Less Than "Very Well"
Breathitt	37	0.30%
Graves	1,111	3.20%
Hopkins	137	0.30%
Warren	7,388	6.00%

Source: U.S. Census Bureau's American Community Survey 5-Year Estimates (2014–2018)

2.2.3.15 Languages Spoken Within the State

Table 35. Languages Spoken Within the State

County	Languages Spoken	Estimate Number Population	Percentage of Population
Breathitt	Speak only English	11,868	99.23%
Breathitt	Speak Spanish	31	0.26%
Breathitt	Speak other Indo-European languages	21	0.18%
Breathitt	Speak Asian and Pacific Island languages	32	0.27%
Breathitt	Speak other languages	8	0.07%
Graves	Speak only English	32,997	94.63%
Graves	Speak Spanish	1,586	4.55%
Graves	Speak other Indo-European languages	182	0.52%
Graves	Speak Asian and Pacific Island languages	86	0.25%
Graves	Speak other languages	17	0.05%

County	Languages Spoken	Estimate Number Population	Percentage of Population
Hopkins	Speak only English	41,750	98.49%
Hopkins	Speak Spanish	307	0.72%
Hopkins	Speak other Indo-European languages	205	0.48%
Hopkins	Speak Asian and Pacific Island languages	97	0.23%
Hopkins	Speak other languages	33	0.08%
Warren	Speak only English	108,016	88.27%
Warren	Speak Spanish	4,465	3.65%
Warren	Speak other Indo-European languages	3,414	2.79%
Warren	Speak Asian and Pacific Island languages	4,277	3.50%
Warren	Speak other languages	2,194	1.79%

Source: U.S. Census Bureau's American Community Survey 5-Year Estimates (2015–2019)

2.2.3.16 Affected Continuum of Care Entities

Tables 36, 37, and 38 illustrate the number of persons experiencing homelessness by Continuum of Care regions and county. This information is used to effectively target nontraditional outreach methods to ensure persons experiencing homelessness are connected to the right resources for recovery.

Table 36. Affected Continuum of Care Entities

CoC Number	CoC Entity	Impacted County	Homeless Count
KY-500	KY-500 Kentucky Balance of State CoC	Anderson	0
KY-500	KY-500 Kentucky Balance of State CoC	Ballard	0
KY-500	KY-500 Kentucky Balance of State CoC	Bell	1
KY-500	KY-500 Kentucky Balance of State CoC	Boyd	108
KY-500	KY-500 Kentucky Balance of State CoC	Breathitt	13
KY-500	KY-500 Kentucky Balance of State CoC	Caldwell	1
KY-500	KY-500 Kentucky Balance of State CoC	Calloway	1
KY-500	KY-500 Kentucky Balance of State CoC	Carter	0
KY-500	KY-500 Kentucky Balance of State CoC	Casey	0
KY-500	KY-500 Kentucky Balance of State CoC	Christian	92
KY-500	KY-500 Kentucky Balance of State CoC	Clark	80
KY-500	KY-500 Kentucky Balance of State CoC	Clay	4
KY-500	KY-500 Kentucky Balance of State CoC	Cumberland	0
KY-500	KY-500 Kentucky Balance of State CoC	Edmonson	0
KY-500	KY-500 Kentucky Balance of State CoC	Elliott	0
KY-500	KY-500 Kentucky Balance of State CoC	Estill	0

CoC Number	CoC Entity	Impacted County	Homeless Count
KY-500	KY-500 Kentucky Balance of State CoC	Floyd	21
KY-500	KY-500 Kentucky Balance of State CoC	Franklin	57
KY-500	KY-500 Kentucky Balance of State CoC	Fulton	0
KY-500	KY-500 Kentucky Balance of State CoC	Graves	0
KY-500	KY-500 Kentucky Balance of State CoC	Greenup	0
KY-500	KY-500 Kentucky Balance of State CoC	Harlan	71
KY-500	KY-500 Kentucky Balance of State CoC	Hart	0
KY-500	KY-500 Kentucky Balance of State CoC	Hickman	0
KY-500	KY-500 Kentucky Balance of State CoC	Hopkins	20
KY-500	KY-500 Kentucky Balance of State CoC	Jackson	1
KY-500	KY-500 Kentucky Balance of State CoC	Jessamine	31
KY-500	KY-500 Kentucky Balance of State CoC	Johnson	21
KY-500	KY-500 Kentucky Balance of State CoC	Knott	0
KY-500	KY-500 Kentucky Balance of State CoC	Knox	98
KY-500	KY-500 Kentucky Balance of State CoC	Laurel	33
KY-500	KY-500 Kentucky Balance of State CoC	Lawrence	1
KY-500	KY-500 Kentucky Balance of State CoC	Lee	3
KY-500	KY-500 Kentucky Balance of State CoC	Leslie	0
KY-500	KY-500 Kentucky Balance of State CoC	Letcher	4
KY-500	KY-500 Kentucky Balance of State CoC	Lincoln	0
KY-500	KY-500 Kentucky Balance of State CoC	Logan	12
KY-500	KY-500 Kentucky Balance of State CoC	Lyon	0
KY-500	KY-500 Kentucky Balance of State CoC	Madison	67
KY-500	KY-500 Kentucky Balance of State CoC	Magoffin	0
KY-500	KY-500 Kentucky Balance of State CoC	Marion	0
KY-500	KY-500 Kentucky Balance of State CoC	Marshall	2
KY-500	KY-500 Kentucky Balance of State CoC	Martin	68
KY-500	KY-500 Kentucky Balance of State CoC	Mason	41
KY-500	KY-500 Kentucky Balance of State CoC	Menifee	0
KY-500	KY-500 Kentucky Balance of State CoC	Morgan	0
KY-500	KY-500 Kentucky Balance of State CoC	Muhlenberg	2
KY-500	KY-500 Kentucky Balance of State CoC	Ohio	0
KY-500	KY-500 Kentucky Balance of State CoC	Owsley	0
KY-500	KY-500 Kentucky Balance of State CoC	Perry	30
KY-500	KY-500 Kentucky Balance of State CoC	Pike	33
KY-500	KY-500 Kentucky Balance of State CoC	Powell	29

CoC Number	CoC Entity	Impacted County	Homeless Count
KY-500	KY-500 Kentucky Balance of State CoC	Pulaski	36
KY-500	KY-500 Kentucky Balance of State CoC	Rockcastle	8
KY-500	KY-500 Kentucky Balance of State CoC	Taylor	11
KY-500	KY-500 Kentucky Balance of State CoC	Todd	0
KY-500	KY-500 Kentucky Balance of State CoC	Union	0
KY-500	KY-500 Kentucky Balance of State CoC	Warren	130
KY-500	KY-500 Kentucky Balance of State CoC	Whitley	9
KY-500	KY-500 Kentucky Balance of State CoC	Wolfe	0
KY-500	KY-500 Kentucky Balance of State CoC	Woodford	0
KY-502	KY-502 Lexington-Fayette County CoC	Fayette	715

Source: HUD Exchange, Kentucky COCs for 2020 (updated July 2021)

2.2.3.17 Point-in-Time Count – Type of Shelter

Table 37. Point-in-Time Count – Type of Shelter (HUD and Grantee MID Areas)

2021 Disaster Counties	Emergency Shelter	Transitional Housing	Unsheltered	Total Known Homeless
Boyd	55	15	38	70
Breathitt	13	0	0	13
Caldwell	0	0	1	1
Christian	46	35	11	81
Clark	40	8	32	48
Clay	0	0	4	4
Estill	0	0	0	0
Floyd	11	0	10	11
Fulton	0	0	0	0
Greenup	0	0	0	0
Hart	0	0	0	0
Hickman	0	0	0	0
Hopkins	18	0	2	18
Jackson	0	0	1	1
Johnson	0	0	21	21
Knott	0	0	0	0
Laurel	29	0	4	29
Lawrence	0	0	1	1
Lee	0	0	3	3
Leslie	0	0	0	0

2021 Disaster Counties	Emergency Shelter	Transitional Housing	Unsheltered	Total Known Homeless
Letcher	0	4	0	4
Lincoln	0	0	0	0
Logan	12	0	0	12
Lyon	0	0	0	0
Madison	56	0	11	56
Magoffin	0	0	0	0
Marion	0	0	0	0
Marshall	0	0	2	0
Martin	0	0	68	0
Morgan	0	0	0	0
Muhlenberg	0	0	2	0
Ohio	0	0	0	0
Owsley	0	0	0	0
Perry	20	0	10	20
Powell	0	17	12	17
Pulaski	10	0	26	10
Rockcastle	0	0	8	0
Taylor	11	0	0	11

Source: Kentucky Balance of State Continuum of Care

2.2.3.18 Point-in-Time Count – Impacted by Disaster

Table 38. Point-in-Time Count – Impacted by Disaster

Geography	Emergency Shelter	Transitional Housing	Unsheltered Homeless	Total Known Homeless
Areawide	1170	141	543	1854
FEMA-Declared	1125	116	359	1600
MIDs	115	4	44	163

Source: HUD 2021 CoC Homeless Populations and Subpopulations Reports

2.2.3.19 HUD Assisted Housing Impacted by Disaster

The table below shows the number of public housing units, the number of impacted Low-Income Housing Tax Credit (LIHTC) program, and the number of Housing Choice Voucher units impacted by the disaster.

Table 39. HUD Assisted Housing Impacted by Disaster (HUD and Grantee MID Areas)

County	Total Housing Choice Vouchers	Total Impacted Housing Choice Voucher Units	Total LIHTC Units	Total Impacted LIHTC Units	Total Public Housing Dwelling Units	Total Impacted Public Housing Dwelling Units
Caldwell	-	-	-	-	2	58
Christian	-	-	-	-	1	0
Graves	-	-	188	188	-	-
Hopkins	-	-	24	24	-	58
Lee	-	-	-	-	1	0
Warren	-	13	-	-	-	0

Source: Kentucky Housing Corporation

2.3 Infrastructure Unmet Need

2.3.1 Disaster Damage and Impacts

2.3.1.1 Impact on Flood Resiliency and Mitigation

The 2021 storms caused damage throughout the region. The flooding left much of the Commonwealth's infrastructure either inoperable or inaccessible to the public. Because of Kentucky's changing topography, there is an increased vulnerability to flooding. There is an opportunity to use the CDBG-DR funding to consider strategic flood management solutions.

2.3.1.2 Impact on Power Sources and Utilities

The impact of the tornado left many communities dealing with power outages and caused substantial damage to many public buildings.²⁹ To deal with low temperatures during the 2021 storm events, the Commonwealth opened centers to provide heat and shelter to residents seeking a safe place. Shelter became a critical part of protecting lives as people moved to quickly find a safe location during the storms. Many buildings could not withstand the storms and collapsed, and the debris was widespread. Though funding from FEMA is available, there is potentially more work that can be done to mitigate against future tornado events by building resilient shelters and facilities for residents to use during an emergency.

²⁹ [NY Times Article - Tornadoes Leave Trail of Devastation Across Six States, 2021](#)

2.3.1.3 Impact on Roads and Bridges

With increased precipitation, the roads and critical infrastructure in various areas of Kentucky have a higher probability of flooding.³⁰

2.3.1.4 Impact on Buildings, Equipment, Parks and Recreation Areas, and Other Facilities

Buildings and equipment had the highest dollar amount of damage across the affected counties.

Parks and recreation areas were damaged, but because these areas have fewer structures, recovery is often much quicker. Many of the State's parks are housing tornado survivors and serving as a temporary location for people to live until permanent housing is secured.³¹

2.3.2 FEMA Public Assistance Program (FEMA)

FEMA's Public Assistance (PA) program provides grants to state, tribal, territorial, and local governments, as well as certain types of private nonprofits so that communities can respond to and recover from major disasters quickly. Sections 403 and 407 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act allow FEMA to assist with debris removal and emergency response immediately following a disaster. Section 406 allows FEMA to fund the repair of damaged facilities and provide funding to mitigate damage from future events.

To access FEMA PA funds, eligible applicants must submit a request for grant funds to the Commonwealth. Together with FEMA, the Kentucky Emergency Management (KYEM) manages the PA program on behalf of the Commonwealth. On [March 18, 2022](#), FEMA announced that additional disaster funding is available to all states, tribal nations, and territories that had presidential major disaster and emergency declarations in 2020 and 2021. Through the March 15, 2022, [H.R. 2471](#) Consolidated Appropriations Act 2022, Congress granted a minimum 90% federal cost share. For both DR-4595 and DR-4630, FEMA is authorized to reimburse up to 90% of the eligible costs for specific types of disaster response and recovery work undertaken by eligible applicants.

The following table shows FEMA PA categories under DR-4595 and DR-4630, the number of eligible project sites, and the amount of damage that FEMA recorded. Based on current analysis, FEMA has determined that more than \$500 million in damages is eligible under its PA program.

³⁰ [Risk Factor of Louisville, Kentucky to Flooding – 2022](#)

³¹ [Kentucky state parks still figuring out next steps for tornado survivors | WKMS](#)

FEMA PA-Eligible Project Sites

Table 40. PA-Eligible Project Sites

PA Category	Damaged Sites	Sum of Approximate Cost	Sum of Federal Share	Sum of Nonfederal Share
A – Debris Removal	167	\$49,273,013.33	\$44,345,712.00	\$4,927,301
B – Emergency Protective Measures	409	\$54,487,093.43	\$49,038,384.09	\$5,448,709
C – Roads and Bridges	2,987	\$126,014,798.31	\$113,413,318.48	\$12,601,479
D – Water Control Facilities	9	\$8,185,260.00	\$7,366,734.00	\$818,526
E – Buildings and Equipment	482	\$178,294,794.93	\$160,465,315.44	\$17,829,479
F – Utilities	286	\$67,596,244.23	\$60,836,619.81	\$6,759,624
G – Parks, Recreational Facilities, and Other	142	\$16,648,444.44	\$14,983,600.00	\$1,664,844
TOTAL	4,482	\$500,499,648.67	\$450,449,683.80	\$50,049,964

Source: FEMA PA program data

Cost Estimates by Damage Category

Table 41. Cost Estimates by Damage Category

Declaration	Damage Category	Sum of Approximate Cost	Sum of Federal Share	Sum of Nonfederal Share
DR-4595	A – Debris Removal	\$3,795,219.40	\$3,415,697.46	\$379,521
DR-4595	B – Emergency Protective Measures	\$1,731,475.84	\$1,558,328.26	\$173,147
DR-4595	C – Roads and Bridges	\$112,753,786.40	\$101,478,407.76	\$11,275,378
DR-4595	D – Water Control Facilities	\$8,185,260.00	\$7,366,734.00	\$818,526
DR-4595	E – Buildings and Equipment	\$6,293,830.73	\$5,664,447.66	\$629,383
DR-4595	F – Utilities	\$25,959,061.38	\$23,363,155.24	\$2,595,906
DR-4595	G – Parks, Recreational Facilities, and Other	\$6,127,389.22	\$5,514,650.30	\$612,738
DR-4595	Z – Management Costs	\$1,992,731.46	\$1,793,458.31	\$199,273
DR-4595	TOTAL	\$166,838,754.43	\$150,154,878.99	\$16,683,875
DR-4630	A – Debris	\$45,477,793.93	\$40,930,014.54	\$4,547,779
DR-4630	B – Emergency Protective Measures	\$52,755,617.59	\$47,480,055.83	\$5,275,561
DR-4630	C – Roads and Bridges	\$13,261,011.91	\$11,934,910.72	\$1,326,101

Declaration	Damage Category	Sum of Approximate Cost	Sum of Federal Share	Sum of Nonfederal Share
DR-4630	D – Water Control Facilities	\$0.00	\$0.00	\$0.00
DR-4630	E – Buildings and Equipment	\$172,000,964.20	\$154,800,867.78	\$17,200,096
DR-4630	F – Utilities	\$41,637,182.85	\$37,473,464.57	\$4,163,718
DR-4630	G – Parks, Recreational Facilities, and Other	\$10,521,055.22	\$9,468,949.70	\$1,052,105
DR-4630	Z – Management Costs	\$543,888.34	\$489,499.51	\$54,388
DR-4630	TOTAL	\$336,197,514.04	\$302,577,762.64	\$33,619,751

Source: FEMA PA program data

2.3.3 Total Cost and Need by PA Category (FEMA)

Table 42. Total Cost and Need by PA Category

PA Category	Estimated PA Cost	Local Match	Resiliency	Total Need (Match + Resiliency)
A – Debris Removal	\$49,273,013.33	\$4,927,301.33	\$7,390,952.00	\$12,318,253
B – Emergency Protective Measures	\$54,487,093.43	\$5,448,709.34	\$8,173,064.01	\$13,621,773
C – Roads and Bridges	\$126,014,798.31	\$12,601,479.83	\$18,902,219.75	\$31,503,699
D – Water Control Facilities	\$8,185,260.00	\$818,526.00	\$1,227,789.00	\$2,046,315
E – Building and Equipment	\$178,294,794.93	\$17,829,479.49	\$26,744,219.24	\$44,573,698
F – Utilities	\$67,596,244.23	\$6,759,624.42	\$10,139,436.63	\$16,899,061
G – Parks, Recreational Facilities, and Other	\$16,648,444.44	\$1,664,844.44	\$2,497,266.67	\$4,162,111
TOTAL	\$500,499,648.67	\$50,049,964.87	\$75,074,947.30	\$125,124,912

Source: FEMA PA program data

2.3.4 Approximate Recovery Cost per Agency (FEMA)

Table 43. Approximate Recovery Cost per Agency

Agency	Approximate Cost
Kentucky Department of Transportation	\$34,382,999.47
Kentucky Department of Parks	\$122,561.64
Kentucky Division of Emergency Management	\$4,210,934.28

Agency	Approximate Cost
University of Kentucky	\$29,105.78
Western Kentucky University	\$11,634.58
TOTAL	\$38,757,235.75

Source: FEMA PA program data

2.3.5 Hazard Mitigation Needs per County or Known Project (client, county)

Kentucky Emergency Management also manages the Hazard Mitigation Assistance program. Currently, the Commonwealth is tracking more than \$174 million in costs that are tied to mitigation work. Work includes the construction of safe rooms, repair and hardening of utilities, dam restoration, elevation of buildings and roads, generator installation, and flood management.

Table 44. Hazard Mitigation Needs per County or Known Project

Project	Cost	FEMA Funding	Unmet Need
Allen	\$2,196,705	\$1,977,035	\$219,671
Barren	\$35,000	\$31,500	\$3,500
Bath	\$450,000	\$405,000	\$45,000
Boyd	\$591,256	\$532,130	\$59,126
Breathitt	\$186,990	\$168,291	\$18,699
Butler	\$316,000	\$284,400	\$31,600
Caldwell	\$1,500,677	\$1,350,609	\$150,068
Calloway	\$2,705,650	\$2,435,085	\$270,565
Campbell	\$89,688	\$80,719	\$8,969
Carlisle	\$202,550	\$182,295	\$20,255
Carroll	\$553,775	\$498,398	\$55,378
Carter	\$3,773,608	\$3,396,247	\$377,361
Christian	\$21,973,808	\$19,776,427	\$2,197,381
Crittenden	\$118,450	\$106,605	\$11,845
Daviess	\$1,168,946	\$1,052,051	\$116,895
Edmonson	\$83,000	\$74,700	\$8,300
Elliott	\$1,031,341	\$928,207	\$103,134
Fayette	\$150,000	\$135,000	\$15,000
Floyd	\$1,390,000	\$1,251,000	\$139,000
Franklin	\$375,000	\$337,500	\$37,500
Fulton	\$348,155	\$313,340	\$34,816
Graves	\$22,428,620	\$20,185,758	\$2,242,862

Project	Cost	FEMA Funding	Unmet Need
Green	\$18,000	\$16,200	\$1,800
Greenup	\$2,380,000	\$2,142,000	\$238,000
Hancock	\$1,439,607	\$1,295,646	\$143,961
Hardin	\$110,066	\$99,059	\$11,007
Harrison	\$2,190,800	\$1,971,720	\$219,080
Hart	\$864,903	\$778,413	\$86,490
Hopkins	\$17,021,391	\$15,319,252	\$1,702,139
Jefferson	\$1,394,683	\$1,255,215	\$139,468
Johnson	\$222,246	\$200,021	\$22,225
Kenton	\$5,790,000	\$5,211,000	\$579,000
Larue	\$1,114,177	\$1,002,759	\$111,418
Lee	\$91,859	\$82,673	\$9,186
Lincoln	\$130,000	\$117,000	\$13,000
Logan	\$1,541,100	\$1,386,990	\$154,110
Madison	\$559,803	\$503,823	\$55,980
Marion	\$7,103,210	\$6,392,889	\$710,321
Marshall	\$9,654,607	\$8,689,146	\$965,461
Mason	\$600,000	\$540,000	\$60,000
Menifee	\$140,000	\$126,000	\$14,000
Mercer	\$1,500,000	\$1,350,000	\$150,000
Metcalf	\$2,068,000	\$1,861,200	\$206,800
Monroe	\$1,089,000	\$980,100	\$108,900
Morgan	\$85,000	\$76,500	\$8,500
Muhlenberg	\$2,406,603	\$2,165,943	\$240,660
Ohio	\$337,081	\$303,373	\$33,708
Owen	\$315,748	\$284,173	\$31,575
Pendleton	\$79,000	\$71,100	\$7,900
Perry	\$56,475	\$50,828	\$5,648
Pike	\$2,023,715	\$1,821,344	\$202,372
Rowan	\$100,000	\$90,000	\$10,000
Shelby	\$1,585,000	\$1,426,500	\$158,500
Simpson	\$1,400,000	\$1,260,000	\$140,000
Spencer	\$1,393,000	\$1,253,700	\$139,300
Taylor	\$1,250,000	\$1,125,000	\$125,000
Todd	\$1,302,146	\$1,171,931	\$130,215
Trigg	\$699,766	\$629,789	\$69,977

Project	Cost	FEMA Funding	Unmet Need
Trimble	\$40,000	\$36,000	\$4,000
Union	\$2,014,000	\$1,812,600	\$201,400
Warren	\$31,417,351	\$28,275,616	\$3,141,735
Washington	\$647,076	\$582,368	\$64,708
Webster	\$615,549	\$553,994	\$61,555
Woodford	\$7,969,297	\$7,172,367	\$796,930
TOTAL	\$174,429,478	\$156,986,530	\$17,442,948

Source: FEMA's Hazard Mitigation Grant Program data

2.4 Economic Revitalization Unmet Need

2.4.1 Disaster Damage and Impacts

2.4.1.1 Impact on Businesses and Employment

Many businesses were impacted by the flooding and the tornado. Damages included external damage to building structures and/or loss of valuable inventory and equipment, and business owners suffered from loss of business for several weeks and/or lack of business insurance. Given the news of the tragic deaths occurring during the disasters, businesses have also helped start a conversation about detailed emergency action plans to keep workers safe during a disaster event and planning for unforeseen risks.

Following the severe storms, SBA made available low-interest disaster loans to businesses in Kentucky. Businesses and private nonprofit organizations of any size are able borrow up to \$2 million to repair or replace disaster-damaged or destroyed real estate, machinery and equipment, inventory, and other business assets. Applicants may be eligible for a loan amount increase of up to 20% of their physical damages, as verified by the SBA, for mitigation purposes. As reflected in the tables below, data show that Graves and Warren Counties—both HUD MID areas—had the highest number of applications for business loans and cumulative dollars approved by the SBA.

Despite the disasters and the effects of the pandemic, Kentucky is still experiencing a reduction in its unemployment rate and projecting substantial growth across many job sectors in the Commonwealth.³²

³² [Civilian Labor Force Report – Historical Comparison, 2022](#)

2.4.1.2 Impact on Agriculture

Following the 2021 storms, not only were towns and buildings affected but farms and livestock were also damaged or destroyed.³³ Kentucky's agriculture industry was one of the hardest impacted. From collapsed grain centers and storage silos to destroyed poultry barns and downed fencing, the Commonwealth suffered the largest agricultural loss in its history. Nearly 200 producers and 30 chicken houses were reported affected.³⁴ The storm events were devastating, and the aftermath of recovering and caring for livestock that survived was a major challenge. Kentucky Department of Agriculture and the Kentucky Farm Bureau Federation joined forces to create the Kentucky Agriculture Relief Fund.

2.4.2 Total Business Loans Approved by the SBA

Table 45. Business Loans Approved by SBA

Disaster	County	Business/EIDL Loan Amounts
DR-4595	Madison	\$25,000
DR-4630	Caldwell	\$141,000
DR-4630	Calloway	\$2,100
DR-4630	Graves	\$2,305,400
DR-4630	Hart	\$119,200
DR-4630	Henry	\$25,000
DR-4630	Hopkins	\$233,200
DR-4630	Logan	\$234,300
DR-4630	Lyon	\$3,500
DR-4630	Marshall	\$458,600
DR-4630	Mclean	\$30,200
DR-4630	Muhlenberg	\$178,000
DR-4630	Taylor	\$15,000
DR-4630	Warren	\$5,135,600
DR-4630	Weakley	47,000
TOTAL		\$8,913,100

Source: SBA Disaster Loan Statistics, 2022

³³ [Kentucky Farmers Endure Epic Ruin And Worst Storm Damage In State History As Agriculture Rushes To Rebuild | AgWeb](#)

³⁴ [Tornados Across Kentucky Make a Devastating Impact on State's Agriculture Industry - \(producersvoice.net\)](#)

2.4.3 Estimating Business Operations Losses

Table 46. Business Operations Losses Estimates

Disaster	County	Businesses With Verified Losses	Average Verified Loss	Estimated Additional Losses to Businesses
DR-4595	Anderson	2	-	-
DR-4595	Bell	1	-	-
DR-4595	Boyd	3	\$1,676	\$5,029
DR-4595	Breathitt	5	\$303,031	\$1,515,153
DR-4595	Clark	8	\$164,616	\$1,316,924
DR-4595	Clay	2	\$68,949	\$137,898
DR-4595	Estill	4	\$10,709	\$42,837
DR-4595	Fayette	7	\$67,263	\$470,838
DR-4595	Floyd	6	\$14,498	\$86,986
DR-4595	Franklin	1	-	-
DR-4595	Harlan	1	-	-
DR-4595	Harrison	1	-	-
DR-4595	Jackson	3	\$26,336	\$79,008
DR-4595	Jefferson	2	-	-
DR-4595	Johnson	5	\$28,938	\$144,691
DR-4595	Lee	10	\$77,300	\$772,999
DR-4595	Lincoln	1	-	-
DR-4595	Madison	2	\$17,751	\$35,502
DR-4595	Mercer	1	-	-
DR-4595	Morgan	1	-	-
DR-4595	Owsley	1	\$127,101	\$127,101
DR-4595	Powell	6	\$113,169	\$679,013
DR-4595	Pulaski	3	\$3,150	\$9,450
DR-4595	Warren	1	\$2,385	\$2,385
DR-4595	Wolfe	1	-	-
DR-4595	Woodford	1	\$5,000	\$5,000
DR-4595 TOTAL		82	\$66,229	\$5,430,814
DR-4630	Allen	1	-	-
DR-4630	Barren	4	\$1,256	\$5,025
DR-4630	Boone	1	\$19,340	\$19,340
DR-4630	Butler	1	-	-
DR-4630	Caldwell	12	\$27,691	\$332,288

Disaster	County	Businesses With Verified Losses	Average Verified Loss	Estimated Additional Losses to Businesses
DR-4630	Calloway	4	-	-
DR-4630	Christian	18	\$64,811	\$1,166,602
DR-4630	Fulton	5	\$48,246	\$241,232
DR-4630	Graves	125	\$340,286	\$42,535,805
DR-4630	Hart	9	\$90,193	\$811,737
DR-4630	Henry	1	-	-
DR-4630	Hickman	2	\$40,283	\$80,566
DR-4630	Hopkins	33	\$67,096	\$2,214,152
DR-4630	Jefferson	1	-	-
DR-4630	Logan	8	\$106,487	\$851,899
DR-4630	Lyon	5	\$184,004	\$920,018
DR-4630	Marion	3	\$5,061	\$15,182
DR-4630	Marshall	19	\$100,979	\$1,918,598
DR-4630	Mclean	1	\$78,160	\$78,160
DR-4630	Montgomery	1	-	-
DR-4630	Muhlenberg	9	\$208,977	\$1,880,789
DR-4630	Ohio	4	\$50,461	\$201,842
DR-4630	Taylor	9	\$127,519	\$1,147,670
DR-4630	Warren	152	\$133,676	\$20,318,753
DR-4630 TOTAL		429	\$174,218	\$74,739,658
GRAND TOTAL		511	\$156,889	\$80,170,471

Source: SBA Disaster Loan Statistics, 2022

2.4.4 Increased Occupation Demands

Table 47. Increased Occupation Demands

Occupation Area	Currently Employed	Projected Employment	Projected Growth (#)	Projected Growth (%)	Total Job Openings
Architecture and Engineering	29,324	31,229	1,905	6.50%	22,455
Arts, Design, Entertainment, Sports, and Media	22,279	22,257	-22	-0.10%	21,513
Building and Grounds Cleaning and Maintenance	58,725	64,047	5,322	9.06%	78,573
Business and Financial Operations	78,721	83,221	4,500	5.72%	71,500
Community and Social Services	28,754	32,981	4,227	14.70%	32,128

Occupation Area	Currently Employed	Projected Employment	Projected Growth (#)	Projected Growth (%)	Total Job Openings
Computer and Mathematics	33,873	38,444	4,571	13.49%	27,415
Construction and Extraction	84,260	81,988	-2,272	-2.70%	76,291
Educational Instruction and Library Services	95,297	100,071	4,774	5.01%	81,161
Farming, Fishing, and Forestry	8,061	8,551	490	6.08%	12,373
Food Preparation and Serving	178,641	186,468	7,827	4.38%	306,058
Healthcare Practitioners and Related Technical Occupations	127,447	142,293	14,846	11.65%	84,723
Healthcare Support	73,951	89,649	15,698	21.23%	102,564
Installation, Maintenance, and Repair Services	91,841	96,766	4,925	5.36%	86,436
Legal Services	11,761	12,529	768	6.53%	8,048
Life, Physical, and Social Sciences	11,188	11,784	596	5.33%	9,333
Management Services	104,116	110,844	6,728	6.46%	83,515
Office and Administrative Support	263,265	257,543	-5,722	-2.17%	267,759
Personal Care and Services	53,143	57,140	3,997	7.52%	80,585
Production Services	200,264	201,596	1,332	0.67%	202,751
Protective Service	38,613	40,415	1,802	4.67%	40,186
Sales and Related Occupations	186,590	180,270	-6,320	-3.39%	224,333
Transportation and Material Moving	218,406	234,745	16,339	7.48%	268,545

Source: Kentucky Center for Statistics (KYSTATS) – Labor Market Data

2.5 Mitigation-Only Activities

2.5.1 Introduction

The Mitigation Needs Assessment is a risk-based assessment that summarizes the natural threats and hazards in the HUD designated Most Impacted and Distressed (HUD-MID) counties (Breathitt, Graves, Hopkins, and Warren Counties) through DR-4595 (2021 severe storms, flooding, landslides, and mudslides) and DR-4630 (2021 severe storms, straight-line winds, flooding and tornadoes). The Mitigation Needs Assessment was undertaken to inform the use of the Commonwealth’s 15% Community Development Block Grant-Mitigation (CDBG-MIT) set-aside and to help build resilience and mitigation measures into recovery programs and projects.

It is important to note that while this assessment looked at severe storms, straight-line winds, tornadoes, flooding, landslides, and mudslides, it also reviewed any natural hazard likely to threaten HUD- and grantee-identified MIDs, including drought,

earthquakes, extreme temperatures, flood (riverine and flash), karst/sinkholes, landslides, severe weather (high winds, severe storms, and hailstorms), severe winter storms, tornadoes, and wildfires. These hazards were identified in Kentucky's FEMA-approved Hazard Mitigation Plan (HMP) as well as the plans for HUD- and grantee-identified MID counties.

In addition to current hazards posed to the MID counties, the Mitigation Needs Assessment considered future threats, particularly as severe weather events become more frequent and severe. In this way, the Commonwealth can ensure it minimizes vulnerabilities to the impacts of future extreme events through its recovery and mitigation projects and programs.

This assessment will inform the proposed programs and projects in this Action Plan that are designed to mitigate current and future hazards. In addition, it will inform all projects undertaken through CDBG-DR such that, at a minimum, they do not exacerbate natural hazard threats and make best use of scarce resources for recovery and mitigation. As part of this assessment, the Commonwealth also sought to identify and address risks to indispensable services; indispensable services are those which enable continuous operation of critical business and government functions and/or are critical to human health and safety and economic security.

2.5.2 State Hazard Mitigation Plan

The risk assessment for the HMP provides the factual basis for developing a mitigation strategy for the Commonwealth. Kentucky's approach to hazard mitigation is based on a hazard analysis and risk assessment that is comprehensive and multihazard. The risk assessment identifies nine hazards of concern based on an analysis of federal risk assessment guidance, past disasters, and other resources.

Each natural hazard profile includes a general description of the hazard; the location of the hazard; the extent of the hazard; previous occurrences and losses; the probability of future occurrences; an impact analysis, including severity and warning time, secondary hazards, and environmental impacts; and a vulnerability assessment. The nine natural hazards are included in Table 48.

Table 48. HMP-Identified Natural Hazards

Hazard
Drought
Earthquake
Extreme Temperatures
Flooding
Karst/Sinkholes

Hazard
Landslide
Severe Winter Storms
Tornadoes and Severe Thunderstorm Wind
Wildfires

2.5.3 Regional Hazard Mitigation Plans

2.5.3.1 Barren River Area Development District

Barren, Hart, Logan, and Warren Counties

Through the Barren River Area Development District (BRADD), Barren, Hart, Logan, and Warren Counties are included in the Barren River Regional Hazard Mitigation Plan, which profiles the natural and human-caused hazards that could impact counties within the Barren River Area Development District. Each natural hazard profile includes an identification of the hazard; the location of the hazard; the timing and duration of the hazard, the severity of the hazard; the frequency of the hazard, including previous regional occurrences and probability of future events; and vulnerability, including manmade, natural, and systems vulnerabilities as well as population risk.

The risk assessment identifies 10 applicable natural hazards based on an analysis from BRADD staff, public input, and the Barren River Regional Hazard Mitigation Council and subcommittees. The 10 hazards include dam failures, droughts, earthquakes, extreme temperatures, floods, landslides, severe storms, sinkholes/karst, tornadoes, and winter storms.

2.5.3.2 Big Sandy Area Development District

Floyd, Johnson, Magoffin, and Martin Counties

Through the Big Sandy Area Development District (BSADD), Floyd, Johnson, Magoffin, and Martin Counties are included in the Big Sandy Multi-Jurisdictional Hazard Mitigation Plan, which profiles the natural hazards that could impact counties within the BSADD.

The risk assessment identifies 10 applicable natural hazards based on an analysis from BSADD staff and Regional Mitigation Committee. The 10 hazards include dam failures, droughts, earthquakes, flooding, hail, landslides, thunderstorms/severe wind, tornadoes, severe winter storms, and wildfires.

2.5.3.3 Bluegrass Area Development District

Anderson, Clark, Estill, Fayette, Franklin, Jessamine, Lincoln, Madison, Powell, and Woodford Counties

Through the Bluegrass Area Development District (BADD), Anderson, Clark, Estill, Franklin, Jessamine, Lincoln, Madison, Powell, and Woodford Counties are included in the Bluegrass Regional Hazard Mitigation Plan, which profiles the natural hazards that could impact counties within the BADD. Fayette County has its own Lexington Fayette County Hazard Mitigation Plan, which profiles the natural hazards that could impact the county. Each natural hazard profile includes the period of occurrence, number of events to date, annualized probability, probability of event(s), potential impacts, potency of injury or death, potential duration of facility shutdown, past damages, warning time, and extent.

The Bluegrass Regional Hazard Mitigation Plan risk assessment identifies nine applicable natural hazards based on an analysis from local officials. The nine hazards include dam/levee failures, droughts, earthquakes, flooding, mudslides/landslides, severe storms and tornadoes, subsidence/karst, severe winter storms, and wildfires. The Lexington Fayette County Hazard Mitigation Plan identifies 13 natural hazards based on an analysis made by the Planning Team and public input. The hazards include dam failure, drought, extreme heat, extreme cold, earthquake, flooding, hail, karst/sinkhole, landslide, severe storm, severe winter storm, tornado, and wildfire.

2.5.3.4 Cumberland Valley Area Development District

Clay, Jackson, Laurel, and Rockcastle Counties

Through the Cumberland Valley Area Development District (CVADD), Clay, Jackson, Laurel, and Rockcastle Counties are included in the Cumberland Valley Regional Hazard Mitigation Plan, which profiles the natural hazards that could impact counties within the CVADD. Each natural hazard profile includes the definition of the hazard, an overview of the region, history of the hazard, and the frequency and probability of the hazard.

The Cumberland Valley Regional Hazard Mitigation Plan risk assessment identifies four applicable natural hazards based on an analysis by CVADD staff; planning committee members (comprising representatives from 8 counties and 17 cities, businesses, community groups, regional and local emergency management offices, and the Department of Transportation); and county workgroup subcommittees made up of local officials and residents. The four hazards include flooding, landslides, severe storms/hail/tornadoes, and winter storms.

2.5.3.5 Fivco Area Development District

Boyd, Greenup, and Lawrence Counties

Through the Fivco Area Development District (FADD), Boyd, Greenup, and Lawrence Counties are included in the Fivco ADD Multi-Jurisdictional Hazard Mitigation Plan, which profiles the natural hazards that could impact counties within the FADD.

The Fivco ADD Multi-Jurisdictional Hazard Mitigation Plan risk assessment identifies eight applicable natural hazards based on an analysis by a Hazard Mitigation Planning committee consisting of local officials from the county and city level, representatives from other organizations who offer expertise in specific areas, as well as members of the public. The eight hazards include dam failure, drought, earthquake, flooding, landslides, thunderstorms (severe wind and tornadoes), severe winter storms, and wildfire.

2.5.3.6 Gateway Area Development District

Morgan County

Through the Gateway Area Development District (GADD), Morgan County is included in the Gateway Area Development District Hazard Mitigation Plan, which profiles the natural hazards that could impact counties within the GADD.

The Gateway Area Development District Hazard Mitigation Plan risk assessment identifies 13 applicable natural hazards based on an analysis by GADD staff. The 13 hazards include dam failure, drought, extreme temperatures, earthquake, general floods/flash floods, forest fire, karst/sinkholes, landslides, land subsidence, severe thunderstorms, hailstorms, severe winter storms, and tornadoes.

2.5.3.7 Green River Area Development District

Ohio County

Through the Green River Area Development District (GRADD), Ohio County is included in the Green River Area Development District Hazard Mitigation Plan, which profiles the natural and human-made hazards that could impact counties within the GRADD.

The Green River Area Development District Hazard Mitigation Plan risk assessment identifies 11 applicable natural hazards based on an analysis by GRADD staff. The 11 hazards include dam/levee failure, drought, extreme temperatures, earthquake, flooding/flash flooding, landslide, land subsidence, thunderstorm wind/hail/lightning, severe winter storms, tornadoes, and wildfire.

2.5.3.8 Kentucky River Area Development District

Breathitt, Knott, Lee, Leslie, Letcher, Owsley, and Perry Counties

Through the Kentucky River Area Development District (KRADD), Breathitt, Knott, Lee, Leslie, Letcher, Owsley, and Perry Counties are included in the KRADD Regional Hazard Mitigation Plan: 2017 that profiles the natural and human-caused hazards that could impact each of the counties included in the planning area.

The risk assessment identifies 13 hazards and 7 priority hazards based on an analysis by the Regional Mitigation Planning Committee. Each natural hazard profile includes a description of the hazard, the location of the hazard, the extent of the hazard, previous occurrences and losses, the probability of future occurrences, the potential effects of climate change, and a vulnerability assessment.

The seven priority hazards include flooding (flash floods and riverine), windstorms/snow and ice storms, tornadoes, severe thunderstorms/lightning/hailstorms, wildfires, landslides, and drought/extreme heat.

2.5.3.9 Lake Cumberland Area Development District

Pulaski and Taylor Counties

Through the Lake Cumberland Area Development District, Pulaski and Taylor Counties are included in the Lake Cumberland Area Development District Regional Multi-Hazard Mitigation Plan, which profiles the natural and human-caused hazards that could impact counties within the Lake Cumberland Area Development District.

The risk assessment identifies seven applicable natural hazards based on an analysis from Lake Cumberland Area Development District staff. The nine hazards include dam/levee failure, drought, expansive soil, extreme summer weather, floods, forest/wildfires, geologic hazards (including earthquakes, land subsidence/landslides, and sinkholes), tornadoes and thunderstorms, and winter storm events.

2.5.3.10 Lincoln Trail Area Development District

Marion County

Through the Lincoln Trail Area Development District (LTADD), Marion County is included in the Lincoln Trail Region Hazard Mitigation Plan, which profiles the natural and human-caused hazards that could impact counties within the LTADD.

The risk assessment identifies seven applicable natural hazards based on an analysis by LTADD staff. The seven hazards include floods, earthquake, hail, lightning, snow and ice, thunderstorm wind, and tornadoes.

2.5.3.11 Pennyrile Area Development District

Caldwell, Christian, Hopkins, Lyon, and Muhlenberg Counties

Through the Pennyrile Area Development District (PADD), Caldwell, Christian, Hopkins, Lyon, and Muhlenberg Counties are included in the Pennyrile Regional Hazard Mitigation Plan, which profiles the natural and human-caused hazards that could impact counties within the PADD. Each natural hazard profile includes a history of the hazard in the PADD, the hazard impact by county, significant historical events, probable future occurrence, and a hazard frequency summary.

The risk assessment identifies seven applicable natural hazards based on an analysis from PADD staff, public input, and the Pennyrile Regional Hazard Mitigation Council and subcommittees. The seven hazards include flooding, tornadoes, severe thunderstorms, earthquakes, severe winter storms, extreme heat/drought, and dam failure.

2.5.3.12 (Jackson) Purchase Area Development District

Fulton, Graves, Hickman, and Marshall Counties

Through the (Jackson) Purchase Area Development District (JPADD), Fulton, Graves, Hickman, and Marshall Counties produced the Jackson Purchase Hazard Mitigation Plan in 2018 that profiles the natural and human-caused hazards that could impact the county. The JPADD and Graves County Mitigation Planning Team's (MPT) risk assessment identifies eight hazards. Each natural hazard profile includes a description of the hazard, frequency and impact, previous occurrences and losses, and the probability and impact of future occurrences.

The eight hazards include tornadoes, floods (flash flood/river erosion), thunderstorm/wind/hail, earthquake, winter storm/ice storm, excessive heat/drought, dam failure, and wildfire.

2.5.3.13 MID Area Hazard Table

Table 49. MID Area Hazard

Hazard	Barren River Area Development District	Kentucky River Area Development District	Pennyrile Area Development District	(Jackson) Purchase Area Development District
Drought	X	X	X	X
Earthquakes	X		X	X
Extreme Temperatures	X	X	X	X
Flooding	X	X	X	X

Hazard	Barren River Area Development District	Kentucky River Area Development District	Pennyrile Area Development District	(Jackson) Purchase Area Development District
Karst/Sinkholes	X			
Landslides	X	X		
Severe Weather	X	X	X	X
Severe Winter Storms	X	X	X	X
Tornadoes	X	X	X	X
Wildfires		X		X

Table 49 lists the natural hazards from the Barren River Area Development District (BRADD), the Kentucky River Area Development District (KRADD), the Pennyrile Area Development District (PADD), and the (Jackson) Purchase Area Development District (JPADD). Hazards include drought, earthquakes, extreme temperatures, flooding, karst/sinkholes, landslides, severe weather, severe winter storms, tornadoes, and wildfires. BRADD faces drought, earthquakes, extreme temperatures, flooding, karst/sinkholes, landslides, severe weather, severe winter storms, and tornadoes. KRADD faces drought, extreme temperatures, flooding, landslides, severe weather, severe winter storms, tornadoes, and wildfires. PADD faces drought, earthquakes, extreme temperatures, flooding, severe weather, severe winter storms, and tornadoes. JPADD faces drought, earthquakes, extreme temperatures, flooding, severe weather, severe winter storms, tornadoes, and wildfires.

2.5.3.14 IA Only Area Hazard Table

Table 50. IA Only Area Hazard

Hazard	BSADD	BGADD	CVADD	FIVCO	GWADD	GRADD	LCADD	LTADD
Drought	X	X		X	X	X	X	
Earthquake	X	X		X	X	X	X	X
Extreme Temperatures		X			X	X	X	
Flood	X	X	X	X	X	X	X	X
Karst/Sinkholes		X			X		X	
Landslide	X	X	X	X	X	X	X	
Severe Weather	X	X	X	X	X	X	X	X
Severe Winter Storm	X	X	X	X	X	X	X	X
Tornado	X	X	X	X	X	X	X	X
Wildfires	X	X		X	X	X	X	

Table 50 lists the natural hazards from the Big Sandy Area Development District (BSADD), the Bluegrass Area Development District (BGADD), the Cumberland Valley Area Development District (CVADD), the Fivco Area Development District (FIVCO), the Gateway Area Development District (GWADD), the Green River Area Development District (GRADD), the Lake Cumberland Area Development District (LCADD), and Lincoln Trail Area Development District (LTADD). Hazards include drought, earthquakes, extreme temperatures, flooding, karst/sinkholes, landslides, severe weather, severe winter storms, tornadoes, and wildfires. BSADD faces drought, earthquakes, flooding, karst/sinkholes, landslides, severe weather, severe winter storms, and tornadoes. BGADD faces drought, earthquakes, extreme temperatures, flooding, karst/sinkholes, landslides, severe weather, severe winter storms, tornadoes, and wildfires. CVADD faces flooding, landslides, severe weather, severe winter storms, and tornadoes. FIVCO faces drought, earthquakes, flooding, landslides, severe weather, severe winter storms, tornadoes, and wildfires. GWADD faces drought, earthquakes, extreme temperatures, flooding, karst/sinkholes, landslides, severe weather, severe winter storms, tornadoes, and wildfires. GRADD faces drought, earthquakes, extreme temperatures, flooding, landslides, severe weather, severe winter storms, tornadoes, and wildfires. LCADD faces drought, earthquakes, extreme temperatures, flooding, karst/sinkholes, landslides, severe weather, severe winter storms, tornadoes, and wildfires. LTADD faces earthquakes, flooding, severe weather, severe winter storms, and tornadoes.

2.5.4 Greatest Risk Hazards

2.5.4.1 Drought

A drought is a prolonged period of lower-than-normal precipitation such that the lack of water causes a serious hydrologic imbalance. Relief from droughts depends on a variety of precipitation factors, including the timing and effectiveness of the rains, temperatures, wind, and low relative humidity, and the balance between precipitation and evapotranspiration, which is the sum of evaporation and transpiration. The release of water from plant leaves are also factors that can intensify a drought.

While droughts are often a normal climatic feature, human water demands and community response can hasten or mitigate droughts and their impact on communities. Common effects of drought include crop failure, water supply shortages, and fish and wildlife mortality. Drought conditions can also make an area more susceptible to wildfires. The agricultural industry is particularly vulnerable to the impacts of drought because the crops depend on stored soil water and surface water.

There are several methods of interpreting drought data and classifying a drought's severity, and no single index is the best in every situation. The Palmer Drought Severity Index (PDSI) is based on a water balance equation that weighs supply and demand, accounting for more than simply a location's precipitation deficits, while the Keetch-

Byran Drought Index (KBDI) is merely a reference scale for estimating the dryness of the soil layers that increases for each day without rain. The U.S. Drought Monitor measures droughts and classifies their intensity from D0: Abnormally Dry to D4: Exceptional Drought, as seen in Table 51.

Table 51. U.S. Drought Monitor, Drought Classification

Category	Description	Possible Impacts	Palmer Drought Severity Index	CPC Soil Moisture Model (Percentiles)	USGS Weekly Streamflow (Percentiles)	Standardized Precipitation Index (SPI)
D0	Abnormally Dry	Going into drought: short-term dryness, slowing of planting, growth of crops or pastures. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered	-1.0 to -1.9	21–30	21–30	-0.5 to -0.7
D1	Moderate Drought	Some damage to crops, pastures; streams, reservoirs, or wells low; some water shortages developing or imminent; voluntary water-use restrictions requested	-2.0 to -2.9	11–20	11–20	-0.8 to -1.2
D2	Severe Drought	Crop or pasture losses likely; water shortages common; water restrictions imposed	-3.0 to -3.9	6–10	6–10	-1.3 to -1.5
D3	Extreme Drought	Major crop/pasture losses; widespread water shortages or restrictions	-4.0 to -4.9	3–5	3–5	-1.6 to -1.9
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; shortages of water in reservoirs, streams, and wells, creating water emergencies	-5.0 or less	0–2	0–2	-2.0 or less

Table 51 explains U.S. Drought Monitor drought classifications. Category D0: Abnormally Dry includes potential impacts such as going into drought and short-term dryness slowing planting, growth of crops, or pastures. Coming out of drought, D0 may include some lingering water deficits and pastures or crops may not be fully recovered. Category D1: Moderate Drought includes impacts such as damage to crops and pastures; streams, reservoirs, or wells are low; some water shortages are developing or imminent; and voluntary water-use restrictions are requested. Category D2: Severe Drought includes impacts such as crop or pasture losses, water shortages, and water restrictions. Category D3: Extreme Drought includes potential impacts such as major crop or pasture losses and widespread water shortages or restrictions. Category D4: Exceptional Drought includes impacts such as exceptional and widespread crop or pasture losses, and shortages of water in reservoirs, streams, and wells creating water emergencies.

Kentucky is perceived as a “water-rich” State with an average annual rainfall of 45–50 inches and abundant groundwater and surface water resources. However, Kentucky can experience extended periods of dry weather ranging from relatively short-duration, single-season events to multiyear events.

Kentucky has experienced five significant drought periods in the past 20 years: 1988, 1999–2000, 2007–2008, 2010, and 2012. Each of these droughts brought hardships and inflicted various types of damage to Kentuckians, especially within the agricultural sector. These droughts also had individual “personalities” in terms of where they struck, how intense they became, how long they lasted, and what damage was done. But these droughts also share common features that distinguish them from normal dry periods, as detailed in the table below.

Table 52. Drought Categories

Drought Distinguisher	Explanation
Intensity	Drought develops only after a significant length of time with abnormally low precipitation, often combined with abnormally high temperatures. This combination of climatic anomalies results in an environment that stresses plants and animals, makes the lives of people living with water shortages uncomfortable, and can sometimes cause structural damage such as shifting foundations and ruptured water lines.
Duration	Kentucky has had some level of dry spells in nearly every year. Dry spells are termed to reflect a short-duration event, most commonly noticed during the hot days of summer or the warming days of spring. Dry spells are not droughts, but they are always a precursor to droughts. Unfortunately, and this is especially true for agriculture, a persistent dry spell may cause substantial damage early on in drought development, long before water shortages and problems with public water supplies emerge. Thus, one of the most difficult aspects of dealing with the drought hazard is the ability to accurately distinguish when a dry spell transitions into drought.
Timing	When a dry spell lingers and tends toward drought, the consequences are determined partly by the timing of drought emergence. Spring droughts can delay the refilling of water supply lakes, accelerate water loss from soils by rapidly growing plants, reduce hay production and storage, and in general make us more vulnerable to even mild summer drought. Summer drought development is most damaging to agricultural interests, reducing crop development and yields and often placing hardships on livestock producers when ponds dry up or pastures fail to keep up with animal grazing demands. Droughts that intensify into the fall generally begin to affect the dependability of drinking water sources, both surface and groundwater. Late fall and winter droughts can affect recharge of groundwater and delay or prevent the filling of lakes that typically draw down during summer, when evaporation and plant water use (evapotranspiration, or “ET”) rates exceed rainfall. Severe persistent winter droughts increase vulnerability to droughts that may develop the following spring or summer.

Table 52 outlines the features that distinguish a drought, including intensity, duration, and timing.

Since 2000, the four MID counties have experienced 53 documented drought events.³⁵ In September 2007, Graves and Hopkins Counties experienced \$2.2 million in documented crop damage, respectively, during a drought event. During the event, some parts of the Pennyryle region around Hopkinsville had rainfall 15 inches below normal. The governor of Kentucky sought a federal disaster declaration for agricultural losses incurred by the drought, which was granted the following month. Fire danger was moderate to high, and many counties in western Kentucky banned outdoor burning

³⁵ [NCEI – Storm Events Database](#)

during the driest part of September 2007. See Figure 33 for a visual representation of the 2007 drought.

Figure 33. Kentucky October 2007 Drought³⁶

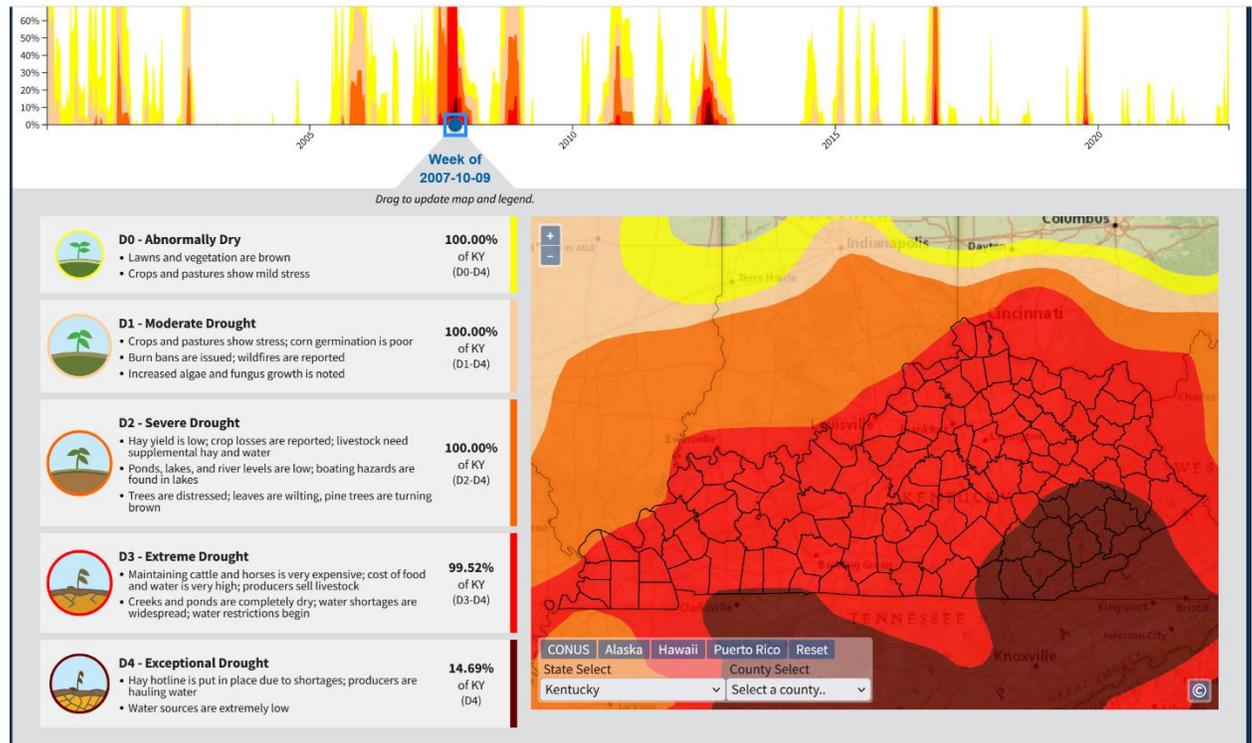


Figure 33 includes a map of Kentucky with drought classifications during the October 2007 drought. The majority of the Commonwealth (99.52%) was in an extreme drought, while several counties in the southeast (14.69% of the Commonwealth) were in exceptional drought. In addition, across the top of the figure is a timeline depicting periods of drought, including drought spikes in 2007, 2008, 2010, 2012, and 2019.

As with other hazards, changes in precipitation and climate are likely to affect the frequency, duration, and severity of drought events. While annual precipitation in Kentucky has increased approximately 5% since the first half of the 20th century, rising temperatures increase evaporation, which dries the soil and decreases the amount of rain that runs off into rivers.³⁷ Although rainfall during spring is likely to increase during the next 40–50 years, the total amount of water running off into rivers or recharging groundwater each year is likely to decline 2.5%–5% as increased evaporation offsets the greater rainfall. Droughts are likely to be more severe because periods without rain will be longer and very hot days will be more frequent. The potential increase in the intensity

³⁶ [NOAA – Historical Drought Information](#)

³⁷ [EPA Report – What Climate Change Means for Kentucky](#)

of droughts will have implications for important sectors of the Commonwealth's economy, including agriculture, industry, tourism, and natural resource management.³⁸

2.5.4.2 Earthquake

An earthquake is a vibration or shaking of the Earth's surface due to an underground release of energy. Earthquakes can be caused by various conditions, such as sudden movements along geological faults or volcanic activity. Earthquake magnitudes, or severity, are recorded on the Richter scale with seismographs. Some earthquakes may be so minor that they are virtually unnoticed, while others can destroy entire cities. Seismology, the study of earthquakes, helps scientists understand what areas are more prone to experiencing earthquakes, such as along active fault lines; however, earthquakes are generally unpredictable.

Most earthquakes occur where the Earth's tectonic plates meet, also known as fault lines. Earthquakes that occur within the plate interiors are much rarer, accounting for less than 10% of total earthquakes. Although most earthquakes, especially large ones (magnitude equal to or greater than 8.0), have occurred along plate boundaries, a few strong earthquakes have occurred in plate interiors. Kentucky is affected by several seismic zones: the New Madrid and Wabash Valley Seismic Zones to the west and the Eastern Tennessee Seismic Zone to the east. The largest recorded earthquake inside Kentucky's borders was the Sharpsburg earthquake on July 27, 1980, in Bath County. Its magnitude was 5.2, and it caused an estimated \$3 million in damage in Maysville. The 2003 Bardwell earthquake in western Kentucky (magnitude 4.0) caused some minor damage in Carlisle County, and the 2012 Perry County earthquake (magnitude 4.2) caused some minor damage in Letcher and Perry Counties in southeastern Kentucky, including at the Letcher County Courthouse. See a compilation of damage in Table 53.

Table 53. Earthquakes in Kentucky Since 1980

Year	Location	Magnitude	Notes
1980	Sharpsburg	5.2	Significant damage in Maysville
1988	Bath County	4.6	Shaking was felt in the area
2003	Bardwell	4.0	Some minor damage in Bardwell
2012	Perry County	4.2	Some minor damage in Letcher and Perry Counties

Table 53 shows earthquakes that have occurred in Kentucky since 1980. In 1980, a 5.2 magnitude earthquake hit Sharpsburg, causing significant damage in Maysville. In 1988, a 4.6 magnitude earthquake in Bath County caused shaking in the area. In 2003, a 4.0 magnitude earthquake caused some minor damage in Bardwell. In 2012, a 4.2

³⁸ [NOAA – State Climate Summaries: Kentucky](#)

magnitude earthquake in Perry County caused some minor damage in Letcher and Perry counties.

2.5.4.3 Extreme Temperatures

Extreme temperature includes both heat and cold events, which can have a significant impact on human health, commercial and agricultural businesses, and primary and secondary effects on infrastructure (e.g., burst pipes and power failures).

Conditions of extreme heat are defined as summertime temperatures that are substantially hotter and/or more humid than average for a location at that time of year. The heat index is a number in degrees Fahrenheit that indicates how hot it feels when relative humidity is factored into actual air temperature. Exposure to full sunshine can increase the heat index by at least 15 degrees. Figure 34 shows the heat index values when both humidity and temperature are considered. It also shows the likelihood of heat disorders with prolonged exposure to or strenuous activity in such conditions.

Figure 34. NWS Heat Index³⁹

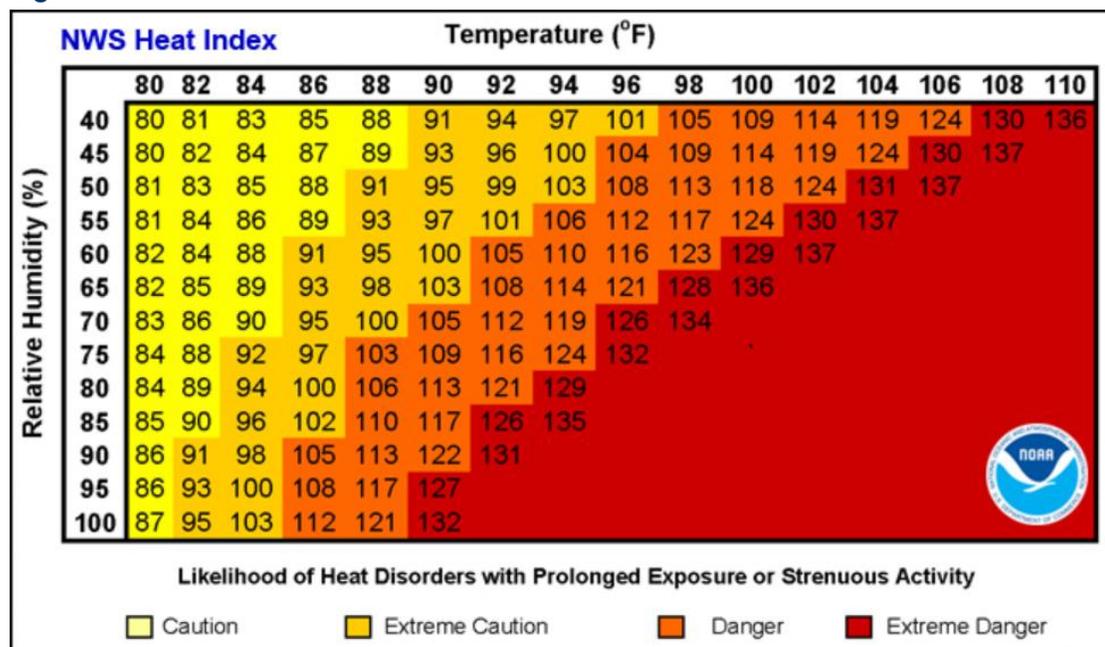


Figure 34 shows a graph of the National Weather Service's (NWS) heat index. The x-axis is temperature, and the y-axis is relative humidity. Based on relative humidity and temperature, the NWS calculated the likelihood of heat disorders with prolonged exposure or strenuous activity, divided into four categories: caution, extreme caution, danger, and extreme danger.

³⁹ [NOAA – What is the Heat Index?](#)

Under extreme heat conditions, the NWS can issue either a heat advisory or an excessive heat warning. A heat advisory is issued when a heat index of 100 degrees or higher is expected for 3 hours or more. An excessive heat warning is used when a heat index of 105 degrees or higher is expected for 3 hours or more.

Extreme heat can impose stress on humans and animals. Exposure to heat can lead to a variety of adverse health impacts, ranging from cramps to death.⁴⁰ Heat exhaustion is a relatively common reaction to excessive heat and can include symptoms such as headaches, dizziness, and fainting. If exposure is prolonged, heatstroke can occur. This reaction is more severe and requires medical attention. Deaths from heat exposure typically occur in individuals with preexisting conditions, frequently those with heart conditions.

Certain demographic groups are particularly vulnerable to adverse health impacts from extreme heat events.⁴¹ Very young children, seniors, and populations with physical and psychiatric medical conditions are more vulnerable to health impacts from heat events than the general population. Additionally, people of color and low-income residents are at greater risk from adverse extreme heat health impacts.

Urban areas are also particularly at risk because of air stagnation and large quantities of heat-absorbing materials such as streets and buildings. Extreme heat can also result in distortion and failure of structures and surfaces such as roadways and railroad tracks.

Extreme cold events are when temperatures drop well below normal in an area. Exposure to cold temperatures, whether indoors or outside, can lead to serious or life-threatening health problems such as hypothermia, cold stress, frostbite, or freezing of the exposed extremities such as fingers, toes, nose, and ear lobes. See Figure 35 for the NWS Wind Chill Chart.

⁴⁰ [Union of Concerned Scientists: Heat Waves and Climate Change](#)

⁴¹ Ibid

Figure 35. NWS Wind Chill Chart⁴²

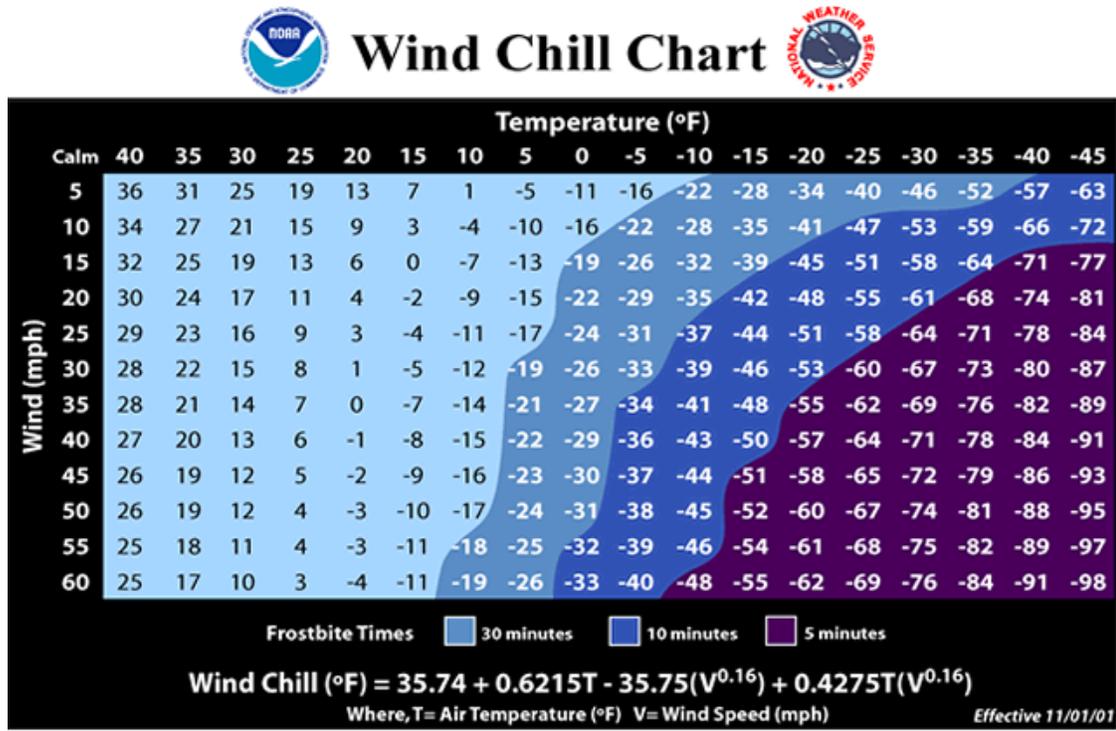


Figure 35 shows a graph of the NWS’s wind chill chart. The x-axis is temperature in degrees Fahrenheit and the y-axis is wind in miles per hour. Based on wind speed and temperature, the NWS calculated the time to incur frostbite, divided into 3 categories: 30 minutes, 10 minutes, and 5 minutes.

There were 65 heat events and 9 cold and extreme cold events in the 4 MID counties between 2012 and 2022.

Heatwaves in Kentucky are expected to impact larger areas with more frequency and longer duration by 2050. A higher emissions pathway could lead to unprecedented warming in the 21st century (see Figure 36). Kentucky can expect to experience an average annual temperature that is warmer than any to date (low emissions scenario) and future temperatures could be as much as 11 degrees warmer (high emissions scenario). While heatwaves are predicted to be more intense, extreme cold is predicted to be less intense.

⁴² [NOAA – Wind Chill Chart](#)

Figure 36. Predicted Temperature Change in Kentucky Under Different Emissions Scenarios

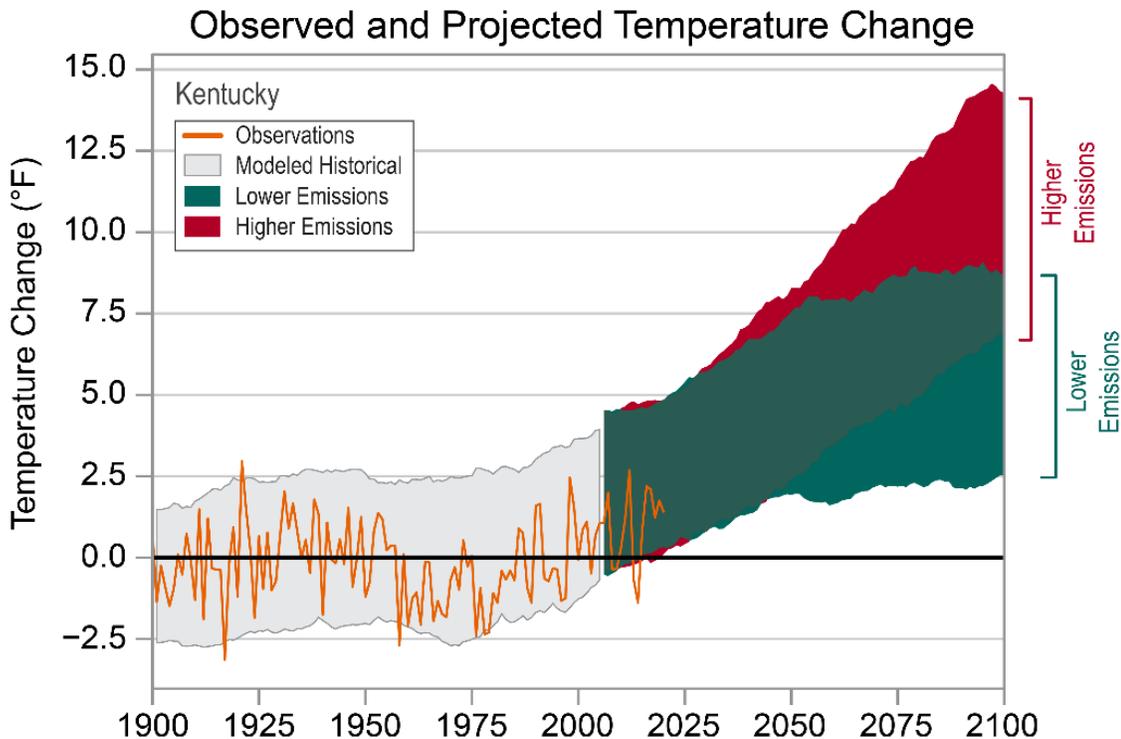


Figure 36 is a graph demonstrating observed and projected temperature change in Kentucky under different emissions scenarios. The graph demonstrates that observed temperatures have risen overall from a baseline temperature since the early 20th century.

2.5.4.4 Flood (Riverine and Flash)

A flood or flooding refers to the general or temporary conditions of partial or complete inundation of normally dry land areas from the overflow of water and surface water runoff from any source. Floodplains are defined as any land areas susceptible to being inundated by water from any flooding source. There are several different types of flooding that impact the MID, PA, and IA counties, including riverine and flash flooding.

FEMA has identified and mapped areas of flood risk on Flood Insurance Rate Maps (FIRMs), with the highest risk zones called the Special Flood Hazard Areas (SFHA).⁴³ The 100-year floodplain is considered a high-risk area and is denoted as Zone A. The 500-year floodplain is denoted as Zone C or Zone X. The areas between the 100- and 500-year floodplains are shown using Zone B and Zone X. Additionally, high-risk coastal areas are denoted as Zone V. This information is shown in Table 54 below.

⁴³ [FEMA Flood Zone - Glossary](#)

Table 54. FEMA-Designated Flood Zones

Zone	Description
Low-to-Moderate Risk Areas	
C and X (Unshaded)	Area of minimal flood hazard is usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that do not warrant a detailed study or designation as a base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by a levee from the 100-year flood.
B and X (Unshaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year floods, or shallow flooding areas with average depths of less than 1 foot or drainage areas less than 1 square mile.
High-Risk Areas	
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas, no depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided.
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1–3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
High-Risk Coastal Areas	
V	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. No base flood elevations are shown within these zones.
Undetermined Risk Areas	
D	Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted. Flood insurance rates are commensurate with the uncertainty of the flood risk.

Table 54 contains FEMA-designated flood zones with descriptions and includes low-to-moderate risk areas (C and X unshaded, B and X unshaded), high-risk areas (A, AE, AH, and AO), high-risk coastal areas (V), and undetermined risk areas (D).

Flooding is the most frequent and costly natural hazard within the Commonwealth, with an average annual loss of greater than \$40,000,000. Flood events occur within the Commonwealth every year with several substantial floods occurring annually. Kentucky's topography contains 13 major drainage basins to accommodate 40–50 inches of

average rainfall (maximum during winter and spring, minimum during late summer and fall). The Commonwealth contains 89,431 miles of rivers and streams, 637,000 acres of wetlands, 18 reservoirs greater than 1,000 acres in size, and 228,382 acres of publicly owned lakes and reservoirs.

The primary factors that determine the severity of a flood include:

- Rainfall intensity and duration
 - A large amount of rain over a short time can result in flash flooding.
 - Small amounts may cause flooding where the soil is already saturated.
- Topography
 - Water runoff is greater in areas with steep slopes and little vegetation.

Rainfall and topography vary considerably across the Commonwealth. Eastern Kentucky generally has steep slopes and narrow valleys throughout, making it susceptible to flash flooding events. The speed with which these events develop gives little time for warning and can potentially lead to loss of life. Central Kentucky has rolling hills and several medium-to-large river systems and associated small tributaries. These areas tend to have increased warning times, but the smaller tributaries are still susceptible to flash flooding events. Northern Kentucky along the Ohio River and western Kentucky are generally flatter with larger, well-defined floodplains. These areas tend to have the greatest amount of warning time in the Commonwealth, providing communities and citizens the opportunity to get out of the way. These areas are less vulnerable to loss of life due to flooding but have a higher risk of economic losses.

Other factors that contribute to flood impacts include storm types, soil types, channel slope, karst areas, soil saturation, infrastructure development, impervious surfaces, and emergency response capabilities. Variations in local conditions can cause extreme variability in flood levels, duration, and impacts.

There are a multitude of factors that lead to a flooding event. These factors can lead to a variety of flooding types, with each type of flooding having different effects on communities. Two common types of flooding in Kentucky are described below.

2.5.4.4.1 Riverine Flooding

Riverine floods are the most common flood type. They occur along a channel and include overbank and flash flooding. Channels are defined ground features that carry water through and out of a watershed. These channels may be rivers, creeks, streams, or ditches. When a channel receives too much water, the excess water flows over its banks and inundates low-lying areas.⁴⁴

⁴⁴ [Natural Aspects of Flooding | The Illinois Association for Floodplain and Stormwater Management](#)

2.5.4.4.2 Urban Flooding

The National Oceanic and Atmospheric Administration (NOAA) defines urban flooding as the flooding of streets, underpasses, low-lying areas, or storm drains.⁴⁵ This type of flooding is mainly an inconvenience and is generally not life-threatening.

Urban drainage flooding is caused by increased water runoff due to urban development and drainage systems. Drainage systems are designed to remove surface water from developed areas as quickly as possible to prevent localized flooding on streets and other urban areas. These drainage systems make use of a closed conveyance system that channels water away from an urban area to surrounding streams, bypassing the natural processes of water filtration through the ground, containment, and evaporation of excess water. Since drainage systems reduce the amount of time the surface water takes to reach surrounding streams, flooding in those streams can occur more quickly and reach greater depths than before development in that area.

There have been 156 flood events across the MID counties between 2012 and 2022. These floods caused more than \$402.3 million in property damage. One heavy rainfall event in Breathitt County and across central and east Kentucky on March 1, 2021, led to significant flooding across the Commonwealth. FEMA estimated that the event caused \$350–\$400 million in damage, including damage to both individual and public infrastructure. Major flood events between 2012 and 2022 can be found in Table 55.

Table 55. Major Flood Events With Deaths, Injuries, or Property Damage >\$10,000 in MID Counties, 2012–2022

County	Location	Date	Event Type	Amount of Property Damage
Breathitt	Wilhurst	3/1/2021	Flood	\$400,000,000
Graves	Symsonia	2/21/2018	Flood	\$1,000,000
Hopkins	Carbondale	6/24/2013	Flash Flood	\$500,000
Graves	Farmington	2/23/2018	Flood	\$250,000
Graves	Lowes	6/4/2014	Flash Flood	\$80,000
Breathitt	War Creek	6/17/2013	Flash Flood	\$78,000
Breathitt	Whick	1/1/2022	Flash Flood	\$60,000
Hopkins	Hanson	7/6/2016	Flash Flood	\$50,000
Breathitt	Wilhurst	2/28/2021	Flash Flood	\$50,000
Graves	Symsonia	8/1/2016	Flash Flood	\$30,000
Graves	Symsonia	3/1/2018	Flood	\$25,000
Graves	Mayfield	3/14/2019	Flash Flood	\$25,000
Graves	Sedalia	2/28/2021	Flash Flood	\$25,000

⁴⁵ [Urban Flooding \(NOAA\)](#)

County	Location	Date	Event Type	Amount of Property Damage
Warren	Bowling Green	7/21/2020	Flood	\$20,000
Breathitt	Hardshell	1/1/2022	Flash Flood	\$20,000

Table 55 contains data on major flood events in the MID counties between 2012 and 2022 that resulted in property damage greater than \$20,000. There were five major events in Breathitt County resulting in just over \$4.2 million in property damage, seven in Graves County resulting in more than \$1.43 million in damage, two in Hopkins County resulting in more than \$550,000 in damage, and one in Warren County resulting in \$20,000 in damage.

Total annual precipitation in Kentucky exhibits an overall upward trend and has averaged 7.4 inches above the long-term (1895–2020) average since 2011. Winter and spring precipitation and extreme precipitation events are projected to increase during the 21st century (see Figure 37 for precipitation map).⁴⁶ Continuing increases in the frequency and intensity of extreme precipitation events are also projected, potentially increasing the frequency and intensity of floods. The projections of increasing precipitation and heavy precipitation events are true for a large area of the Northern Hemisphere in the northern middle latitudes. Increased flood events will have significant impacts on Kentucky's infrastructure and economy.

⁴⁶ [NOAA – State Climate Summaries: Kentucky](#)

Figure 37. Projected Change in Spring Precipitation⁴⁷

Projected Change in Spring Precipitation

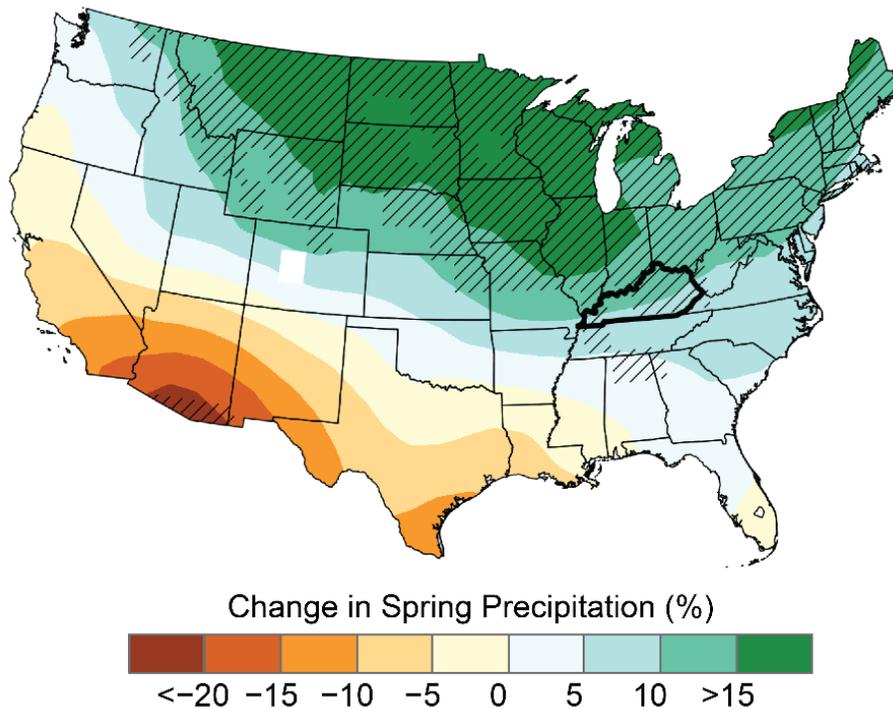


Figure 37 presents a map of the United States showing project changes in spring precipitation. The map demonstrates that Kentucky will receive approximately 10% more spring precipitation.

2.5.4.5 Karst/Sinkholes

Karst is a type of landscape where the dissolving of the bedrock has created sinkholes, sinking streams, caves, springs, and other characteristic features.⁴⁸ Karst is associated with soluble rock types such as limestone, marble, and gypsum. In general, a typical karst landscape forms when much of the water falling on the surface interacts with and enters the subsurface through cracks, fractures, and holes that have been dissolved into the bedrock. After traveling underground, sometimes for long distances, this water is then discharged from springs, many of which are cave entrances.

In Kentucky, approximately 50%–60% of the Commonwealth has karst or potential for karst, as indicated by maps showing areas where limestone crops out. About 38% of the Commonwealth has at least some karst development that can be recognized on topographic maps, and 25% of the Commonwealth is known to have well-developed

⁴⁷ [NOAA – State Climate Summaries: Kentucky](#)

⁴⁸ [NPS – Karst Landscapes](#)

karst features. Data obtained from the 2010 U.S. Census indicate that 2,894,115 people, or about 67% of the Commonwealth's population, live in a karst region.⁴⁹ Some of the larger Kentucky cities and towns located on karst are Frankfort, Louisville, Lexington, Lawrenceburg, Georgetown, Winchester, Paris, Versailles, and Nicholasville (all located in the inner Bluegrass region); Fort Knox, Bowling Green, Elizabethtown, Munfordville, Russellville, Hopkinsville, and Princeton (in the western Pennyroyal region); and Somerset, Monticello, and Mount Vernon (in the eastern Pennyroyal region).

Karst hazards that could have an impact on Kentucky's citizens and infrastructure include sinkholes, flooding, and groundwater and surface water contamination. Sinkholes are by far the largest and most frequently encountered karst hazards. Kentucky is ranked fifth nationally among states affected by sinkhole hazards.

Sinkholes are closed and internally drained topographic depressions of generally circular shape that develop where soil or other overburdened material subsides or collapses into subsurface voids. Sinkholes can form as a result of both natural (karst-related) processes and as a direct or indirect consequence of human activities. Human activities that can cause sinkholes include groundwater withdrawals, alteration, or diversion of surface runoff; subsurface mining; subsurface erosion, piping, or compaction of unconsolidated soils or sediments along buried pipelines or beneath highways and roads; and decaying buried organic debris (e.g., tree roots, buried trash, and other debris). Sinkholes also form in nonkarst areas where leaking water or sewer pipes and other human activities create or result in subsidence, compaction, or subsurface erosion (i.e., piping) of soil, gravel, or other fill materials.

Sinkholes may be grouped into two broad categories: subsidence and collapse. Subsidence and collapse sinkholes often occur together in the same karst area, and many sinkholes form as a combination of the two processes. Subsidence sinkholes form by the relatively slow and gradual subsurface dissolution of soluble bedrock and piping of unconsolidated cover materials (soil, alluvium) into fractures and conduits enlarged by solution in the epikarst, a zone of intensified weathering and dissolution at the soil-bedrock interface. Subsidence sinkholes in Kentucky are generally recognizable as broad, shallow, bowl-shaped depressions. These sinkholes are largely responsible for the rolling topography that characterizes much of the Bluegrass and western Pennyroyal regions. Diameters can range from several tens to hundreds of feet, and shapes can be circular, elongate, or irregular and complex.

Collapse sinkholes form suddenly by failure of the roof or arch of soil, bedrock, or other surface and subsurface materials located above subsurface karst voids and caves.⁵⁰

⁴⁹ Cecil, M.C. (2015). *Population and land use in Kentucky karst regions: University of Kentucky Departments of Earth and Environmental Sciences and Geography, Kentucky Geological Survey*. Independent study final report, 15.

⁵⁰ Waltham T., Bell, F., and Culshaw, M. (2005). *Sinkholes and subsidence: Karst and cavernous rocks in engineering and construction: Berlin, Springer*.

Their seemingly unpredictable occurrence makes them a hazard of particular concern in karst areas. The Kentucky Geological Survey began developing a catalog of case histories of cover-collapse occurrences in 1997 and has documented 354 occurrences throughout the Commonwealth; an average of 24 new reports are received each year.

In the 2018 State Hazard Mitigation Plan, researchers looked at karst potential areas and sinkhole density and created a hazard map for the State (see Figure 38).

Figure 38. Karst/Sinkhole Hazard Score, Kentucky

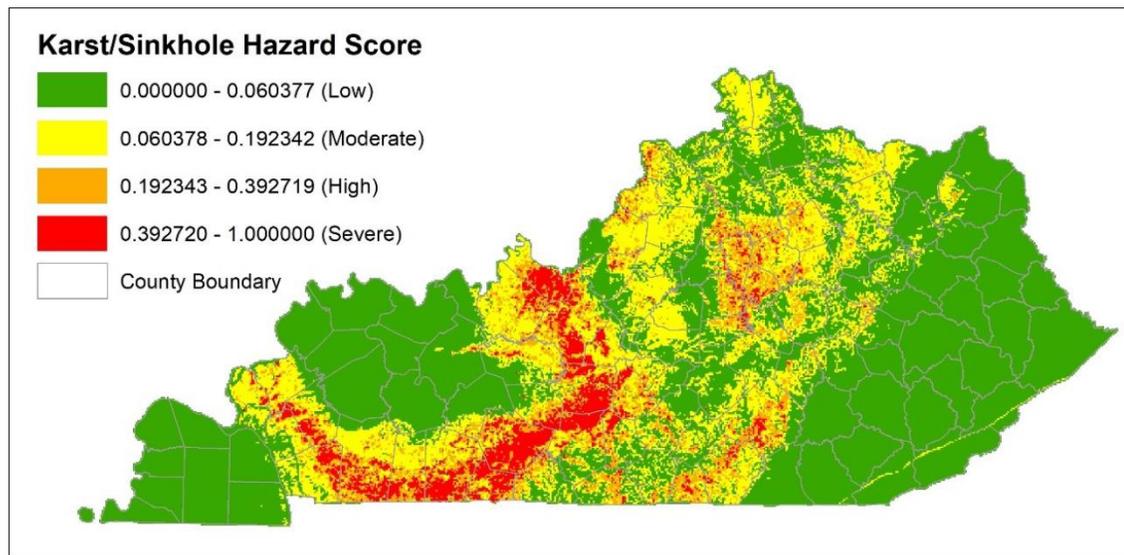


Figure 38 depicts a map of karst and sinkhole hazards in Kentucky. The far eastern and western areas of the State have a low sinkhole hazard risk, while the south-central region of the Commonwealth has a high-to-severe karst/sinkhole hazard risk.

With gradual warming and its effects on summer highs and winter lows, increased precipitation, and increased variability of the weather, it is expected that the probability (or, rather, the frequency and/or severity) of sinkhole events, particularly sinkhole flooding events, will increase.

2.5.4.6 Landslide

A landslide is a general term for the downslope movement of rock, soil, or both under the influence of gravity. The style of movement and resulting landform or deposit are influenced by the rock and soil type, slope location, and how fast the rock or soil moves. Landslides occur when the strength of rocks or soil is exceeded by stress applied to those hillslope materials. Common stresses are gravity, increased pore-water pressure, earthquake shaking, and slope modification.

Figure 39. Types of Landslides (Source: Kentucky Emergency Management)⁵¹

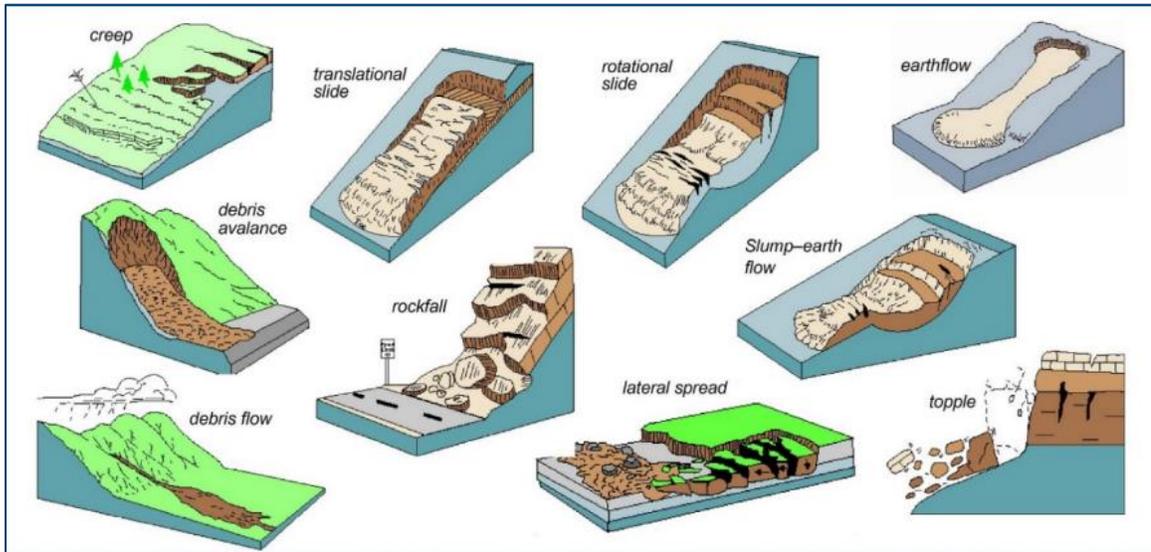


Figure 39 presents a diagram with various types of landslides, including creep, translational landslides, rotational slides, earthflows, debris avalanche, rockfall, slump-earth flow, debris flow, lateral spread, and topple.

Landslide-triggering mechanisms work in conjunction with the causes. Triggers are the external stimuli that can initiate slides and include rainfall, earthquake shaking, volcanic eruptions, rapid groundwater change, and slope modification by humans. Landslides can occur on natural or engineered slopes. Most landslides in Kentucky occur within colluvial soils or along the soil-bedrock contact. Colluvial soils are formed by weathering and erosion of rock and soil accompanied by downslope movement by gravity. When disturbed or loaded, by heavy rainfall saturating a slope, for example, these soils are susceptible to landslides.

⁵¹ [United States Geological Survey Landslide Fact Sheet FS2004-3072](#)

Figure 40. FEMA's Landslide Risk Index Score

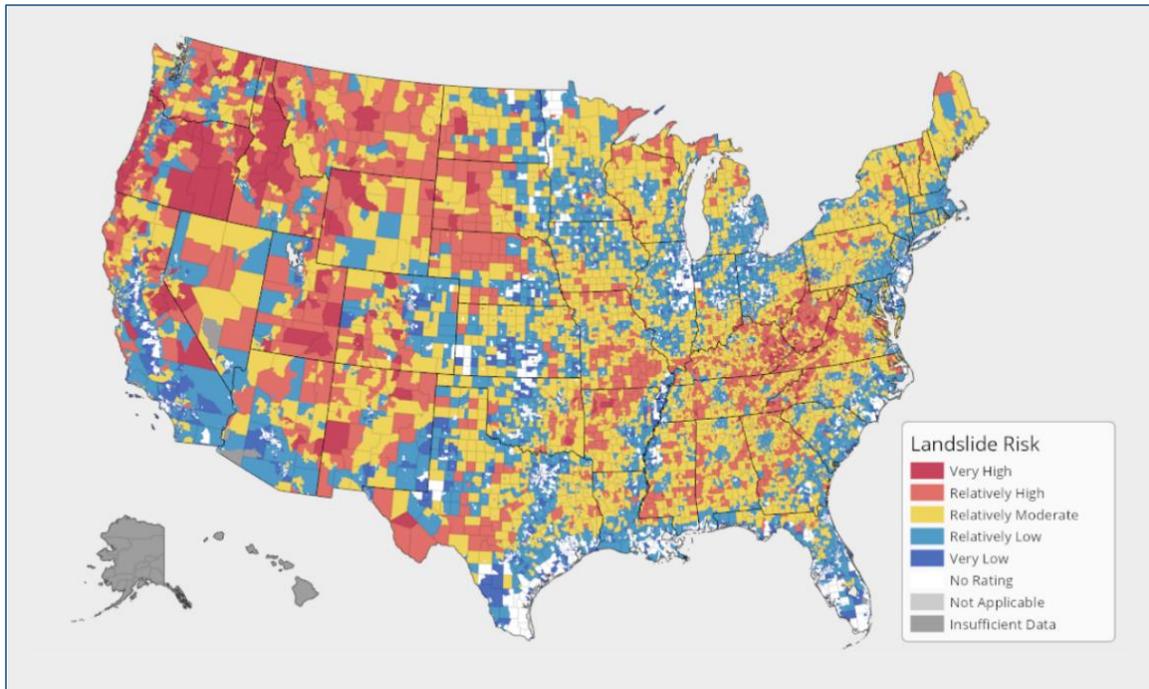


Figure 40 depicts a map of the United States demonstrating regional landslide risk; the majority of the Commonwealth of Kentucky is either at relatively moderate, relatively high, or very high landslide risk. FEMA's landslide risk index score represents a community's relative risk for landslides compared to the rest of the United States.

No systematic catalog of landslide occurrence or impact is maintained in the United States. One complication is that landslides are often considered a secondary hazard associated with a primary extreme event, such as a tropical storm or an earthquake. This makes compiling statistics on landslides and their impact difficult; as such, their impacts are likely underestimated. However, according to the U.S. Geological Survey, landslides cause \$1–\$2 billion in damages and more than 25 deaths on average each year in the United States. Direct costs of landslides include repairs and maintenance of roads and other property. Indirect costs, including loss of tax revenue on devalued property, loss of real estate value in landslide-prone areas, and environmental effects (such as water quality), may even exceed direct costs.

Figure 41. USGS Landslide Inventory, 2022

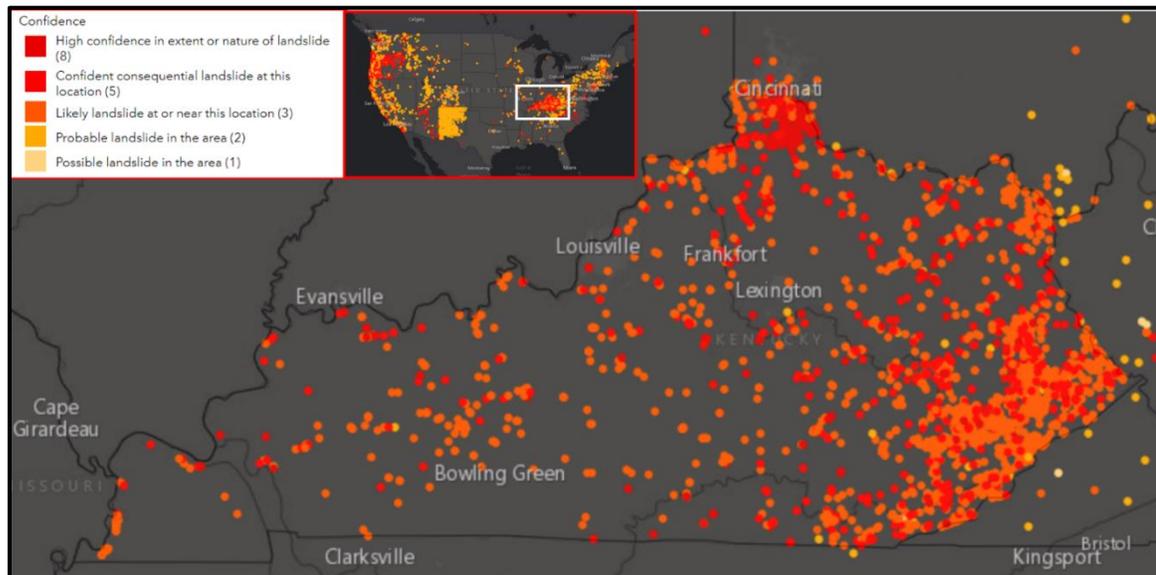


Figure 41 shows a map of Kentucky from USGS with landslide events from 2022. Most landslides have occurred along the eastern border of the Commonwealth.

There are more than 76,000 landslides in the Kentucky Geological Survey landslide inventory database as of 2018.⁵² Kentucky's landslides occur in all regions of the Commonwealth, 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.

Evidence suggests that landslide costs rival or exceed flood and earthquake costs in Kentucky. Costs of landslides and rockfall repair exceed \$4 million annually, largely costs incurred by the Kentucky Transportation Cabinet. However, many slides unrelated to transportation go unreported and pose significant hazards to people and infrastructure. Landslide projects from 2003 to 2013 funded by a Kentucky Hazard Mitigation grant program that acquires landslide-damaged homes or stabilizes the area totaled approximately \$5 million. The most expensive landslide mitigation effort in the Commonwealth occurred in Hickman, when the federal government secured \$17 million to stabilize a large slide on the bluff of the Mississippi River.

Generally, more landslides occur when average statewide rainfall is higher than normal. There has been gradual warming since the late 1970s. This gradual warming will likely continue without much significant change until 2040. Further, part of the gradual warming since the late 1970s involves precipitation increases. Precipitation increases affect nearly every hazard identified in this hazard mitigation plan: landslides are

⁵² Kentucky Emergency Management, 2018

triggered by precipitation; sinkholes flood with increased precipitation; flash flooding increases from severe storms; and winter storms either increase or become more severe. With gradual warming and its effects on summer highs and winter lows, increased precipitation, and increased variability of the weather, it is expected that the probability (or, rather, the frequency and/or severity) of landslide events will increase. Increasing urbanization and development on landslide-prone slopes will also increase the likelihood of slope failures. Finally, as the population increases, development of landslide-prone areas grows, and the hazard and risk will increase.

2.5.4.7 Severe Weather – High Winds, Thunderstorms, and Hailstorms

The Kentucky Hazard Mitigation Plan defines severe weather as an event that has at least one of the following: wind gusts of at least 58 mph or higher (i.e., 50 knots), tornado, or hail that is 1 inch or larger (i.e., the size of a quarter).

2.5.4.7.1 High Winds

High winds are defined as a rough horizontal movement of air caused by uneven heating of the earth's surface. Wind occurs at all scales, from local breezes lasting a few minutes to global winds resulting from solar heating of the earth. Effects from high winds can include downed trees and power lines and damage to roofs, windows, etc.

The Kentucky Hazard Mitigation Plan identifies three types of damaging wind associated with severe storms:

Downburst: A downburst refers to an area of strong, often damaging winds produced by air rapidly descending in a thunderstorm. Downbursts are sometimes described as a microburst when it covers an area of less than 2.5 square miles and lasts 3–7 minutes. Microbursts can be referred to as downbursts when they cover larger areas or last for more than 7 minutes. On rare occasions, downbursts can have wind speeds exceeding 150 mph.

Bow Echo: A bow echo is a bow-shaped line of convective cells, best seen on radar, and is often associated with swaths of damaging straight-line winds and small tornadoes.

Derecho: A derecho is a widespread and usually fast-moving convectively induced episode of damaging winds. Derechos can result from bow echoes, supercells, multicell clusters or lines, or a blend of any of these. They can produce damaging straight-line winds over areas hundreds of miles long and more than 100 miles across. Due to the large area extent, an episode is usually not classified as a derecho until it is complete.

As far as jurisdictional variations in vulnerability to severe wind events and tornado events, the eastern, northeastern, and southeastern parts of the Commonwealth are going to be far less vulnerable to severe wind and tornadoes than the western end of the Commonwealth. Central Kentucky has moderate vulnerability to tornadic and severe

wind activity compared to the western part of the Commonwealth. However, northwestern Kentucky can show high vulnerability to severe winds and tornadoes. Severe wind is a more troubling issue for Kentuckians than tornadoes. Straight-line winds are more frequent and often more damaging than tornadoes.

2.5.4.7.2 Severe Storms/Thunderstorms and Hailstorms

Severe storms, or thunderstorms, can be dangerous and can cause destructive, deadly flooding. When they contain strong winds, hail, or tornadoes, they can turn violent. NOAA classifies a storm as “severe” when it produces wind gusts of at least 58 mph and/or hail 1 inch in diameter (about the size of a quarter) or larger and/or a tornado.

Thunderstorms vary in type depending on size and organization. NOAA classifies thunderstorms by cells, or convection in the form of a single updraft, downdraft, or updraft/downdraft couplet, typically seen as a vertical dome or tower as in a towering cumulus cloud.⁵³

- Ordinary cell thunderstorms only have one cell. These storms may also be referred to as single-cell thunderstorms or pulse thunderstorms.
- Multicell cluster thunderstorms are organized in clusters of two to four short-lived cells.
- Multicell line thunderstorms form in a line that extends—sometimes for hundreds of miles—and can persist for hours. These are called squall lines, and they can be continuous or include contiguous precipitation.
- Long-lived squall lines are called derechos and can cause severe damage with fast, straight-line winds.
- Supercell thunderstorms are very dangerous storms with long-lived strong tornadoes and damaging wind, hail, and flash floods.

Thunderstorms form due to three conditions: moisture, rising unstable air (air that keeps rising when given a “nudge”), and a lifting mechanism to provide the nudge. Thunderstorms have three stages in their lifecycle: the developing stage, the mature stage, and the dissipating stage. The developing stage of a thunderstorm is marked by a cumulus cloud that is pushed upward by a rising column of air (updraft). There is little to no rain during this stage but occasional lightning. The thunderstorm enters the mature stage when the updraft continues to feed the storm, but precipitation begins to fall out of the storm, creating a downdraft (a column of air pushing downward). When the downdraft and rain-cooled air spreads out along the ground it forms a gust front or a line of gusty winds. The mature stage is the most likely time for hail, heavy rain, frequent lightning, strong winds, and tornadoes. The production of a large amount of precipitation and a downdraft signifies the beginning of the dissipating stage.

⁵³ [Severe Weather 101: NOAA National Severe Storms Laboratory](#)

Hail forms inside a thunderstorm where there are strong updrafts of warm air and downdrafts of cold water. If a water droplet is picked up by the updrafts, it can be carried well above the freezing level. Water droplets freeze when temperatures reach 32 degrees or colder. As the frozen droplet begins to fall, it may thaw as it moves into warmer air toward the bottom of the thunderstorm. However, the droplet may be picked up again by another updraft and carried back into the cold air and refreeze. With each trip above and below the freezing level, the frozen droplet adds another layer of ice. The frozen droplet, with many layers of ice, falls to the ground as hail. Most hail is small and typically less than 2 inches in diameter.

Severe storms can have significant impacts on infrastructure. Lightning strikes can cause infrastructure and tree damage, start fires, and pose a threat to human life. Damage from hail increases with the size of the hail and can cause damage to vehicles, aircraft, and homes, and can be fatal to people and livestock. Additionally, heavy rain from severe thunderstorms can often lead to flash flooding in low-lying areas and in urban areas where the prevalence of impermeable surfaces (such as roads, roofs, and parking lots) accelerates storm runoff to ditches and streams. From 2010 to 2020, FEMA granted 19 disaster declarations in Kentucky, mostly for severe storms, tornadoes, and flooding.

Thunderstorms will potentially become more intense and severe as climate change creates conditions that are conducive to thunderstorm formation, with warmer surface temperatures and more moisture in the air due to increased evaporation. A study led by Purdue University found that a doubling of greenhouse gases in the atmosphere would significantly increase the number of days that severe thunderstorm could occur in the southern and eastern United States.⁵⁴

2.5.4.8 Severe Winter Storm

A severe winter storm consists of heavy snow, ice, strong winds, and/or cold temperatures. Heavy snow is considered 6 inches of snow or more in 12 hours; or 8 inches of snow or more in 24 hours. A severe winter storm is considered a blizzard if the storm has winds 35 mph or greater and significant snow or blowing snow with visibility less than 1/4 mile.

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 close to 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 5 inches are fairly common, while totals of more than 20 inches are infrequent. Northern areas rarely receive less than 10 inches of snow and occasionally receive as much as 40 inches or

⁵⁴ [Severe Thunderstorms and Climate Change: NASA](#)

more. Snow cover seldom persists for more than 1 week in the south or more than 2 weeks in the north.

The number of extremely cold events has also been below average in recent winters. The top 10 coldest winters all occurred prior to 1980. Also, since 1990, the number of very cold nights has been below average, and winter average temperatures have generally been near to above average.

However, winter storms still afflict Kentucky. Heavy snow is normally associated with storm systems that originate in the southwest, are fueled by Gulf of Mexico moisture, and track toward the northeast. Instead of snow, a winter storm may bring freezing rain that produces significant icing, but such events are infrequent. Intense winter storms are sometimes followed by cold waves that bring temperatures of zero degrees or colder.

Of the top 25 weather events ever recorded from the NWS Louisville Field Office, seven events have been severe winter storms. Kentucky witnessed 45 winter storm events between 2013 and 2018, with an average annual occurrence of 7.5 (Table 56).

Table 56. Severe Winter Storm Events in Kentucky, Annual Frequency, 2013–2018

Year	Winter Storm Events	Ice Storm Events	Heavy Snow Events	Events Combined
2013	5	3	3	11
2014	7	2	5	14
2015	3	1	3	7
2016	2	0	3	5
2017	0	0	1	1
2018	4	0	3	7
<i>Totals</i>	21	6	18	45
Frequency Per Year (/6)	3.5	1	3	7.5

Table 56 contains the frequency of severe winter storm events between 2013 and 2018 in Kentucky. In 2013, Kentucky experienced 5 winter storm events, 3 ice storm events, 3 heavy snow events, and 11 total events. In 2014, Kentucky experienced 7 winter storm events, 2 ice storm events, 5 heavy snow events, and 14 total events. In 2015, Kentucky experienced three winter storm events, one ice storm event, three heavy snow events, and seven total events. In 2016, Kentucky experienced two winter storm events, zero ice storm events, three heavy snow events, and five total events. In 2017, Kentucky experienced zero winter storm events, zero ice storm events, one heavy snow event, and one total event. In 2018, Kentucky experienced four winter storm events, zero ice storm events, three heavy snow events, and seven total events.

With gradual warming and its effects on summer highs and winter lows, increased precipitation, and increased variability of the weather, it is expected that the probability (or, rather, the frequency and/or severity) of severe winter storms, heavy snow, and ice storms will increase.

2.5.4.9 Tornado

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud. Tornadoes occur when cool, dry air intersects and overrides a layer of warm, moist air, forcing the warm air to rise rapidly. Tornado wind speeds normally range from 65 mph to over 200 mph but can reach more than 300 mph. The maximum winds in tornadoes are often confined to extremely small areas and vary tremendously over short distances, even within the funnel itself. These storms typically travel around 10–20 mph but can move at more than 60 mph. Damage paths can vary from as narrow as 1 mile to as wide as 50 miles. Tornadoes can occur at any time of the year and at any time of day.

Tornadoes are measured by their intensity in terms of wind speed and their area using the Enhanced Fujita (EF) scale. The scale ranges from EF0, with minor damages from winds ranging 65–85 mph, to EF5 with severe damages from winds more than 200 mph.

Table 57. Enhanced Fujita Scale

EF Number	Estimated 3-second gust (mph)	Typical Damage
0 (Gale)	65–85	Some damage to chimneys; branches broken off trees; shallow-rooted trees blown over; damaged signboards.
1 (Weak)	86–110	Surfaces peeled off roofs; mobile homes pushed off foundations or overturned; autos pushed off roads.
2 (Strong)	111–135	Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
3 (Severe)	136–165	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forests uprooted. Well-constructed houses leveled; structures with weak foundations blown off, sometimes to a distance; cars flung about; large missiles generated.
4 (Devastating)	166–200	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars flung about; large missiles generated.
5 (Incredible)	200+	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile-sized missiles flying more than 100 meters; trees debarked; steel-reinforced concrete structures badly damaged.

Table 57 explains the Enhanced Fujita scale. An EF0 (gale) storm has estimated 3-second gusts of 65–85 mph; an EF1 (weak) storm has estimated 3-second gusts of 86–110 mph; an EF2 (strong) storm has estimated 3-second gusts of 111–135 mph; an EF3 (severe) storm has estimated 3-second gusts of 136–165 mph; an EF4 (devastating) storm has estimated 3-second gusts of 166–200 mph; and an EF5 (incredible) storm has estimated 3-second gusts of 200+ mph.

Kentucky experiences a relatively high number of tornadoes each year, with an annual average of approximately 24 tornadoes between 1991 and 2019.⁵⁵ On March 2, 2012, 18 tornadoes touched down in Kentucky, including one of EF4 and four of EF3 intensity, resulting in 22 fatalities. In April 2011, 41 tornadoes were reported, superseding an earlier April record of 29 tornadoes during the Super Outbreak of 1974. The December 10–11, 2021, tornado outbreak was one of the deadliest in Kentucky history, resulting in 76 fatalities. Twenty tornadoes touched down, including one of EF4 and three of EF3 intensity. The EF4 tornado path extended from near Woodland Mills, Tennessee (just across the border from Fulton County, Kentucky), to Breckinridge County (near Falls of Rough, Kentucky), a distance of 165.7 miles. The maximum estimated wind speed was 190 mph. A summary of impacts by county are summarized in Table X: Damage Estimates by County of a December 10, 2021 Tornado. National Weather Service.

Table 58. Damage Estimates by County From One of the December 10, 2021, Tornadoes

	Deaths	Structures Damaged	Structures Destroyed
Fulton County	1	40	21
Hickman County	0	40	12
Graves County	24	1,390	785
Marshall County	1	341	356
Lyon County	1	141	45
Caldwell County	4	-	300 (estimate)
Hopkins County	15	1,000 (estimate)	500 (estimate)
Muhlenberg County	11	81	84

Table 58 contains damage estimates by county from one of the December 20, 2021, tornadoes. In Fulton County, there was 1 death, 40 structures damaged, and 21 structures destroyed. In Hickman County, there were 40 structures damaged and 12 structures destroyed. In Graves County, there were 24 deaths, 1,390 structures damaged, and 785 structures destroyed. In Marshall County, there was 1 death, 341 structures damaged, and 356 structures destroyed. In Lyon County, there was 1 death, 141 structures damaged, and 45 structures destroyed. In Caldwell County, there were 4 deaths and 300 structures destroyed. In Hopkins County, there were 15 deaths, 1,000 structures damaged, and 500 structures destroyed. In Muhlenberg County, there were 11 deaths, 81 structures damaged, and 84 structures destroyed.

According to NOAA, there is no known way to predict whether or how climate change is affecting tornado frequency or severity. Some studies predict that climate change could produce more severe thunderstorms known as supercells. As global temperatures rise, the hotter atmosphere can hold more moisture. This increases atmospheric instability,

⁵⁵ [NOAA – State Climate Summaries: Kentucky](#)

an ingredient to supercell formation. On the other hand, as the planet warms, wind shear (another vital ingredient) is likely to decrease. These two forces work against each other, and it is difficult to anticipate which one might have a greater impact on tornado formation. Furthermore, more frequent or severe thunderstorms does not necessarily mean that more tornadoes will occur, especially since only about 20% of supercell thunderstorms produce tornadoes.⁵⁶

However, there is evidence to suggest that climate change has shifted tornado patterns geographically east due to its impact on the jet stream. The number of tornadoes in the states that make up Tornado Alley are falling, while tornado events have been on the rise in Mississippi, Alabama, Arkansas, Missouri, Illinois, Indiana, Tennessee, and Kentucky.

2.5.4.10 Wildfires

A wildfire is an uncontrolled burning of grasslands, brush, or woodlands. Wildfires can be divided into two categories: wildland and wildland-urban interface

A wildland fire is a wildfire in an area where development is essentially nonexistent, except for roads, railroads, power lines, and similar facilities. Wildland fires have been occurring in Kentucky for thousands of years. Unfortunately, these fires began to threaten homes and communities, prompting the need to suppress wildfires and establish forest protection laws.

An urban wildland interface fire is a wildfire in a geographic area where structures and other human development meet or intermingle with wildland or vegetative fuels. Areas that have experienced prolonged droughts or are excessively dry are at risk of wildfires. People start more than four out of every five wildfires, usually as debris burns, arson, or carelessness. Lightning strikes are the next leading cause of wildfires. Wildfire behavior is based on three primary factors: fuel, topography, and weather.

Table 59. Summary of Fire Occurrences, Extent, 2013–August 2018 (Source: Kentucky Emergency Management)

Fire Class	Class Descriptor	# Fires	Acreage Burned	% of Total Fire Type
Class A	>0.25 Acres	92	12.3	1.7%
Class B	0.25 to 9 Acres	2,918	8,685.5	53.1%
Class C	10 to 99 Acres	2,172	77,954.4	39.6%
Class D	100 to 299 Acres	217	37,487.0	4.0%
Class E	300 to 999 Acres	81	37,620.0	1.5%
Class F	1,000 to 4,999 Acres	10	16,694.0	0.2%
Class G	5,000 or More Acres	1	7,400	0.0%

⁵⁶ [Tornadoes and Climate Change | National Geographic Society](#)

Table 59 contains a summary, by class, of fire occurrences between 2013 and 2018 in Kentucky. Class A fires, burning less than 1/4 acre, accounted for 1.7% of wildfires, with 12.3 acres burned and 92 total fires. Class B fires, burning between 1/4 acre and 9 acres, accounted for 53.1% of wildfires, with 8,685.5 acres burned and 2,918 total fires. Class C fires, burning between 10 and 99 acres, accounted for 39.6% of wildfires, with 77,954.4 acres burned and 2,172 total fires. Class D fires, burning between 100 and 299 acres, accounted for 4.0% of wildfires, with 37,487 acres burned and 217 total fires. Class E fires, burning between 300 and 999 acres, accounted for 1.5% of wildfires, with 37,620 acres burned and 81 total fires. Class F fires, burning between 1,000 and 4,999 acres, accounted for 0.2% of wildfires, with 16,694 acres burned and 10 total fires. Class G fires, burning more than 5,000 acres, accounted for less than 0.01% of wildfires, with 7,400 acres burned and 1 fire.

According to Kentucky Division of Forestry, wildfires are categorized into classes. These classes represent types of wildfire as well as an illustration of the extent, which is a measurement of how bad a wildfire can get, in terms of scale. Shown in Table 3 most wildfires in Kentucky have been Class B fires, meaning they burn small areas less than 10 acres.

Most wildfires in Kentucky have occurred in eastern portions of the Commonwealth, which are largely covered by State and national forests. Figure 5 shows the geographical distribution of wildfires between 2013 and 2018. Between January 1, 2013, and August 13, 2018, the Commonwealth of Kentucky suffered 5,491 wildfire events. The immediate danger from wildfires is the destruction of property, timber, wildlife, and injury or loss of life to persons in the affected area. From the 5,491 wildfire events between 2013 and 2018, 185,853 acres were burned.

Figure 42. Wildfire Event Locations, 2013–2018 (Source: Kentucky Emergency Management)

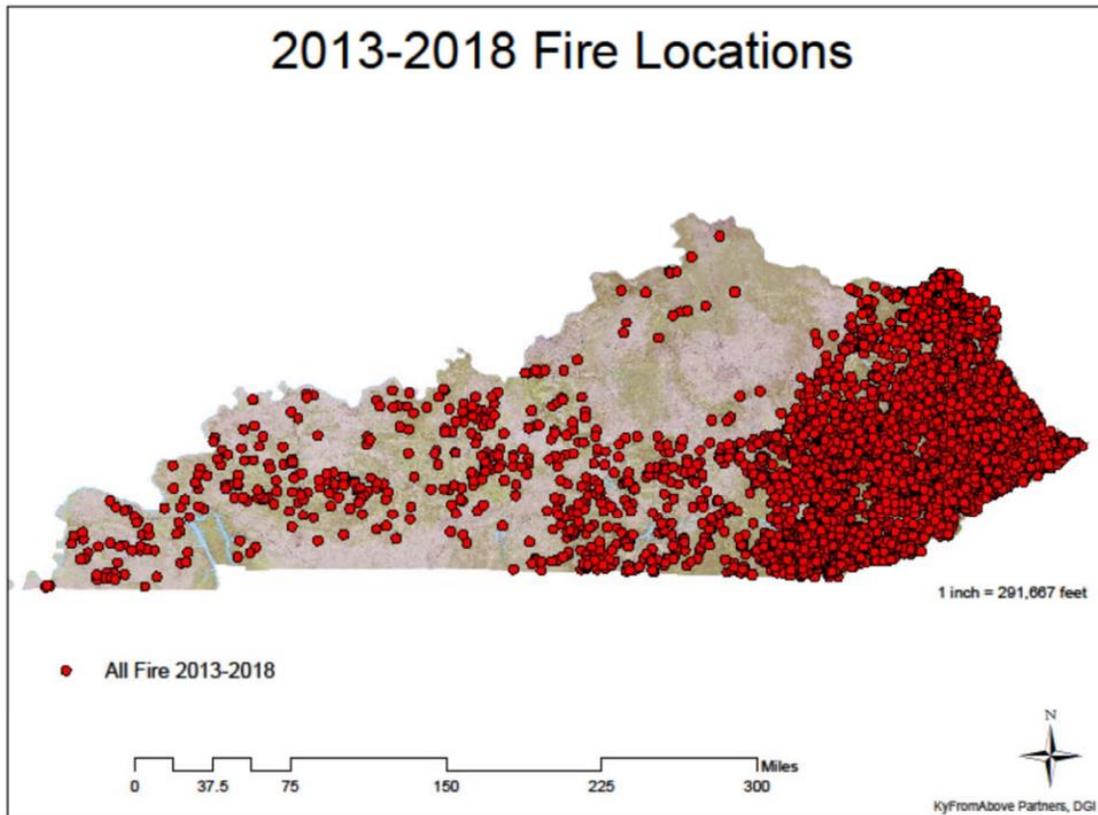


Figure 42 shows a map of fire locations between 2013 and 2018 in Kentucky. Most fires occurred in the eastern half of the Commonwealth, with a scattering across the south of the Commonwealth.

The following impacts resulted from these 5,491 wildfire events:

- Total suppression cost: \$4,766,014
- Average cost per fire: \$868
- Number of lost structures: 58
- Value of lost structures: \$370,150
- Improvements saved: \$2,346,085

Wildfires can cause widespread concern and disruptions even in cases where physical damages have been prevented. Smoke, closed roadways, and infrastructure disruptions may interfere with ordinary life and local economy. Wildfires are particularly damaging to the environment. Wildfires leave black soot, deposits of peat, smolder, and charcoal-like ground cover that can contaminate the soil and underground water table. These events also cause dramatic changes in vegetation, eliminating some species or causing others to appear where they were not present before the fire.

Figure 43. Relative Wildfire Risk to Kentucky Homes
(Source: USGS Wildfire Risk to Communities)

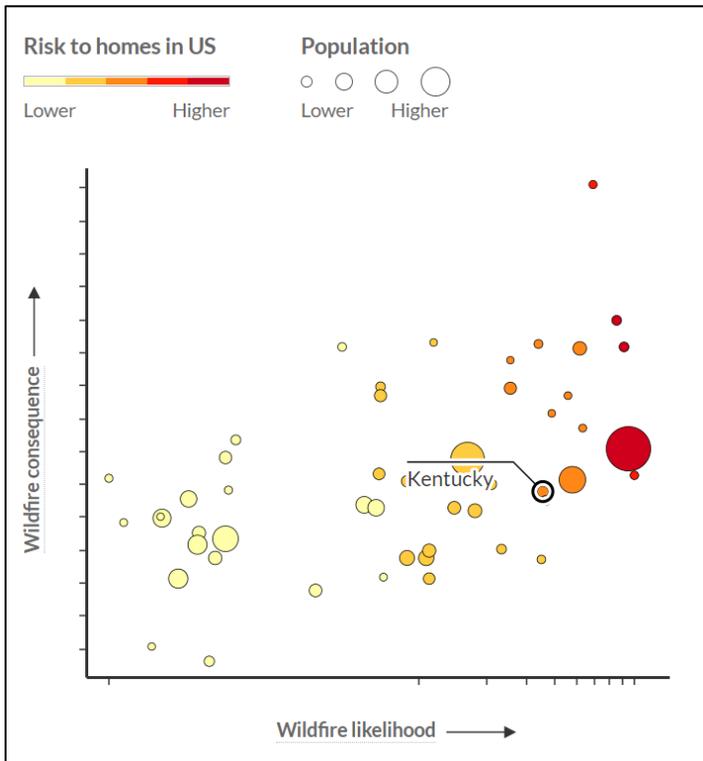


Figure 43 represents a graph of wildfire likelihood and wildfire consequences in terms of risks to homes in the United States and population size. Kentucky has a high wildfire risk with mild wildfire consequences and a medium populations size as compared to other states.

According to the USDA Forest Service, populated areas in Kentucky have, on average, greater risk than 72% of states in the United States (Figure 5) Counties in eastern Kentucky are particularly vulnerable to wildfires. Populated areas in Breathitt County have, on average, a greater wildfire likelihood than 93% of counties in Kentucky and 98% of the United States. Furthermore, individuals living in poverty have elevated fire risk and may require additional support recovering from a disaster.⁵⁷ As of 2021, 27.9% of Breathitt County residents live in poverty according to the U.S. Census Bureau, a ratio above the national and State average.

Over the last several decades, climate conditions have grown hotter and drier, which creates more fuel for fires to burn hotter and travel faster. Another aspect that warmer temperatures have on the landscape is they allow non-native creatures to travel to and survive in areas they previously found uninhabitable. One example of a problematic

⁵⁷ National Fire Protection Association

species is the invasive bark beetle. Climate change has eliminated the seasonal cold spells that would normally kill off the beetles. Bark beetles have killed 100,000 square miles of trees across western North America in the last 20 years. Dead trees serve as tinder for wildfires. With increased fire vulnerability, it is critical to protect the health of Kentucky's vast forest resources.

2.5.5 Indispensable Services

Indispensable services are those that enable the continuous operation of critical business and government functions and/or are critical to human health and safety and economic security. Area Development District (ADD) staff have identified critical facilities within each ADD's Hazard Mitigation Plan. Critical facilities that correspond with several of FEMA's community lifelines, including safety and security; food, water, and shelter; health and medical; communication; and hazardous materials are included in Table 60 for all identified counties.

Table 60. Critical Facilities, Identified and MID Counties

ADD	County	Fire Stations	Police Stations	Emergency Operations Center	Hospitals	Schools	Water and Wastewater Treatment Plants	Total # of Critical Facilities
BRADD	Barren	14	3	1	1	22	4	45
	Hart	7	3	1	1	15	2	29
	Logan	6	5	1	1	10	4	27
	Warren	24	7	0	5	47	1	84
BSADD	Floyd	18	4	0	3	16	10	51
	Johnson	15	2	0	1	14	3	35
	Magoffin	8	2	0	0	6	2	18
	Martin	5	2	0	0	7	2	16
BGADD	Anderson	7	1	1	0	13	0	22
	Clark	5	2	1	1	1	14	24
	Estill	5	2	1	1	7	0	16
	Fayette	1	2	0	11	92	3	0
	Jessamine	11	2	1	0	15	0	29
	Lincoln	13	6	0	2	11	0	32
	Madison	13	0	1	1	175	0	190
	Powell	2	1	1	0	6	0	10
CVADD	Woodford	10	2	0	2	8	13	35
	Clay	10	1	1	1	10	0	23
	Jackson	4	1	1	0	6	3	15

ADD	County	Fire Stations	Police Stations	Emergency Operations Center	Hospitals	Schools	Water and Wastewater Treatment Plants	Total # of Critical Facilities
	Laurel	16	3	1	2	18	9	49
	Rockcastle	4	2	1	1	6	1	15
FIVCO	Boyd	9	3	1	1	4	3	21
	Greenup	15	7	1	1	3	9	36
	Lawrence	7	2	1	1	1	2	14
GWADD	Morgan	8	3	1	1	10	3	26
GRADD	Ohio	8	3	1	3	11	6	32
KRADD	Breathitt	5	2	1	1	12	0	21
	Knott	3	1	1	0	6	0	11
	Lee	4	2	1	0	5	0	12
	Leslie	6	2	1	1	7	0	17
	Letcher	7	4	1	2	12	0	26
	Owsley	2	2	1	0	3	0	8
	Perry	9	2	1	1	19	0	32
LCADD	Pulaski	19	2	1	1	14	2	39
	Taylor	2	2	1	1	5	1	12
LTADD	Marion	6	2	1	1	9	3	9
Pennyrite ADD	Caldwell	3	2	1	1	7	2	16
	Christian	18	6	1	3	29	6	63
	Hopkins	18	6	1	1	21	8	55
	Lyon	4	2	1	0	4	6	17
	Muhlenberg	8	5	1	1	12	5	32
Purchase JADD	Fulton	3	3	1	0	6	4	17
	Graves	17	3	1	1	12	13	47
	Hickman	4	0	0	0	2	3	9
	Marshall	15	3	1	1	12	7	27

Table 60 outlines the number of critical facilities—including fire stations, police stations, EOCs, hospitals, schools, and water and wastewater treatment plants—in both MID and IA counties in Kentucky.

Breathitt County, through the KRADD, identifies 160 critical facilities within the county. These facilities include 1 water plant, 6 water tanks, 3 water pumps, 1 sewer plant, 25 sewer pumps, 121 bridges, and 3 electric substations.

Graves County, through the Jackson Purchase Hazard Mitigation Plan, identifies 272 critical facilities within the county. These facilities include 1 county EOC, 5 radio communication facilities, 17 fire stations, 3 public safety buildings, 2 government buildings, 1 hospital, 1 electric power plant, 5 sewage treatment plants, 5 package treatment plants, 8 water treatment plants, 2 flood control pump stations, 18 lift stations, 17 storage tanks, 21 wells, 12 schools, 1 airport, 31 dams, and 122 bridges. Eighty-four facilities, including 2 sewage plants, 7 lift stations, 8 dams, and 67 bridges are in an SFHA.

Hopkins County, through the Pennyryle Regional Hazard Mitigation Plan, identifies 200 critical facilities within the county. These facilities include 1 county EOC, 46 radio communication facilities, 18 fire stations, 6 police stations, 2 railways, 10 government buildings, 1 hospital, 3 sewage treatment plants, 5 water treatment plants, 24 pumping stations, 37 wells and storage tanks, 21 schools, 2 transportation facilities, 3 natural gas facilities, and 21 dams. Thirteen facilities, including two railways, one sewage treatment plant, three pumping stations, one transportation facility, and six dams are in an SFHA.

Warren County, through the Barren River Regional Hazard Mitigation Plan, identifies 395 critical facilities within the county. These facilities include 3 airports, 110 bridges, 1 potable water facility, 43 pumping stations, 30 storage tanks, 1 wastewater plant, 51 lift stations, 5 natural gas facilities, 5 hospitals, 8 clinics, 48 care facilities, 8 group living facilities, 7 law enforcement stations, 2 jails, 24 fire stations, 1 ambulance service, 1 senior citizen center, 47 schools, 3 newspapers, 152 repeater sites, 125 base stations, 5 television stations, and 14 radio stations.

2.5.6 Conclusion

As this Mitigation Needs Assessment makes clear, there are at least 10 natural hazards that pose a considerable risk to Breathitt, Graves, Hopkins, and Warren Counties. These counties were HUD-identified as most impacted and distressed by the 2021 flooding and tornado/straight-line winds events. By characterizing these hazards in terms of their frequency and each county's vulnerability, DLG and its subrecipients can draw on this needs assessment to identify current and future hazards in these communities and target CDBG-DR funds toward cost-effective solutions to mitigate them over the long term. In addition, this assessment will inform all CDBG-DR programs and activities undertaken as part of this allocation such that, at a minimum, they do not exacerbate hazards but rather, serve to lessen their impacts.

3 General Requirements

3 General Requirements

3.1 Citizen Participation

3.1.1 Outreach and Engagement

In the development of this disaster recovery Action Plan, DLG conducted a survey of communities, organizations, tribal authorities, and citizens to better understand the remaining unmet needs and recovery ideas. The survey was posted on DLG's website in June 2022 and is still available. The survey was discussed at disaster recovery meetings, sent to DLG field staff to share with communities and citizens, and discussed at the DLG Annual Governor's Conference in August 2022.

To gather feedback from groups least likely to participate in the survey process, such as racial/ethnic minorities, people with special communication needs, and persons in other protected classes, the Commonwealth took various steps on outreach:

- DLG shared the survey questions with the Kentucky Area Development Districts, ADDs, counties, cities, and field offices. These entities are familiar with the impacted areas and were able to advertise the survey in impacted communities to specific vulnerable and distressed populations.
- DLG issued press releases notifying the public about the CDBG-DR award and the purpose of the funding. DLG requested community input from local governments, citizens, and organizations directly affected by the disasters. Press releases were posted on the website and disseminated through social media accounts.

The community survey generated more than 360 responses from the disaster-declared counties. Most respondents were from Warren or Hopkins Counties. The survey allowed respondents to select all answers that applied to them when asked how they were impacted. Some selected more than one answer. About half reported living in a community impacted by the storm, but that implies potentially and not directly impacted. More than one-quarter of responses included having significant property damage and loss of property and being permanently displaced from their home. Only 6% of respondents who were evacuated from their homes returned to little or no property damage. From the survey, the most severely impacted and having the hardest recovery were elderly and disabled individuals, renters, immigrants and refugees, low-income households, middle-income families who were underinsured or uninsured, those who were still unable to find housing, and small businesses.

Several recovery principles were presented, and the survey asked respondents to select whether they agreed or disagreed and why. The majority of respondents agreed with the following principles presented:

- Build back better: Rebuild homes and communities so they are better prepared to withstand future disasters.
- Housing and community recovery go together: A complete recovery means survivors of the storms in 2021 have appropriate housing and impacted communities have resources to address their needs.
- Advance equity and racial justice: Prioritize those who face the greatest challenges for recovery.

There were respondents who disagreed with the last principle about prioritizing those who face the greatest challenges for recovery. There were many comments about how people impacted by the storms should be treated equally and how assistance should be based on need versus a certain identity. Assisting small businesses, tree restoration, and ensuring affordable new housing were the top suggestions for other guiding principles. Eighty percent of respondents agreed that the biggest need for recovery from the 2021 storms is to rebuild housing. These themes of housing and business assistance were incorporated into the recovery programs as outlined in this Action Plan.

Respondents were also asked to prioritize programming on a scale of 1 to 5, with 5 being the highest rank or score a program could receive. Housing recovery assistance for LMI households ranked the highest, with an average score of 4.22. The next highest rank was for housing recovery assistance for residents of all incomes with a score of 4.14, followed by rehabilitation of existing homes with an average score of 4.1. Finally, new construction of housing and infrastructure investments with hazard mitigation scored 3.83 and 3.73, respectively. Affordable housing, business assistance, tree restoration, debris clean-up, intermediate assistance for food and personal items, rental assistance until permanent housing is secured, infrastructure and flood mitigation, and storm shelters were among the top priorities listed in the additional response section of the survey.

In the survey, DLG asked respondents to share their thoughts on how DLG can work with those impacted and local groups to help residents gain access to the resources and support they need to recover. Responses included good communication and an advertisement plan, making applications for funding straightforward and the process easy to understand, having oversight of contractors and creating protections for homeowners and tenants, help with insurance issues, and bringing the assistance down to the neighborhood level. DLG also asked about the top barriers to recovering fully; among the top responses were access to funds and information, issues with the FEMA process, contractors who are overwhelmed, insurance company issues, lack of affordable housing, not enough storm shelters, and predatory lenders.

People who took the survey were asked to imagine their community 5 years after the storm. Respondents envisioned that, if recovered well, their community's housing, businesses, and trees would be restored and replaced; everyone who needed jobs

would have one; there would be an adequate number of tornado-safe zones; new housing would be built; and the community would come together and help each other.

A second survey targeting city and county officials was released at the same time and received 25 responses. Most respondents agreed with the recovery principles (build back better, housing and community recovery go together, and advance equity and racial justice). Additional comments for guiding principles included themes of resiliency and strengthening businesses, downtowns, and infrastructure as they are rebuilt. Respondents were also asked to rank recovery priorities. The highest ranked recovery priority was infrastructure investment with hazard mitigation, with an average score of 4.68 out of 5. The next highest was housing recovery assistance for LMI individuals, with a score of 4.48. Then the following received ascending scores: housing recovery assistance for residents of all incomes (4.24), new construction housing (4.08), and rehabilitation of existing homes (3.96). When asked how DLG can work with respondents and local groups to help residents gain access to resources and support that the community needs to recover, responses included additional technical assistance to local communities, advertising and being visible, and working with local organizations and recovery groups. Finally, some of the top responses when asked about the top barriers to recovering fully were funding needs and lacking the knowledge and skill to apply for State and federal grants; loss of housing; lack of local tools to prevent future risk, such as ordinances and flood protection; and low contractor capacity.

DLG also consulted with disaster-affected residents, stakeholders, local governments, public housing authorities, and other affected parties in the surrounding geographic area to ensure the consistency of disaster impacts identified in the plan and to confirm that the plan and planning process were comprehensive and inclusive.

Through these consultation meetings, DLG was able to gather data, experiences, and community insight to develop an initial unmet needs assessment. All engagements were either conducted virtually or in-person, and surveys were submitted by each city and community organization. Table 61 shows the consultation events held to date.

Table 61. Table of Engagements/Consultations

Date	Attendees
Weekly	HB5/SB150 SAFE Funds
Ongoing	KYEMT Tornado Recovery Call
	Housing RSF/Housing Impact Presentation
	Housing RSF/Housing Impact Assessment
August 1, 2022	Field Representative Alex Caudill: Mayfield and Hopkinsville site visits, meetings with officials and survivors
July 28, 2022	SBA
	KY DLG/COSDA CDBG/CDBG-DR Meeting

Date	Attendees
July 20, 2022	Mayfield
July 12, 2022	Field Representative Alex Caudill: Mayfield and Marshall County site visits, meetings with officials and survivors
July 11, 2022	KYEM
July 11, 2022	Field Representative Alex Caudill: Dawson Springs site visit, meetings with officials and survivors
	CDBG-DR preallocation ideas
July 6, 2022	CDBG-DR Award
July 5, 2022	DOW
	DR4630 Western KY SAFE information meeting
	CDBG-DR Briefing (HUD)
June 22, 2022	KY Disaster Housing
June 22, 2022	Kentucky River ADD
June 15, 2022	Kentucky Housing Corporation
June 10, 2022	Field Representative Alex Caudill: Site visits to Mayfield, Marshall County, and Dawson Springs with officials
June 7, June 21, July 5, 2022 and continuing	West KY Planning Group (regular meetings scheduled)
June 6, 2022	Meeting with Bowling Green
June 1 and 16, 2022	Field Representative Alex Caudill: EDA tornado recovery workshop with officials
April 28, 2022	Field Representative Alex Caudill: Marshall County site visit, meetings with officials
April 11, 2022	Field Representative Alex Caudill: Meetings with officials in Hopkinsville
April 5, 2022	West KY State Aid for Emergencies Fund (SAFE) information
April 4, 2022	Field Representative Alex Caudill: Ohio County site visit, meeting with officials
March 23; May 11, 2022	West KY Planning Workgroup to brief governor and governor's staff
March 15, 2022	West KY Planning Workgroup
March 15, 2022	HUD Region IV
March 7, 14, and 28; April 4, 2022	KY Emergency Management KY Counties Tornado 21
April 6; May 16; July 11 and 21, 2022	FAHE
February 23, 2022	Kentucky Chamber of Commerce
February 14, 2022	Field Representative Alex Caudill: Zoom meetings with officials
February 10, 2022	Field Representative Alex Caudill: Mayfield and Fulton site visits, meetings with officials

Date	Attendees
February 7, 2022	KY Emergency Management KY Tornado 21 Recovery and Sheltering call
January 28, 2022	Field Representative Alex Caudill: Dawson Springs and Mayfield site visits, meetings with officials and survivors
January 27; February 3, 2022	KY Disaster Housing Task Force Briefing conference call with county judges and mayors
January 26; July 8, 2022	Field Representative Alex Caudill: Bowling Green site visit, meetings with officials
January 24; March 11; April 25; May 10; and July 25, 2022	Field Representative Alex Caudill: Mayfield site visit, meetings with officials and survivors
January 19, 2022	Teams call with Graves County Economic Development, DLG and Economic Development Cabinet
January 19, 2022	Field Representative Alex Caudill: Mayfield zoning meeting
January 19, 2022	Disaster Housing Task Force call with KY Emergency Management, DLG, and KHC
January 11, 2022	KY Tornado 21 calls with commissioner and chief of staff
January 11, 2022	DLG Disaster Housing Task Force discussion
January 10; February 9; March 23; April 12, 2022	Field Representative Alex Caudill: Hopkinsville site visit, meetings with officials
January 5, 2022	DLG and KY Housing Task Force discussion with chief of staff
January 4, 10, 18, 24, and 31; February 7, 14, 21, and 28; March 7, 21, and 28, 2022	KYDHTF – KY Disaster Housing Task Force conference calls with chief of staff
January 24; February 17; March 23; July 5, 2022	KHC
December 29, 2021; January 4, 10, 11, 17, and 18; February 1, 14, 15, 21, and 22; March 1, 7, 8, and 14, 2022	KYTC Task Force meetings
January 6, 10, and 27; March 22 and 24; April 29; May 2 and 31; June 14 and 28; July 5 and 8; August 8, 2022	Purchase ADD – Hickman, Fulton, and Graves Counties
December 29, 2021; February 18, 2022; March 15, 2022	Pennyrile ADD

Date	Attendees
January 4 and 27; February 3, 21, 22, and 25; April 12; May 16, June 16; July 13 and 20, 2022	Meetings with Bowling Green
January 3, 2022	Field Representative Alex Caudill: Hopkinsville and Mayfield site visits, meetings with officials
December 28, 2021; January 4, 2022	Disaster Housing – KY Housing Task Force
December 28, 2021	Mayfield KY support – Meeting with CED and Commissioner Dennis Keene and Chief of Staff Eddie Jacobs
December 22, 2021	Field Representative Alex Caudill: Constituent calls and calls with officials
December 21 and 23, 2021	Field Representative Alex Caudill: Visits to KY State Parks housing tornado victims
December 20, 2021	Field Representative Alex Caudill: Site visits in Hart County and meetings with officials, Teams meeting with Frankfort
December 19, 2021	Field Representative Alex Caudill: Visits to KY State Parks housing tornado victims
December 18 and 27, 2021	Field Representative Alex Caudill: Constituent calls and calls with officials, Teams meeting with Frankfort
December 17, 28, and 29, 2021; February 2, 2022	Field Representative Alex Caudill: Constituent calls and calls with officials
December 16, 2021	Field Representative Alex Caudill: Constituent calls and calls with officials, Teams meeting with Frankfort
December 15, 2021	Field Representative Alex Caudill: Mayfield, Princeton/Caldwell County site visits, meetings with officials
December 14, 2021	Field Representative Alex Caudill: Bremen site visits, meetings with officials, and constituent calls, calls with officials
December 13, 2021	Field Representative Alex Caudill: Mayfield site visits and meetings with officials, candle factory, FEMA meetings
December 12, 2021	Field Representative Alex Caudill: Bremen, Ohio County, Mayfield, site visits, meetings with officials, calls to local officials
December 11, 2021	Feld Representative Alex Caudill: Dawson Springs and Caldwell County site visits, meetings with officials, calls to local officials

The Action Plan is posted on the DLG disaster recovery website https://kydlgweb.ky.gov/FederalGrants/16_DRP.cfm for the 30-day comment period. It is available in English and Spanish. DLG will ensure that all residents have equal access to information, including persons with disabilities, elderly families, and those with limited English proficiency.

DLG advertised the availability of the Draft Action Plan and public hearings via public notice by publishing it in the newspaper of general circulation in the Commonwealth of Kentucky. DLG also emailed the public notice to Cities, Counties, and Area Development Districts as well as State stakeholders. DLG also promoted availability of the Action Plan via press releases. The public is encouraged to comment on the draft Action Plan by:

Email: DLG.DR@ky.gov

Letter: address referenced below

Phone: 502-573-2382

In person at public hearings: dates, times and locations listed below

For those who otherwise cannot obtain a copy of the Action Plan, DLG will make copies available upon request by contacting:

Department for Local Government

ATTN: Office of Federal Grants: DR Team

100 Airport Road 3rd Floor

Frankfort, KY 40601

3.1.2 Public Hearings

Per the Federal Register's approach for CDBG-DR, at least 1 public hearing in 1 of the HUD-identified MID areas is required during the 30-day comment period to obtain citizens' views and to respond to proposals and questions. The process below will be followed for a public hearing regarding the use of CDBG-DR funds or a substantial amendment.

All public hearings (whether in-person, virtual, or hybrid) will be held at a time and accessible location convenient to potential and actual beneficiaries, and with accommodations for persons with disabilities and LEP persons. If the hearing is conducted virtually, the hearing will allow questions in real time for all attendees.

DLG has decided to hold two public hearings:

- One public hearing will be held in Western Kentucky at the Purchase Area Development District office at 1002 Medical Drive, Mayfield KY 42066 on November 3, 2022 at 5 p.m. central time.

- One public hearing will be held in Eastern Kentucky at the Kentucky River Area Development District office at 941 North Main Street, Hazard KY 41701 on November 1, 2022 at 5 p.m. eastern time.

The public is encouraged to attend. The public hearing notice will be posted on the DLG Disaster Recovery website https://kydlgweb.ky.gov/FederalGrants/16_DRP.cfm, and in the newspaper. The public hearing notice also has the zoom meeting call in instructions. Along with the hearing, DLG has provided key information and recorded presentations on the Action Plan and the funded programs on its disaster recovery website. As per the Language Access Plan, DLG made available versions of the Action Plan in both English and Spanish.

Table 62. Table of Public Feedback/AP Presentations

Date	Attendees

3.1.2.1 Effective Communication

DLG will ensure that all residents have equal access to information, including persons with disabilities (vision and hearing impaired) and LEP persons. As required, DLG shall make critical documents (e.g., the Action Plan, Citizen Participation Plan, Quarterly Progress Reports) available in a form accessible to LEP persons and persons with disabilities. DLG will take steps to identify the LEP persons who need language assistance and identify how language assistance will be provided. The published Language Access Plan will provide details on how DLG will conduct this work. By improving accessibility, DLG intends to increase participation in its programs and activities by LEP persons, individuals from underserved communities, and persons with disabilities.

Further details can be found in the [Public Website](#) and [Amendments](#) sections in this chapter.

3.1.3 Complaints

DLG or its subrecipients will provide a written response to each formal complaint within 15 working days of receipt of the complaint or will document why additional time for a response is needed.

- Formal complaints are written statements of grievance and include email, comments posted on the DLG website, and handwritten complaints. DLG shall detail the process and contact information (through the website or email) for submitting

complaints in its program guidelines, application documents, and on the DLG website. DLG shall maintain a tracker for collecting and categorizing complaints through resolution.

- Informal complaints are verbal complaints. DLG and its subrecipients will attempt to resolve informal complaints; however, they are not subject to the written response process.
- Complaints alleging violation of fair housing laws will be directed to HUD for immediate review. Complaints regarding fraud, waste, or abuse of funds will be forwarded to the HUD Office of the Inspector General Fraud Hotline (phone: 1-800-347-3735 or email: hotline@hudoig.gov).

DLG's fraud, waste, and abuse policy will be available on the CDBG-DR Recovery website.

DLG or its subrecipients will include a written appeals process within each set of program guidelines. The appeals processes will include but are not limited to:

- The process for submitting, tracking, and resolving a written appeal to the organization administering the program (DLG or its subrecipients), to include whether an appeals committee will be established to review and/or rule on appeals.
- The documentation required when submitting an appeal.
- The timelines for reviewing and providing a response to the appeal.
- Clarification on what may or may not be appealed.

Generally, policies that have been approved and adopted within program guidelines may not be appealed. DLG and its subrecipients do not have the authority to grant an appeal to a regulatory, statutory, or HUD-specified CDBG-DR requirement.

3.2 Public Website

In accordance with [87 FR 31636](#) Section III.A.1.a, the Commonwealth of Kentucky will maintain a comprehensive, accessible website regarding all disaster recovery activities that utilize CDBG-DR funds. This website will serve as a central source of information for applicants and the public to ensure ease of access of information and overall transparency. To do this, the Commonwealth of Kentucky will ensure the website is accessible to persons with disabilities and LEP persons. Additionally, the Commonwealth of Kentucky will take all reasonable steps to ensure meaningful access to its programs and activities by LEP persons, including members of protected classes, vulnerable populations, and individuals from underserved communities, as described in Section III.D.1.d of the Consolidated Notice.

The lead agency to manage this website will be the DLG. Additionally, the website will be updated at a minimum on a quarterly basis. Information that will be available on the website will include:

- Action Plan and amendments
- Performance reports
- Citizen Participation Plan
- Procurement policies and procedures
- All executed contracts that will be paid with CDBG-DR funds
- A summary that includes the description and status of services or goods currently being procured by the grantee or the subrecipient (e.g., phase of procurement, requirements for proposals).
- Fraudulent Activity Notices that will include possible fraudulent activity, how the fraud can be avoided, and which local or State agencies to contact to take action.

The disaster recovery website can be found here: [Kentucky DLG - DRP Grants](#)

3.3 Amendments

Over time, recovery needs will change. Thus, DLG will amend the disaster recovery Action Plan as often as necessary to best address long-term recovery needs and goals. This plan describes proposed programs and activities. As programs and activities develop, an amendment may not be triggered if the program or activity is consistent with the descriptions provided in this plan. When unmet needs and program descriptions or other sections rise to the level of requiring an Action Plan amendment, the Commonwealth will do the following:

- Ensure that the current version of the Action Plan is accessible for viewing as a single document, with all amendments, so that the public and HUD do not have to view and cross-reference changes among multiple amendments.
- Identify amendments by highlighting added or changed text and striking out deleted text.
- Include a table that clearly illustrates where the funds are coming from and where they are going. Include a revised budget allocation table that reflects the entirety of all funds, if applicable to the amendment.

3.3.1 Substantial Amendment

A change to this Action Plan is considered substantial if it meets the following criteria:

- Addition or deletion of any allowable activity described in the approved application
- Change in the planned beneficiaries or overall benefit requirement
- Change in program benefit or eligibility criteria
- The allocation or reallocation of more than \$5,000,000

The amendment will be posted on the CDBG-DR Recovery website for a 30-day public comment period. The amendment will be posted in adherence with the Americans with Disabilities Act and LEP requirements.

A substantial Action Plan amendment shall require the following:

- The Commonwealth will revisit the impact and needs assessment when moving funds from one program to another through a substantial amendment.
- A 30-day public comment period will include the following:
 - The Commonwealth will prominently post the Action Plan amendment on the [DLG Disaster Recovery website](https://kydlgweb.ky.gov/FederalGrants/16_DRP.cfm) https://kydlgweb.ky.gov/FederalGrants/16_DRP.cfm
 - The Commonwealth will afford residents, affected local governments, and other interested parties a reasonable opportunity to review the plan or substantial amendment.
 - The Commonwealth will identify and consider potential barriers that limit or prohibit equitable participation and will undertake reasonable measures to increase coordination, communication, affirmative marketing, targeted outreach, and engagement with underserved communities and individuals, including persons with disabilities and LEP persons. This includes the following:
 - The Action Plan amendment will be translated according to the CDBG-DR Language Access Plan
 - The Action Plan amendment will be posted in a way that meets all accessibility requirements
 - The Commonwealth will review and respond to all written and oral public comments received. Any updates or changes made to the Action Plan in response to public comments shall be clearly identified in the Action Plan and amendments. The public comments also will be submitted to HUD with the final Action Plan amendment.
- Submit to HUD for approval
- Receipt of approval from HUD

3.3.2 Nonsubstantial Amendment

A nonsubstantial amendment is an amendment to the plan that includes technical corrections and clarifications and budget changes that do not meet the monetary threshold for substantial amendments to the plan. The amendment does not require posting for public comment. DLG will notify HUD 5 business days before the change is effective. All amendments will be numbered sequentially and posted to the website into one final, consolidated Action Plan.

3.4 Displacement of Persons and Other Entities

To minimize the displacement of persons and other entities who may be affected by the activities outlined in this Action Plan, DLG and subrecipients will coordinate with applicable agencies and entities to ensure that all programs are administered in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act

(URA) of 1970, as amended (49 CFR Part 24), and Section 104(d) of the Housing and Community Development Act of 1974, as amended, and implementing regulations at 24 CFR Part 570.496(a).

These regulations and requirements apply to both property owners and tenants in the event that proposed projects cause the displacement of persons or other entities. DLG will include detailed policies and procedures for when proposed programs or projects could potentially cause the displacement of people or other entities. DLG also will budget to cover the costs involved in implementing those policies and procedures. Currently, it is not anticipated that the proposed programs will cause displacement.

DLG has drafted a disaster recovery Residential Antidisplacement and Relocation Assistance Plan (RARAP) that has been adapted to meet the URA, Section 104(d), and related waivers and the alternative requirements specified in the Consolidated Notice.

CDBG-DR funds may not be used to support any federal, State, or local projects that seek to use the power of eminent domain, unless eminent domain is employed only for a public use.

The disaster displaced many residents, both tenants and homeowners, who are still looking for access to the housing market. Due to the limited stock of affordable housing, residents are finding it difficult to become first-time homebuyers or find suitable rental housing. The proposed programs in this Action Plan will address displacement due to the disaster by providing new housing opportunities.

3.5 Protection of People and Property

The Commonwealth of Kentucky will leverage CDBG-DR funds to build economic and disaster resilience into all recovery programs and activities. Some of the ways that the Commonwealth will do this are included in the sections below.

3.6 Elevation Standards

All structures, defined at 44 CFR 59.1, designed principally for residential use and located in the SFHA (1% annual chance [or 100-year] floodplain) or equivalent FEMA data source, that receive assistance for new construction, reconstruction, rehabilitation of substantial damage, or rehabilitation that results in substantial improvement, as defined at 24 CFR 55.2(b)(10), must be elevated with the lowest floor, including the basement, at least 2 feet above the 1% annual chance floodplain elevation (base flood elevation). Structures that are elevated will meet federal accessibility standards.

Mixed-use structures with no dwelling units and no residents below 2 feet above base flood elevation must be elevated or floodproofed in accordance with FEMA floodproofing

standards at 44 CFR 60.3(c)(3)(ii) or a successor standard up to at least 2 feet above base flood elevation.

Nonresidential structures, including infrastructure, will also be elevated to the standards described above.

If a critical action structure is in a 500-year floodplain, the structure must be elevated 3 feet above the 100-year floodplain. Critical actions are described as any activity for which even a slight chance of flooding would be too great because such flooding might result in loss of life, injury to persons, or damage to property. Examples might include hospitals, nursing homes, emergency shelters, police stations, and fire stations. In addition to the elevation standards described in this section, DLG will comply with applicable State and local codes and standards for floodplain management, including elevation, setbacks, and cumulative substantial damage requirements.

The cost of elevation will be included as part of the overall cost of rehabilitation or replacement of a property. It is estimated that the costs will depend on the location, the size of the unit, and the level to which the property must be elevated. For single-family residences, if a home is within a 100-year floodplain, DLG will ensure the reasonableness of elevation costs by analyzing multiple bids from contractors, cost estimating software, and/or examples of comparable costs to elevate in similar markets.

3.7 Flood Insurance Requirements

Assisted property owners must comply with flood insurance requirements. HUD-assisted homeowners for a property located in an SFHA must obtain and maintain flood insurance in the amount and duration prescribed by FEMA's National Flood Insurance Program (NFIP). DLG may not provide disaster assistance for the repair, replacement, or restoration of a property to a person who has received federal flood disaster assistance that was conditioned on obtaining flood insurance but then that person failed to obtain it or allowed their flood insurance to lapse for the property. DLG is prohibited by HUD from providing CDBG-DR assistance for the rehabilitation or reconstruction of a house if the following conditions are met:

- The combined household income is greater than 120% AMI or the national median, and,
- The property was located in a floodplain at the time of the disaster, and
- The property owner did not maintain flood insurance on the damaged property.

To ensure adequate recovery resources are available to LMI homeowners who reside in a floodplain but who are unlikely to be able to afford flood insurance, LMI homeowners may receive CDBG-DR assistance if:

- The homeowner had flood insurance at the time of the qualifying disaster and still has unmet recovery needs, or
- The household earns less than 120% AMI or the national median and has unmet recovery needs.

DLG and its subrecipients will implement procedures and mechanisms to ensure that assisted property owners comply with all flood insurance requirements, including the purchase and notification requirements described below:

- Flood insurance purchase requirements for funds used to rehabilitate or reconstruct existing residential buildings in an SFHA (or 100-year floodplain).
- Federal assistance to owners remaining in a floodplain.
- Prohibition on flood disaster assistance for failure to obtain and maintain flood insurance.
- Prohibition on flood disaster assistance for households above 120% of AMI for failure to obtain flood insurance.
- Responsibility to inform property owners to obtain and maintain flood insurance.

3.8 Construction Standards

DLG will work with other State agencies including the Department of Housing, Building, and Construction within the Public Protection Cabinet and the Kentucky Housing Corporation to develop guidelines that will require quality inspections and code compliance inspections on all projects and places, with an emphasis on high-quality, durable, sustainable, and energy-efficient construction methods and materials. Site inspections will be required on all projects to ensure quality and compliance with building codes.

All rehabilitation, reconstruction, or new construction must meet an industry-recognized standard that has achieved certification under at least one of the following programs:

- ENERGY STAR® (certified homes or multifamily high risk)
- Enterprise Green Communities
- LEED (new construction, homes, midrise, existing building operations and maintenance, or neighborhood development)
- ICC 700 National Green Building Standard®
- U.S. Environmental Protection Agency (EPA) Indoor airPLUS
- Equivalent or higher Kentucky energy efficiency standards
- Any other equivalent comprehensive green building standard program acceptable to HUD

DLG will specify the standards that will be used within each set of program guidelines.

For the rehabilitation of nonsubstantially damaged residential buildings, DLG will follow the guidelines to the extent applicable as specified in the HUD Office of Community

Planning and Development (CPD) Green Building Retrofit Checklist. When older or obsolete products are replaced as part of rehabilitation work, the rehabilitation is required to use ENERGY STAR-labeled, WaterSense-labeled, or Federal Energy Management Program-designed products and appliances.

For infrastructure projects, DLG will encourage, to the extent practicable, the use of green infrastructure design and implementation, such as those issued by:

- EPA through their Green Infrastructure Design and Implementation guidance
- HUD through their Green Infrastructure and Sustainable Communities Initiative

The term “substantial damage” applies to a structure in an SFHA or floodplain for which the total cost of repairs is 50% or more of the structure’s market value before the disaster occurred, regardless of the cause of the damage.

All projects will be subject to cost reasonableness standards as outlined in the policies and procedures of the applicable program specific to the applicable activity.

3.9 Contractor Standards

Contractors selected to carry out recovery and resilient activities will make every effort to provide opportunities to LMI persons by providing resources and information to notify Section 3 individuals and businesses about opportunities in the community. Grantee or subrecipients may elaborate on specific steps to promote Section 3.

DLG will undertake the following efforts to help meet its Section 3 goals:

- Ensure that Section 3 requirements are outlined in all applicable contracts and subrecipient agreements.
- Build the capacity of stakeholders, including subrecipients and contractors, to meet Section 3 standards through technical assistance, tools, and guidance.
- Designate a Section 3 coordinator who will manage, support, and facilitate an effective Section 3 program, and who will be able to effectively communicate program requirements to stakeholders.

DLG will report Section 3 accomplishments in the Disaster Recovery Grant Reporting (DRGR) system.

The Commonwealth also has a Minority and Women Business Enterprise Certification Program. The program encourages growth among Kentucky businesses owned by women and minorities and assists those businesses with expanding their markets. The Minority and Women Business Enterprise Certification Program, along with Kentucky’s [SMALL BUSINESS CONNECTION Database](#), helps facilitate the development of women- and minority-owned businesses in Kentucky. DLG will promote the Minority and Women Business Enterprise Certification Program.

Recovery programs implemented by DLG and its subrecipients will incorporate uniform best practices of construction standards for all construction contractors performing work in all relevant jurisdictions. All contractors are statutorily required to be licensed and registered with the Department of Housing, Building, and Construction within the Public Protection Cabinet. Construction contractors will be required to carry the required licenses and insurance coverage for all work performed, and contractors will be required to provide a warranty period for all work performed. DLG will outline contractor requirements in the respective program guidelines that address procurement, bonding, wage rates, Section 3 requirements, and any other requirements necessary to ensure the work is completed and in compliance with local, State, and federal regulations.

Contractors' standards, warranty periods, and warranty notification periods will be detailed in the respective policies and procedures documents and will pertain to the scale and type of work being performed, including the controls for ensuring that construction costs are reasonable and consistent with market costs at the time and place of construction.

Rehabilitation contract work provided through a program included in this Action Plan may be appealed by homeowners whose property was repaired by contractors under the Commonwealth's control.

In addition, DLG will provide information on reporting contractor fraud or illegal activities in their applicable program guidelines. The Attorney General of Kentucky has set up multiple ways to file a report:

- Citizens can call 502-696-5485 to report any suspected fraud
- Suspected price gouging can be reported to <https://secure.kentucky.gov/formservices/AttorneyGeneral/PriceGougingComplaintForm>
- Scams can be reported to <https://secure.kentucky.gov/formservices/AttorneyGeneral/ScamReport>
- The Attorney General's Consumer Protection hotline remains active and can be reached by calling 1-888-432-9257

The Attorney General's office has a list of natural disaster scams with tips on how to avoid these common scams.

The processes for homeowners to submit appeals for rehabilitation work, as well as complaints such as contractor fraud, poor quality work, and associated issues, will be detailed within each respective set of program guidelines.

3.10 Preparedness, Mitigation, and Resilience

3.10.1 Design Programs That Protect People and Property from Harm

The primary focus of the housing recovery program is to provide relief for those affected by disasters while complying with all CDBG-DR requirements and addressing recognized impediments to fair housing choice as required under the Fair Housing Act. Assistance may be provided to eligible applicants under a variety of housing option activities, including rehabilitation, reconstruction, new construction, demolition, elevation, hazard mitigation, down payment assistance, and storm hardening of homeowner and rental housing units, as allowable. All housing activities should consider the following objectives:

- Provide high-quality, durable, resilient, mold-resistant, energy-efficient, decent, safe, and sanitary housing that meets Green Building Standards and mitigates the impact from future disasters.
 - Resilient measures may include elevating the first floor of habitable area,
 - breakaway ground floor walls, reinforced roofs, storm shutters, and debris impact-resistant windows, as well as other measures.
 - Rental units also will follow safe, decent, and sanitary requirements in the impacted areas identified in the HUD-approved Action Plan.
- Prioritize households while affirmatively furthering fair housing for the following:
 - Families with children under age 18
 - Elderly households
 - Disabled households
 - Veteran populations
- Emphasize housing choices and designs to reduce maintenance and insurance costs, as well as provide independent living options.
- Make improvements to reduce the possibility of property damage, personal and commercial hardship, and long-lasting monetary burdens.

3.10.2 Emphasize High Quality, Durability, Energy Efficiency, and Sustainability

For rehabilitation construction, the Commonwealth will follow [the Department of Housing and Urban Development's Green Building Retrofit Checklist](#) to the extent applicable to the rehabilitation work undertaken, including the use of mold-resistant products when replacing surfaces such as drywall. When older or obsolete products are replaced as part of the rehabilitation work, rehabilitation is required to use ENERGY STAR-labeled, WaterSense-labeled, or Federal Energy Management Program-designated products and appliances or other equivalent.

3.10.3 Enforce Resilient Building Codes

DLG will require both quality inspections and code compliance inspections on all projects. Site inspections will be required on all projects to ensure quality and compliance with building codes. DLG will encourage and support subrecipients' efforts to update and strengthen local compliance codes to mitigate hazard risks due to high winds, tornados, and flooding where applicable. DLG, as necessary, will coordinate with the KYEM to provide technical guidance on hazard mitigation code examples.

3.10.4 Fund Feasible, Cost-Effective Measures

DLG will require that applicants demonstrate that projects (1) address a problem that has been repetitive or a problem that poses a significant risk to public health and safety if left unsolved; (2) cost less than the anticipated value of the reduction in both direct damages and subsequent negative impacts on the area if future disasters were to occur; (3) have been determined to be the most practical, effective, and environmentally sound alternative after consideration of a range of options; (4) contribute, to the extent practicable, to a long-term solution to the problem it is intended to address; and/or (5) consider long-term changes to the areas and entities it protects and have manageable future maintenance and modification requirements.

3.10.5 Make Land Use Decisions to Reduce Future Risks

The legislature of the Commonwealth of Kentucky has in [Kentucky Revised Statute \(KRS\) Chapter 100](#) delegated to local government units the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. While the elected body has the power to adopt the zoning ordinance, the responsibility for overseeing the preparation of the ordinance falls to the local planning commissions. The statute permits three types of local planning units with commissions: independent, joint, and regional.

The planning commission of each unit is required to prepare a comprehensive plan, which serves as a guide for public and private actions and decisions to assure the development of public and private property in the most appropriate relationships. The elements of the plan may be expressed in words, graphics, or other appropriate forms. They will be interrelated, and each element will describe how it relates to each of the other elements.

Additionally, the Commonwealth established 15 Area Development Districts (ADDs) through [KRS Chapter 147A](#) that guide local communities in conducting the necessary research and studies and coordinate and cooperate with all appropriate groups and agencies in order to develop, and adopt and revise when necessary, a district development plan or series of plans including but not limited to the following districtwide plan elements: goals and objectives; water and sewer; land use; and open space and

recreation. The plans serve as a general guide for public and private actions and decisions to assure the development of public and private property in the most appropriate relationships. The districts are placed under the direction of regional planning councils.

One of an ADD's critical functions is to coordinate local hazard mitigation plans. ADDs will review and approve comprehensive plans from each local planning commission and will help develop regional hazard mitigation plans that incorporates local hazard mitigation plans for the Commonwealth's hazard mitigation plans. The plans use the best available data to identify risks and are used to inform land use decisions. At a minimum, hazard mitigation plans are updated every 5 years.

DLG will require local governments to demonstrate how their projects or activities fit into local or regional mitigation plans, the Commonwealth's mitigation plan, existing risk mapping, and connection to this Action Plan's mitigation assessment.

3.10.6 Increase Awareness of Hazards

Seeking input from stakeholders and communities around the Commonwealth is an important component of the planning process. DLG used a variety of methods to inform local officials and the public on the purpose and goals of mitigation; understanding risks, threats, and hazards in MID areas; and gathering feedback on how to craft programs that will meet the needs of communities as quickly as possible. In addition to gaining feedback, this process helped local stakeholders and members of the public understand what to expect from CDBG-DR funding and allowed them to play a key role in shaping the outcomes of this plan. The outreach methods, along with the feedback obtained, include webinars, a survey of community and citizens, and stakeholder meetings.

DLG is committed to ensuring environmental justice in minority, low-income, refugee, and immigrant populations. Members of these populations are encouraged to participate in DLG's outreach efforts and provide valuable input on the needs and priorities of their communities. To ensure adequate public participation and access to information as required by Executive Order 12898, DLG will solicit public recommendations in developing and implementing environmental justice strategies, use public documents that are concise and understandable, and translate appropriate public documents for LEP persons.

DLG also will provide meaningful opportunities for public participation throughout the environmental review process, as required by guidance from the Council on Environmental Quality.

3.10.7 Develop the Risk Assessment

This Action Plan details how this funding will be allocated to reduce the effects of natural disasters and eliminate long-term risks to Kentuckians. The purpose of the mitigation risk

assessment is to detail a strategy that (1) reduces the risks and vulnerabilities of people in hazard-prone areas through current technology; (2) reduces the potential impact of natural disasters on new and existing properties, infrastructure, and local economies; and (3) promotes education, outreach, and research and development programs to improve knowledge and awareness among citizens and industry about the hazards they may face and mitigation alternatives that can reduce vulnerabilities.

The focus on mitigation can result in cost savings that can be used to fund more resilient work in local communities. As per FEMA's analysis on mitigation, local communities can save \$6 on average for every \$1 spent on federal mitigation grants.⁵⁸ This cost savings can be attributed to paying for risk-reduction practices or technologies that can prevent damage and increased costs from future disasters.

DLG has completed this risk-based Mitigation Needs Assessment to identify and analyze all significant current and future disaster risks that provide a substantive basis for the activities proposed in Section 4. The assessment utilized the findings of Kentucky's State Hazard Mitigation Plan; data and research acquired from essential data resources; and consultation with public, private, and nonprofit stakeholders to arrive at a thorough assessment of the hazards that pose substantial risk of loss of life, injury, damage, and loss of property, along with suffering and hardship.

3.10.8 Use the Hazard Mitigation Plan

The Commonwealth of Kentucky's 2018 Hazard Mitigation Plan (HMP) is the most recent risk assessment completed through the FEMA hazard mitigation planning process and is the starting point for the Action Plan's risk-based Mitigation Needs Assessment. The HMP was completed by the Kentucky Division of Emergency Management, which focuses on emergency management and the hazards faced by Kentuckians and provides a mitigation strategy for the Commonwealth. The purpose of the HMP is to reduce death, injuries, and property losses caused by natural hazards in Kentucky. The 2018 HMP identifies hazards based on the history of disasters within the Commonwealth and lists goals, objectives, strategies, and actions for reducing future losses.

This assessment utilizes the findings of Kentucky's HMP; data and research acquired from essential data resources; and consultation with public, private, and nonprofit stakeholders to arrive at a thorough assessment of the hazards that pose a substantial risk of loss of life, injury, damage, and loss of property, along with suffering and hardship.

3.10.9 Ensure Mitigation Efforts Are Cost-Reasonable

All rehabilitation, reconstruction, and new construction work will be designed to incorporate the principles of sustainability, including water and energy efficiency,

⁵⁸ FEMA: [Natural Hazard Mitigation Saves Interim Report](#)

resilience, and mitigation against the impact of future disasters. DLG will—and will encourage its applicants to—incorporate preparedness and mitigation measures for rebuilding activities. This helps to ensure that communities build back safer and stronger than before the disaster. Incorporation of these measures also reduces costs in recovering from future disasters. Mitigation measures that are not incorporated into those rebuilding activities must be a necessary expense related to disaster relief, long-term recovery, and the restoration of infrastructure.

3.10.10 Support Long-Term Recovery Planning

DLG has an excellent relationship with local governments and will coordinate with the local governments to promote sound, sustainable, long-term recovery planning that has been informed through the evaluation of natural hazards. In preparing this Action Plan, DLG met with local governments, regional districts, nonprofits, and agencies.

Through these consultation meetings, DLG was able to gather data, experiences, and community insight to develop an initial unmet needs assessment. All engagements were either conducted virtually or in-person, and surveys were submitted by each city and community organization. Table 61 shows the consultation events held to date.

3.11 Broadband Infrastructure in Housing

Per 24 CFR 570.202, any substantial rehabilitation or new construction of a building with more than four rental units will include the installation of broadband infrastructure, except when:

- The location of the new construction or substantial rehabilitation makes the broadband infrastructure infeasible,
- The cost of installing broadband infrastructure would result in a fundamental alteration of its program or activity or an undue financial burden, or
- The structure of the housing to be substantially rehabilitated makes installation of broadband infrastructure infeasible.

3.12 Cost-Effectiveness

The Commonwealth will establish policies and procedures to assess the cost-effectiveness of each proposed program or activity to assist a household under any residential rehabilitation or reconstruction program or activity funded with CDBG-DR funds. Policies and procedures also will establish the criteria for determining when the cost of rehabilitation or reconstruction of the unit will not be cost-effective relative to other means of assisting the property owner.

As mentioned above, the existing housing stock is not affordable for the residents who need housing the most. Rehabilitating old and damaged housing may not be the most

cost-effective way to resolve this problem. Reconstruction and constructing new housing using updated technologies and better energy-efficient materials will ensure that residents can own a home that is resilient and addresses the risks faced by the community.

DLG will define “demonstrable hardship” as experiencing conditions such as continued financial hardships, impacts from COVID-19 on the affordability of the housing stock, or residing in unsafe or unsanitary living conditions as a result of the 2021 disasters.

DLG defines a residential property as “not suitable for rehabilitation” if any of these conditions apply:

- The property is declared a total loss.
- Repairs would exceed 50% of the cost of reconstruction.
- Homes cannot be rehabilitated under existing agency policies and award caps due to legal, engineering, or environmental constraints such as permitting, extraordinary site conditions, or historic preservation.

The Commonwealth may provide exceptions to award maximums on a case-by-case basis and will include procedures within program guidelines on how the Commonwealth or its subrecipients will analyze the circumstances under which an exception is needed, and the amount of assistance necessary and reasonable.

3.13 Duplication of Benefits

Section 312 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, generally prohibits any person, business concern, or other entity from receiving financial assistance with respect to any part of a loss resulting from a major disaster for which such person, business concern, or other entity has received financial assistance under any other program or from insurance or any other source. To comply with Section 312, DLG shall ensure that each program and activity provides assistance to a person or entity only to the extent that the person or entity has a disaster recovery need that has not been fully met.

As per the Duplication of Benefits Policy, DLG and its subrecipients are subject to the requirements in Federal Register Notices explaining the duplication of benefits requirement (84 FR 28836 and 84 FR 28848, published June 20, 2019, or other applicable notices).

4 Grantee Proposed Use of Funds

4 Grantee Proposed Use of Funds

4.1 Overview

DLG is the lead agency and responsible entity for administering \$74,953,000 in CDBG-DR funds for recovery from the storm events in 2021. DLG will implement many of these programs through a unit of general local government (UGLG) or tribal authority as well as in partnership with subrecipients. All programs have been designed in accordance with HUD-eligible activities to meet HUD National Objectives and the requirements of the Consolidated Notice. These programs, along with the funding allocated to each, are outlined below.

Owner-Occupied Housing Assistance

Single-Family New Housing Construction with Homebuyer Assistance
Owner-Occupied Rehabilitation/Reconstruction

Rental Housing Assistance

Multifamily Rental New Construction
Rental Rehabilitation/Reconstruction

Public Services

Housing Counseling and Legal Aid Assistance

Economic Revitalization

Small Business Grant Program

Infrastructure

Public Infrastructure and Stormwater Management

Planning and Administration

Resilience Planning
Administration

4.2 Program Budget

Table 63. Program Allocations

Program Category	Program	Budget	HUD-Identified MID Budget (%)	Grantee-Identified MID Budget (%)	Percentage of Allocation	Maximum Award
Housing	Single-Family New Housing Construction	\$4,000,000	80%	20%	5%	\$200,000 per housing unit
Housing	Owner-Occupied Rehabilitation/ Reconstruction	\$17,905,350	80%	20%	25%	\$100,000 per home; \$500,000 per applicant (for multiple homes)
Housing	Multifamily Rental New Construction	\$3,000,000	80%	20%	4%	\$1,000,000 per project
Housing	Rental Rehabilitation/ Reconstruction	\$15,000,000	80%	20%	20%	\$75,000 per unit
Economic Revitalization	Small Business Grant Program	\$4,000,000	80%	20%	5%	\$200,000 for operating; \$20,000 per job
Infrastructure and Other Activities	Public Infrastructure and Stormwater Management	\$25,000,000	80%	20%	33%	\$3,000,000 per project
Public Services	Housing Counseling and Legal Aid	\$800,000	80%	20%	1%	N/A
Planning	Resilience Planning	\$1,500,000	80%	20%	2%	\$25,000 to \$100,000
Administration	Administration	\$3,747,650			5%	N/A
TOTAL		\$74,953,000			100%	

4.3 Connection to Unmet Needs

As required by [Federal Register, Vol. 87, No. 100](#), May 24, 2022 (87 FR 6326), the Kentucky DLG will allocate at least 80% of the funds to address unmet needs in the HUD-identified MID areas. The remaining 20% of the allocation may be used to address unmet needs in a grantee-identified MID area that received a presidential major disaster declaration from severe storms, flooding, landslides, and mudslides (DR-4595) and the 2021 severe storms, straight-line winds, flooding, and tornadoes (DR-4630). Currently, the Commonwealth anticipates putting 80% of funding in Graves County, Hopkins County, Breathitt County (41339), and Warren County (42101), and the remaining 20% will be focused on supporting recovery efforts in the counties the DLG identified and outlined in this document.

This Action Plan primarily considers and addresses housing and infrastructure unmet needs and incorporates mitigation activities into all programs.

The Federal Register Notice also requires that at least 70% of all program funds benefit LMI persons or households. Based on data and the current priorities to encourage LMI persons to participate in the program, the Commonwealth anticipates meeting the LMI requirement. In addition, the Commonwealth also will be assessing the status of eligible unmet needs of LMI persons and non-LMI persons and determining, at an appropriate stage, whether to request a modification of the requirement.

4.4 Leveraging Funds

The Commonwealth of Kentucky understands the importance of leveraging all available funds and resources to increase its ability to address and mitigate major disasters. As a component of this Action Plan, DLG has coordinated across federal, State, and local organizations to gather information about other resources available for recovering from the 2021 designated disasters. The Commonwealth anticipates leveraging CDBG-DR funds with other funding sources, such as FEMA grants, SBA loans, and other State and local funds. CDBG-DR funds will be used to address critical unmet needs that remain after all other federal sources have been committed and exhausted to prevent any duplication of benefits.

In addition, to ensure coordination in funding and activities, the Commonwealth will utilize its strong interagency partnerships to ensure that information, program updates, and data are shared when necessary and utilize methods to reach vulnerable populations, protected classes, persons experiencing homelessness, and those who are historically underserved.

DLG is committed to using CDBG-DR funds to address critical unmet needs that remain following the infusion of funding from other funding sources detailed below. Existing State resources and other funds from the disaster appropriation will be further examined

to ensure that all available and viable funding is used where it is most needed and will be leveraged appropriately.

4.4.1 Commonwealth Funding

After the 2021 disasters, the Commonwealth of Kentucky moved quickly to set up relief funds and a centralized [resource website](#) to help those affected. Resources include but are not limited to sheltering, food sources, financial, insurance, and mental health assistance.

State Aid Funding for Emergencies (SAFE) Fund from Kentucky Senate Bill 150

The Senate passed a bill that created a fund that allocated \$155 million to cities, counties, and nonprofits to offset the cost of recovery. Costs incurred for debris clean-up, infrastructure replacement, relief for businesses, and temporary housing are eligible.

Team Western Kentucky Tornado Relief Fund

Governor Beshear has established the Team Western Kentucky Tornado Relief Fund to assist those impacted by the tornados and the severe weather system overnight on December 10, 2021. As of July 6, 2022, 150,205 donations have been received, totaling \$59,953,085. The funds that have been raised have gone to funeral assistance payments (\$810,000) and uninsured (\$2,121,001) and underinsured (\$7,354,694) homeowners and renters. The remainder of the funding is committed as follows; \$16,000,000 to build 300 homes in cooperation with nonprofits, \$3,250,000 to the Graves County Grain Assistance Program, and \$12,000,000 to help impacted individuals with unmet needs, in coordination with long-term recovery groups. Donations are still being collected.

Kentucky Housing Corporation (KHC)

Kentucky Housing Corporation invests in affordable housing solutions by offering programs and services designed to develop, preserve, and sustain affordable housing throughout the Commonwealth. The disaster recovery resources page on KHC's website: <https://www.kyhousing.org/Programs/Pages/Kentuckians-In-Need.aspx> is where residents recovering from the disaster can access housing-specific resources, such as finding immediate shelter for rent, contacting FEMA, and connecting with SBA. The Kentucky Housing Corporation also helps with foreclosure relief and FHA insurance for mortgages and home rehabilitation.

Kentucky Chamber of Commerce

Kentucky Sports Radio (KSR) and the Kentucky Chamber Foundation partnered to build a relief fund for Kentuckians to ensure they can rebuild.

With the money raised in this fund, the two groups will be working with local communities, local chambers, as well as Commonwealth and local elected officials to ensure the needs of these areas are met in the wake of tragedy.

4.4.2 Federal Assistance and Private Insurance

Additional funding sources that are important to document for the purposes of leveraging disaster recovery funds and ensuring compliance regarding duplication of benefits include FEMA, SBA, and private insurance. Data specific to these sources were provided above in the unmet needs assessments. Summary information is provided here to document Kentucky DLG's research as it relates to leveraging available funding sources.

Table 64. FEMA IA, PA, and HMGP Assistance

FEMA Program	Approved FEMA Assistance	Total Approved Applications
Individual Assistance (IA)	\$23,428,031	3,680
Public Assistance (PA)	\$82,684,104	961
Hazard Mitigation Grant Program (HMGP)	\$156,986,530	255

Table 65. SBA Residential and Business Loans

SBA Loan Type	Loan Amount Issued
Residential Loans Executed and Awarded	\$56,592,975
Business Loans Executed	\$10,636,800

4.5 Program Partners

DLG will engage program partners through formal agreements, interagency agreements, and informal partnerships. It is critical for DLG to engage a spectrum of program partners so that programs are more accessible, understandable, and tailored to equitably meet the unmet needs of disaster-impacted residents and communities. When engaging in formal agreements for the administration or implementation of programs, DLG will ensure that recipients of CDBG-DR funds have the capacity and expertise to carry out the program activities included in their scope of work. DLG may help expand recipient capacity and will provide technical assistance and training to recipients on program requirements, applicable federal cross-cutting requirements and Commonwealth overlays, and reporting and performance requirements, and may allocate administrative funding, as appropriate, to do so.

Kentucky DLG plans to fund UGLGs such as cities and counties as well as tribal authorities who will then award grant funds to citizens and projects within their communities. DLG will provide extensive CDBG-DR training as well as descriptive

guidelines that each UGLG and tribe will need to follow as they administer and award funding in their communities. Understanding that for many UGLGs the burden of administering a CDBG-DR grant might be too much for existing staff, DLG plans to award administrative funding in the form of project delivery funds for them to hire qualified grant administrators. There is a long tradition in Kentucky through the regular CDBG program of communities hiring ADDs or other certified administrators. Proper administration of the CDBG-DR funds is critical to Kentucky's recovery, and DLG will work with their partners to ensure that all regulatory rules are followed in the implementation of the CDBG-DR funds.

4.5.1 Area Development Districts

The concept of ADDs originated in Kentucky in the early 1960s with the establishment of Area Development Councils. These councils were organized in all counties and ultimately served as the precursor for Area Development authorization. Landmark federal acts, such as the Appalachian Regional Development Act, a product of visionary Kentuckian John Whisman, and the Public Works and Economic Development Act of 1965, were passed with the intention of utilizing the Area Development network to administer and deliver needed federal resources to communities across the United States. These acts resulted in the creation of two new federal agencies: The Appalachian Regional Commission and the Economic Development Administration. In the period between 1966 and 1972, Kentucky formally created 15 ADDs to serve every county and municipality in the Commonwealth.

As mentioned in the previous section, the ADDs will assist the UGLG administer their awarded CDBG-DR funds. They will not only assist with regulatory compliance but will also be available to facilitate conversations with other partners, such as nonprofit community organizations that can assist communities implement CDBG-DR programs.

Further, the ADDs are designed to be essential in a necessary federal-State-local partnership, "the three-legged stool," which provides for the optimum synergy to advance real improvement in the quality of life for Kentucky citizens. This concept has effectively eliminated debilitating parochialism and serves as a model for public/private collaboration, convening public officials to discuss common public service challenges, and to cost-effectively deliver competent public administration assistance to State and local governments. This service legacy has now operated for more than 5 decades.

Programs and activities conducted by ADDs include:

- Workforce development
- Economic development
- Water/wastewater planning
- Transportation and infrastructure planning
- Healthcare and aging services

- GIS mapping
- Agriculture planning
- Tourism
- Broadband planning
- Hazard mitigation and disaster preparedness planning

4.5.2 Kentucky Housing Corporation

Kentucky Housing Corporation (KHC) invests in affordable housing solutions by offering programs and services designed to develop, preserve, and sustain affordable housing throughout the Commonwealth.

Created by the 1972 General Assembly, KHC is a self-supporting, public corporation of the Commonwealth of Kentucky and is governed by a 15-member board of directors. KHC is a quasi-government agency, which is administratively attached to the Kentucky Finance and Administration Cabinet, and a portion of KHC's funds are derived from the interest earned through the sale of tax-exempt mortgage revenue bonds. From these proceeds, KHC has made homeownership possible for more than 76,000 Kentucky families.

KHC also receives fee income for administering federal programs, including rental assistance that makes quality housing available to more than 27,500 low-income Kentuckians. Other programs offered by KHC include rental housing financing, including administering LIHTCs, homeownership education/counseling, housing rehabilitation, homeless programs, home energy and repair initiatives, and loan servicing. KHC's skills and focus areas make the organization a valuable resource for the CDBG-DR housing programs. DLG plans to partner with KHC on their housing programs, specifically in implementing their new construction multifamily program.

KHC works with many partners across the Commonwealth to invest in and create affordable housing opportunities.

4.5.3 Kentucky Energy and Environment Cabinet

The Kentucky Energy and Environment Cabinet (EEC) serves the public by enforcing laws relating to natural resources and the environment. It keeps citizens safe and healthy while supporting a positive business climate. Within the EEC, there are two main departments and several offices, including:

- The Department for Environmental Protection protects and enhances Kentucky's environment through its Divisions of Air Quality, Waste Management, Water, Enforcement and Compliance Assistance.
- The Department for Natural Resources provides technical assistance, education, and funding to sustain Kentucky's natural resources. It is home to the Divisions of

Abandoned Mine Lands, Forestry, Mine Permits, Conservation, Oil and Gas, Mine Safety, and Mine Reclamation.

- The Office of Energy Policy brings a common-sense approach that ensures the Commonwealth thrives amid rapid changes occurring in the production, delivery, and use of energy.
- The Office of Kentucky Nature Preserves works to protect the Commonwealth's natural heritage and educate Kentuckians about its importance.

Division of Water

The Division of Water is part of the EEC, and its mission is to manage, protect, and enhance the quality and quantity of the Commonwealth's water resources for present and future generations through voluntary, regulatory, and educational programs. It also assists in watershed management. Kentucky is divided into seven major river basins, each of which is staffed by a basin coordinator. The basin coordinators serve as facilitators for agency activities and as a point of contact for local organizations interested in addressing clean water issues and watershed planning.

DLG and the Division of Water are committed to partnering in the design and implementation of the infrastructure and planning CDBG-DR funds. The two agencies have had several meetings to discuss the most advantageous infrastructure project that will help mitigate future disasters. The Watershed Management Plans for the seven watershed basins are also in need of updating. Through this partnership, these plans can be updated to include the most recent flooding data as well as outline innovative future projects to mitigate flooding events.

4.5.4 Kentucky Association of Mitigation Managers

The Kentucky Association of Mitigation Managers (KAMM) was formed to promote natural hazard mitigation and management in Kentucky. Current members represent local, State, and federal officials; floodplain coordinators; planning and zoning officials; engineers; surveyors; GIS specialists; hydrologists; and public safety and emergency managers. The purpose of KAMM is to:

- Provide a forum for floodplain coordinators, emergency and mitigation managers, engineers, code enforcement officials, and surveyors.
- Gain knowledge and network on issues pertinent to floodplain management, mitigation, and disaster recovery.
- Promote public awareness of floodplain and stormwater management and mitigation.
- Promote the professional status of floodplain, stormwater, and emergency management and mitigation and secure all resulting benefits.
- Enhance cooperation and exchange information among various private and nonprofit organizations, individuals, and local, State, and federal agencies.

- Inform individuals concerned with floodplain, stormwater, and emergency management and mitigation through educational and professional seminars and provide a method for dissemination of both general and technical information.
- Inform concerned individuals of pending floodplain, stormwater, and emergency management and mitigation legislation and other hazard-related matters.
- Study and support legislation pertinent and necessary to the effective implementation of floodplain and stormwater management and mitigation regulations.

DLG will coordinate with KAMM in association with the Division of Water to plan for and implement CDBG-DR infrastructure and planning projects.

4.6 Distribution of Funds

Each of the program descriptions below include information on how DLG will distribute CDBG-DR funds, including the eligible applicant, beneficiary, and partners. As stated previously, DLG plans to award funds to the UGLG or tribal authorities for most funds. They will administer the CDBG-DR funds to complete infrastructure and planning projects and provide direct assistance to homeowners, landlords, and businesses. DLG anticipates an extensive training program for UGLGs and tribal authorities that will include the fundamentals in managing CDBG-DR funds. DLG will also hold informational application workshops in the disaster-affected regions for UGLGs and tribal authorities to advertise the availability of the CDBG-DR funds. DLG will mandate that each entity hire a DLG-certified grant administrator. Partnerships between local communities and community partners are strongly encouraged, and DLG will work with the ADDs to facilitate those conversations. These partnerships will not only assist in reaching potential direct beneficiaries in the communities for housing and business projects, but they can also assist in the implementation of the housing and business development programs.

Each program section includes the following subsections, as applicable for the different types of programs:

- Program Budget and Amount for LMI and HUD MIDs
- Program Description
- Program Tieback to Disaster/Unmet Needs
- How the Program Will Promote Housing for Vulnerable Populations
- Program Affordability Period (if applicable)
- Program Definition of Second Home/Eligibility (if applicable)
- Program National Objective(s)
- Program Eligibility
- Program Responsible Entity
- Program Maximum Assistance
- Program Estimated Begin and End Dates

- Other Program Details
- Program Competitive Application Overview (if applicable)
- Program Method of Distribution Description/Overview
- How Mitigation Set-Aside Activities Will Meet the Definition of Mitigation
- How Mitigation Set-Aside Activities Will Address Current and Future Risks
- How the Program Will Advance Long-Term Resilience (Infrastructure and Planning)
- How the Program Will Address Disaster-Related Storm Water Management/Other Systems (Infrastructure and Planning)

4.7 Program Income

The Commonwealth understands that certain activities funded with CDBG-DR funds could result in the generation of program income. DLG shall develop and adopt specific policies and procedures for each program that generates program income and will specify in those policies whether program income may be retained by local governments, if applicable. Up to 5% of the program income generated by CDBG-DR funds may be used for administrative costs by DLG, Units of General Local Government, or other subrecipients.

During the grant period: Should program income be generated by DLG, Units of General Local Government, or other subrecipients, program grant funds are not allowed to be drawn until all program income has been expended. Program income will be treated as additional CDBG-DR funds subject to the requirements of the applicable Federal Register Notice and must be used in accordance with the disaster recovery Action Plan.

Once grant is closed: Should program income be generated by Units of General Local Government or other subrecipients, they will mail the program income payment to DLG with the contract and activity number in the memo line. The funds will be deposited by DLG and recorded as program income to be applied to the Commonwealth's annual CDBG program. Program income funds will be expended first for eligible annual CDBG claims. Any remaining balance in CDBG-DR activities resulting from the use of program income will be deobligated by DLG at activity closeout.

Unless otherwise specified, all program income shall be remitted to the Commonwealth. DLG shall treat program income as additional CDBG-DR funds subject to the requirements of the Consolidated Notice and shall use it in accordance with the Commonwealth's CDBG-DR Action Plan.

To the maximum extent feasible, program income shall be used or distributed before additional withdrawals from the U.S. Department of the Treasury are made.

4.8 Resale or Recapture

Resale or recapture requirements will vary by program and may not be applicable to all CDBG-DR programs. If applicable, the resale or recapture requirements are described within each of the program guidelines and will provide additional details on the terms of resale or recapture and the specific circumstances under which resale or recapture will be used. The resale and recapture provisions must clearly describe the terms of the resale and recapture provisions, the specific circumstances under which these provisions will be used, and how the provisions will be enforced (whether by recorded deed restrictions, covenants, or other similar mechanisms). The affordability restrictions, including the affordability period requirements, do not apply to housing units newly constructed or reconstructed for an owner-occupant to replace the owner-occupant's home that was damaged by the disaster.

4.9 Promoting Equity in Recovery and Housing for Vulnerable Populations

KHC and DLG are recipients of HUD funding that is administered throughout Kentucky; however, other State agencies also have a role in Kentucky's efforts to affirmatively further fair housing. To ensure that there is a concerted level across State agencies, DLG will focus on implementing the following recommendations:

- Collaborate with other State agencies and community partners (e.g., local nonprofit organizations) to affirmatively further fair housing. By working with partners like KHC, DLG will align policies and funding to expand affordable housing opportunities and explore avenues for practical fair housing solutions. A few of the strategies will include utilizing scoring evaluations that encourage equity, providing guidance and training to subrecipients, analyzing program activity data, and conducting regular monitoring. DLG will coordinate with community partners to ensure that impacted and vulnerable populations are aware of and can access assistance. DLG will also work with nonprofit organizations that provide housing services and have equity as part of their mission.

Kentucky's municipalities and counties play a central role in ensuring that residents have access to housing.

As discussed previously, in 2019 Kentucky Housing Corporation and DLG developed an Analysis of Impediments to Fair Housing Choice. The document includes (1) a review of demographic housing data and analysis of public and private sector policies and programs that impact housing decisions across the Commonwealth, (2) a list of impediments that restrict fair housing choice for Kentuckians, and (3) a series of recommended actions to remove the identified impediments. The report recommends

the following initiatives that would affirmatively further fair housing through local administrative decisions, planning documents, and municipal ordinances:

- Expand affordable housing in a variety of locations
- Identify developable land within the municipality for developers of affordable housing
- Participate in regional planning efforts to ensure that there is affordable housing in a variety of locations
- Support funding applications, zoning decisions, and other administrative functions to expand the inventory of affordable housing options for protected classes
- Support fair housing education and outreach efforts

Engage the Kentucky Commission on Human Rights and/or Lexington Fair Housing Council, Inc., to provide fair housing education and outreach at the local or regional level with topics appropriate for residents, landlords, appointed boards and commissions, elected officials, real estate professionals, architects, etc.

4.10 Program Details

4.10.1 Single-Family New Housing Construction

Program	Budget	HUD-Identified MID Budget	Grantee-Identified MID Budget
Single-Family New Housing Construction	\$4,000,000	\$3,200,000	\$800,000

Program Description:

The Single-Family New Housing Construction program will provide resilient and affordable housing to impacted Kentucky residents by funding developer-constructed new housing units. The program will offer developer incentives to construct new single-family houses on vacant lots within existing neighborhoods or the development of new neighborhoods for residential purposes. DLG will offer homebuyer assistance to potential buyers who meet income requirements to make the homes affordable. Program details and eligible activities will be further detailed in the program guidelines.

All new units must be constructed outside of the SFHA and follow State and local floodplain ordinances and laws. Based on the disaster impact and post-disaster unmet needs assessment included in this document, it is understood that a variety of housing sizes and types are needed to respond to the needs of all residents. DLG will make awards to projects that offer a variety of housing sizes to best serve families with children, disabled persons, and seniors. Single family homeownership opportunities are a valuable tool to build wealth and reduce poverty, particularly for LMI households.

Only costs incurred after an award will be eligible for reimbursement. Reimbursement of pre-award costs is not allowed.

Program Tieback to Disaster:

Through this program, the Commonwealth will address unmet housing recovery needs by financing the replacement of damaged or destroyed affordable housing stock. The construction of new, single-family housing units will allow for households impacted and/or displaced by the storms of 2021 to find safe and affordable housing options. This program will also provide direct financial assistance to homebuyers to occupy the newly constructed single-family homes.

How the Program Will Promote Housing for Vulnerable Populations:

The Commonwealth of Kentucky aims to lead an equitable recovery from the storms of 2021, which will require an examination of systemic policies and practices that may marginalize some populations and perpetuate disparities.

In 2019, Kentucky Housing Corporation and DLG developed an Analysis of Impediments to Fair Housing Choice. The document includes (1) a review of demographic housing data and analysis of public and private sector policies and programs that impact housing decisions across the Commonwealth, (2) a list of impediments that restrict fair housing choice for Kentuckians, and (3) a series of recommended actions to remove the identified impediments.

DLG's Single-Family New Housing Construction program will help impacted residents, vulnerable populations, and members of underserved communities expedite their recovery by:

- Performing outreach and engagement to understand the needs of impacted participants and facilitating connections with vulnerable populations.
- Coordinating with local organizations to ensure that refugee and immigrant populations are aware of and can access assistance.
- Coordinating with local nonprofit organizations that provide services to people with disabilities and historically underserved populations to ensure the promotion of the program and help remove barriers to assistance.

Program Affordability Period:

Affordability periods will be documented through a restricted use covenant, mortgage, or other legal and financial mechanism for the buyer of the single-family unit. Affordability periods will be based on the amount of homeownership assistance provided to homebuyer at the time of closing.

Homeownership Assistance Per Unit	Minimum Period of Affordability in Years
Less than \$15,000	5
\$15,000 to \$40,000	10
More than \$40,000	15

Sale to Initial Occupant:

DLG will support the construction of single-family homes for LMI homebuyers. Developers can build homes within the development for non-LMI homebuyers, but those homes would not be supported with CDBG-DR funds.

All LMI buyer applicants can utilize CDBG-DR assistance for down payment and closing costs as a benefit to buyers, providing up to 100% of the minimum required down payment that will be recorded as a forgivable loan. DLG will detail resale and recapture requirements for homebuyers in the program guidelines.

Program Definition of Second Home/Eligibility:

Per the requirements in the Consolidated Notice, properties that served as second homes at the time of or following the disaster are not eligible for assistance for rehabilitation, reconstruction, new construction, or replacement. A “second home” is defined as a home that is not the primary residence of the owner, a tenant, or any occupant at the time of the disaster or at the time of application for CDBG-DR assistance.

Program National Objective(s):

Assistance provided under this program will meet the national objective of benefiting LMI persons or households.

Program Eligibility:

New construction, acquisition, clearance, and homeownership assistance; HCDA Section 105(a)1, 4, 5, 11, 14, 15, and 24; applicable waivers identified in the Allocation Announcement Notice and Consolidated Notice.

Other Program Details:

The program will fund incentives for developers to build new construction housing. The funding incentives will be in the form of a lien secured with the property at the time of the award and can be drawn down during construction, with 10% retainage held until an LMI buyer assumes ownership of the home. Eligible developer costs include acquisition, demolition and clearance, soft and hard construction costs, resilience, energy efficiency, and other costs related to development. Developers are responsible for establishing their project cost estimates. Cost reasonableness will be determined by competitive comparison of projects. Additionally, DLG may use details regarding cost of materials

using industry-standard, cost-estimating software, comparative and market analysis of price per square foot, and/or the comparison of multiple competitive bids. Applications will include specific details about the number, location, size, and design of the units, as well as the identified developer who will construct all units. Through the review of submitted applications, DLG will document that no other funds have been provided for the same development, ensuring no duplication of benefits. Development agreements will be required between the jurisdiction and the developer. All eligible costs incurred by the developer will be claimed by the jurisdiction who will act as a pass-through for funding. Specific activities will be detailed in the program guidelines.

Assistance will be provided to LMI homebuyers, as needed, to purchase the home and make the home affordable. Down payment and closing cost assistance awards will be determined based on need and a duplication of benefits review. Program guidelines will document how a down payment award will be determined. Assistance will be provided in the form of a forgivable loan to the buyer at the time of closing.

Geographic Eligibility:

HUD has identified the following MID areas:

- Graves County
- Hopkins County
- Breathitt County (41339)
- Warren County (42101)

Kentucky has decided to expand the HUD-identified MID areas in ZIP codes 41339 and 42101 to include the entire counties of Breathitt and Warren.

In addition to HUD's identified MIDs, Kentucky has identified the following counties as eligible for CDBG-DR funding:

Boyd County, Caldwell County, Christian County, Clark County, Clay County, Estill County, Floyd County, Fulton County, Greenup County, Hart County, Hickman County, Jackson County, Johnson County, Knott County, Laurel County, Lawrence County, Lee County, Leslie County, Letcher County, Lincoln County, Logan County, Lyon County, Madison County, Magoffin County, Marion County, Marshall County, Martin County, Morgan County, Muhlenburg County, Ohio County, Owsley County, Perry County, Powell County, Pulaski County, Rockcastle County, and Taylor County.

Program Responsible Entity or Administering Entity:

- **Eligible Applicants:** City, county, and tribal governments will apply to DLG and assume the role of the responsible entity. Eligible applicants may work with qualified organizations or partners to help implement the projects.

Applicants must work with a certified grant administrator to assist with application development, grant administration, and activity delivery.

- **Eligible Developers:** Approved developers must be identified under the eligible applicant's request for funding. They must be experienced and in good standing with the Commonwealth. The developers or partnerships may be for-profit or nonprofit entities. Additional eligibility requirements will be described in the program guidelines.
- **Eligible Beneficiaries:** The program's beneficiaries are the homebuyers who will purchase and occupy the newly constructed housing units. DLG will prioritize and market to LMI disaster-impacted households for the first 4 months of the program, after which all eligible LMI homebuyers will be prioritized. Cities and counties will conduct advertising to ensure that impacted households are informed and can participate in the program.

Program Maximum Assistance:

DLG is setting a maximum award of \$200,000 per housing unit. The maximum award will cover, per housing unit, reimbursement to developers for construction, funds for developers to use towards building materials that can better withstand storm events and mitigate against future natural disaster damage, and funds for down payment assistance and closing costs for LMI households. Program guidelines will include details regarding how jurisdictions will manage the maximum award to ensure sufficient down payment assistance funds are available after the housing units are completed. Policies will also specify the process by which applications can be reviewed to identify situations where exceeding the maximum award amount may be necessary. For example, the program will consider cases where design will need to accommodate persons living with disabilities under the Fair Housing Act, Section 504, and/or the ADA.

How the Program Promotes Long-Term Resilience:

The Single-Family New Housing Construction program will invest in new owner-occupied housing with housing stock that is more energy efficient; resilient to the hazards in the impacted communities (including flood, wind, extreme heat/winter, drought, and other applicable high-risk hazards based on housing location); and can mitigate the projected impacts of climate change. In addition, the new housing will be built to accessibility and visibility standards that will allow impacted residents to age in place and increase the housing stock available to individuals living with disabilities.

By building in a manner that achieves higher energy efficiency, resilience, and more accommodating construction standards, the Commonwealth will mitigate future loss of life and property. This will reduce short- and long-term interruptions caused by future disasters.

Program Competitive Application Overview:

Application approval and associated funding decisions will be made through evaluation of threshold criteria related to the grant application and subject to funding availability. The application must show that the project will:

- Respond to a demonstrated need
- Impact vulnerable communities
- Qualify as a CDBG-DR-eligible activity
- Meet a national objective
- Be located in a declared disaster-affected area

DLG will establish a competitive scoring rubric for applications that will be based on the following criteria:

- Project is located in one of the HUD- or grantee-identified MIDs (priority given to HUD-identified MID areas)
- Evidence of developer capacity
 - All sources of funding are identified
 - Experience with federal grants
 - Project management team members are identified
- Ability to get projects to construction start
 - Preliminary designs are complete
 - Cost estimates are complete
 - Housing sites have been identified and site control is in place (either the developer already owns the sites or has an executed option to purchase)
 - An implementation plan with milestones included
- The budget is comprehensive and reasonable for the project scope
 - Hard costs are detailed per house (labor and materials)
 - Soft costs are identified (A/E fees, inspection, financing and legal fees, equipment rentals)
- Amount of additional funds leveraged
- The degree to which the designs and plans mitigate future hazards and meet a green building standard
 - The project scope takes into consideration the specific location of the unit(s) and will plan accordingly for the specific hazards and natural features that would affect or be affected by the project
 - Project site is NOT located in an SFHA
 - Energy-efficient appliances will be included in the units
 - Green building standards as outlined in the program guidelines have been acknowledged and will be followed during the construction process
- An outreach and marketing plan for disaster-impacted and vulnerable populations has been submitted

Project beneficiaries do not need to be identified in the application. Beneficiaries will apply through the local jurisdiction for eligibility to purchase a constructed housing unit.

Program Method of Distribution:

There will be an open application window with deadlines. DLG will receive the applications and make funding decisions based on competitiveness and completeness of the application, justification for funding, and feasibility of the project. A city, county, or tribal authority will apply in conjunction with an eligible developer who is committed to the project and completing the work in a timely manner.

DLG will encourage applicants to consider leveraging other funds or look for financing options to fully fund projects.

Program Timeline:

This program will begin in the spring of 2023. The program will end when all funds have been expended and all eligible participants have completed closeout, or 6 years after execution of the grant agreement with HUD.

4.10.2 Owner-Occupied Rehabilitation and Reconstruction

Program	Budget	HUD-Identified MID Budget	Grantee-Identified MID Budget
Owner-Occupied Rehabilitation and Reconstruction	\$17,905,350	\$14,324,280	\$3,581,070

Program Description:

The Owner-Occupied Rehabilitation and Reconstruction program is intended to assist homeowners repair their homes, support rehabilitation of older and existing housing stock, and provide safe and decent housing opportunities for residents. The program will provide assistance in the form of grants up to \$50,000 and forgivable loans if costs run over \$50,000 for each home rehabilitated or reconstructed. The program beneficiaries will be eligible homeowners who experienced damage to their homes from the 2021 storm events and have remaining recovery needs after accounting for other benefits received. Because the program will benefit homeowners impacted by the 2021 storm events, the applicant must own the property as their principal place of residence and have damages resulting from the declared eligible disaster. Program guidelines will document how DLG will work with applicants to ensure sufficient documentation of ownership and damage.

The program will fund rehabilitation and reconstruction including additional costs to comply with federal, State, and local construction standards, such as replacing onsite residential infrastructure, complying with green building standards, and ensuring that

homes are accessible for individuals living with disabilities, senior residents, and individuals and families at risk of homelessness. Eligible costs also include elevation, flood- and wind-resistant structures, and other program-required mitigation costs that will help protect homes from natural hazards faced in the disaster-impacted communities.

Program Tieback to Disaster:

Through this program, the Commonwealth will address unmet housing recovery needs by addressing needed repairs or reconstruction to homes impacted by the 2021 storm events.

How the Program Will Promote Housing for Vulnerable Populations:

The Commonwealth of Kentucky aims to lead an equitable recovery from the 2021 storm events, which will require an examination of systemic policies and practices that may marginalize some populations and perpetuate disparities. The 2019 Analysis of Impediments to Fair Housing conducted by DLG and the Kentucky Housing Corporation provided recommendations that will serve as a guide for implementing the programs.

DLG's Owner-Occupied Rehabilitation and Reconstruction program will help impacted residents, vulnerable populations, and members of underserved communities expedite their recovery by:

- Performing outreach and engagement to understand the needs of impacted participants and facilitating connections with vulnerable populations.
- Coordinating with local organizations to ensure that refugee and immigrant populations are aware of and can access assistance.
- Coordinating with local nonprofit organizations that provide services to people with disabilities and historically underserved populations to ensure the promotion of the program and help remove barriers to assistance.
- During the application process, ensuring that eligible applicants to DLG have the tools to market the program to potential beneficiaries.

Program Definition of Second Home/Eligibility:

Per the requirements in the Consolidated Notice, properties that served as second homes at the time of or following the disaster are not eligible for assistance for rehabilitation, reconstruction, new construction, or replacement. A "second home" is defined as a home that was not the primary residence of the owner, a tenant, or any occupant at the time of the disaster or at the time of application for CDBG-DR assistance.

Program National Objective(s):

Assistance provided under this program will meet the national objectives of benefiting LMI persons or households or addressing an urgent need. The program may use the

Urgent Need national objective to assist eligible disaster-impacted applicants with incomes greater than 80% AMI. The national objective will be met based on applicant's household income verified at the time of award by the jurisdiction to the beneficiary.

Program Eligibility:

Rehabilitation, reconstruction, elevation; HCDA Section 105(a)1, 4, 5, 11, and 14; applicable waivers identified in the Allocation Announcement Notice and Consolidated Notice (87 FR 6326).

Only costs incurred after an award will be eligible for reimbursement. Reimbursement of pre-award costs is not allowed.

Other Program Details:

Applicants will complete an initial reconnaissance of homes and beneficiaries in their jurisdiction eligible for rehabilitation and reconstruction prior to submitting an application to DLG. After the award, potential beneficiaries will apply to the awarded jurisdiction or their implementation partner(s) running the rehabilitation program. If eligible, the jurisdiction or their implementation partner(s) will complete an inspection of the applicant's property to document structural damage and develop a cost estimate for repairs or reconstruction. Based on this cost estimate, the jurisdiction or its implementation partner(s) will conduct a duplication of benefits review with the applicant to ensure no other funds were provided for the same repairs. The results of the duplication of benefits review will determine the maximum award amount that will be verified by DLG. Program guidelines will outline the details of a maximum award, including how change orders or unanticipated scope increases will be addressed. Program guidelines will further detail eligible construction activities, including but not limited to exterior repairs, interior repairs, electrical, plumbing, mechanical, resilient mitigation, and lead abatement (when required by federal regulations). The jurisdiction or its implementation partner(s) will develop a detailed scope of work and bid the project. The jurisdiction or its implementation partner(s) will follow federal procurement requirements, verify contractor eligibility, select the contractor, and directly fund the contractor for completed work. The amount of the grant, or grant and loan depending on total award, will be secured through a lien with covenants and restrictions filed on the property. The beneficiary will not select or fund the contractor directly.

Geographic Eligibility:

HUD has identified the following MID areas:

- Graves County
- Hopkins County

- Breathitt County (41339)
- Warren County (42101)

Kentucky has decided to expand the HUD-identified MID areas in ZIP codes 41339 and 42101 to include the entire counties of Breathitt and Warren.

In addition to HUD's identified MIDs, Kentucky has identified the following counties as eligible for CDBG-DR funding:

Boyd County, Caldwell County, Christian County, Clark County, Clay County, Estill County, Floyd County, Fulton County, Greenup County, Hart County, Hickman County, Jackson County, Johnson County, Knott County, Laurel County, Lawrence County, Lee County, Leslie County, Letcher County, Lincoln County, Logan County, Lyon County, Madison County, Magoffin County, Marion County, Marshall County, Martin County, Morgan County, Muhlenburg County, Ohio County, Owsley County, Perry County, Powell County, Pulaski County, Rockcastle County, and Taylor County

Special Flood Hazard Area Development:

Rehabilitation and reconstruction are eligible activities in the SFHA. If properties are assisted in this area, the scope of work will be required to minimize harm to or within the floodplain. Rehabilitation activities in the SFHA that include rehabilitation of substantial damage properties or rehabilitation resulting in substantial improvement of the structure as defined in the program guidelines will also be required to meet elevation standards, when feasible. Flood insurance requirements will be required for any use of CDBG-DR funding in the SFHA and will also be recorded as a permanent restrictive covenant on the property to ensure that future owners understand the flood insurance requirements.

As part of the homeowner-occupied rehabilitation/reconstruction application process, it will also need to be determined if the home ever received other federal disaster recovery benefits that required the maintenance of flood insurance. If flood insurance was not obtained or maintained, then the applicant will not be eligible for CDBG-DR funding.

Program Responsible Entity or Administering Entity:

City, county, and tribal governments will apply to DLG and assume the role of the responsible entity to operate an owner-occupied housing rehabilitation and reconstruction program. Eligible applicants may work with qualified organizations or partners to help implement the projects.

Applicants must work with a certified grant administrator to assist with application development, grant administration, and activity delivery.

Beneficiaries will then apply to the entity jurisdiction or their implementation partner for participation in the program.

Eligible Beneficiaries:

To be eligible for the program, homeowners must meet the following criteria:

- The damaged property must have been the applicant's primary residence at the time of the disaster.
- The damaged property must have sustained damage because of the 2021 storm events.
- The damaged property must be an eligible structure as defined in the program guidelines, including but not limited to single-family residences, manufactured homes, and prefabricated homes.

Program Maximum Assistance:

DLG is setting a maximum award of up to \$500,000 per applicant that will serve multiple beneficiaries within jurisdictions. Each rehabilitated or reconstructed home is eligible for a maximum award of \$100,000 per property in the form of a grant for costs less than \$50,000 and a forgivable loan for costs above \$50,000. Policies will also specify the process by which applications can be reviewed to identify situations where exceeding the maximum award amount may be necessary.

How the Program Promotes Long-Term Resilience:

The Owner-Occupied Rehabilitation and Reconstruction program will rehabilitate or reconstruct existing owner-occupied housing to be more energy efficient and resilient to the hazards in the impacted area. By rehabilitating and reconstructing in a manner that achieves higher energy efficiency, resilience, and more accommodating construction standards, the Commonwealth will mitigate future loss of life and property. This will reduce short- and long-term interruptions caused by future disasters.

Program Competitive Application Overview:

Application approval and associated funding decisions will be made through evaluation of threshold criteria related to the grant application and subject to funding availability.

For applications to be eligible, applicants must show that the project will:

- Respond to a demonstrated need
- Impact vulnerable communities
- Meet a national objective
- Qualify as a CDBG-DR-eligible activity
- Be located in a declared disaster-affected area

DLG will establish a competitive scoring rubric for applications that will be based on the following criteria:

- Project is located in one of the HUD- or grantee-identified MIDs (preference will be given to HUD-identified MID areas)
- Project readiness is demonstrated by an implementation plan including program milestones that will be met
- Potential homes and eligible LMI homeowners are preliminarily identified
- All sources of funds are identified
- Anticipated budget that is provided is cost-reasonable
- The degree by which proposed designs and plans will mitigate future hazards and meet a green building standard is appropriate
 - The project scope takes into consideration the specific location of the unit(s) and will plan accordingly for the specific hazards and natural features that would affect or be affected by the project, as feasible
 - Energy-efficient appliances will be included in the units, if replaced
 - Green building standards as outlined in the program guidelines have been acknowledged and will be followed during the construction process

Program Method of Distribution:

There will be an open application window with deadlines. DLG will receive the applications and make funding decisions based on competitiveness and completeness of the application, justification for funding, and feasibility of the project. City, county, and tribal governments will apply to DLG to develop programs that will fund eligible homeowners. DLG will encourage applicants to consider leveraging other funds or look for financing options to fully fund the projects.

Program Timeline:

This program will begin in the spring of 2023. The program will end when all funds have been expended and all eligible participants have completed closeout, or 6 years after execution of the grant agreement with HUD.

4.10.3 Multifamily New Construction

Program	Budget	HUD-Identified MID Budget	Grantee-Identified MID Budget
Multifamily New Construction	\$3,000,000	\$2,400,000	\$600,000

Program Description:

The Multifamily New Construction program will offer funding subsidies for the construction of multifamily structures (five or more units) on vacant lots within existing

neighborhoods. The program will offer incentives to encourage builders and developers to build new rental units in the disaster-impacted areas. The new units will incorporate green and resilient building practices to mitigate future risks of hazards.

Program Tieback to Disaster:

Through this program, the Commonwealth will address unmet housing recovery needs by increasing the availability of safe, sanitary, and affordable housing to replace units lost as a result of the 2021 storm events.

How the Program Will Promote Housing for Vulnerable Populations:

The Commonwealth of Kentucky aims to lead an equitable recovery from the 2021 storm events, which will require an examination of systemic policies and practices that may marginalize some populations and perpetuate disparities. The 2019 Analysis of Impediments to Fair Housing Choice conducted by DLG and the Kentucky Housing Corporation provided some recommendations that will serve as a guide for implementing the programs.

DLG's Multifamily New Construction program will help impacted residents, vulnerable populations, and members of underserved communities expedite their recovery by:

- Performing outreach and engagement to understand the needs of impacted participants and facilitating connections with vulnerable populations.
- Coordinating with local organizations to ensure that refugee and immigrant populations are aware of and can access the assistance.
- Coordinating with local nonprofit organizations that provide services to people with disabilities and historically underserved populations to ensure the promotion of the program and help remove barriers to assistance.

Program Affordability Period:

For multifamily projects, the affordability period for new construction will be 20 years.

Affordable Rents:

Units that are intended to meet an LMI national objective in a project must be rented to persons of verified LMI income and subject to the 65% HOME rent limits (published annually by HUD) for the affordability period.

Restrictive Covenants:

To ensure that projects are completed per program requirements, applicants must agree to a restrictive covenant being recorded on the property through the affordability terms. The affordability period will be documented through a personally guaranteed loan and

restricted use covenant. Both will be in place until the end of the affordability period or until the loan is paid in full.

Program Definition of Second Home/Eligibility:

A “second home” is defined as a home that was not the primary residence of the owner, a tenant, or any occupant at the time of the disaster or at the time of application for CDBG-DR assistance. Because the Multifamily New Construction program is constructing new rental housing, second homes are not eligible for assistance.

Program National Objective(s):

Low- to Moderate-Income Housing (LMH) or Urgent Need will be used to meet a national objective for this program. To meet the LMH national objective, 51% of units must be occupied by LMI households. CDBG-DR funds can pay for multifamily rental new construction when less than 51% of the units will be occupied by LMI households; however, a minimum of 20% of all occupants must be LMI households. Where LMI occupancy is between 20% and 50%, the CDBG-DR funds must not exceed the percent of LMI households to occupy the units. CDBG-DR funds that provide assistance to the LMI units will meet the LMH national objective. If less than 20% LMI occupancy is achieved, Urgent Need will be the determined national objective.

Program Eligibility:

New construction, acquisition, clearance; HCDA Section 105(a)1, 4, 11, 14, and 15; applicable waivers identified in the Allocation Announcement Notice and Consolidated Notice (87 FR 6364).

Only costs incurred after an award will be eligible for reimbursement. Reimbursement of pre-award costs is not allowed.

Other Program Details:

Eligible activities include constructing new rental units necessary to replace those that were lost from the 2021 storm events and increasing available affordable housing for residents displaced by the storm events. In conjunction with awards for new construction, applicants may identify mitigation measures to be incorporated into the new multifamily housing project. These mitigation measures include but are not limited to structural and utility design modifications to make the building more resistant to floods, grading and slope stabilization, and drainage improvements. New construction of multifamily properties will meet resilient green building standards and include the installation of broadband infrastructure, where feasible. Developers are responsible for establishing their project cost estimates. Cost reasonableness will be determined by a competitive comparison of projects. Additionally, DLG may use details regarding cost of materials using industry-standard, cost-estimating software; comparative and market

analysis of price per square foot; and/or the comparison of multiple competitive bids. Applications will include specific details about the number, location, size, and design of the units, as well as the identified developer who will construct all units. Through the review of submitted applications, DLG will document that no other funds have been provided for the same development, ensuring no duplication of benefits. Development agreements will be required between the jurisdiction and the developer. All eligible costs incurred by the developer will be claimed by the jurisdiction who will act as a pass-through for funding. Specific eligible activities will be detailed in the program guidelines.

Special Flood Hazard Area Development:

DLG will discourage development in the SFHA. However, if that location is the only suitable building location in the community based on topography, construction in the SFHA can be considered. If properties are constructed in this area, the development will be required to meet the elevation standards as described in the program guidelines. Property owners will also be required to obtain and maintain flood insurance. This requirement will be recorded as a permanent restrictive covenant on the property to ensure that future owners understand the flood insurance requirements.

Geographic Eligibility:

HUD has identified the following MID areas:

- Graves County
- Hopkins County
- Breathitt County (41339)
- Warren County (42101)

Kentucky has decided to expand the HUD-identified MID areas in ZIP codes 41339 and 42101 to include the entire counties of Breathitt and Warren.

In addition to HUD's identified MIDs, Kentucky has identified the following counties as eligible for CDBG-DR funding:

Boyd County, Caldwell County, Christian County, Clark County, Clay County, Estill County, Floyd County, Fulton County, Greenup County, Hart County, Hickman County, Jackson County, Johnson County, Knott County, Laurel County, Lawrence County, Lee County, Leslie County, Letcher County, Lincoln County, Logan County, Lyon County, Madison County, Magoffin County, Marion County, Marshall County, Martin County, Morgan County, Muhlenburg County, Ohio County, Owsley County, Perry County, Powell County, Pulaski County, Rockcastle County, and Taylor County

Program Responsible Entity or Administering Entity:

- **Eligible Applicants:** City, county, and tribal governments, in coordination with eligible developers, will apply to DLG. The local jurisdiction will assume the role of the responsible entity. If a city, county, or tribal government applies, it must work with a certified grant administrator to assist with application development, grant administration, and activity delivery.
For-profit and nonprofit housing developers may apply directly to DLG. Developers cannot assume the role of responsible entity; as such, DLG will remain the responsible entity for direct awards to developers.
- **Eligible Developers:** If the developer is not applying directly, approved developers must be identified in the city, county, or tribal authority's request for funding. The developer must be experienced and in good standing with the Commonwealth. The developers or partnerships may be for-profit or nonprofit entities. Developers and any future owner of the property will be required to comply with the term of affordability and any other covenants and restrictions placed on the property. Additional eligibility requirements will be described in the program guidelines.
- **Eligible Beneficiaries:** The program's beneficiaries will be the renters who meet the income eligibility. The owner/developer of the multifamily development will be required to ensure that priority will be given to—and advertisement will be targeted to—disaster-impacted LMI households. The property owner/developer will be responsible for ensuring the ratio of LMI units is maintained for the affordability period.

Program Maximum Assistance:

The maximum award is \$1,000,000 for any new construction project. This award will include incentives for construction, incentives for applicable mitigation measures, and the cost of compliance such as additional costs incurred paying Davis Bacon wages. Policies will also specify the process by which applications can be reviewed to identify situations where exceeding the maximum award amount may be necessary.

How the Program Promotes Long-Term Resilience:

The Multifamily New Construction program will invest in new multifamily housing that is more energy efficient; resilient to the hazards in the impacted communities (including flood, wind, extreme heat/winter, drought, and other applicable high-risk hazards based on the location of the housing); and can mitigate the projected impacts of climate change. In addition, the new housing will be built to accessibility and visibility standards that will allow impacted residents to age in place and increase the housing stock available to individuals living with disabilities.

Program Competitive Application Overview:

Application approval and associated funding decisions will be made through evaluation of threshold criteria related to the grant application and subject to funding availability.

For applications to be eligible, applicants must show that the project will:

- Respond to a demonstrated need
- Impact vulnerable communities
- Meet a national objective
- Qualify as a CDBG-DR-eligible activity
- Be located in a declared disaster-affected area

DLG will establish a competitive scoring rubric for applications that will be based on the following criteria:

- Project is located in one of the HUD- or grantee-identified MIDs (priority will be given to projects located in the HUD-identified MID areas)
- Evidence of developer capacity
 - All sources of funding are identified
 - Documentation of experience
 - Project management team members are identified
- Demonstrated construction readiness
 - Preliminary designs are complete
 - Cost estimates are complete
 - Developer has site control (either already own the site or has an executed option to purchase)
 - An implementation plan with milestones is included
- Budget is comprehensive and reasonable for the project scope
 - Hard costs are detailed per house (labor and materials)
 - Soft costs are identified (A/E fees, inspection, financing and legal fees, equipment rentals)
- The degree to which the designs and plans mitigate future hazards and meet a green building standard
 - The project scope takes into consideration the specific location of the unit(s) and will plan accordingly for the specific hazards and natural features that would affect or be affected by the project as feasible
 - Energy-efficient appliances will be included in the units
 - Green building standards as outlined in the program guidelines have been acknowledged and will be followed during the construction process
- A rental outreach and marketing plan for disaster impacted and vulnerable populations has been submitted

Project beneficiaries do not need to be identified in the application.

Program Method of Distribution:

There will be an open application window with deadlines. DLG will receive the applications and make funding decisions based on the competitiveness and completeness of the application, justification for funding, and feasibility of the project. Cities, counties, and tribal authorities will apply in conjunction with an eligible developer who is committed to the project and completing the work. For-profit or nonprofit developers may also apply directly to DLG.

DLG will encourage applicants to consider leveraging other funds or look for financing options to fully fund the projects.

Program Timeline:

This program will begin in the spring of 2023. The program will end when all funds have been expended and all eligible participants have completed closeout, or 6 years after execution of the grant agreement with HUD.

4.10.4 Rental Rehabilitation/Reconstruction

Program	Budget	HUD-Identified MID Budget	Grantee-Identified MID Budget
Multifamily and Small Rental Rehabilitation/Reconstruction	\$15,000,000	\$12,000,000	\$3,000,000

Program Description:

The program is intended to assist eligible owners of rental properties to rehabilitate or reconstruct rental housing to provide safe, clean, and affordable rental housing to LMI households. The program will restore or reconstruct affordable rental units in disaster-impacted areas with the goal of ensuring that impacted counties do not lose the remaining rental units. It will work to alleviate blight in some of the areas that were hit hardest by the storm.

The program will provide assistance for activities necessary to restore storm-damaged rental units, including rehabilitation, reconstruction, elevation, and/or other mitigation activities. Mitigation activities include but are not limited to structural and utility retrofits or design modifications/retrofits to make the building more resistant to flood and wind damage such as , grading and slope stabilization, , drainage improvements, and structural enhancements. Assistance may also be provided to make housing accessible for individuals living with disabilities. Substantial rehabilitation and reconstruction of properties with more than four rental units will include the installation of broadband infrastructure, where feasible.

Program Tieback to Disaster:

Through this program, the Commonwealth will address unmet housing recovery needs by providing rehabilitation/reconstruction assistance to landlords to ensure the availability of safe, affordable housing for those impacted by the 2021 storm events.

How the Program Will Promote Housing for Vulnerable Populations:

The Commonwealth of Kentucky aims to lead an equitable recovery from the 2021 storm events, which will require an examination of systemic policies and practices that may marginalize some populations and perpetuate disparities. The 2019 Analysis of Impediments to Fair Housing Choice conducted by DLG and the Kentucky Housing Corporation provided some recommendations that will serve as a guide for implementing the programs.

DLG's Multifamily and Small Rental Rehabilitation/Reconstruction program will help impacted residents, vulnerable populations, and members of underserved communities expedite their recovery by:

- Performing outreach and engagement to understand the needs of impacted participants and facilitating connections with vulnerable populations.
- Coordinating with local organizations to ensure that refugee and immigrant populations are aware of and can access the assistance.
- Coordinating with local nonprofit organizations that provide services to people with disabilities and historically underserved populations to ensure the promotion of the program and help remove barriers to assistance.

Program Affordability Period:

The program must maintain affordability periods in accordance with HOME program standards at 24 CFR 92.252(e)(4). The following affordability time frames apply to the units that will be occupied by LMI households.

Rental Housing Activity of Existing Housing Per Unit Amount of CDBG-DR Funds	Minimum Period of Affordability in Years
Less than \$15,000	5
\$15,000–\$40,000	10
More than \$40,000 or rehabilitation involving refinancing	15

Affordable Rents:

Units that are intended to meet the LMI national objective in a project must be rented to persons of verified LMI income and subject to the 65% HOME rent limits for the affordability period.

Restrictive Covenants:

To ensure that projects are completed per program requirements, applicants must agree to a restrictive covenant being recorded on the property through the affordability terms. The affordability period will be documented through a personally guaranteed loan and restricted use covenant. Both will be in place until the end of the affordability period or until the loan is paid in full.

Required Number of Affordable Units by Property Size:

Number of Total Units in Property	Number of Units That Must Be Affordable to LMI Households
1	1
2	1
3	2
4	3
5	3
6	4
7	4

Program Definition of Second Home/Eligibility:

Per the requirements in the Consolidated Notice, properties that served as second homes at the time of or following the disaster are not eligible for assistance for rehabilitation, reconstruction, new construction, or replacement. A “second home” is defined as a home that was not the primary residence of the owner, a tenant, or any occupant at the time of the disaster or at the time of application for CDBG-DR assistance.

Program National Objective(s):

Assistance provided under this program will meet the national objectives of benefiting LMI persons or households.

Program Eligibility:

Rehabilitation, reconstruction, elevation, and lead-based paint and clearance; HCDA Section 105(a) 2, 4, 5, 11, 14, and 24; applicable waivers identified in the Allocation Announcement Notice and Consolidated Notice (87 FR 6326); other applicable waivers or alternative requirements.

Only costs incurred after an award will be eligible for reimbursement. Reimbursement of pre-award costs is not allowed.

Other Program Details:

Landlords at the time of this disaster event whose rental properties sustained damage and who have been unable to fully recover may apply through their local jurisdiction for assistance to rehabilitate or reconstruct damaged rental units. An awarded jurisdiction or its implementation partner(s) running the rehabilitation program will establish local applications and program guidelines. If eligible, the jurisdiction will complete an inspection of the rental property to document structural damage and develop a cost estimate for repairs or reconstruction. Based on this cost estimate, the jurisdiction will conduct a duplication of benefits review with the owner applicant to ensure that no other funds were provided for the same repairs, including insurance or other federal assistance. The results of the duplication of benefits review will determine the maximum award amount.

Program guidelines will outline the details of a maximum award, including how change orders or unanticipated scope increases will be addressed. Program guidelines will further detail eligible construction activities including but not limited to exterior repairs, interior repairs, electrical, plumbing, mechanical, resilient mitigation, and lead abatement (when required by federal regulations). The jurisdiction will develop a detailed scope of work and bid the project. The jurisdiction will follow federal procurement requirements, verify contractor eligibility, select the contractor, and directly fund the contractor for completed work. The amount of the loan will be based on the total award and will be secured through a lien with covenants and restrictions filed on the property.

Other Requirements and Enforceability:

Tenants displaced by the rehabilitation or reconstruction activities are eligible for assistance under the Uniform Relocation Act (URA). The program guidelines will define situations where tenants have been displaced and what procedures are in place to address the cost of permanent or temporary relocation.

Special Flood Hazard Area Development:

Rental units located in the SFHA are eligible for rehabilitation and reconstruction activities. If properties are assisted in the SFHA, the scope of work will be required to minimize harm to or within the floodplain, as described in the program guidelines. Rehabilitation activities in the SFHA that include rehabilitation of substantial damage properties or rehabilitation resulting in substantial improvement of the structure as defined in the program guidelines will also be required to meet elevation standards, where feasible. Flood insurance requirements will be required for any use of CDBG-DR funding in the SFHA and will also be recorded as a permanent restrictive covenant on the property to ensure that future owners understand the flood insurance requirements.

As part of the Rental Rehabilitation/Reconstruction program application process, it will also need to be determined if the home ever received other federal disaster recovery benefits that required the maintenance of flood insurance. If flood insurance was not obtained or maintained, then the applicant will not be eligible for CDBG-DR funding.

Geographic Eligibility:

HUD has identified the following MID areas:

- Graves County
- Hopkins County
- Breathitt County (41339)
- Warren County (42101)

Kentucky has decided to expand the HUD-identified MID areas in ZIP codes 41339 and 42101 to include the entire counties of Breathitt and Warren.

In addition to HUD's identified MIDs, Kentucky has identified the following counties as eligible for CDBG-DR funding:

Boyd County, Caldwell County, Christian County, Clark County, Clay County, Estill County, Floyd County, Fulton County, Greenup County, Hart County, Hickman County, Jackson County, Johnson County, Knott County, Laurel County, Lawrence County, Lee County, Leslie County, Letcher County, Lincoln County, Logan County, Lyon County, Madison County, Magoffin County, Marion County, Marshall County, Martin County, Morgan County, Muhlenburg County, Ohio County, Owsley County, Perry County, Powell County, Pulaski County, Rockcastle County, and Taylor County

Program Responsible Entity or Administering Entity:

City, county, and tribal governments will apply to DLG and assume the role of the responsible entity to operate the Multifamily and Small Rental Rehabilitation/Reconstruction program. DLG will allow local entities to submit applications for rental housing projects with up to seven units. Existing landlords will apply to the awarded jurisdiction to participate in the rehabilitation and reconstruction program. Beneficiaries will be documented as the existing or initial renters occupying the rehabilitated units.

Applicants must work with a certified grant administrator to assist with application development, grant administration, and activity delivery.

Eligible Property Owners (landlords): Current property owners of rental units must apply to the local jurisdiction for funding. They must be in good standing with the Commonwealth. The property owners may be individuals, for-profit entities, or nonprofit entities. Additional eligibility requirements will be described in the program guidelines.

Eligible Developers:

For-profit and nonprofit housing developers who partner with the Kentucky Housing Corporation can submit rental housing applications to DLG for an uncapped number of units. DLG will remain the responsible entity for direct awards to developers. Developers must be experienced and in good standing with the Commonwealth. Developers and any future owner of the property will be required to comply with the terms of affordability and any other covenants and restrictions placed on the property. Additional eligibility requirements will be described in the program guidelines.

Eligible Beneficiaries:

The program's beneficiaries are renters who meet the income eligibility or disaster impact criteria including current residents of the project. The buildings once renovated must maintain the required ratio of LMI to non-LMI units for the affordability period.

Program Maximum Assistance:

The maximum award is \$75,000 per unit for any rehabilitation or reconstruction project. Program guidelines will stipulate a process for applications to identify situations where exceeding the maximum award amount may be necessary. For example, increased costs of compliance associated with accessibility concerns, environmental mitigation, and other extenuating circumstances may warrant exceeding the maximum award amount. Such requests will be reviewed by DLG on a case-by-case basis.

Program Timeline:

This program will begin in the spring of 2023. The program will end when all funds have been expended and all eligible participants have completed closeout, or 6 years after execution of the grant agreement with HUD.

Program Competitive Application Overview:

Application approval and associated funding decisions will be made through evaluation of threshold criteria related to the grant application and subject to funding availability.

For applications to be eligible, applicants must show that the project will:

- Respond to a demonstrated need
- Impact vulnerable communities
- Meet a national objective
- Qualify as a CDBG-DR eligible activity
- Be located in a declared disaster-affected area

DLG will establish a competitive scoring rubric for applications that will be based on the following criteria:

- The project is located in one of the HUD- or grantee-identified MID areas (priority will be given to projects located in the HUD-identified MID areas)
- The budget is comprehensive and reasonable for how many units they plan to assist
- The proposed review of landlord designs and plans will include consideration of mitigation of future hazards and meet a green building standard
 - The project scope takes into consideration the specific location of the unit(s) and will plan accordingly for the specific hazards and natural features that would affect or be affected by the project as feasible
 - Energy-efficient appliances will be included in the units, if replaced
 - Green building standards as outlined in the program guidelines have been acknowledged and will be followed during the construction process
- A potential outreach and marketing plan that landlords will use to advertise the units to disaster-impacted and vulnerable populations has been submitted
- Process is outlined by which the rental unit owners will be evaluated to ensure they are in good standing with the Commonwealth and have experience managing rental properties
- A proposed relocation plan outline has been submitted, including how the program responsible entity or administering entity will implement the plan once rental units are identified to ensure the plan meets URA requirements

Program Method of Distribution:

There will be an open application window with deadlines and a competitive review process. DLG will receive the applications and make funding decisions based on the competitiveness and completeness of the application, justification for funding, and feasibility of the program.

DLG will encourage applicants to consider leveraging other funds or look for financing options to fully fund the projects.

Once awarded program funds from DLG, awarded jurisdictions will receive and review applications from landlords. Local jurisdictions must have clear and consistent program guidelines consistent with the State's program.

4.10.5 Housing Counseling and Legal Aid

Program	Budget	HUD-Identified MID Budget	Grantee-Identified MID Budget
Housing Counseling and Legal Aid	\$800,000	\$640,000	\$160,000

Program Description:

DLG will provide grants to subrecipients to deliver critical support services, the need for which has increased because of the 2021 storm events. This Housing Counseling and Legal Aid program was developed by DLG to provide a wide range of counseling services to renters and homeowners impacted by the 2021 storms.

The program is a collaboration of HUD-certified, nonprofit, community-based organizations that provide a wide range of counseling services. Counselors provide support services, such as foreclosure prevention, relocation services, title transfers and title searches, and debt management. Counselors also assist with application intake for CDBG-DR-funded programs. Housing counselors may provide information to renters participating in the other rental housing programs as well.

This program also will fund legal services needed to help impacted residents transition to more permanent housing.

Program Tieback to Disaster/Unmet Needs:

The program provides services to individuals and households living in the impacted communities or who were impacted by the 2021 storms.

How the Program Will Promote Housing for Vulnerable Populations:

In the aftermath of a disaster, housing counseling and legal services are a critical component of comprehensive disaster relief. Legal resources are often confusing, unattainable, and/or unaffordable to LEP individuals, HUD-defined vulnerable populations, and LMI households as they work through the challenges of recovery that require legal representation, support, and analysis. Failure to resolve these legal issues often results in the denial of recovery resources and/or delays to recovery.

Housing counseling and legal services providers will help impacted residents, vulnerable populations, and members of underserved communities expedite their recovery by:

- Providing access to fair housing information for participants
- Providing guidance and counseling services to LEP households
- Assessing housing needs and financial resources and addressing other concerns about short- and long-term housing
- Discussing the unique assistance needs and resources that are available
- Connecting with State and local recovery resources
- Communicating with lenders, insurance companies, and government agencies
- Supporting application intake and assisting with the necessary paperwork for recovery programs, thereby reducing barriers of entry into recovery and other funding programs

- Reviewing income, expenses, credit, and debt and helping to develop ways to improve a participant's financial situation
- Providing other housing navigation services, as needed

Program National Objective(s):

LMI persons or households and/or Urgent Need.

The program may use the Urgent Need national objective to provide assistance to eligible disaster-impacted applicants with incomes greater than 80% of AMI.

Program Eligibility:

Public Services; HCDA Section 105(a)8; applicable waivers identified in the Allocation Announcement Notice and Consolidated Notice; other applicable waivers or alternative requirements.

Other Program Details:

Housing counseling organizations may provide supportive services, including but not limited to foreclosure prevention, homebuyer financial counseling, relocation advisory services, debt management, and assistance with application intake for CDBG-DR-funded programs. The services also may provide support to navigate insurance requirements, State programs, application submittal, and any technology gaps.

Assistance will be provided to eligible subrecipient legal services providers to deliver recovery-related assistance, such as working through insurance claims; clearing property titles; working through heirship and probate; fighting unlawful evictions and foreclosures; combating contractor scams, disputes, and fraud; assistance with school transfers; and other legal services needed for applicants to complete their recovery.

Financial counseling services will be provided to owners of rental properties who will rent housing at affordable rates to income-qualified tenants. They will receive training on fair housing requirements and compliance requirements for participating in affordable rental programs.

Geographic Eligibility:

HUD has identified the following MID areas:

- Graves County
- Hopkins County
- Breathitt County (41339)
- Warren County (42101)

Kentucky has decided to expand the HUD-identified MID areas in ZIP codes 41339 and 42101 to include the entire counties of Breathitt and Warren.

In addition to HUD's identified MIDs, Kentucky has identified the following counties as eligible for CDBG-DR funding:

Boyd County, Caldwell County, Christian County, Clark County, Clay County, Estill County, Floyd County, Fulton County, Greenup County, Hart County, Hickman County, Jackson County, Johnson County, Knott County, Laurel County, Lawrence County, Lee County, Leslie County, Letcher County, Lincoln County, Logan County, Lyon County, Madison County, Magoffin County, Marion County, Marshall County, Martin County, Morgan County, Muhlenburg County, Ohio County, Owsley County, Perry County, Powell County, Pulaski County, Rockcastle County, and Taylor County

Program Responsible Entity or Administering Entity:

Eligible subrecipients include HUD-certified housing counseling agencies, nonprofit organizations, and community-based organizations.

These entities may apply directly to DLG for funding. However, subrecipients cannot assume the role of responsible entity; as such, DLG will remain the responsible entity for direct awards to subrecipients.

Program Maximum Assistance:

The maximum amount allocated to subrecipients will be detailed in the program guidelines and applicable Notice of Funding Availability (NOFA) and will be determined based on such factors as the subrecipient's capacity, the scope of work, the types of services provided, and/or the communities served by the organization.

Method of Distribution:

The Commonwealth will implement this program through subrecipients.

Program Application Overview:

The program policies and public funding announcements will provide information on how qualified organizations are selected as subrecipients, to include all scoring criteria, relative weighting, and minimum requirements. Subrecipients will be selected competitively through a NOFA, competitive procurement, or other process described in the program guidelines.

The program is not competitive for residents seeking housing or legal services.

Program Timeline:

This program will begin in the spring of 2023. The program will end when all funds have been expended and all eligible participants have completed closeout, or 6 years after execution of the grant agreement with HUD.

4.10.6 Small Business Grant Program

Program	Budget	HUD-Identified MID Budget	Grantee-Identified MID Budget
Small Business Grant Program	\$4,000,000	\$3,200,000	\$800,000

Program Description:

CDBG-DR funds can be used for CDBG-DR-eligible activities related to economic revitalization. The attraction, retention, and return of businesses and jobs to a disaster-impacted area is critical to long-term recovery. For CDBG-DR purposes, economic revitalization may include any CDBG-DR-eligible activity that demonstrably restores and improves the local economy through job creation and retention or by expanding access to goods and services.

DLG will prioritize economic revitalization funding in LMI and socially vulnerable communities that include members of protected classes, HUD-identified vulnerable populations, and historically underserved communities. Economic revitalization recipients will also be required to advertise and promote funding for Section 3 businesses and workers.

The Small Business Grant program is designed to allow for a flexible range of eligible activities to help local entities meet the economic recovery or mitigation needs of their disaster-impacted communities. Each activity must clearly have a tie to revitalizing disaster-impacted communities.

This program is designed to promote sustainable long-term recovery by implementing projects that account for the unique hazards, opportunities, land use restrictions, underserved communities, and disaster impacts within Kentucky's impacted communities. Subrecipients will be required to describe the data and/or planning analysis they used in their project prioritization process, including how their projects address the following opportunities, as applicable:

- How the project supports members of protected classes, historically underserved communities, and/or vulnerable populations.
- How the project spurs economic growth and retains or creates jobs to replace those that were lost.

Program Tieback to Disaster and Unmet Needs:

This program addresses unmet recovery and mitigation economic revitalization needs in HUD-identified and grantee-identified MIDs after deducting any duplication of benefits from other federal, State, or private sources.

Program National Objective(s):

The program will meet the national objective of LMI job creation or retention (LMJ). HUD has provided a waiver allowing economic revitalization programs to identify the LMI jobs benefit by documenting, for each person employed, the name of the business, type of job, and the annual wages or salary of the job. HUD will consider the person income-qualified if the person's annual wages or salary of the job is at or under the HUD-established income limit for a one-person family. This method replaces the standard CDBG requirement in which grantees must review the annual wages or salary of a job compared to the person's total household income and size (87 FR 31636 II.D.2.).

Program Eligible Activities:

Economic Revitalization and Development; HCDA Section 105(a)15, 17 and 19; applicable waivers identified in the Allocation Announcement Notice and Consolidated Notice; other applicable waivers or alternative requirements.

Other Program Details:

DLG will provide funding for the following activities:

- Working capital
- Purchase of equipment
- Job retention or job creation if recipient can prove the job replacement is for jobs that were lost as a result of the declared disaster.

Program Responsible Entity or Administering Entity:

City, county, and tribal governments will apply to DLG and assume the role of the responsible entity. Applications will include information about the business entity they will be assisting with funds.

Applicants must work with a certified grant administrator to assist with application development, grant administration, and activity delivery.

Eligible Beneficiaries:

Eligible applicants will provide funding to business entities that will provide jobs for LMI individuals. These LMI individuals hired or retained are the program beneficiaries. Fifty-

one percent of the jobs created or retained as a result of CDBG-DR funding will be for LMI individuals.

Program Underwriting:

DLG will review all applications, focusing on the following criteria for each proposed business project:

- Reasonable project costs
- Commitment of all project sources of financing
- Substitution of CDBG-DR funds for nonfederal financial support has been avoided
- Financial feasibility of the project
- Assurance that CDBG-DR funds will be disbursed on a pro rata basis

Geographic Eligibility:

HUD-identified MID areas:

- Graves County
- Hopkins County
- Breathitt County (41339)
- Warren County (42101)

Kentucky has decided to expand the HUD-identified MID areas in ZIP codes 41339 and 42101 to include the entire counties of Breathitt and Warren.

In addition to HUD's identified MIDs, Kentucky has identified the following counties as eligible for CDBG-DR funding.

Boyd County, Caldwell County, Christian County, Clark County, Clay County, Estill County, Floyd County, Fulton County, Greenup County, Hart County, Hickman County, Jackson County, Johnson County, Knott County, Laurel County, Lawrence County, Lee County, Leslie County, Letcher County, Lincoln County, Logan County, Lyon County, Madison County, Magoffin County, Marion County, Marshall County, Martin County, Morgan County, Muhlenburg County, Ohio County, Owsley County, Perry County, Powell County, Pulaski County, Rockcastle County, and Taylor County

Program Maximum Assistance:

The grant assistance for the Small Business Grant program will be tiered and on a per-assisted-business basis:

- \$200,000 max assistance for operating capital for qualified businesses
- \$20,000 per LMI job retained or replaced, up to \$200,000

The Federal Register Notice waived the public benefit standard that sets the maximum per job grant limit. Each applicant must maintain documentation of the creation and retention of total jobs, number of jobs within appropriate salary ranges, and the average amount of assistance per job.

Program Method of Distribution:

There will be an open application window and review process. DLG will receive the applications and make funding decisions based on the completeness of the application, justification for funding, and feasibility of the project.

Program Application Overview:

Application approval and associated funding allocations will be made through evaluation of threshold criteria related to the grant application and subject to funding availability. DLG will assess each application based on the response to the following criteria. The project must:

- Be an eligible activity under CDBG-DR
- Meet a CDBG-DR national objective
- Be located in one of the HUD- or grantee-identified MIDs
- Demonstrate how the project will address a disaster-related impact
- State how many LMI and non-LMI jobs will be retained or created with the funding
- Be cost-reasonable
- List other leveraged funds
- If operating capital is used, show the ability of the applicant to operate and maintain the project beyond the life of the CDBG-DR grant
- Demonstrate how the project positively impacts members of protected classes, HUD-defined vulnerable populations, and/or historically underserved communities from the risks in each of the respective impacted communities
- State other benefits of the project

Program Timeline:

This program will begin in the spring of 2023. The program will end when all funds have been expended and all eligible participants have completed closeout, or 6 years after execution of the grant agreement with HUD.

4.10.7 Infrastructure

Program	Budget	HUD-Identified MID Budget	Grantee-Identified MID Budget
Public Infrastructure and Stormwater Management	\$25,000,000	\$20,000,000	\$5,000,000

Program Description:

This program provides funding for infrastructure projects that will help impacted communities recover from the 2021 storm events and become more resilient to current and future natural hazards. Under this program, DLG will seek to fund recovery activities including improvements to community water and sewer systems and mitigation activities such as stormwater management systems, both engineered and nature-based. DLG developed this program to not only support communities in replacing and rebuilding what was damaged or lost in the disaster events but also to implement mitigation measures. The goal of the Public Infrastructure and Stormwater Management program is to provide a resilient recovery by:

- Reducing or eliminating the long-term risk of loss of life, injury, and damage from future disaster events
- Recovering from the disaster impacts
- Protecting publicly funded recovery investments in impacted communities

DLG will prioritize projects that provide the essential public infrastructure in LMI and socially vulnerable communities, protect life and property, and address the needs of members of protected classes, HUD-identified vulnerable populations, and historically underserved communities. Public infrastructure projects will be selected through DLG's competitive application process.

How the Program Will Advance Long-Term Resilience:

This program is designed to promote sound, sustainable long-term recovery and projects that account for the unique hazards, opportunities, land use restrictions, underserved communities, and disaster impacts within Kentucky's impacted communities.

Applicants will be required to describe the data and/or planning analysis they will use in their evaluation of hazard risk, including climate-related natural hazards. Applicants will also be required to demonstrate how the projects will be operated and maintained beyond the life of the CDBG-DR grant, including incorporating technologies to prevent early failures of the project.

Eligible projects may consider how to mitigate, eliminate, or reduce loss of life or property with respect to the natural hazards identified in the [Mitigation Needs Assessment](#). Applicants seeking to incorporate mitigation should evaluate whether their project:

- Mitigates the risk to public infrastructure
- Mitigates the risk to one or more of FEMA's community lifelines, including safety and security; food, water, and shelter; health and medical; energy; communications; transportation; and hazardous materials
- Incorporates nature-based solutions
- Protects and benefits disadvantaged communities

- Promotes resiliency through ancillary or triple bottom line benefits (social, environmental, and economic benefits)
- Considers climate change and future conditions
- Leverages federal, State, and local partnerships

Program Tieback to Disaster and Unmet Needs:

This program addresses unmet recovery and mitigation needs for public infrastructure in HUD-identified and grantee-identified MID. Disaster-related impacts also will be part of the competitive application review criteria.

Program National Objective(s):

Low to moderate income area (LMA) benefit and Urgent Need (UN) national objectives

Assistance provided under this program will meet the national objectives of benefiting LMI areas or addressing an Urgent Need.

The Urgent Need national objective will only be used when an LMI national objective cannot be achieved through the project, but the project has demonstrable recovery or mitigation benefits within the HUD- or grantee-identified MID. Each approved application will describe the urgency, type, scale, and location of the disaster-related impact that will be addressed through the project.

Program Eligible Activities:

Acquisition, construction, reconstruction, or installation of public works, facilities, and site or other improvements; HCDA Section 105(a)1, 2, 4, 9 and 14; applicable waivers identified in the Allocation Announcement Notice and Consolidated Notice (87 FR 31636); other applicable waivers or alternative requirements.

Activities may include acquisition, planning, engineering, and construction. Infrastructure improvements can also include improvements intended for flood protection, drainage improvement, and hazard mitigation. Types of eligible projects include:

- Improvement or rehabilitation of existing infrastructure such as community water and sewer systems
- New or enhanced stormwater management practices

Funds cannot be used to cover the costs for maintenance and operation, purchase of construction equipment, or buildings used for general use by government entities. Private utilities cannot be funded with CDBG-DR funds.

Geographic Eligibility:

HUD-identified MID areas:

- Graves County
- Hopkins County
- Breathitt County (41339)
- Warren County (42101)

Kentucky has decided to expand the HUD-identified MID areas in ZIP codes 41339 and 42101 to include the entire counties of Breathitt and Warren.

In addition to HUD's identified MIDs, Kentucky has identified the following counties as eligible for CDBG-DR funding.

Boyd County, Caldwell County, Christian County, Clark County, Clay County, Estill County, Floyd County, Fulton County, Greenup County, Hart County, Hickman County, Jackson County, Johnson County, Knott County, Laurel County, Lawrence County, Lee County, Leslie County, Letcher County, Lincoln County, Logan County, Lyon County, Madison County, Magoffin County, Marion County, Marshall County, Martin County, Morgan County, Muhlenburg County, Ohio County, Owsley County, Perry County, Powell County, Pulaski County, Rockcastle County, and Taylor County

Program Responsible Entity or Administering Entity:

City, county, and tribal governments will apply to DLG and assume the role of the responsible entity to implement public infrastructure projects. Eligible applicants may work with qualified organizations or partners to help implement the projects.

Applicants must work with a certified grant administrator to assist with application development, grant administration, and activity delivery.

Eligible Beneficiaries:

Beneficiaries of public infrastructure projects will be those residents located within the defined service area of the public facility. If the service area in which the infrastructure is located contains 51% or more LMI residents, then the service area can be considered to meet the LMI national objective. If the service area serves less than 51% LMI, it will be considered an Urgent Need project.

Program Maximum Assistance:

The maximum assistance available is \$3 million per project. Funding is allocated for each project based on the eligibility criteria below. Each project will be evaluated related to the costs and benefits of the infrastructure project. These benefits will not only include recovery but also consider the long-term benefits of protection against future risks.

Program Method of Distribution:

There will be an open application window with deadlines and a competitive review process. DLG will receive the applications and make funding decisions based on the competitiveness and completeness of the application, justification for funding, and feasibility of the project. DLG may coordinate with other State partners, such as the Kentucky Division of Water and KAMM, to provide technical assistance to communities in developing applications and assist in evaluating and scoring applications based on the criteria described in this plan.

Program Application Overview:

Application approval and associated funding allocations will be made through evaluation of threshold criteria related to the grant application and subject to funding availability. DLG will assess each application based on the response to the following criteria:

For applications to be eligible, applicants must show the project:

- Is an eligible activity under CDBG-DR
- Meets a CDBG-DR national objective
- Mitigates risk to critical public infrastructure
- Is located in the disaster impacted area

DLG will establish weighted scoring that will assess such factors as the following:

- Whether the project is located in one of the HUD- or grantee-identified MIDs
- How the project will address a disaster-related impact
- Whether the project can be implemented successfully as designed
- How effective the proposed project is in protecting the public, including members of protected classes, HUD-defined vulnerable populations, and historically underserved communities, from the risks in each of the respective impacted communities
- How the project will mitigate natural hazard risk to critical structures, facilities, and systems
- Whether the project considers future conditions
- Whether the project incorporates nature-based solutions such as grade-stabilization structures, wetland development, riparian buffers or filter strips, or Karst stormwater best management practices
- The outreach and engagement plan and efforts carried out by the applicant
- The cost-reasonableness of the project (applications must include an engineer's estimate or equivalent)
- Other funds leveraged
- The ability of the applicant to operate and maintain the project beyond the life of the CDBG-DR grant
- Other benefits of the project

Program Timeline:

This program will begin in the spring of 2023. The program will end when all funds have been expended and all eligible participants have completed closeout, or 6 years after execution of the grant agreement with HUD.

4.10.8 Planning

Program	Budget	HUD-Identified MID Budget	Grantee-Identified MID Budget
Resilience Planning	\$1,500,000	\$1,200,000	\$300,000

Program Description:

The Resilience Planning program will make awards to UGLGs and contracted partner organizations to support local resilience and watershed planning. The program will build on the existing efforts of State, local, and regional hazard mitigation, watershed, and resiliency planning. Resilience is defined as a community's ability to minimize damage and recover quickly from extreme events and changing conditions, including natural hazard risks.

Depending on funding availability, types of activities could include but are not limited to:

Updating or creating watershed plans by partnering with appropriate water basin coordinators.

DLG will provide funding for city, county, and tribal governments to work with the seven watershed planning areas to update or create watershed plans. Each of the seven watershed areas have a basin coordinator whose planning efforts are supported by the Kentucky Energy and Environment Cabinet. Together, the applicant and the basin coordinators will create a strategic watershed plan that will include projects to improve the water quality and reduce flood risk within the geographic watershed. Recommended actions could be constructing natural structures like wetland development, riparian buffers/filter strips, and stream back restoration. The planning processes should follow the Watershed Planning Guidebook for Kentucky Communities. There are HUD- and grantee-identified MID counties located in all seven basin districts. Most of the counties do not have a current watershed plan.

Developing local plans that focus on mitigation and resiliency.

Kentucky's planning allocation of CDBG-DR funds may also be used to create or update local comprehensive plans that emphasis resiliency and mitigation activities as they relate to housing development, public land use, and infrastructure. Plans can involve the development of updated local codes and standards to improve resilience, including using FEMA's Building Codes Toolkit or current IBC codes. Funding may

also be used to develop floodplain ordinances with higher regulatory standards or other planning efforts designed for mitigation and resiliency. Applicants can work with the Kentucky Association of Mitigation Managers (KAMM) to provide information and best practices. KAMM membership includes local, State, and federal officials; floodplain coordinators; planning and zoning officials; engineers; surveyors; GIS specialists; hydrologists; and public safety and emergency managers.

How the Program Promotes Equity in Recovery and Housing for Vulnerable Populations:

DLG will ensure to prioritize planning work focused on mitigation in LMI and socially vulnerable communities, including for members of protected classes, HUD-identified vulnerable populations, and historically underserved communities.

How the Program Will Advance Long-Term Resilience:

This program meets the definition of long-term resilience through the creation of comprehensive, local, and watershed plans that promote resilient land use, redevelopment, and long-term recovery as well as considering future risk conditions. The plans will enhance the value and integrity of the social, ecological, and economic resources in the region; improve public access and recreational opportunities; and reach underserved and socially vulnerable populations.

Program Tieback to Disaster and Unmet Needs:

This program addresses unmet recovery and mitigation needs for planning in HUD-identified and grantee-identified MIDs. How the project addresses disaster-related impacts, underserved communities, and localities with outdated or stale plans will also be part of the application review criteria.

Program National Objective(s):

Planning activities are presumed to meet a national objective under the requirements at 24 CFR 570.208(d)(4).

Program Eligible Activities:

Planning; HCDA Section 105(a)12 and 16; applicable waivers identified in the Allocation Announcement Notice and Consolidated Notice (87 FR 31636); other applicable waivers or alternative requirements.

Eligible Applicants:

Eligible applicants are UGLGs that include cities, counties, and tribal governments. Eligible applicants can work with nonprofit planning organizations.

Applicants must work with a certified grant administrator to assist with project development, application, and activity delivery. Applicants who lack the capacity to produce planning documents internally should also contract with another qualified entity to lead the planning activity.

Geographic Eligibility:

HUD-identified MID areas:

- Graves County
- Hopkins County
- Breathitt County (41339)
- Warren County (42101)

Kentucky has decided to expand the HUD-identified MID areas in ZIP codes 41339 and 42101 to include the entire counties of Breathitt and Warren.

In addition to HUD's identified MIDs, Kentucky has identified the following counties as eligible for CDBG-DR funding.

Boyd County, Caldwell County, Christian County, Clark County, Clay County, Estill County, Floyd County, Fulton County, Greenup County, Hart County, Hickman County, Jackson County, Johnson County, Knott County, Laurel County, Lawrence County, Lee County, Leslie County, Letcher County, Lincoln County, Logan County, Lyon County, Madison County, Magoffin County, Marion County, Marshall County, Martin County, Morgan County, Muhlenburg County, Ohio County, Owsley County, Perry County, Powell County, Pulaski County, Rockcastle County, and Taylor County

Program Maximum Assistance:

The assistance that eligible applicants may receive per plan is between \$25,000 and \$100,000. The amount will depend on the scope and type of plan.

Program Method of Distribution:

There will be an open application window with deadlines and a competitive review process. DLG will receive the applications and make funding decisions based on the competitiveness and completeness of the application and justification for funding. DLG may coordinate with other State partners, such as Kentucky Division of Water and KAMM, to provide technical assistance to communities in developing applications and assist with evaluating and scoring applications based on the criteria described in this plan.

Program Application Overview:

Application approval and associated funding allocations will be made through evaluation of threshold criteria related to the grant application and subject to funding availability. DLG will assess each application based on the response to the following criteria.

For applications to be eligible, the project must:

- Be an eligible activity under CDBG-DR
- Have a proposed plan that will mitigate risk
- Be located in the disaster-impacted area
- DLG will establish weighted scoring that will assess such factors as the following:
- Proposed project is located in one of the HUD- or grantee-identified MID areas (priority will be given to areas in the HUD-identified MID areas)
- Proposed plan is in alignment with meeting the CDBG-DR goal of helping mitigate future disaster risks
- Degree to which the proposed plan will consider and mitigate risks to members of protected classes, HUD-defined vulnerable populations, and historically underserved communities
- Proposed plan will include a path for adopting and implementing the plan

Program Timeline:

This program will begin in the spring of 2023. The program will end when all funds have been expended and all eligible participants have completed closeout, or 6 years after execution of the grant agreement with HUD.

4.10.9 Administrative

Program	Budget	HUD-Identified MID Budget	Grantee-Identified MID Budget
Administrative	\$3,747,650	\$2,998,120	\$749,530

Program Description:

Administration costs are necessary to support expenses related to administrative activities and include contract development, overall grant management, compliance and monitoring, and other costs specified as eligible administrative expenses in 24 CFR 570.206. Up to 5% of the overall grant and any program income may be used for administration of the grant, inclusive of administrative costs incurred by DLG.

Program Eligible Activities:

Program administrative costs, defined at 24 CFR 570.205 and 570.206, and any applicable waivers or alternative requirements are eligible.

5 Appendix

5 Appendix

5.1 Certifications

- a. The grantee certifies that it has in effect and is following a residential antidisplacement and relocation assistance plan (RARAP) in connection with any activity assisted with CDBG–DR grant funds that fulfills the requirements of Section 104(d), 24 CFR part 42, and 24 CFR part 570, as amended by waivers and alternative requirements.
- b. The grantee certifies its compliance with restrictions on lobbying required by 24 CFR part 87, together with disclosure forms, if required by part 87.
- c. The grantee certifies that the action plan for disaster recovery is authorized under state and local law (as applicable) and that the grantee, and any entity or entities designated by the grantee, and any contractor, subrecipient, or designated public agency carrying out an activity with CDBG–DR funds, possess(es) the legal authority to carry out the program for which it is seeking funding, in accordance with applicable HUD regulations as modified by waivers and alternative requirements.
- d. The grantee certifies that activities to be undertaken with CDBG–DR funds are consistent with its action plan.
- e. The grantee certifies that it will comply with the acquisition and relocation requirements of the URA, as amended, and implementing regulations at 49 CFR part 24, as such requirements may be modified by waivers or alternative requirements.
- f. The grantee certifies that it will comply with section 3 of the Housing and Urban Development Act of 1968 (12 U.S.C. 1701u) and implementing regulations at 24 CFR part 75.
- g. The grantee certifies that it is following a detailed citizen participation plan that satisfies the requirements of 24 CFR 91.115 or 91.105 (except as provided for in waivers and alternative requirements). Also, each local government receiving assistance from a state grantee must follow a detailed citizen participation plan that satisfies the requirements of 24 CFR 570.486 (except as provided for in waivers and alternative requirements).
- h. State grantee certifies that it has consulted with all disaster-affected local governments (including any CDBGentitlement grantees), Indian tribes, and any local public housing authorities in determining the use of funds, including the method of distribution of funding, or activities carried out directly by the state.
- i. The grantee certifies that it is complying with each of the following criteria:
 - (1) Funds will be used solely for necessary expenses related to disaster relief, long-term recovery, restoration of infrastructure and housing, economic revitalization,

- and mitigation in the most impacted and distressed areas for which the President declared a major disaster pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1974 (42 U.S.C. 5121 et seq.).
- (2) With respect to activities expected to be assisted with CDBG–DR funds, the action plan has been developed so as to give the maximum feasible priority to activities that will benefit low- and moderate-income families.
 - (3) The aggregate use of CDBG–DR funds shall principally benefit low- and moderate-income families in a manner that ensures that at least 70 percent (or another percentage permitted by HUD in a waiver) of the grant amount is expended for activities that benefit such persons.
 - (4) The grantee will not attempt to recover any capital costs of public improvements assisted with CDBG–DR grant funds, by assessing any amount against properties owned and occupied by persons of low- and moderate-income, including any fee charged or assessment made as a condition of obtaining access to such public improvements, unless:
 - (a) Disaster recovery grant funds are used to pay the proportion of such fee or assessment that relates to the capital costs of such public improvements that are financed from revenue sources other than under this title; or
 - (b) for purposes of assessing any amount against properties owned and occupied by persons of moderate income, the grantee certifies to the Secretary that it lacks sufficient CDBG funds (in any form) to comply with the requirements of clause (a).
- j. State and local government grantees certify that the grant will be conducted and administered in conformity with title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), the Fair Housing Act (42 U.S.C. 3601–3619), and implementing regulations, and that it will affirmatively further fair housing. An Indian tribe grantee certifies that the grant will be conducted and administered in conformity with the Indian Civil Rights Act.
- k. The grantee certifies that it has adopted and is enforcing the following policies, and, in addition, state grantees must certify that they will require local governments that receive their grant funds to certify that they have adopted and are enforcing:
 - (1) A policy prohibiting the use of excessive force by law enforcement agencies within its jurisdiction against any individuals engaged in nonviolent civil rights demonstrations; and (2) A policy of enforcing applicable state and local laws against physically barring entrance to or exit from a facility or location that is the subject of such nonviolent civil rights demonstrations within its jurisdiction.
- l. The grantee certifies that it (and any subrecipient or administering entity) currently has or will develop and maintain the capacity to carry out disaster recovery activities in a timely manner and that the grantee has reviewed the requirements applicable to the use of grant funds.

- m. The grantee certifies to the accuracy of its Financial Management and Grant Compliance Certification Requirements, or other recent certification submission, if approved by HUD, and related supporting documentation as provided in section III.A.1. of the Consolidated Notice and the grantee's implementation plan and related submissions to HUD as provided in section III.A.2. of the Consolidated Notice.
- n. The grantee certifies that it will not use CDBG–DR funds for any activity in an area identified as flood prone for land use or hazard mitigation planning purposes by the state, local, or tribal government or delineated as a Special Flood Hazard Area (or 100-year floodplain) in FEMA's most current flood advisory maps, unless it also ensures that the action is designed or modified to minimize harm to or within the floodplain, in accordance with Executive Order 11988 and 24 CFR part 55. The relevant data source for this provision is the state, local, and tribal government land use regulations and hazard mitigation plans and the latest-issued FEMA data or guidance, which includes advisory data (such as Advisory Base Flood Elevations) or preliminary and final Flood Insurance Rate Maps.
- o. The grantee certifies that its activities concerning lead-based paint will comply with the requirements of 24 CFR part 35, subparts A, B, J, K, and R.
- p. The grantee certifies that it will comply with environmental requirements at 24 CFR part 58.
- q. The grantee certifies that it will comply with the provisions of title I of the HCDA and with other applicable laws.

5.2 Waivers (if applicable)

New housing construction waiver and alternative requirement. 42 U.S.C. 5305(a) and 24 CFR 570.207(b)(3) are waived to the extent necessary to permit new housing construction, subject to the following alternative requirement. When a CDBG-DR grantee carries out a new housing construction activity, 24 CFR 570.202 shall apply and shall be read to extend to new construction in addition to rehabilitation assistance. Private individuals and entities must remain compliant with federal accessibility requirements as well as with the applicable site selection requirements of 24 CFR 1.4(b)(3) and 8.4(b)(5).

Homeownership assistance waiver and alternative requirement. 42 U.S.C. 5305(a)(24) is waived and replaced with the following alternative requirement: "Provision of direct assistance to facilitate and expand homeownership among persons at or below 120 percent of area median income (except that such assistance shall not be considered a public service for purposes of 42 U.S.C. 5305(a)(8)) by using such assistance to—(A) subsidize interest rates and mortgage principal amounts for homebuyers with incomes at or below 120 percent of area median income; (B) finance the acquisition of housing by homebuyers with incomes at or below 120 percent of area median income that is occupied by the homebuyers; (C) acquire guarantees for mortgage financing obtained by

homebuyers with incomes at or below 120 percent of area median income from private lenders, meaning that if a private lender selected by the homebuyer offers a guarantee of the mortgage financing, the grantee may purchase the guarantee to ensure repayment in case of default by the homebuyer. This subparagraph allows the purchase of mortgage insurance by the household but not the direct issuance of mortgage insurance by the grantee; (D) provide up to 100 percent of any down payment required from homebuyers with incomes at or below 120 percent of area median income; or (E) pay reasonable closing costs (normally associated with the purchase of a home) incurred by homebuyers with incomes at or below 120 percent of area median income.” While homeownership assistance, as described above, may be provided to households with incomes at or below 120% of the area median income, HUD will only consider those funds used for households with incomes at or below 80% of the area median income to qualify as meeting the LMI person benefit national objective.

HUD is waiving the requirements at 24 CFR 570.483(b)(5) and (c)(3), which limit the circumstances under which the planning activity can meet an LMI or slum-and-bligh national objective. Instead, as an alternative requirement, 24 CFR 570.208(d)(4) applies to states when funding disaster recovery-assisted, planning-only grants, or when directly administering planning activities that guide disaster recovery. In addition, 42 U.S.C. 5305(a)(12) is waived to the extent necessary so the types of planning activities that states may fund or undertake are expanded to be consistent with those of CDBG entitlement grantees identified at 24 CFR 570.205.

Prioritizing economic revitalization assistance and alternative requirement. When funding activities outlined in 24 CFR 570.203 and 570.204 and sections 105(a)(14), (15), and (17) of the HCDA, HUD is instituting an alternative requirement in addition to the other requirements in these provisions to require grantees to prioritize assistance to disaster-impacted businesses that serve underserved communities and spur economic opportunity for underserved communities that were economically distressed before the disaster.

National objective documentation for activities that support economic revitalization. 24 CFR 570.208(a)(4)(i)&(ii), 24 CFR 570.483(b)(4)(i)&(ii), 24 CFR 570.506(b)(5)&(6), and 24 CFR 1003.208(d) are waived to allow the grantees under the Consolidated Notice to identify the LMI jobs benefit by documenting, for each person employed, the name of the business, type of job, and the annual wages or salary of the job. HUD will consider the person income-qualified if the annual wages or salary of the job is at or under the HUD-established income limit for a one-person family. This method replaces the standard CDBG requirement in which grantees must review the annual wages or salary of a job in comparison to the person’s total household income and size (i.e., the number of persons). Thus, this method streamlines the documentation process by allowing the collection of wage data for each position created or retained from the assisted businesses, rather than from each individual household.

Waiver and modification of the job relocation clause to permit assistance to help a business return. CDBG requirements prevent program participants from providing assistance to a business to relocate from one labor market area to another if the relocation is likely to result in a significant loss of jobs in the labor market from which the business moved. This prohibition can be a critical barrier to reestablishing and rebuilding a displaced employment base after a major disaster. Therefore, 42 U.S.C. 5305(h), 24 CFR 570.210, 24 CFR 570.482(h), and 24 CFR 1003.209 are waived to allow a grantee to provide assistance to any business that was operating in the disaster-declared labor market area before the incident date of the applicable disaster and has since moved, in whole or in part, from the affected area to another state or to another labor market area within the same state to continue business.

Waiver of Section 414 of the Stafford Act. Section 414 of the Stafford Act (42 U.S.C. 5181) provides that, “Notwithstanding any other provision of law, no person otherwise eligible for any kind of replacement housing payment under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Pub. L. 91–646) [42 U.S.C. 4601 et seq.] [“URA”] shall be denied such eligibility as a result of his being unable, because of a major disaster as determined by the President, to meet the occupancy requirements set by [the URA].” Accordingly, homeowner occupants and tenants displaced from their homes as a result of the identified disasters and who would have otherwise been displaced as a direct result of any acquisition, rehabilitation, or demolition of real property for a federally funded program or project may become eligible for a replacement housing payment notwithstanding their inability to meet occupancy requirements prescribed in the URA. Section 414 of the Stafford Act and its implementing regulation at 49 CFR 24.403(d)(1) are waived to the extent that they would apply to real property acquisition, rehabilitation, or demolition of real property for a CDBG-DR-funded project commencing more than 1 year after the date of the latest applicable presidentially declared disaster undertaken by the grantees, or subrecipients, provided that the project was not planned, approved, or otherwise underway before the disaster. For purposes of this waiver, a CDBG-DR funded project shall be determined to have commenced on the earliest of: (1) the date of an approved Request for Release of Funds and certification; (2) the date of completion of the site-specific review when a program utilizes tiering; or (3) the date of sign-off by the approving official when a project converts to exempt under 24 CFR 58.34(a)(12). The waiver will simplify the administration of the disaster recovery process and reduce the administrative burden associated with the implementation of Stafford Act Section 414 requirements for projects commencing more than 1 year after the date of the presidentially declared disaster, considering most of such persons displaced by the disaster will have returned to their dwellings or found another place of permanent residence. This waiver does not apply with respect to persons who meet the occupancy requirements to receive a replacement housing payment under the URA nor does it apply to persons displaced or relocated

temporarily by other HUD-funded programs or projects. Such persons' eligibility for relocation assistance and payments under the URA is not impacted by this waiver.

5.3 Summary and Response of Public Comments

5.4 Data Sources/Methodologies

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Federal Emergency Management Agency (FEMA)

U.S. Small Business Administration (SBA)

U.S. Department of Agriculture (USDA)

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5.5 Important Definitions and Terms

AMI: Area Median Income

CBDO: Community-Based Development Organization

CDBG: Community Development Block Grant

CDBG-DR: Community Development Block Grant – Disaster Recovery

CFR: Code of Federal Regulations

CO: Certifying Officer

CP: Participation

DOB: Duplication of Benefits

DRGR: Disaster Recovery and Grant Reporting System

FEMA: Federal Emergency Management Agency

HCDA Act: Housing and Community Development Act of 1974, as amended

HMGP: Hazard Mitigation Grant Program

IA: (FEMA) Individual Assistance

LIHTC: Low-Income Housing Tax Credit
LMI: Low- to moderate-income
NFIP: National Flood Insurance Program
PA: (FEMA) Public Assistance
RE: Responsible Entity
RFP: Request for Proposals
SBA: U.S. Small Business Administration
SFHA: Special Flood Hazard Area
UGLG: Unit of general local government
URA: Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended
USACE: U.S. Army Corps of Engineers

5.6 Standard Form 424