

Chapter 2: Community Profile

Planning for Natural Hazards in Brown County

Natural hazards impact citizens, property, the environment and the economy of Brown County. Brown County is susceptible to flooding, high winds, tornadoes, severe winter storms, droughts and periods of intense heat, and earthquakes. Brown County residents and businesses have been exposed to the economic, as well as the health and emotional costs, associated with natural disasters.

Brown County continues to experience growth in development, housing and population. The population of Brown County currently exceeds 42,000 people based on 2000 U.S. Census figures, a population increase of nearly 21% over 1990 figures.⁸ The inevitability of natural hazards, and the growing population and activity within the county create an urgent need to develop strategies, coordinate resources and increase public awareness to reduce risk and prevent loss from future natural hazard events. Developing strategies to reduce the impact of a hazard event can assist in protecting life and property of citizens and businesses.

Historical Hazard Events

Flood of 1883

The communities in Brown County located along the Ohio River have experienced flooding events many times based on historical information. On Monday, February 5, 1883 the Ohio River began rising rapidly and by Thursday afternoon the water crossed Second Street at Cherry in Ripley. Nearly all the people in that portion of the town began moving their household goods into the upper stories and to other places of safety. Eventually those who had moved “upstairs” were forced to vacate their homes entirely.³

Flood of 1884

Residents of Brown County river towns had barely recovered from the 1883 flood before another deluge occurred in 1884. The 1884 caused widespread destruction to property and lives. The Bee & Times for February 20, 1884, stated that business industry of the valley and the adjacent countryside was virtually paralyzed. “No estimate can ever be made of the actual loss sustained by the unfortunates. While the destruction was heavy at many towns along the river, yet it is safe to say that the loss at Ripley will exceed that of any place in the valley in proportion to the population. Over one hundred houses were swept from their foundations, and wrecked, and as the majority of these belonged to the working class citizens, the loss will fall especially heavy on them. Every business house in the town but one was submerged, and every merchant had his stock damaged. Over two-thirds of the town was under water, and by actual count 587 families were in the flooded district.”

“In this town, the water extended out Main Street to the old “Ripley Hotel”, skiffs landing at the front porch. In some buildings, the water’s crest was within inches of the second floors. Aberdeen also suffered a great loss. Out of 900 inhabitants in the town, only 175 were out of water’s reach. About 40 houses were wrecked or floated away. Farm houses and barns all along the river banks were submerged, and all that was left to show that there were any, were the chimney tops or roofs above the water. The river crested at Ripley on February 14, 1884, the stage being 71 feet and 8 inches. The flood of 1884 has left its trace in our town, which will not be eradicated for years to come, and will never be forgotten by our citizens.”³

Drought of 1900

The drought of 1900 had a devastating affect on the Brown County area. Crops were destroyed and animals moved to provide much needed water. The Ohio River was at its lowest level for more than twenty years prior which affected ferry traffic and commerce along the Ohio River.³

Flood of 1907

The Ohio River flood of 1907 marked the most disastrous flood Brown County had seen to date. There was not as much water as 1884, but more than 1883, and the damage wrought was greater than during either of these floods. The damage in Ripley to the property from the waves caused by high winds was beyond the conception of the average person living inland. Several houses were carried from their foundations, estimated between 15 and 20. The conditions at Aberdeen were equal.

The people of Higginsport report a higher stage of water than during the 1883 flood, and by far, greater damage done. Several houses were damaged or destroyed, resulting in thousands of dollars of damage.

Mail delivery and other commerce, such as rail and ferry, were also disrupted by the floods.³

The Ohio River Didn’t Do This

On April 1, 1908 a severe hail storm was followed by torrential rainfall. An avalanche of water descended from the high hills in the rear of the town and came sweeping down through Aberdeen with a roar. The creeks above and below Aberdeen overflowed their banks carrying to the Ohio River the wrecks of barns and stables, and the carcasses of cattle, hogs and chickens. Farmers received heavy crop losses.³

Deluge of 1913

Historical flooding events were no stranger to Brown County. The flood of 1913 was noted for its swiftness and ferocity. All of the tributaries of the Ohio soon began to disgorge huge volumes of water, and the Ohio River rose fifteen to twenty feet in one day until it finally sprang over its

banks and rapidly invaded the valley and towns. The rapid rise of the water caused merchants to frantically move stock, ultimately abandoning the effort. Water ultimately reached levels beyond the second floor of most buildings. The rise continued until April 1st when the water reached a height of seventy feet, seven or more inches higher than the catastrophic flood of 1884. Supplies of water, gas, electricity and food were exhausted due to the flooding, which contributed to great anxiety within the community. By April 6th the waters had returned to their banks and cleanup had begun. A Relief Committee was established, but losses were heavy to the gas and electric light plants. Other businesses such as the Ripley Bee newspaper, Ripley Mill and Lumber Company, Ripley National Bank and Citizens National Bank also experienced heavy losses. Again, the community re-built from the devastating flood.³

The 1937 Flood Disaster

Rising to almost unbelievable heights, the Ohio River spread over towns and cities along the Ohio Valley the week of January 14, 1937, ultimately becoming the most disastrous flood in Brown County history. By January 25th, the water had peaked at over eighty feet. Ripley, Aberdeen, Levanna, Higginsport and many other towns along the Ohio River experienced the worst flooding since their establishment.

Heavy rains which had fallen the week prior turned into snow by January 22nd, reaching a depth of one foot. However, warmer temperatures led to more rain and snowmelt causing the river to rise thirteen inches overnight. The river swelled to levels surpassing the previous records of 1884 and 1913. On Sunday, January 24th the river reached the 80 foot stage at Ripley, with New Richmond reporting 83 feet and Cincinnati 79.9 feet. The date and day took on the infamous name of “Black Sunday”.

In Ripley, several buildings were washed from their foundations. The power supply was cut off and the water supply exhausted. Numerous public and private buildings were destroyed, including their contents. Thousands of dollars worth of tobacco stored in warehouses was at risk not just from floodwaters, but also became a fire hazard from gasoline covered waters from tanks that had exploded in Portsmouth.

Only a few houses at Aberdeen were beyond the flood. Citizens were housed in the lodge and school building. The same condition existed at Levanna. Almost the entire town was washed out by the flood waters. At Higginsport, only one well was available to supply the town. All routes into the village were inundated with water. Three-fourths of the town was under water and residents were care for at a school, one of the few places out of the flood zone. At the time, damage to the towns along the river in Brown County and to the state and county highway system was estimated at more than one million dollars. American Red Cross records indicate there were more than 270 refugees from Higginsport, 675 in Ripley and 125 in Aberdeen.³

Blizzard of 1978

The blizzard of 1978 was felt throughout most of the State of Ohio. The blizzard began as rain and changed over to snow, resulting in more than 7 inches of snow. Wind gusts up to 69 MPH

contributed to significant blowing and drifting of snow across much of the region. January 1978 holds the monthly snowfall record for the Cincinnati region at 31.5 inches. During that winter, five or more inches were on the ground for 43 days from January 13 through February 24th. Record cold temperatures were also recorded during the same period.¹¹

Brown County residents recall most of the public schools were closed during most of the month of January, 1978.

The 1997 Flood

The March 1997 flood in Brown County centered over the Eagle Creek watershed within Byrd, Huntington and Union townships. Within 48 hours, 11 inches of rain flooded the watershed and along Ohio Brush Creek, the 100-year floodplain was exceeded by 19 feet in 12 hours. Two Brown County residents lost their lives and the flood caused nearly \$4 million in damage to roads and bridges, not including private property.

The 1997 flood will be discussed in greater detail in the flood chapter of the plan.

Brown County History

Brown County was established by an act of the Ohio General Assembly passed December 27, 1817 and is named in honor of General Jacob Brown, who had distinguished himself in the War of 1812. He was an early surveyor in the public lands of Ohio, entered the army in 1812 and had distinguished himself at the battles of Chippewa and Niagara Falls and the siege of Fort Erie.

The contest for the seat of justice in Brown County was a heated one that continued for several years. The contest was between advocates of Ripley, the largest and most prosperous town in the county, and advocates of a central location. In 1818, a commission appointed by the Ohio General Assembly recommended a location along Straight Creek, also known as Bridgewater. Ripley advocates fought the recommendation ultimately leading to a contract to build a courthouse in Ripley in 1820. The contract was eventually terminated. The Ohio General Assembly once again became involved in the dispute leading to the final recommendation that Georgetown be established as the county seat in 1821. The current courthouse was received by the county commissioners in 1851.⁴

The county's appeal to strong-minded idealists began with its most famous resident: General U.S. Grant whose Georgetown home and school have been restored for visitors. Brown County also featured prominently in the anti-slavery movement of the early 1800's. The Reverend John Rankin maintained the first stop for slaves enroute north via the Underground Railroad. His Ripley home is maintained by the Ohio Historical Society and is open to visitors.¹

Physical Features

Brown County contains 493 square miles and is bounded on the north by Clinton County, on the east by Highland and Adams counties, on the west by Clermont County and on the south by the Ohio River. Although it is not the largest county in the State of Ohio, a line drawn from the northwest to southeast corners of the county would total about forty-five miles. The county has a different shape from that of any other county in Ohio, ultimately forming a “boot leg” of about eight miles in width to about fifteen in length. The county has a diverse topography and variety of soil types. Steep and high hills are located within the county, as well as large tracts of flat land. Wetlands, black swamps, white swamps and limestone hills can all be found in Brown County.

It contains some of the richest and poorest soils in the State. The soils of the county are of two classes—native and foreign. The native soil consists of clays and sands, formed by the disintegration of native limestone rocks. It is chiefly found on the slopes of the hills along the Ohio and its tributary streams and constitutes a considerable portion of the southern half of the county. This soil is of great strength and fertility, and is well adapted to the growth of tobacco. The foreign soil consists of drift or materials of foreign origin and is made up of yellow, white and black clays, and alluvium. The clay, sands and rock located within the county are attributed to glacial movements many centuries ago.⁴

Major Water Systems

The Ohio River

The southern boundary of Brown County is the Ohio River. Great Britain gained control of the river by the Treaty of 1763, but ceded control of the region to the United States at the end of the Revolutionary War. It ultimately became a part of the Northwest Territory and upon opening of the Erie Canal in 1825, the Ohio River became the main route to the newly opened West and the principal means of market transportation of the region’s growing farm output. However, the river became shallow in the summer and choked by ice in the winter. Seasonal influences did not impact the reliability of railroads, thus traffic declined on the river as a result of the railroads built in the mid-1800’s. Still a cost effective means of moving cargo, oil, coal and steel account for most of the cargoes moved on the river to the principal river ports of Cincinnati, Louisville and Pittsburgh. Cheap transportation of their raw materials, coupled with a plentiful water supply, contributed to manufacturing and industry along the river.¹⁰

The Ohio River is prone to spring flooding, and extensive flood control and protection devices have been constructed along the river and its tributaries. A system of locks and dams, constructed since 1955 to replace older structures, speeds the transit of barges and leisure craft. The improvements to the lock and dam system have contributed to better flood control along the river. Locks are located about every 60 miles on the Ohio River and the area between each lock

is referred to as a “pool”. The Village of Higginsport lies within the boundaries of the Maysville Pool. The normal level of the Maysville pool is 34 feet. Flood stage is at 50 feet. Higginsport benefited from the improved lock and dam system until 1997 when flood waters reached nearly 65 feet. The 1997 floods proved that despite flood control measures, Mother Nature can still take its toll on the area.⁹

White Oak, Straight and Eagle Creeks

The streams rising in the highest lands have a rapid fall in reaching the Ohio River, and have cut themselves deep channels. Hills as high and steep as those along the Ohio extend some distance up the principal streams which drain the county. The deep channels of these streams are impediments in the construction of roads and railways. On account of this rapid descent, the roar of the waters of White Oak Creek is significant. The White Oak Creek Watershed contains 150,621 acres in Brown and Highland Counties. The entire watershed drainage area is 234.3 square miles and empties into the Ohio River.

All three creeks offer recreational areas at points close to the Ohio River for swimming, camping, boating and other creational activities.

Local Water, Sewer & Other Utilities

Water Systems

Brown County water is supplied by many different entities, depending on the locale within the county. Brown County Rural Water, Ripley Rural Water, Western Water, Mt. Orab Water, Georgetown Water, Ripley Water and Highland Water all serve residents within Brown County.

Sewer systems

Most of the villages within Brown County operate their own sewer systems. Other residents are serviced by septic systems or Brown County sewer.

Other Utilities

Companies that provide electric and gas service within Brown County include American Electric Power (AEP), Cincinnati Gas & Electric, Columbus & Southern Power, Adams Rural Electric Company, South Central Power, Blue Flame Gas, Cinergy, Columbia Gas of Ohio and Pike Natural Gas. Telephone service is provided by General Telephone Exchange (GTE), SBC and Little Miami Telephone Company.

Several gas pipelines also run through Brown County.

Demographics and Population

Based on U.S. Census figures⁸, Brown County has experienced steady population growth and can expect continued development and population growth. After the 1990 U.S. Census, Brown County's population totaled 34,966. Based on 2000 U.S. Census figures, the county's population surpassed 42,285, a 20.9 percent increase.

Table 1 – Population Trends

AREA	1990 POPULATION	2000 POPULATION	% CHANGE
Perry Township	3,271	4,367	25%
Village of Georgetown	3,627	3,691	2%
Sterling Township	2,377	3,604	34%
Pike Township	2,322	2,995	22%
Clark Township	2,245	2,650	15%
Village of Mt. Orab	1,929	2,307	16%
Lewis Township	1,378	2,071	33%
Green Township	1,510	1,978	24%
Village of Ripley	1,816	1,745	-4%
Village of Aberdeen	1,329	1,603	17%
Franklin Township	1,061	1,594	33%
Pleasant Township	1,192	1,498	20%
Eagle Township	1,080	1,438	25%
Washington Township	2,112	1,409	-33%
Huntington Township	1,375	1,365	-1%
Union Township	1,252	1,270	1%
Scott Township	1,001	1,253	20%
Jackson Township	806	1,221	34%
Jefferson Township	1,168	902	-23%
Village of Sardinia	*	862	NA
Village of Hamersville	586	515	-12%
Byrd Township	697	740	6%
Village of Russellville	**	453	NA
Village of Fayetteville	***	372	NA
Village of Higginsport	298	291	-2%
Village of St. Martin	***	91	NA

* Included in Washington Township data
 ** Included in Jefferson Township data
 *** Included in Perry Township data

Other notable information related to population in Brown County is the fact that the age group from 25-44 years is the largest, with the median age being 35. Nearly 42% of the population is

married couples in which both husband and wife work. 61% of the population falls within the ages of 18 to 64, when most people are seeking, or have obtained, full time employment.

Land and Development

The land cover of Brown County totals more than 315,673 acres. Urban acreage totals less than 3,000 acres, however agricultural areas account for more than 223,322 acres. Wooded, shrub, non-forested wetlands and barren land account for more than 87,298 acres in Brown County, with open water occupying 2,054.⁵ Although farming will most likely continue to be a mainstay in Brown County, population trends indicate that housing and new development will also occur.

Incorporated areas of Brown County are subject to local zoning ordinances and enforcement. Unincorporated areas of Brown County are subject to zoning regulations adopted by the Brown County Board of Commissioners and are enforced by the Brown County Zoning Department. Based on data included in Table 1, the largest increase in development and population is occurring in the unincorporated areas of Brown County.

Housing and Community Development

The taxable value of residential real estate in Brown County totals \$309,104,380. All other parcels including farms, commercial and industrial land uses is \$131,058,220, for a total assessed value of \$440,162,600. There are more than 17,193 housing units in Brown County, with more than 71% of them owner occupied. Of the owner occupied homes 62.8% are valued between \$60,000 and \$125,000, for a median value of \$89,900. The median household income in Brown County totals \$38,303.⁵

The Economic Development Director for Brown County coordinates community economic development issues. This office focuses on strengthening business/industry growth in Brown County. The Commissioner's Office coordinates Community Development Block Grants (CDBG) for the county.

Preservation of Brown County's heritage is a county priority. Brown County's many historic sites reflect a rich heritage and a variety of architecture. More than 472 acres of historically important land in Georgetown, Ripley and St. Martin has been listed on the National Register of Historic Places.

New Development

Most new development occurring in Brown County is along S.R. 32, the Appalachian Highway. Brown County recently implemented Subdivision Standards to provide guidelines for new construction and development.

Employment, Industry & Education

The 2000 annual average civilian labor force estimates for Brown County indicated a total labor force of 20,500, with 19,200 employed and a 5.9 percent unemployment rate.

In 2000 most Brown County residents were employed in the retail trade, manufacturing and construction industries. Major private sector employers include Brown County General Hospital, Milacron Inc., Stanley Works and Ohio Valley Manor. Major government employers include Brown Local Board of Education, Eastern Local Board of Education, Fayetteville-Perry Local Board of Education, Ripley-Union Board of Education and the Western Brown Local Board of Education.

Farming has been the mainstay of Brown County's population, sustained by fertile soil, abundant wildlife and pure water. Soybeans, wheat, corn and especially tobacco remain the principle crops. Current Agricultural Use Value (CAUV) in 2000 was 209,000 acres in Brown County, with over 1,620 farms. In 2000, crop cash receipts totaled \$38,502,000.

In 2000, there were over 17 public schools in Brown County with enrollment totaling 8,579. Non-public schools are defined as two year private colleges or universities and had a total enrollment of 59. These include Chatfield College and Southern State Community College.⁵

Transportation and Commuting Patterns

Brown County is surrounded by Adams, Clermont, Clinton, Highland and Warren Counties. State Route 32, the Appalachian Highway, has enhanced Brown County's accessibility to I-275, I-75 and I-71. The county is also served by U.S. Routes 50, 52, 62 and 68. These thoroughfares provide easy access to Northern Kentucky, the Greater Cincinnati area, Clermont and Clinton Counties. Brown County is home to the Brown County Municipal Airport and is within 60 miles of the Greater Cincinnati International Airport. The county is also served by the Norfolk & Southern Railroad and CSX Transportation.¹

Brown County's proximity to the Greater Cincinnati area is contributing to its growth as a bedroom community for commuters seeking a quieter, more rural lifestyle. Workers indicating travel time to work of more than 45 minutes totaled more than 33% of the working population of Brown County.

Emergency Response Functions

The Brown County Emergency Management Agency serves as the lead disaster coordinator in Brown County and focuses on administration, planning, public information, public education,

exercises and training. EMA, in coordination with various volunteer (American Red Cross), emergency response and private sector organizations, has pre-identified many of the resources available to the county during a disaster situation.²

Community Events & Historical Markers

Aberdeen

A floating marina and campground are a community attraction. The William Harsha Bridge carries travelers across the Ohio River to Maysville, Kentucky. An ancient indian mound and weekend flea markets are located in the village.

Fayetteville

Located along S.R. 50 and U.S. 68, the Fayetteville-Perry Township Park is community recreational point with ball diamonds, a shelter house, picnic and concession facilities. Fayetteville is also home to Lake Lorelei.

Georgetown

The Brown County seat is a beautifully restored 19th century town with a historic courthouse square. The Brown County Courthouse and 17 acres surrounding it, including the U.S. Grant Home and the Bailey-Thompson-Neu House, are listed on the National Register of Historic Places. Two golf courses, the Brown County Hospital, the Brown County Fairgrounds and other county offices are also located in historic Georgetown.

Hamersville

Located seven miles west of Georgetown, this quiet farming community hosts the Heritage Days festival the last weekend in June.

Higginsport

The Bondes Ferry operates at Higginsport, crossing the river to Kentucky. The Colonel Higgins Park and the White Oak Creek Boat Launch and Marina recreational areas are also located here.

Mt. Orab

Mt. Orab serves as Brown County's economic center and is perfectly situated for industrial growth. Mt. Orab has an abundance of industrial sites with water, sewer, railroad siding and highway accessibility. Local attractions include Mt. Orab Station and the Grant Lake State Wildlife Area.

New Hope

New Hope is the site of two covered bridges: the Bethel-New Hope Covered Bridge and Brown's Covered Bridge. The McIntosh Vineyards and Winery is also located here.

Ripley

This historic town was once a center for abolitionist activity. Sites listed on the National Register of Historic Places include the Ripley Art Works, the Ripley Museum, Rankin House State Memorial and Ripley's Olde Piano Factory Shoppes. Ripley also serves as a center for recreation activity including the Eagle Creek Boat Launch and Marina, Ripley Public Boat Launch and the Stivers Memorial Park.

Russellville

Russellville is a quiet community founded in 1817. Russellville Park and Reed's Park are meeting places for horse, antique and car shows, as well as political rallies.

St. Martin

This town is also rich in history. Ursuline Center, built in 1845, contains ornate buildings surrounded by mature trees, a picturesque lake, tennis courts, indoor pool, recreation room and gardens. Chatfield College, a three-year community college, is also located in St. Martin. Other attractions include the Daniel Murphy Log House, Indian Creek State Wildlife Area and the Thumann Log House.

Sardinia

Sardinia is home to Brown County's only train turnaround serving the Norfolk & Southern Railroad. Sardinia's first tavern, Temperance Tavern, was owned and operated by the Reverend John Mahan, an ardent abolitionist who sheltered escaped slaves on their way to freedom. The Rev. Mahan built the brick building in 1837. The building was the second station on the Underground Railroad and contained a secret room where slaves were kept.

Sardinia is also home to Lake Waynoka. This recreational lake is surrounded by homes used by full-time and weekend residents.

Major Events

The Brown County Fair occurs each year in the fourth week after Labor Day at the Brown County Fairgrounds in Georgetown. The Ohio Tobacco Festival occurs the fourth weekend in August in Ripley in conjunction with the Blue Grass Festival in Georgetown. The Sorghum and Sawmill Festival occurs the third weekend in October. Other celebrations throughout the year include the Ohio Valley Antique Machinery Show, charity horse shows, Fourth of July celebrations, and home and garden tours.