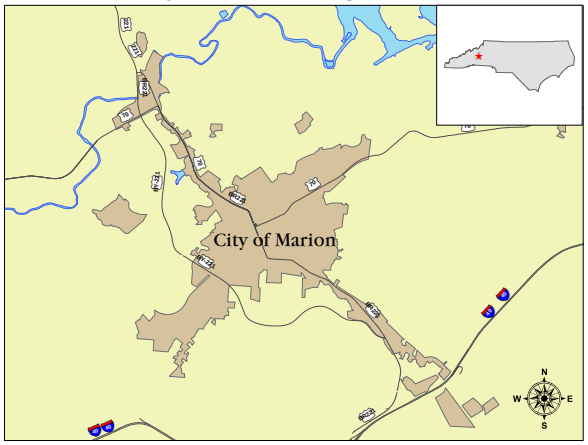
MARION: A COMMUNITY PROFILE

Preparing a meaningful plan for the City of Marion, hereinafter referred to as "the City", requires a thorough understanding of the community's unique characteristics and qualities. This chapter focuses on a summary of Marion's geographic location and climate, historic occupation and growth patterns, and demographics. Of particular importance is an understanding of the past and present in order to identify opportunities and constraints for achieving the goals of this Plan as well as establish a framework for periodic evaluation of progress made. Because the Plan is to be utilized as a working document and conditions are in constant state of change it will be essential that the data be updated as appropriate to ensure correct interpretation and evaluation of changes as they occur over time.

Location & Setting

The City is ideally located in the foothills of the picturesque Blue Ridge Mountains of Western North Carolina, and serves as a gateway to many of the region's most spectacular natural resources and cultural attractions including Linville Gorge "the Grand Canyon of North Carolina", Mount Mitchell (elev. 6,684ft.) the highest peak in eastern United States, Lake James and the headwaters of the Catawba River, Pisgah National Forest, the Blue Ridge Parkway, and more.

Map 2-1.1: City of Marion's Geographical Location



Marion is approximately five and half square miles in size and is bound by the Catawba River to the north and US Interstate 40 to the south. It is largest of two municipalities located in McDowell County, and serves as the county seat and center of commerce for the area. The City is situated at the crossroads of three other major transportation corridors including US Highway 70, US Highway 221, and US Highway 226 that serve as routes between the mountains and piedmont regions of North Carolina and beyond. Marion is in close proximity to several large metropolitan areas and within a day's drive from Nashville TN, Columbus OH, Panama City Beach FL or Washington, DC.

Table: 2-1.1: Proximity to Metropolitan Areas

City	Miles	Population
Asheville	**40**	**70,000**
Hickory	**43**	**40,000**
Charlotte	**96**	**600,000**
Greensboro	**140**	**230,000**
Raleigh	**218**	**313,000**
Knoxville, TN	**150**	**174,000**
Atlanta, GA	**265**	**+424,000**

Marion is also within close proximity to several major airports including Charlotte International Airport, located within an hour's drive, offering service to destinations around the world; and Asheville Regional Airport (AVL) offering frequent non-stop flights from New York, Atlanta, Cincinnati, Nashville, Charlotte, Washington DC, and Orlando. Other nearby airports include Greenville-Spartanburg, SC (GSP), Greensboro (PTI), Johnson City, TN (TRI) and Knoxville, TN (TYS).

Marion's small town qualities, pristine natural setting, accessibility, and low property tax make it an ideal setting for families, retirees, and seasonal residents. More than 50,000 residents call Marion home with just over 8,000 living within the city's municipal limits and approximately 48,000 residents living within the unincorporated area of McDowell County. Each year these figures continue to increase as more people

discover the beauty and affordability of this area. Marion's growth is attracting diverse new development and economic opportunities, but it is also an indicator that Marion needs a plan that adequately addresses future growth if it intends to preserve and protect the qualities that make it a special place to work, live, and play.

Climate

Figure 2-1.1: View of City from Grants Mountain

Climate is an important element and a deciding factor in many of the activities and opportunities enjoyed by both residents and visitors. The area's temperature and precipitation greatly influence recreation and tourism potential, water supply, agriculture, and commerce.

The climate in Marion is classified as a warm temperate with mild winters. The summers are long and warm with an average temperature of 75 degrees Fahrenheit (24ºC) and average daily maximum temperature of 86 degrees (30ºC). The highest recorded temperature of 106 degrees occurred in Marion on July 28, 1952. In winter, the average temperature is 46 degrees (8 ºC) with an average daily minimum temperature of 29 degrees (-2ºC). The lowest temperature ever recorded was -7 degrees (-22 ºC), which occurred on February 18, 1958. The average annual temperature is a mild 58 degrees (14ºC).

The total annual precipitation in Marion is about 56 inches. Of this, 29 inches, or 51 percent, usually falls between April and September. The growing season for most crops falls during this period, which along with fertile soils, makes Marion a suitable location for agricultural activity. The major rain-causing factor in Marion is associated with conflicts of contrasting air masses, which create the cyclonic storms and fronts that accompany weather changes. The average seasonal snowfall is about 13 inches, but the number of average snow days varies greatly from year to year. The following table illustrates the average monthly, seasonal and annual temperatures, and average monthly and seasonal rainfall and snowfall.

Table 2-1.2 Average Temperature and Precipitation

Month	Temperature			Precipitation	
	Average daily maximum	Average daily minimum	Average	Average rainfall	Average Snowfall
	°F	°F	°F	Inches	
January	49.8	28.1	39.0	4.06	4.8
February	53.7	29.8	41.8	4.61	3.9
March	62.2	36.8	49.5	5.74	3.1
April	73.0	45.9	59.5	4.54	.0
May	79.0	53.7	66.4	4.63	.0
June	84.6	61.0	72.8	5.24	.0
July	87.3	64.8	76.1	4.53	.0
August	86.5	64.1	75.3	5.29	.0
September	80.6	58.4	69.5	4.51	.0
October	71.2	46.8	59.0	4.63	.0
November	61.3	37.3	49.3	4.09	.2
December	51.0	28.0	39.0	4.35	2.9
Yearly	52.1	30.5	41.3	4.69	1.2
Average	70.1	46.4	58.3	4.67	1.1
Total	-----	-----	-----	56.22	14.9

Data: Source National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center

Table 2-1.3: Freeze Dates and Average Growing Season (10 Year Average)

	Temperature		
	24 °F	28°F	32 °F
Last Freeze	March 30	April 6	April 23
First Freeze	October 31	October 23	October 14
Days of Growing Season	253	229	205

The average relative humidity in mid-afternoon is about 60 percent. Humidity is higher at night and average humidity at dawn is about 90 percent. The sun shines 70 percent of the time in summer and 55 percent in winter. The prevailing wind is from the southwest and average wind speed is highest (12 miles per hour) in the spring.

Every few years in winter, heavy snow covers the ground from a few days to a week; and every few years in the summer or in autumn, a tropical storm moving inland from the Atlantic Ocean or Gulf of Mexico cause extremely heavy rains for 1 to 3 days.

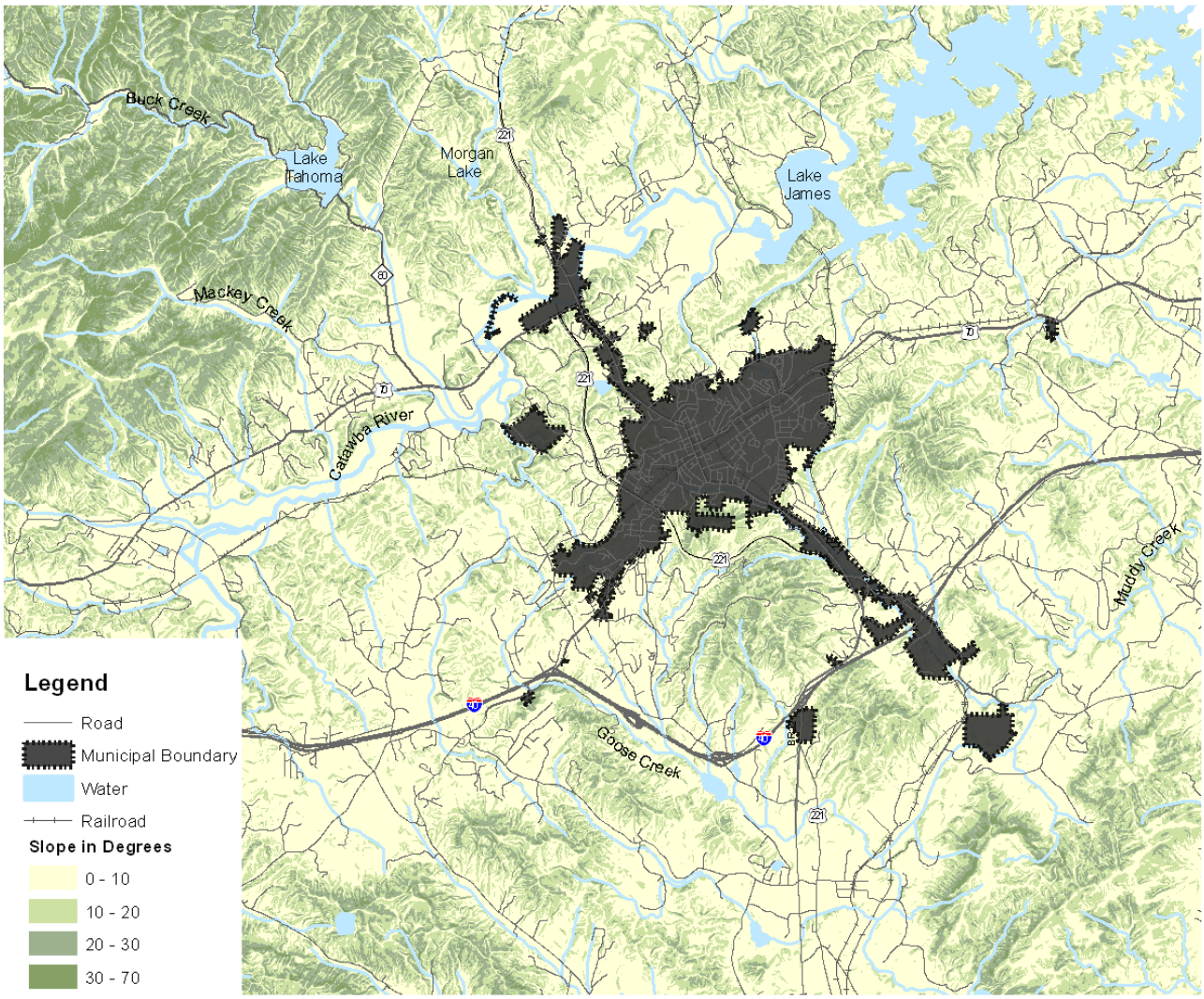
Topography

The topography of Marion is characterized as primarily gently rolling upland, with more extreme higher and lower elevations to the north and south of the City. Surface elevations within the City range between 1220 feet to 2040 feet. The average elevation within the City is 1400 feet with the highest elevation of 1956 feet at top of Mt. Ida, which is the landmark vista to the south of Main Street in downtown. Low lying areas within Marion are located along the banks of the Catawba River and Corpening Creek. The Catawba River travels along the City's northern edge before emptying into nearby Lake James. Young's Fork meanders south along Rutherford Rd before converging into Corpening Creek, which is part of the Muddy Creek Watershed.

The City does not have the same problem with steep slope development like many other mountain communities since most land with slopes in excess of 20 percent are located outside the city limits. The City does have a hillside subdivision ordinance in place that helps to regulate steep slope development where significant grades do exist. The City is also fortunate that the mountain vistas to the north are located within the Pisgah National Forest and are therefore protected from development, which helps to preserve the scenic beauty that draws many visitors to the area.

Data: Source National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center

Map 2-1.2: General Topography Area-Wide Outside the City of Marion



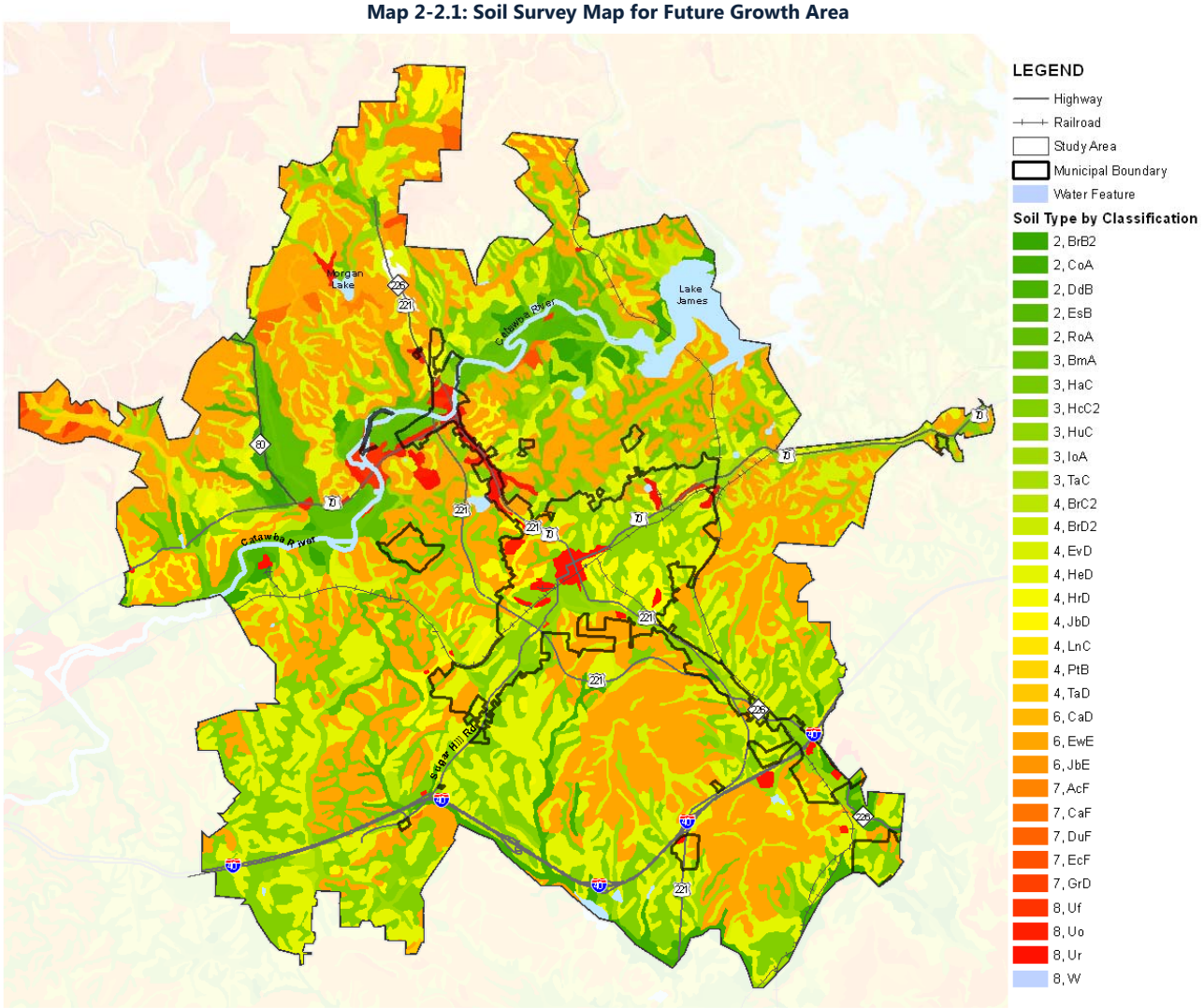
Data: Source National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center

ENVIRONMENT & NATURAL RESOURCES

Soils

Soil Characteristics for McDowell County have been identified and mapped in the form of a soil survey published by the US Department of Agriculture in cooperation with the US Forest Service, NC Department of Environment and Natural Resources, North Carolina Cooperative Extension Service, and the McDowell Soil and Water Conservation District. The criteria used to define local soil types was developed in accordance with the National Soil Survey Handbook published by the U.S. Department of Agriculture, Natural Resources Conservation Service. Individual characteristics that makeup a soil's composition helps identify locations for suitable and unsuitable land uses within the study area. Each soil type can then be further grouped based on similar behaviors, properties, or other factors to help determine the suitability of different types of land uses. Slope, wetness, permeability, depth of bedrock, and susceptibility to erosion are common characteristics that are evaluated when determining the best use of land. Soil information can help determine the location and/or expansion of infrastructure; protect or conserve environmentally sensitive areas for farming, habitat protection, future growth, or public safety; evaluate the cost of development for commercial, industrial, or other forms of development.

Map 2-2.1: Soil Survey Map for Future Growth Area



Data Source: USDA McDowell County Soil Survey

The purpose of providing soil data in this Plan is to identify the major soil types located within the study area, provide information about each of their specific characteristics to help with future decision making, and to identify future land uses to a higher degree of probability within the study area. Soil types delineated on Map 2-2.1 are based on the greatest concentration of one major soil type or areas dominated by two or three dominate types of soil. The soil survey does not suggest that other soils are not located in the same general area only that they exist to a lesser degree. These soils are commonly referred to as minor soils. The information provided in this Plan does not identify site specific soil information or identify minor soils within the study area. For more detailed information on soils refer to the McDowell County Soil Survey or contact the McDowell County Soil and Conservation District Office.

There are forty-five different soil types in McDowell County representing 277,451 acres, not including urban land and water classifications that make up another 5,999 acres. Of those soils found, there are 32 different soil types within the study representing 32,700 acres and an additional 398 acres of urban land and water for a combined total of 33,095 acres or 11.68% acres of the county total. This Plan provides information on only those soils found within the study area and how each soil type may influence future land uses. The table listed below provides a list of each soil type, a brief description of characteristics, and a percentage of land cover in both the county and the study area.

Table 2-2.1: McDowell County Soil Types

Map Unit Symbol	Soil Name	McDowell Acres	County Percentage	Study Area Acres	Percentage of soil in county	Percentage in Study Area
AcF	Ashe-Cleveland-Rock outcrop complex, 60 to 95 percent slopes	5,456	1.9	27	0%	0.08
BmA	Biltmore loamy fine sand, 0 to 3 percent slopes, occasionally flooded	1,408	0.5	6859	48.7%	2.05
BrB2	Braddock clay loam, 2 to 6 percent slopes, eroded	1,836	0.6	413	22.49%	1.24
BrC2	Braddock clay loam, 6 to 15 percent slopes, eroded	2,151	0.8	433	20.13	1.30
BrD2	Braddock clay loam, 15 to 25 percent slopes, eroded	182	*	93	51.10	0.28
CaD	Chestnut-Ashe complex, 10 to 25 percent slopes, stony	1,920	0.7	37	1.93	0.11
CaF	Chestnut-Ashe complex, 25 to 80 percent slopes, stony	44,186	15.6	85	0.19	0.25
CoA	Colvard loam, 0 to 2 percent slopes, occasionally flooded	1,390	0.5	651	46.83	1.95
CrF	Craggey-Rock outcrop complex, 40 to 90 percent slopes	256	*	173	67.58	0.52
DdB	Dillard loam, 1 to 4 percent slopes, rarely flooded	1,452	0.5	173	11.91	0.52
DuF	Ditney-Unicoi complex, 25 to 80 percent slopes, very stony	3,901	1.4	45	1.15	0.13
EcF	Edneyville-Chestnut complex, 25 to 80 percent slopes, stony	22,593	8.0	20	0.09	0.06
EsB	Elsinboro loam, 1 to 4 percent slopes, rarely flooded	1,672	0.6	358	21.41	1.07
EvD	Evard loam, 10 to 25 percent slopes	10,557	3.7	933	8.84	2.79
EwE	Evard-Cowee complex, 25 to 60 percent slopes	72,149	25.5	10,392	14.40	31.10

Data Source: USDA McDowell County Soil Survey

GrD	Greenlee very cobbly loam, 6 to 25 percent slopes, very bouldery	2,885	1.0	10	0.35	0.03
HaC	Hayesville loam, 6 to 15 percent slopes	3,825	1.3	812	21.23	2.43
HcC2	Hayesville clay loam, 6 to 15 percent slopes, eroded	22,531	7.9	3920	17.40	11.73
HeD	Hayesville-Evard complex, 15 to 25 percent slopes	29,397	10.4	6932	23.58	20.75
HrD	Hayesville-Evard-Urban land complex, 15 to 25 percent slopes	958	0.3	840	87.68	2.51
HuC	Hayesville-Urban land complex, 6 to 15 percent slopes	1,876	0.7	1597	85.13	4.78
IoA	Iotla sandy loam, 0 to 2 percent slopes, occasionally flooded	8,003	2.8	2325	29.05	6.96
JbD	Junaluska-Brasstown complex, 6 to 25 percent slopes	1,790	0.6	70	3.91	0.21
JbE	Junaluska-Brasstown complex, 25 to 60 percent slopes	5,741	2.0	176	3.07	0.53
LnC	Lonon-Northcove complex, 6 to 15 percent slopes	2,338	0.8	95	4.06	0.28
MaD	Maymead fine sandy loam, 10 to 25 percent slopes, stony	373	0.1	147	39.41	0.44
PtB	Ostin cobbly loamy sand, 1 to 5 percent slopes, frequently flooded	2,923	1.0	13	0.44	0.04
RoA	Rosman loam, 0 to 3 percent slopes, occasionally flooded	3,400	1.2	915	26.91	2.74
TaC	Tate loam, 6 to 15 percent slopes	2,425	0.9	147	6.06	0.44
TaD	Tate loam, 15 to 25 percent slopes	2,695	1.0	150	5.57	0.45
Uf	Udifluvents, sandy, frequently flooded	901	0.3	126	13.98	0.38
Uo	Udorthents, loamy	471	0.2	224	47.56	0.67
Ur	Urban land	586	0.2	310	52.90	0.93
W	Water	5,413	1.9	88	1.63	0.26
	Source: USDA McDowell County Survey Area Version 11 7/21/2009					

The most predominant soil in McDowell County is Evard-Cowee complex. This soil type is also the most predominant soil type in the study area (31%), as indicated in graph below. This soil is classified as soil found on moderately steep and steep terrain on narrow, winding ridge tops separated by steep soils on long mountain side slopes. Slopes range from 10 to 60 percent, most roads are constructed parallel to the contours of the side slopes. This soil is associated with woodland areas well drained with a loamy subsoil.

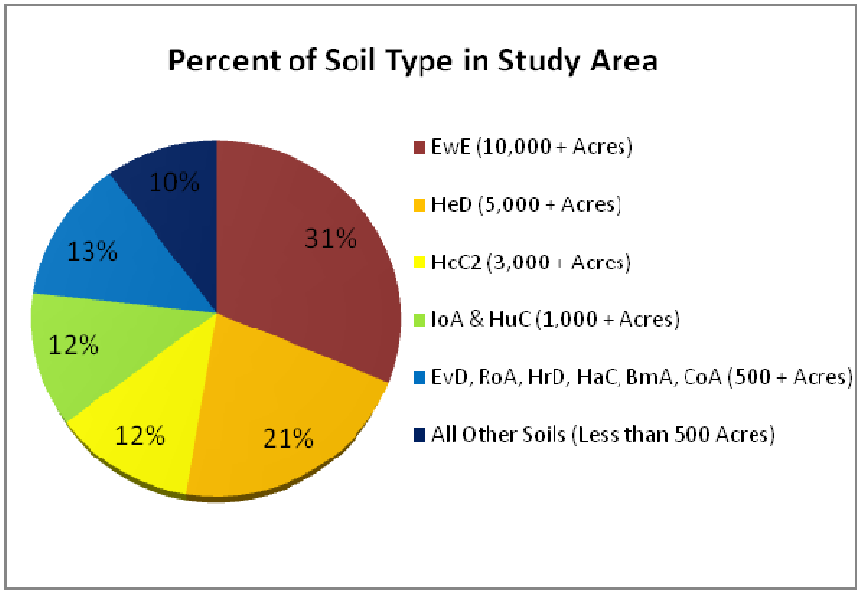
Data Source: USDA McDowell County Soil Survey

There are three predominate soil types:

- **Evard-Cowee** complex, 25 to 60 percent slopes
- **Hayesville-Evard** complex, 15 to 25 percent slopes
- **Hayesville clay loam,** 6 to 15 percent slopes, eroded

Hydric soils are soils defined by the USDA as soil that forms under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper levels. Hydric soils along with hydrophytic vegetation and wetland hydrology are used to designate wetland areas.

Figure 2-2.1: Percent of Soil Type in Study Area

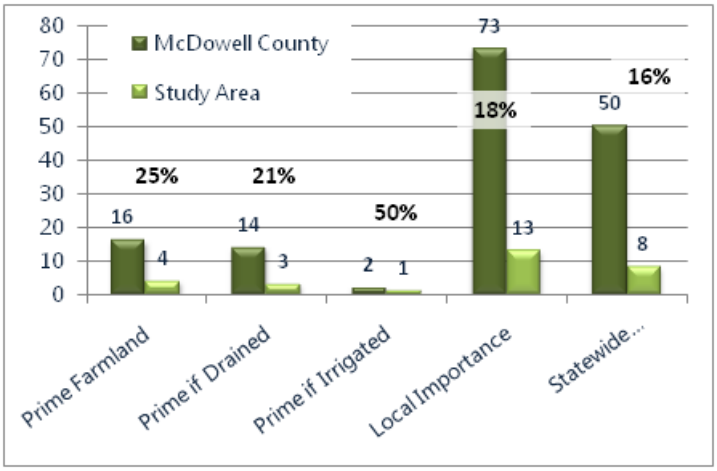


Approximately 18,652 acres or 6.58% of soil within McDowell County is classified by the USDA as hydric soil, of which 3,817 acres or 20.45% is within the study area.

Farmland

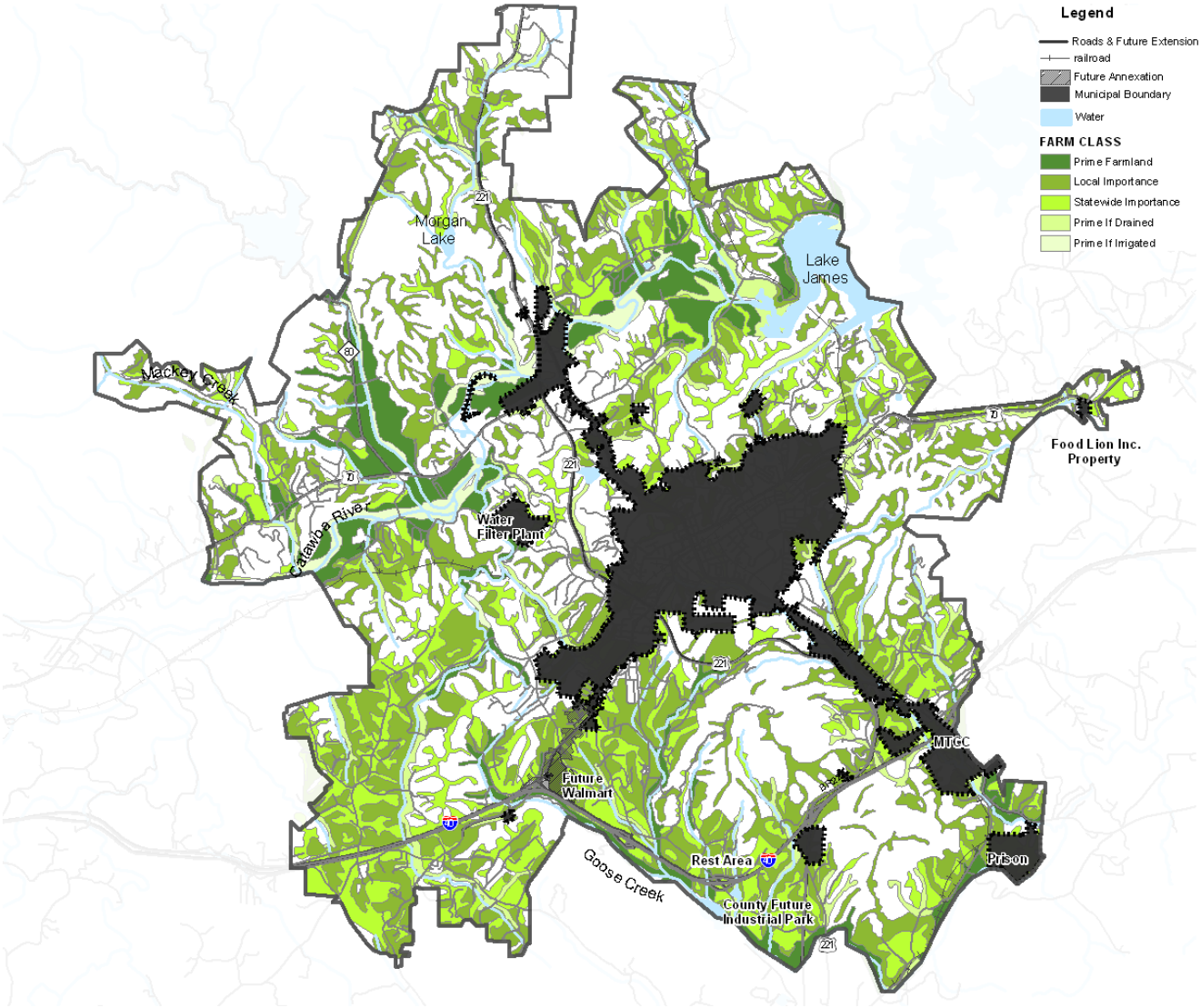
The USDA defines "Prime Farmland" as land which has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including best practices in water management and farming methods; and "Farmlands of Statewide Importance" as land other the Prime Farmland which has good combination of physical and chemical characteristics for the production of crops. These areas are often overlooked as areas in need of preservation to sustain long-term food supply. Currently, there are no specific county regulations in place that support the preservation of prime farmland. While this may not be current public concern, as population continues to grow and prime farmland is converted to other residential and non-residential uses the food supply will diminish and costs will increase.

Figure 2.2.2: Acres of Suitable Farmland in Study Area



Data Source: USDA McDowell County Soil Survey

Map 2-2.2: Farmland in Study Area: 2009 USDA Soil Survey

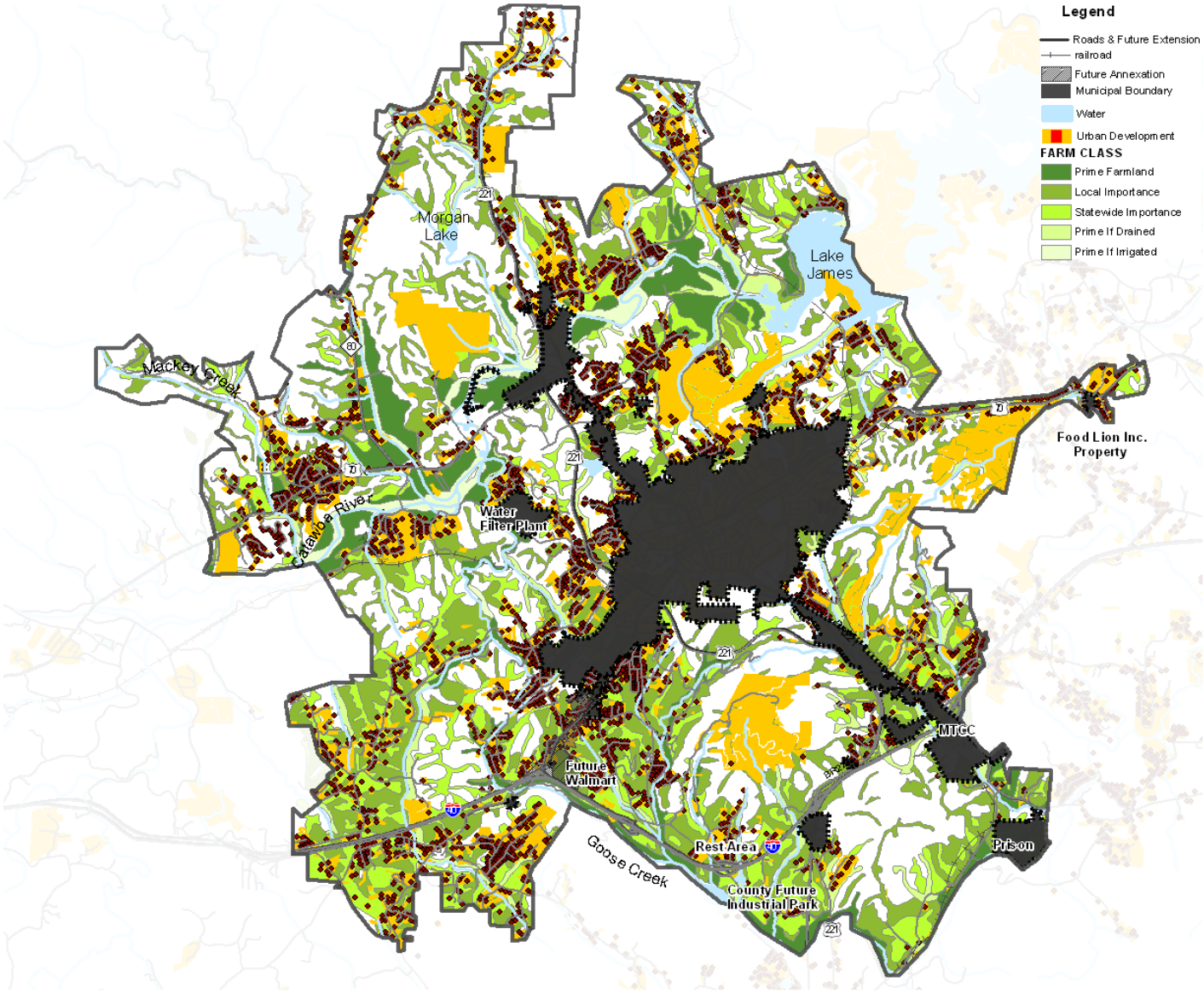


Farmland as a Land Use & Transitional Characteristics

- 155 square mile (98,992 Acres)
- USDA Reports 383 Operational Farms in McDowell County in 2007 up from 282 farms (36% increase) since 2002.
- Average size farm has decreased 31% with avg. farm size of 60 acres with the largest portion of farms averaging between 10-49 acres.
- A total of 22,968 acres of land is utilized for farming in McDowell County generating a market value of products sold of $24,401,000 up 7% since 2002.
- 5,258 acres (30%) of farmland has been converted into land for development purposes.
- 2,129 acres converted into platted subdivisions.
- 3,872 acres subdivided into lots three acres in size or smaller.

Data Source: USDA McDowell County Soil Survey

Map 2-2.3: Farmland Area Transitioning into Other Land Uses

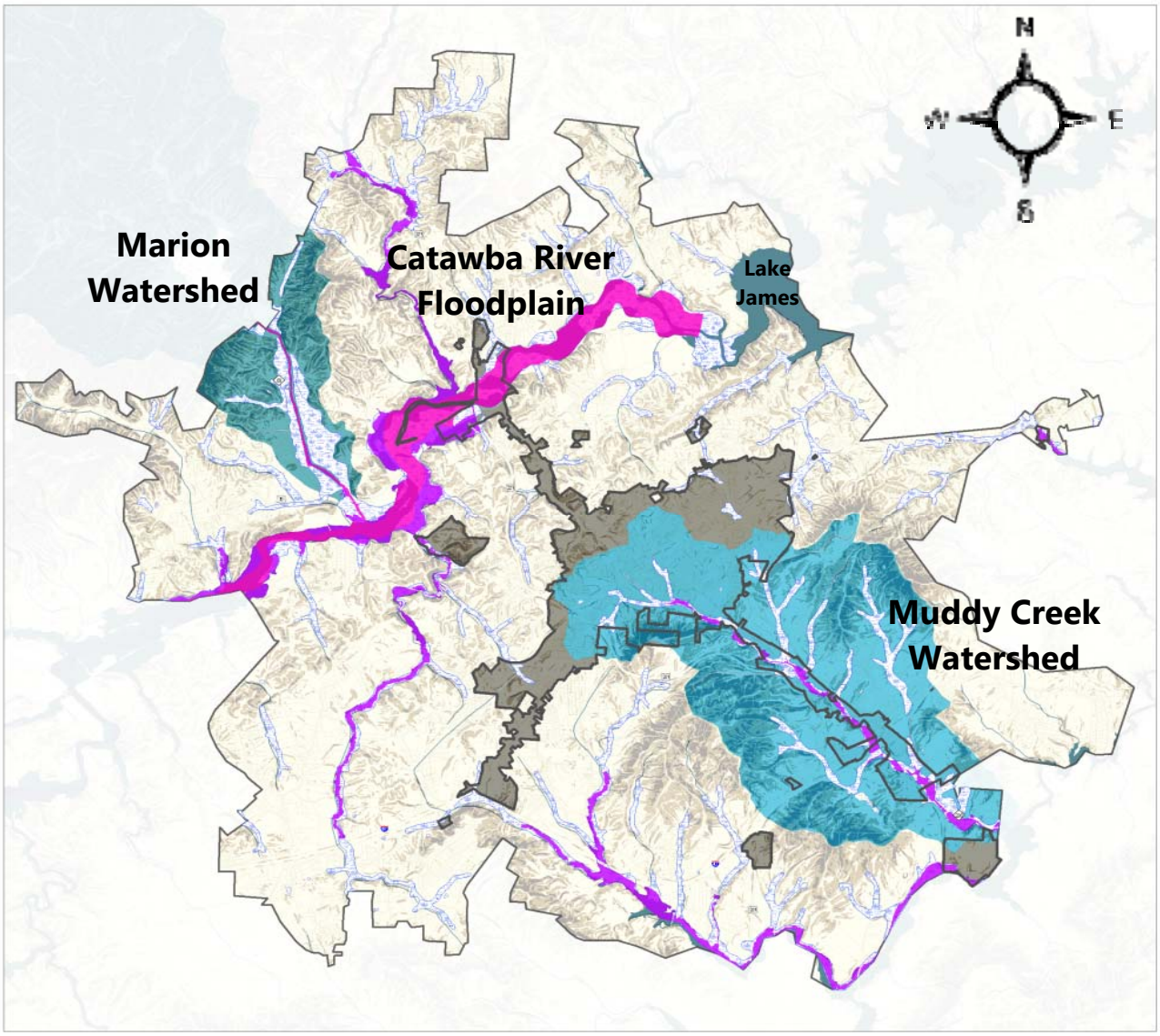


Data Source: USDA McDowell County Soil Survey

Water Resources

Marion is located at the headwaters of the Catawba River Basin, one of seventeen river basins in North Carolina. The basin begins on the eastern slopes of the Blue Ridge Mountains slopes west of the Town of Old Fort. It is named for the Catawba Indians who first settled the river's banks, no doubt to utilize the valuable resources that the river had to offer. The Catawba Indians and their ancestors have lived in the Catawba Valley for more than 10,000 years. In their language, Yap Ye Iswa (yap-yay-ishwong), means "people of the river", a name given to them by European traders. Today, the City boasts that it has some of the cleanest and most abundant water in country if not the world. In fact, water-dependant industries are attracted to the area because of its abundance of quality water. It is therefore, not only a valuable natural resource but an economic commodity that not all communities share, and as such worth protecting.

Map 2-2.4: Hydrological Functions Area-Wide



NC Dept. of Environment and Natural Resources, Division of Water Quality's Basinwide Planning program.
Buck Creek Watershed Management Plan, Adopted by Marion City Council June 1, 2010
Corpening Creek Watershed Restoration Plan, Final draft June 22, 2011

With the abundance of food, water, and other resources, it is easy to see why the Catawba Indians, their ancestors, and early pioneers first settled in the Catawba River Basin. Today, more than one (1) million people live in the Catawba River Basin, including those who live in Charlotte the largest metropolitan area in the state. Population in the basin reached nearly 1.4 million by 2010. This will most certainly have an impact on the demand for basin resources and make pollution control increasingly difficult. American Rivers, a national conservation organization, named the Catawba River an "Endangered River" and placed it on its watch list in 2001. This is particularly significant because Marion is dependent on the Catawba River and its tributaries not only for water supply but also as resource for economic growth and sustainability.

Watersheds

There are two watersheds of importance to the City. These areas are indicated in bright blue on Map 2-2.4, along with special flood hazard areas indicated in purple (AE) and fuchsia (floodway). The Buck Creek Watershed is located just outside the city limits to the north which includes Buck Creek, Mackey Creek, and Clear Creek. This Watershed covers nearly thirty square miles of which two square miles are located with the Plan's study area. The City obtains its drinking water supply from these three creeks. And while Mackey and Clear Creeks are in undeveloped and completely protected WS I watersheds, Buck Creek is a WS II watershed where development and recreational land use activities are permitted, and therefore vitally important to the City that Buck Creek is protected. To insure the protection of the Watershed, the City in partnership with McDowell County and the NC Rural Water Association adopted the Buck Creek Watershed Management Plan in 2010.

The second watershed that boarders the southern and eastern end of the City is the Muddy Creek Watershed, which extends east in to Burke County. This Watershed area covers 110 square miles and contains two creeks and encompasses more land area within the City than the Buck Creek Watershed. While the Buck Creek watershed's protection is important for sustaining the City's water supply, the Muddy Creek Watershed has the potential of being equally important in terms of human land use activities that over time have impaired waters in the Muddy Creek Watershed. The continued degradation of water quality of this watershed not

QUICK FACTS

Hydrological Characteristics
5,921 acres (18% Study Area) are identified as having one or more hydrological characteristics that impact land use and services within the study area.

Hydric Soil
3,817 acres (6 sq. mi) or 11% of the Study Area

Special Flood Hazard Areas 922 acres (1.44 sq. mi.) 3% of the study area. SFHA within the City 214 acres.

Buck Creek Watershed
Total area 18,993 acres (29.68 sq. mi.). Area within Private Ownership 5,979 Acres (9.34 sq. mi.). 1,334 Acres (2 sq. mi.) within the study area equivalent to 4% of the total study area.

Corpening Creek Watershed
Total area 5,760 Acres (9 sq. mi.).
Area within the City 1,645 acres (2.57 sq. mi.).

Residential Characteristics *(does not include residential in commercial areas,*:
Estimated population: 3,082, average household size 2.27, average dwelling units per acre 3, 1,360 single-family residential dwellings *and* 1,540 residential parcels.

Commercial & Industrial Characteristics:
Total land area 678 acres (1.06 sq. mi.), 538 Parcels *(including vacant land in commercial areas)*

Flood Prone Areas
AE Food Zone 123 Acres, 120 properties, 33 buildings or structures with a 2011 taxable value of $35.8 million.

AE Floodway: 96 Acres, 11 properties, 63 properties including 31 residential with a 2011 taxable value of $5.3 million.

NC Dept. of Environment and Natural Resources, Division of Water Quality's Basinwide Planning program.
Buck Creek Watershed Management Plan, Adopted by Marion City Council June 1, 2010
Corpening Creek Watershed Restoration Plan, Final draft June 22, 2011

only makes the community susceptible to future state and federal regulatory mandates, it hurts the local economy, puts both public and private property at risk, and is a potential public health safety concern.

As a result of MCRP's efforts over the last thirteen years, the Partnership has restored 27 miles of stream, installed four (4) large-area stormwater systems, and has had an economic impact of $18 million. Recently, the Partnership has turned its efforts to the Corpening Creek Watershed, which is on the northern end of the Muddy Creek Watershed. The City has become a more active member of the Muddy Creek Restoration Partnership, which recently completed a plan to improve impaired streams in this watershed. The Corpening Creek Watershed Plan is a voluntary-based approached to stream restoration and water quality improvement through community-outreach and education.

The Corpening Creek Watershed is approximately nine square miles, of which 2.57 square miles covers the City encompassing a total of 2,078 publicly and privately owned land. Residential land uses within the Watershed include 33 neighborhoods that have a combination of single-family, multi-family, and institutional residential occupying 514 acres (0.80 sq. mi.) with an estimated population of 3,082. This accounts for 72% of the neighborhoods located within the City. The commercial and industrial land uses are combined to include all non-residential land uses and vacant lands. These areas account for 678 acres (1.06 sq. mi.) or roughly half of the total Watershed area located inside the City's municipal boundaries. Public right-of-way account for the remaining 453 acres (0.71 sq. mi.) is covered by the Watershed.

Flood Prone Areas

The City of Marion is a participant in the Federal Emergency Management Agency's National Flood Insurance Program. The City revised its Flood Hazard Ordinance in 2008 to comply with new state and federal regulations as well as adopt newly revised National Flood Insurance Rate Maps (NFIRM). Based on the new NFIRM, the City has two flood zones areas including the AE Flood Zone and the AE Floodway zone designation. The AE Flood Zone is a designated geographical area that based on topography and hydrology has a high probability of experiencing a flooding event. While the AE Flood Zone is often referred to as the "100-year flood", it does not mean that a flood is likely only once every century. Flooding events in these areas can occur on a more reoccurring and unpredictable basis, therefore protection of personal property and public safety is particularly important in these areas. The AE Floodway designation is given to channels of water and adjacent lands that should remain unobstructed in order to give adequate room for flood waters to discharge over an area during a flood event without creating an increase in the level of water over more than one foot. When obstructions do exist in these areas, the water discharging during a flood event move beyond the AE Flood Zone and into areas not designed to handle flood water, and which places a greater risk to public safety and personal property.

Designated flood zones cover approximately 219 acres (0.34 sq. mi.) making up six percent of the City's total land area. There are 123 acres of AE designated flood zone lands, and 96 acres of lands within the AE Floodway. The AE Flood Zone covers a larger area and number of properties, which translates into a higher taxable value or personal property that is at risk. There are 120 individual properties with the AE Flood Zone, 33 of which have buildings and or structures totaling $35,786,520 in 2011 county assessed tax value. Additionally, there are eleven individual parcels within the AE Floodway, which include 63 buildings or structures including 31 residential dwellings all totaling $5,330,040. According to a 2010 Community Assistance Report by FEMA the most current insurance policy information was provided as follows:

Table 2.2.2: Flood Insurance Polices 2010

Flood Insurance Policies Held in Marion 2010	
Total Number of Policies Held	5
Total Premiums	$6,759
Insurance in Force	$1,799,300
Total Number of Paid Losses	1
Dollar of Closed Paid Losses	$56,415
Number of Substantial Damage Paid Losses	0

If this information is accurate, that would mean that only four percent (4%) of buildings and structures located within a flood hazard area have flood insurance leaving another $39.3 million of uninsured property.

Other Water Resources

Other valuable water resources include Lake James, which is drawing a growing seasonal population to the area, and one with greater wealth. During the building boom of the previous decade, the area around Lake James saw a significant increase in subdivision and second home development. While this has trickled off in the current recession there is no doubt that residential development will continue to grow around the lake as more people chose Marion as their base camp to be close to regional amenities. Protecting this resource for scenic and recreational enjoyment is in the community's best economic interest.

Other Natural and Scenic Resources

Marion is blessed with an abundance of natural and scenic resources that provide many socio-economic opportunities for the community. Marion is located in the foothills of the Blue Ridge Mountains and is designated as part of the Blue Ridge National Heritage Area (BRNHA), a designation enacted by the United Stated Congress in 2003.

Lake James, located just a few short miles from Marion, offers boating, fishing, swimming and other water-based activities. Lake James is the first of seven man-made lakes located in the Catawba River Basin. Around the lake there are several state and local recreational facilities that offer hiking, biking, and camping.

In addition to parks located around the lake, Marion is in close proximity to the Pisgah National Forest, Linville Falls, Linville Gorge, and the Blue Ridge Parkway. In route to the Parkway, people can enjoy a visit to Linville Falls, one of the most beautiful and popular water cascades in the Appalachian Mountains or visit Linville Gorge, one of the deepest canyons in the eastern United States. Just west of these natural wonders is Mount Mitchell the highest peak east of the Rocky Mountains reaching 7,000 feet in height. Mount Mitchell can be accessed by the Blue Ridge Parkway, which runs along the northern edge of the county and is a scenic motor route that draws thousands of visitors each year during the spring, summer and fall seasons. From the Parkway, motorists can enjoy spectacular views of Mt. Mitchell, the Blue Ridge Mountains, fall leaf colors, wildlife and take advantage of many other active recreational opportunities that the area has to offer.

Wildlife Resources

Primarily because of the vast amount of unspoiled forestland surrounding Marion, a wide variety and abundance of wildlife can be found. Approximately 82,000 acres of public and quasi-public lands are open to hunting, fishing and other recreational activities. Almost all of these lands are in the northern part of McDowell County, north of U.S. Highway 70, and are a part of the Pisgah National Forest. Within the National Forest there are two wildlife management areas. The largest area, Curtis Creek is part of the Mt. Mitchell Management Refuge and is located in the northwestern part of the county. A small portion of the Daniel Boone Management Area lies along the northeastern tip of the county. Both areas contain large game, small game, and trout streams, with hunting and fishing regulated by the State Wildlife Resources Commission.

Outside the management areas are several designated public mountain trout waters. These streams and Lake James offer fishing, bird watching and other recreational activities.

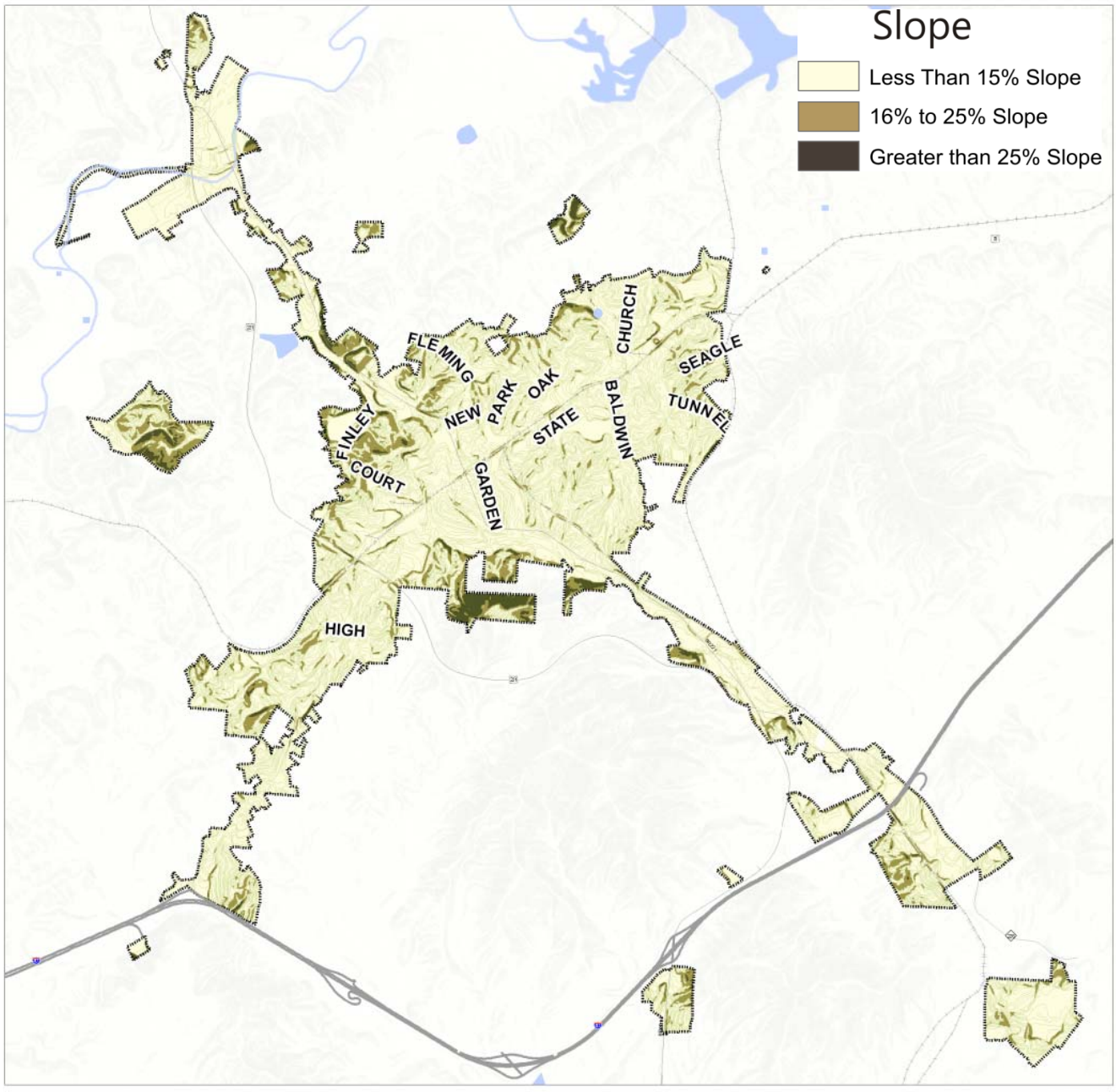
The preservation of public land has been assured to a large extent by the National Forest Service, thus assuring that both residents and visitors to Marion will have access to natural recreational areas with an abundance of wildlife and scenic beauty.

Steep Slope

The City is fortunate to have very few areas with slopes greater than 25 percent as indicated in Map #.#. However, where they do exist caution should be given to the type of development that occurs including not only the construction of buildings and structures, but also to grading and construction of access roads for natural resource extraction or other activities. Such development can have a negative impact on adjoining land. Where development does occur attention should be given to areas with moderate to steep slopes as well as soil type. One way to determine the land's stability is to study the SMORPH model, short for surface morphology, which evaluates both the slop angle and curvature of the land surface. The model weighs slope angles according to the surface curvature to determine the potential for a landslide. This information together with guidance from a geotechnical engineer is essential to making land use decisions that can help protect the public and property from a potential land slide or structural failure.

NC Dept. of Environment and Natural Resources, Division of Water Quality's Basinwide Planning program.
Buck Creek Watershed Management Plan, Adopted by Marion City Council June 1, 2010
Corpening Creek Watershed Restoration Plan, Final draft June 22, 2011
Schwab, James C., et al., Landslide hazards and Planning, American Planning Association PSA Report 533/534 Sept. 2005

Map 2-2.5: Slope Analysis for the City of Marion



NC Dept. of Environment and Natural Resources, Division of Water Quality's Basinwide Planning program.
Buck Creek Watershed Management Plan, Adopted by Marion City Council June 1, 2010
Corpening Creek Watershed Restoration Plan, Final draft June 22, 2011
Schwab, James C., et al., Landslide hazards and Planning, American Planning Association PSA Report 533/534 Sept. 2005

Environmental Assessment

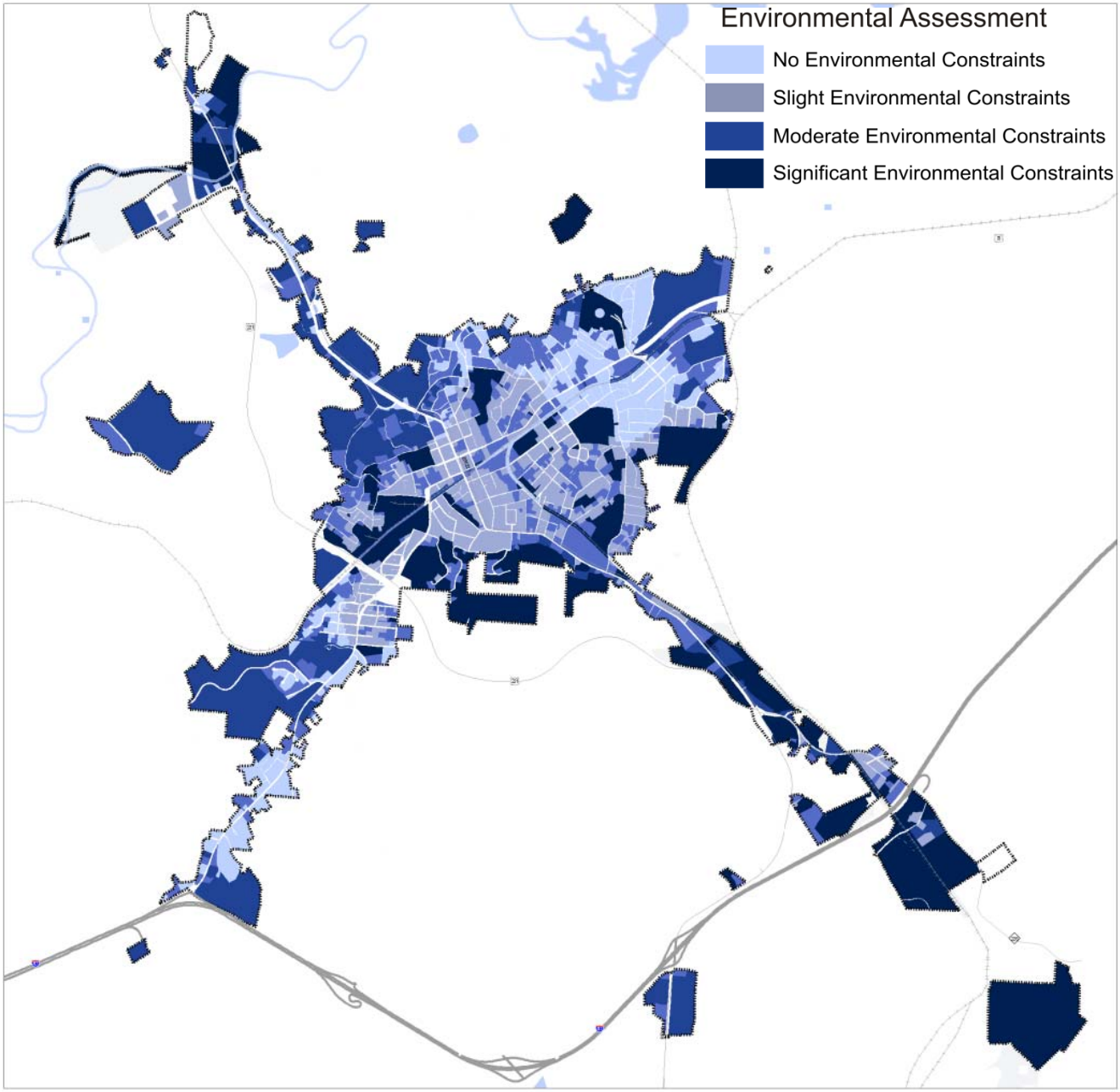
An environmental assessment was completed for all properties within the City to determine, from an environmental perspective, which properties were more suitable for development than others. The assessment looked at several different factors and weighted those factors on a scale from least significant to most significant environmental factors. Map 2-2.6 is a geographical representation of the degree of environmental constraints that have the potential to limit land use activity either on level of regulatory environmental protection or development costs associated with construction. Table: 2-2.3 shows how each individual environmental characteristic was weighted.

Table 2-2.3: Environmental Analysis of Parcels within the City of Marion

Level of Environmental Constraint	None	Slight	Moderate	Significant
None	X			
Watershed Protection Area		X		
Steep Slope 16% to 25%			X	
Steep Slope 25% or greater				X
Floodplain			X	
Stream or Creek within Watershed Protection Area			X	
SFHA, Stream or Creek, and Steep Slope				X

NC Dept. of Environment and Natural Resources, Division of Water Quality's Basinwide Planning program.
Buck Creek Watershed Management Plan, Adopted by Marion City Council June 1, 2010
Corpening Creek Watershed Restoration Plan, Final draft June 22, 2011
Schwab, James C., et al., Landslide hazards and Planning, American Planning Association PSA Report 533/534 Sept. 2005

Map 2-2.6: Environmental Assessment of Land within the City of Marion



NC Dept. of Environment and Natural Resources, Division of Water Quality's Basinwide Planning program.
Buck Creek Watershed Management Plan, Adopted by Marion City Council June 1, 2010
Corpening Creek Watershed Restoration Plan, Final draft June 22, 2011
Schwab, James C., et al., Landslide hazards and Planning, American Planning Association PSA Report 533/534 Sept. 2005

HISTORY & CULTURAL HERITAGE

Figure 2-3.1: General Francis Marion, *Courtesy of City of Charleston*

Marion and the surrounding area is rich in history and cultural resources, which attract visitors from all over the world. Archaeological evidence indicates that Paleo-Indians first inhabited North Carolina and the western region as far back as 8000 B.C. These early inhabitants lived a nomadic lifestyle, traveling in small groups in search of food and fresh water. However, a shift in behavior began occur after the end of the last Ice Age as climate changes produced warmer temperatures making the environment more hospitable to support a wider variety and greater supply of food resources. As such, Paleo-Indians gradually adapted to a more semi-nomadic lifestyle, moving from coastal areas to the mountains between seasons. With an abundance of food, populations increased dramatically during this period. This gave rise to the Woodland period (1000 B.C. – A.D. 1550), when agricultural practices first developed, reducing the need for travel and allowing larger concentrations of settlement along rivers and other sources of fresh water. As populations grew, organizational structures were

The Mississippian Indians created political units called chiefdoms and are also well known for their construction of mounds, which still exist today including several in Marion along the Catawba River. It is the Mississippian Indians that first came into contact with Spanish explorers. One documented site is the Berry site in adjacent Burke County, which is thought to be the site of Juan Padro's 1566 Fort San Juan Additional evidence indicates that large populations of Native Americans had already abandoned the upper Catawba River Valley opening the way for early European settlement in the area.

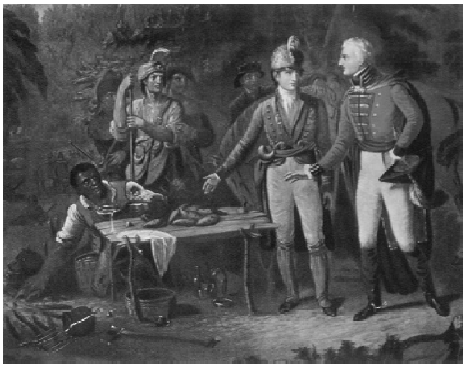


Figure 2-3.2: General Francis Marion Inviting a British Officer to Share His Meal, by John Blake White,

Early Settlement in the Western Frontier

Figure 2-3.3: McDowell Cemetery Marker at Little Round Hill, City of Marion

By the later part of the 18th century, a new migration of people moved into the western region of North Carolina. Early Scotch, Irish, and German settlers migrated west from Pennsylvania through Virginia and eventually traveled south into western North Carolina along the expanding frontier boundary. Early settlers found profit in developing frontier land along the main wagon route into the mountains, and selling it to those less interested in wilderness pioneering. One account is the migration of the Cathey family who settled in McDowell County at Pleasant Gardens and Cathey's Fort in 1755 before moving on to Haywood County in 1798. Another account is the McDowell's, Bowman's, and Greenlee's who came from Virginia to Burke County. Joseph McDowell, Sr., father of "Hunting" John McDowell, acquired a land grant for Quaker Meadows to the east in present day Morganton in 1749. Hunting John McDowell later laid claim to Pleasant Gardens in present day Marion.

Settlement in the new frontier did not come easy. Many early pioneers of present day McDowell County spent time in battle with the Cherokee and British during the Revolutionary War. Two such accounts include the Rutherford Trace Expedition in 1776 and the Battle of Kings Mountain during the fall of 1780. At the time, McDowell County was part of adjacent Burke and Rutherford Counties. As such, early

historical documents refer to Pleasant Gardens, the home of "Hunting" John McDowell, as being located in Burke County. This was true until 1842 when county boundaries were redrawn creating what is today McDowell County, which was named in honor of Colonel Joseph McDowell, son of "Hunting" John, who fought as a patriot against the Cherokee in 1776 as part of General Rutherford's Campaign and led a regiment of troops in the Battle of Cowpens; Ramsour's Mill, and King's Mountain.

Incorporation

The City was incorporated in 1843 with the donation of a 50-acre tract of land provided by Jonathon L. Carson. Mr. Caron donated the land for the purpose of establishing a county seat in McDowell. The City was named in honor of South Carolinian General Francis Marion, a Revolutionary War hero, who had fought beside many of the patriots from McDowell County including Col. Joseph McDowell.

Figure 2-3.4: Downtown Marion, Source Unknown

It is believed that Gen. Marion fought in a battle in the northern portions of the county and may have united with other patriots at Pleasant Gardens during that time.

Industrialization

After incorporation, the City began to experience growth and development and by the late 1800's the City was well on its way to becoming a highly productive industrial town. The Southern Railway constructed a railway line westward through Marion to Asheville to help link the Greensboro-Knoxville line. By 1908, the Clinchfield Railroad had completed the construction of its track through the Blue Ridge Mountains to Marion. Marion was at the junction of two railroads linking north to south and east to west.

Figure 2-3.4: Marion Manufacturing, Source: Revis Group

In 1894, a fire partially destroyed Marion, and much of the town had to be rebuilt. Industrial development had a big influence in the redevelopment. Several mills located in Marion in the early 1900's. These include Marion Manufacturing, Clinchfield Mill, and Cross Mill. Each industry supplied housing to its workforce and their families. Today these neighborhoods are referred to as the mill villages. Most of these neighborhoods have small wooden-plank single-family homes with covered front porches, on small lots, sidewalks, unopened alleys and narrow streets. The mill villages have significant historical meaning to many residents because their ancestors came to Marion to work in the mills. Many who worked in the mills or their families still live in the same homes. These areas are unique in character and add an irreplaceable charm to the community.

DEMOGRAPHICS

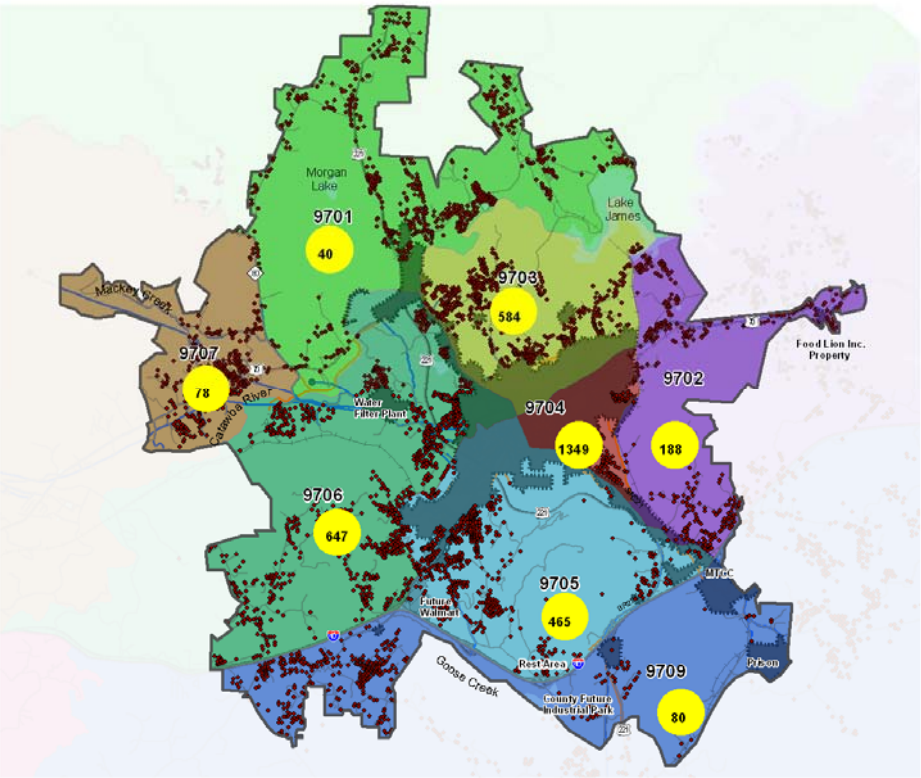
Population

According to the 2010 U.S. Census, the City has an estimated population of 7,838 residents. This represents a 59 percent increase in population since the 2000 U.S. Census, which recorded a population of 4,943. This places Marion in the top ten (10) percent of municipalities experiencing growth in the State. In part, the increase in population figures is the result of annexation and modest growth of new residential development. The following table is the U.S. Census count for the City over the last half century.

Table 2-4.1: Total Population

1970	1980	1990	2000	2010
3,335	3,675	4,765	4,943	7,838

Map 2-4.1: Persons Per Square Mile- 2000 U.S. Census



The map above shows persons per square mile by census tract within the study area. The yellow circles indicate the number of persons per square mile while the small red dots indicate where the concentration of development is occurring outside the city limits. As indicated in the map, persons per square mile in five of the census tracts (9702, 9703, 9704, 9705, 9706) are greater than the 100 persons per square mile in McDowell County as reported by the NC Office of State Budget and Management. It is safe to assume that these census tracts will continue to outpace county growth figures as a result of the employment, education, and proximity to goods and services located within the City and more urban areas located just

Sources: U.S. Census Bureau
2010-2011 NC Schools Report Card
2012 McDowell Community College: An Institute of Excellence Report

beyond its boundary. Aside from the most densely populated Census Tract 9704 with 1349 persons per square mile, 9706, the second largest tract has 647 persons per square mile and is predominately outside of the existing city limits. Previous plans, including the 1978 Land Use Plan and the City Water & Sewer Study, both indicated significant future growth in the area of 9706 Census Tract. An explanation for this growth pattern was not specifically provided in previous plans. However, it can be assumed that in addition to employment, education, and proximity to goods and services that generate greater density, the availability of land with fewer environmental constraints make new development more feasible and therefore more probable that future growth will occur at a faster rate than in other more constrained areas. That said, the same environmental factors that make development difficult also attract it for the benefit of scenic vistas, proximity to water, and other natural amenities. These areas will also continue to grow but at a slower rate and more expensive cost. These areas are also vital to the sustainability of the community and it will therefore be important moving forward to be thoughtful about how such growth and development occurs.

Ethnicity

According to 2010 U.S. Census figures, the City continues to be a predominantly White/Caucasian, with Black/African-American and Hispanic/Latino representing a majority of the remaining ethnic population. Both the 2000 and 2010 figures show a continued trend in greater racial diversity with the number of Hispanic and Latino figures out numbering the Black/African American population for the first time and becoming the largest racial minority represented in the community. In comparison to both McDowell County and State, Marion more closely resembles the ethnic diversity of the state with a marginal difference of no greater than five percent with the exception of the Black/African American segment slightly higher statewide.

Figure 2-4.1: Ethnicity Percent Change 1980-2010

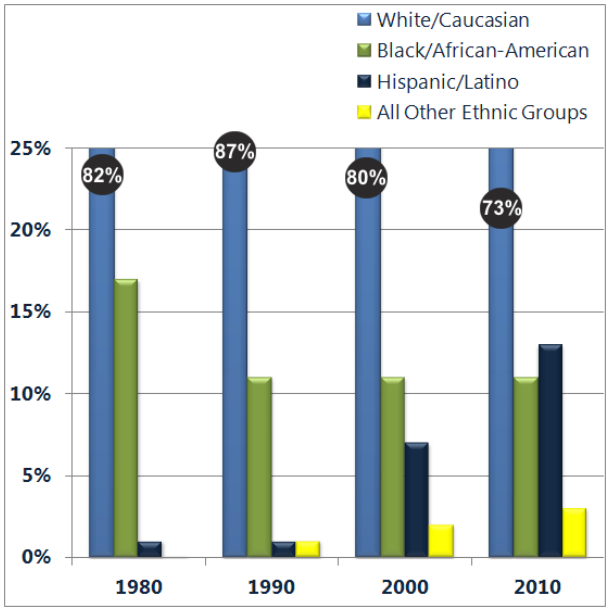
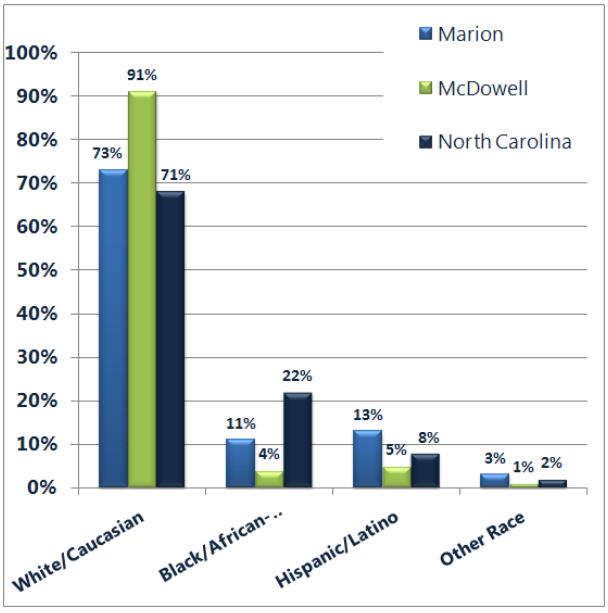


Figure 2-4.2 Ethnicity Comparison 2010



Sources: U.S. Census Bureau
2010-2011 NC Schools Report Card
2012 McDowell Community College: An Institute of Excellence Report

Age and Gender

The City's population distribution by age and gender compared to the County and the State is useful in determining current and projected service needs. The 2010 U.S. Census reported that the median age in the City was 37.5. This figure is only slightly higher that the County median age of 41.6 and nearly identical to the State average of 37.4. In addition, it represents a slightly lower median age of 40, which was reported in both the 1990 and 2000 Census.

As seen in Figures 2-4.3 and 2-4.4, one of the most significant observations of the age distribution that will have an impact on public services is the proportion of retirement-age individuals and those that are reaching retirement age. Over the last decade, this age cohort has represented over 40 percent of the City's total population, and is projected to be the largest segment of the population for at least the next ten years if not longer. Not only is it the fastest growing in the City, it is the fastest growing age group in the state, and nation. While it is no surprise that Marion has an aging population like many other communities, it does support the need to consider this segment of the population when making community wide decisions, including access to health care, daily goods and services, transportation, and safe and adequate housing.

Socio-Economic Characteristics of an Aging Population

- Live on a fixed income;
- Have limited mobility options and greater degree of isolation;
- Have self-care limitations; and
- Are more dependent on support services.

Figure 2-4.3: Total Population by Gender & Age 2000 Census

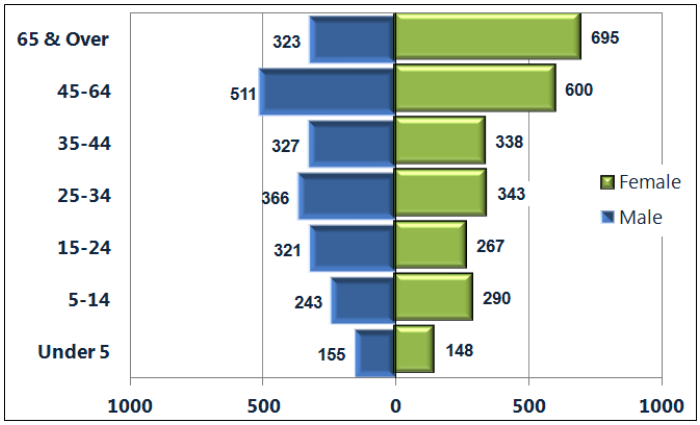
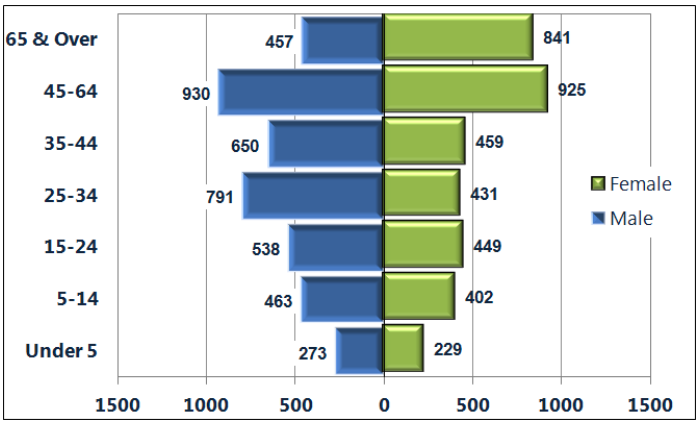


Figure 2-4.4: Total Population by Gender & Age 2010 Census



Marion's gender distribution changed very little in the last half century with slightly more females to males keeping trend with the national average. Then in 2010, the distribution of males to females shifted as seen in Figure 2-4.5 above. Based on Figure 2-4.4 and not taking in-migration into account, this trend is likely to continue. However, keeping with national trends, it is likely that females will continue to exceed the number of males as supported by the numbers in the 65 and older segment indentified in Figure 2-4.4.

Sources: U.S. Census Bureau
2010-2011 NC Schools Report Card
2012 McDowell Community College: An Institute of Excellence Report

Figure 2-4.5: Percent Distribution by Gender

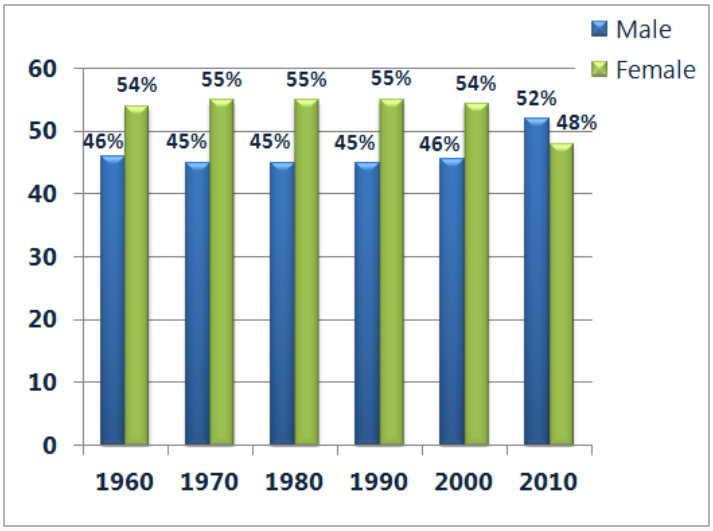


Table 2-4.2: Percent of Population by Age Group

Age Group	1970	1980	1990	2000	2010
Under 14	24%	20%	17%	17%	17%
15-24	14%	16%	14%	12%	13%
25-64	48%	48%	48%	51%	53%
65 & Over	14%	16%	21%	21%	17%

Health

Health is a significant community indicator that until recently was overlooked in the comprehensive planning process. However, with more research focused on health and the built environment correlations are being made about the way communities are designed. Health and quality of life are linked in many ways, and higher levels of community-wide substandard health can have a devastating impact on the local economy and strain public health services. Likewise, a healthy community has a greater opportunity to be economically prosperous and be less of a strain on public services. Additionally, while one recreational amenity may not attract a lucrative industry to the community, a community that has many social amenities that promote a healthy active lifestyle, such as entertainment, cultural enrichment, quality education, recreation, and well-cared for community appearance will attract a labor force that appreciates a community's social qualities which in turn will attract entrepreneurs and industries seeking a healthy, educated, and socially robust community in which to do business.

2010 U.S. Census figures have not been released for disability, though the 2000 U.S. Census figures show that 31 percent of Marion residents over the age of five have a disability. This is much greater than either the state (21%) or the national average (19%). In 2011 the McDowell Health Department in coordination with the McDowell Health Coalition released the State of the County Health Report for McDowell County. The report indicates that the leading cause of death in McDowell County is cancer, and diseases of the heart, chronic lower respiratory disease and cerebrovascular disease. Many of these diseases can be prevented through behavioral changes, such as eating healthy, bring physically active and avoiding tobacco use.

Sources: U.S. Census Bureau
2010-2011 NC Schools Report Card
2012 McDowell Community College: An Institute of Excellence Report

Table 2-4.3: Leading Causes of Death in 2009

McDowell County	North Carolina
Cancer	Heart diseases
Heart diseases	Cerebrovascular disease
Chronic lower respiratory diseases	Atherosclerosis
Cerebrovascular diseases	Cancer
Alzheimer's disease	Diabetes mellitus
Influenza and pneumonia	Influenza and pneumonia
Diabetes mellitus	Chronic lower respiratory diseases
All other unintentional injuries	Chronic liver disease and cirrhosis
Nephritis, nephritic syndrome and nephrosis	Nephritis, nephritic syndrome and nephrosis
Septicemia	Septicemia

According the McDowell Health Department, the Health Resources and Services Administration, HHS ranked McDowell County as a medically underserved community along with a majority of the state, which included predominately smaller urban areas and rural areas. The designation is based on an index of four variables, the ratio of primary care physicians per 1,000 in population, infant mortality rate, percent of population with incomes below the poverty level, and the percent of population 65 and over. In a 2008 community survey, the McDowell Health Coalition selected obesity, substance abuse, and teen pregnancy as the top three health priorities within the community. In 2009, access to health care was added as an additional concern. Land use and transportation policies greatly influence two of the four priorities identified in the community survey. The City should work with the McDowell Heath Department and the McDowell Health Coalition to identify and expand opportunities to all ages and ability levels for healthier living community-wide.

Education

As indicated in Figure 2-4.6, in 2010 Marion residents fall just below the State average on education. In Marion 45% percent of persons 25 years of age graduated from high school as compared with the 49% percent statewide average. The most significant statistical disproportion was the number of those in Marion who did not obtain a high school diploma or its equivalent, which was much higher than any other cohort. However, in comparison to previous years, the percentage of those obtaining higher educational attainment has appeared to stabilize and has begun to increase as seen in the percent change between 1980 and 2010. One of the most significant changes is the increase in the number of those who have obtained a high school diploma or higher education to those who have not.

Figure 2-4.6: Educational Attainment 25 Years of Age and Older: Local, State, & National Comparison: 2010 U.S. Census

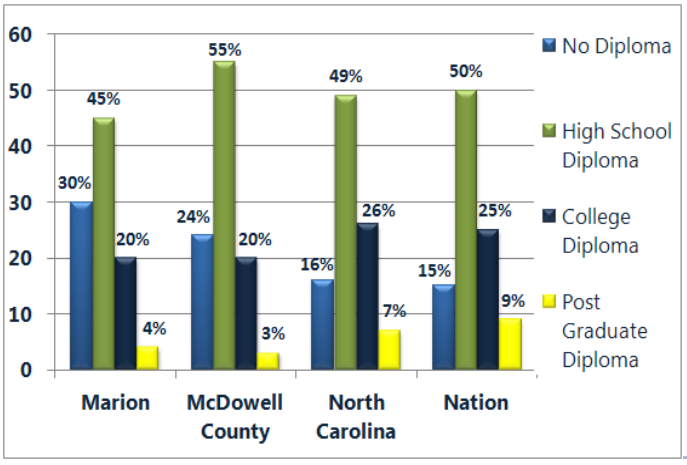
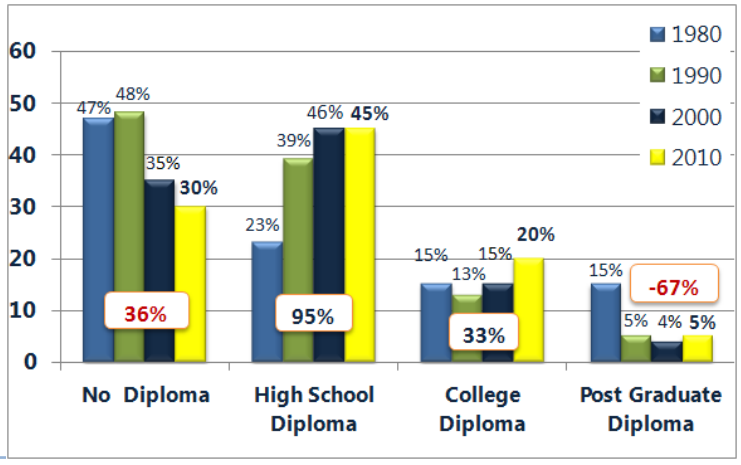


Figure 2-4.7: Educational Attainment 25 Years of Age and Older 1980 - 2010 U.S. Census & Percent Change 2000 to 2010



Sources: U.S. Census Bureau
2010-2011 NC Schools Report Card
2012 McDowell Community College: An Institute of Excellence Report

There has been a modest increase between 2000 and 2010 in the proportion of those 18 years and younger, which directly correlates to a higher percentage of students enrolled at primary and secondary schools located within or in close proximity to Marion. McDowell County High School (grades 10-12) is the only high school located in the county, and while not in the city limits it is contiguous to the City. Both junior high schools (grades 7-9) are also located within Marion, or contiguous to the City. Therefore, all students grade 7th through 12th attend public school in Marion. According to the NC Schools Report Card for the 2010-2011 academic year, there were 2,620 students enrolled in grades 7 through 12 with the exception of Eastfield School. Eastfield School is the only year-round public school in the county, and it too is located in the City with 403 students attending. Of the eight elementary schools, two are located in Marion including Eastfield Elementary and Marion Elementary with 414 students.

Table 2.4-4 2010-2011 Public School Enrollment

Public Schools	Students
McDowell High School	2,620
West McDowell Junior High School	746
East McDowell Junior High School	608
Eastfield Elementary	402
Marion Elementary	414

The McDowell County School System has plans to shift ninth grade students to the high school and convert both junior high schools into grades sixth through eighth middle schools. This restructuring will increase the number of county-wide students attending school within the City since all sixth grade students from the county will be attending one of two middle schools. The following table indicates that an average of nearly 120 new 6th grade students currently attending elementary schools located elsewhere in the county will be attending one of two middle schools in the city. While this restructuring will provide area schools with room to expand and increase the potential to reduce class size, it will increase vehicle trips and decrease level of service of roads. Moving forward, the City should work with the School System and NC DOT to make sure that adequate measures have been taken to accommodate school access and safety.

Table 2.4-5: 6th Grade Enrollment Forecast Students from County Schools

Academic Year	6th Grade Students From County Elementary Schools
2013-2014	129
2014-2015	109
2015-2016	126
2016-2017	120
2017-2018	116
2018-2019	108

There is one state college located in the City. McDowell Technical Community College is a member of the North Carolina Community College System and is accredited by the Southern Association of Colleges and Schools. In addition, the School maintains ten accredited programs, and is in the process of applying for two additional accreditations. While a majority of the enrollment includes students from McDowell County, some travel from Burke, Rutherford, Buncombe and other surrounding counties. The average of age curriculum students attending MTCC from 2005 to 2011 is 31.

According to an MTCC report, in the 2009-2010 academic year there were 8,441 total students in unduplicated enrollment in the following categories:

Sources: U.S. Census Bureau
2010-2011 NC Schools Report Card
2012 McDowell Community College: An Institute of Excellence Report

Table 2.4-6: MTCC Unduplicated Enrollment 2009-2010

Percent of Total	Enrollment Category
0% (0.2%)	Focused Industry Training
1%	Small Business Center
7%	Non-Occupational Continuing Education
8%	Self-Supporting
9%	Basic Skills
13%	Human Resource Development
24%	Curriculum
38%	Occupational

In the last ten years, MTCC has awarded 2,847 degrees in a variety of programs. On average between 7,500 and 8,000 students are enrolled in one the College's programs, which accounts for nearly 25% of the County population.

Household & Family Income

Household income is the combined gross income of all members of the household who are 15 years old and older, including members of the household who may not be related. Therefore, a household is anyone that occupies the same housing unit. Marion residents have a more modest income than those in both the County and the State. The average household income is nearly $5,000 less than households within the County, and $15,000 lower than the State average. This may be the result of a slightly lower per capita income and average household size. However household incomes in the City have risen at a significantly faster rate than both the County and State over the last decade. This sharp increase can be an indication that more people are electing to live together to share resources and reduce individual financial burden.

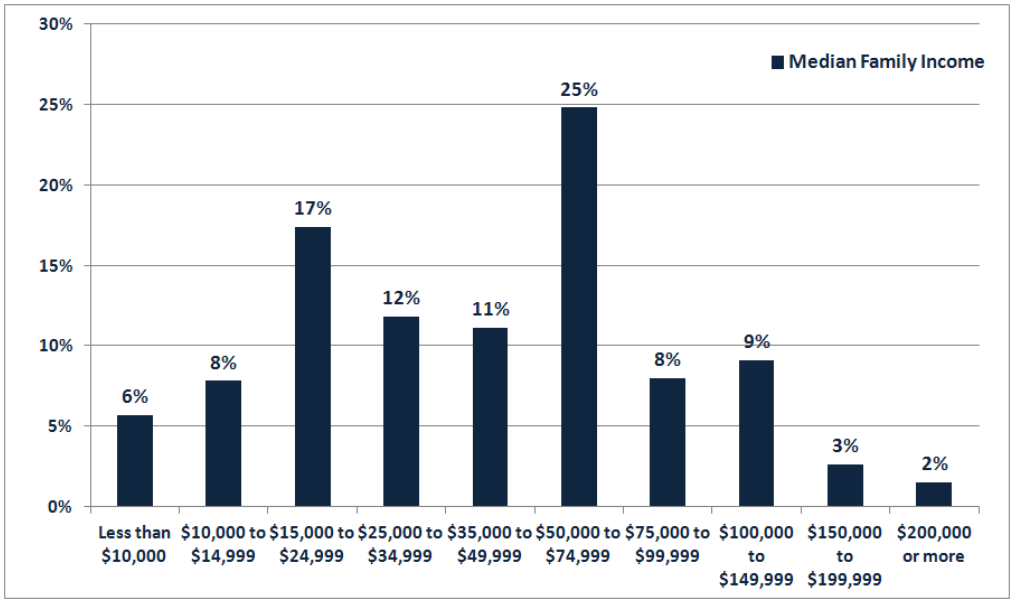
Table2-4.7: Median Household Income 2000 -2010

	2000	2010 (est.)	Percent Change
Marion	$24,753	$30,012	21.25%
McDowell	$32,396	$34,953	7.89%
North Carolina	$39,184	$45,570	16.30%

The U.S. Department of Housing and Urban Development (HUD) calculates annual income limits based on estimated area Median Family Income (MFI), and offers subsidized programs based on family size and family income as a percentage of the area median income. HUD considers families with incomes lower than 50 percent of the median local income level to be "low income", and 80 percent of the median income level to be "very low income". Based on their standards, housing is considered affordable if it costs no more than 30 percent of a household's income. The 2010 income limit for McDowell County was $50,400. Based on U.S. Census family household income estimates, as shown in Figure 2.4-8, 54% percent of residents have a lower-moderate to low income. Two factors that may influence these figures are the large number retirement age residents living in Marion, and the number of those working in manufacturing and service jobs. Of those that make less than area's median household income, 31% percent earn less than $25,000 per year and fall within the low to very-low income category.

Sources: U.S. Census Bureau
2010-2011 NC Schools Report Card
2012 McDowell Community College: An Institute of Excellence Report

Figure 2.4-8: Estimated Family Income 2006 to 2010



According to the 2010 Census, Marion's per capita income was only slightly less than the County Interestingly, despite modest household incomes, per capita income in Marion is nearly identical to those at the county level, but far less than the States nearly $25,000 level. This may, in part, be the result of smaller average household sizes in Marion.

Table 2.4-8: Per Capita Income 2000 to 2010

	2000	2010 (est.)
Marion	$16,569	$17,639
McDowell	$16,109	$18,798
North Carolina	$20,307	$24,745

Table 2.4-9: Persons Per Household

	2010 (est.)
Marion	2.39
McDowell	2.49
North Carolina	2.49

Sources: U.S. Census Bureau
2010-2011 NC Schools Report Card
2012 McDowell Community College: An Institute of Excellence Report

ECONOMIC DEVELOPMENT

Employment

Over the last four decades, Marion has maintained a stable workforce population with nearly half of its population ranging in age from 25 to 64 years old. On average an additional 14 percent have ranged between 15 and 24 years age. In general, it can be anticipated that this segment of the population contributes to the workforce part-time and seasonally, if not on a full-time basis.

According the 2008 U.S. Census Economic Survey approximately 43 percent of the working population is employed in the goods producing sector (manufacturing), while another 57 percent is employed in other sectors. Historically, this figure has much been higher than 50 percent being employed in manufacturing. Job losses, particularly in the manufacturing sector have decreased significantly in the last decade. Since 1990, the City has experienced the loss of approximately 2,300 jobs in manufacturing, negatively impacting the City's tax base and utility revenue.

Like many other communities in North Carolina, Marion has struggled to redefine itself after the closure of the area's textile and manufacturing industries, which in the past had been a stable source of employment and revenue. Recognizing that traditional economic strategies focused primarily on industrial recruitment, Marion has identified the need for a more diverse, well-rounded economic development program that includes downtown development and revitalization, small business entrepreneurship, commercial recruitment and tourism development. Though it is too early to be identified in actual figures, Marion's economic development program is beginning to take shape. One example of new commercial development in Marion is the construction of Grandview Station Shopping Center and Super Walmart Store, which will add an estimated 400 new full-time and part-time jobs for the local workforce. Walmart Corporation is the sixth largest non-manufacturing employer in the county. Other commercial developments recognizing the market potential have also begun to locate within Marion including but not limited to Lowe's, Food Lion, Tractor Supply, and many other small independent retail and restaurants. Based on number of building permits, Marion is on track to have the largest commercial growth in more than ten years.

According to the NC Department of Commerce, the City is designated as a Tier 1 community. The designation refers to the William S. Lee (WSL) Act of 1996, which has been one of North Carolina's chief economic development incentive tools. The rankings are based on an assessment of each county's unemployment rate, median household income, population growth, and assessed property value per capita. The goal of the WSL Act is to promote economic development by awarding corporate income and/or franchise tax credits to North Carolina sited companies that create new jobs, put new equipment and machinery in service, invest in additional research and development activities, train workers or establish and operate a central administrative office. The WSL also includes a three-tier system for the appropriation or higher credits to economically distressed counties (Tier I) and lower credits to larger and more developed counties (Tier 3). In 2007, a business located in a Tier I community could receive a $12,500 tax credit per new job with a requirement to create at least five new jobs, and a 7 percent tax credit for eligible business property expenditures. Other advantages include priority in State funding in which Tier 1 communities receive additional points in the grant process or a reduction in match funding requirements.

Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

Employment By Major Industry

Figure 2-5.1: Employment by Industry Classification

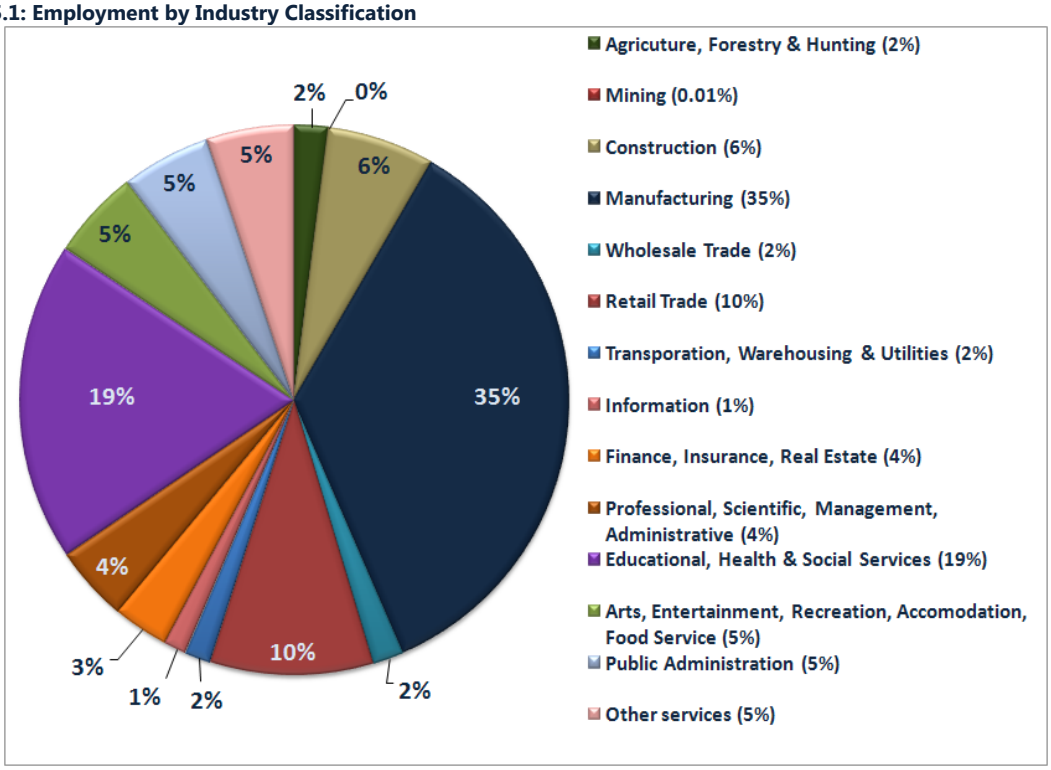
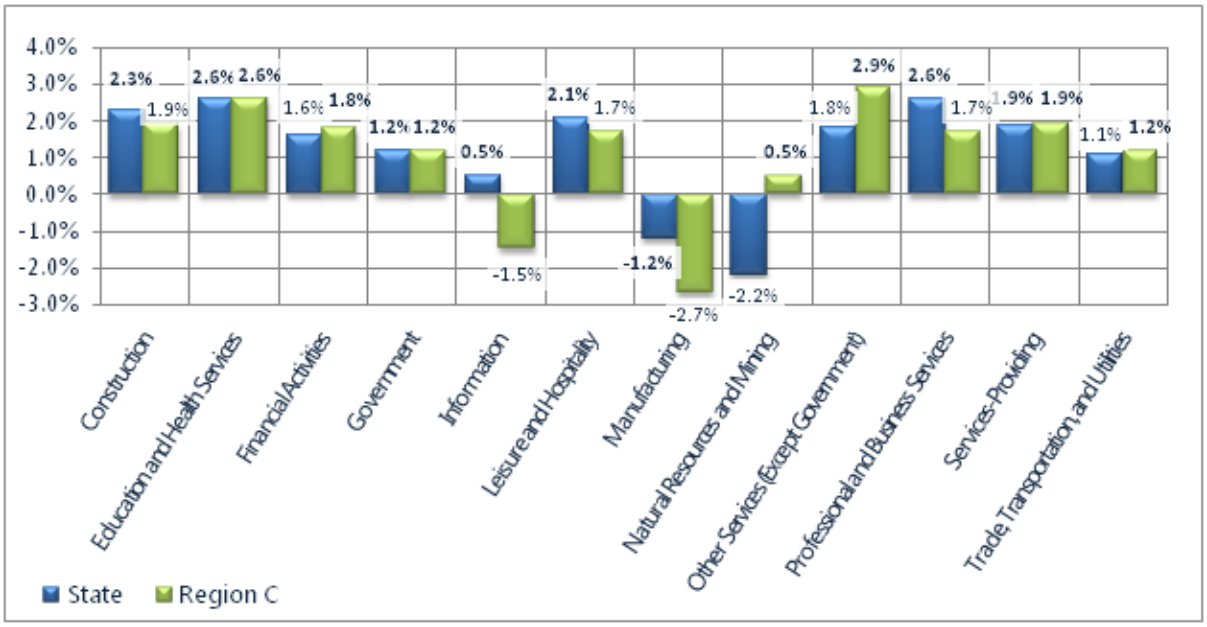


Figure 2-5.2: State and Region C Occupation By Major Industry Projections 2000-2016



Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

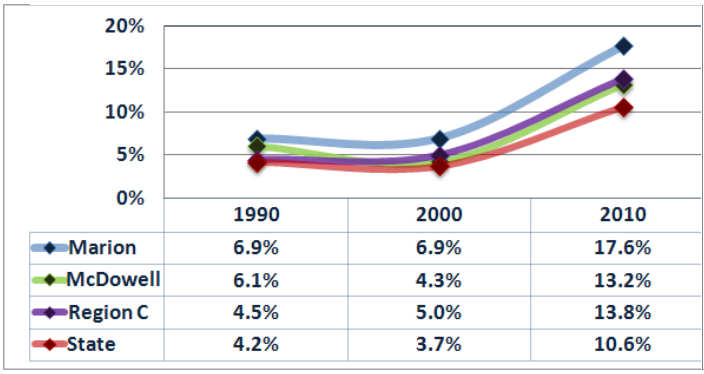
Table 2-5.1: Occupation By Major Industry Projections 2000-2016

Major Industry	Region C 2006	Region C 2016	Percent Change Region C	McDowell (2005-2009)	Marion (2000)	Percent of Marion's Workforce	McDowell 2016	Marion 2016
Construction	3,990	4,830	1.9	1469	134	9	1497	135
Education and Health Services	19,440	2,200	2.6	4387	398	9.07	4501	408
Financial Activities	1,840	19,870	1.8	550	70	12.72	560	71
Government	5,180	5,860	1.2	945	111	11.75	956	112
Information	1,390	1,200	-1.5	143	28	19.58	141	28
Leisure and Hospitality	5,930	7,040	1.7	1642	112	6.82	1670	114
Manufacturing	23,390	25,050	-2.7	5014	746	14.87	4879	726
Natural Resources and Mining	1,000	1,050	0.5	385	40	10.39	387	40
Other Services (Except Government)	3,760	5,000	2.9	850	110	12.94	875	113
Professional and Business Services	4,550	5,390	1.7	1027	94	9.15	1044	96
Services-Providing	56,120	67,470	1.9	2148	204	9.5	2189	208
Trade, Transportation, and Utilities	14,030	15,730	1.2	1102	71	6.44	1115	72

Unemployment

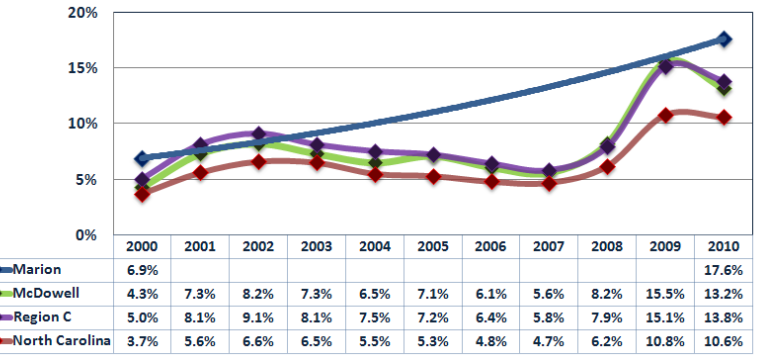
Unemployment rates for both the City and the County as a whole are relatively high. Currently the unemployment rate for McDowell County hovers around nine (9) percent, however historically it averages six (6) percent, which is higher than the state's historic average of 4.8 percent. The unemployment rate consists of the labor force (those over 16) that is not employed. Education, post-public education, and job training is key if to supply a workforce ready to fill job vacancies and attract business.

Figure 2-5.3: 20 Year Unemployment Rate: 2000-2010 Census/ESC



	1990	2000	2010
Marion	6.9%	6.9%	17.6%
McDowell	6.1%	4.3%	13.2%
Region C	4.5%	5.0%	13.8%
State	4.2%	3.7%	10.6%

Figure 2-5.4: Ten Year Unemployment Trend: 2000-2010Census/ESC



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Marion	6.9%										17.6%
McDowell	4.3%	7.3%	8.2%	7.3%	6.5%	7.1%	6.1%	5.6%	8.2%	15.5%	13.2%
Region C	5.0%	8.1%	9.1%	8.1%	7.5%	7.2%	6.4%	5.8%	7.9%	15.1%	13.8%
North Carolina	3.7%	5.6%	6.6%	6.5%	5.5%	5.3%	4.8%	4.7%	6.2%	10.8%	10.6%

Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

Tax Rate

During the past five years, the City has experienced only slow growth in its property tax base, due in significant part to the declining State and National economy. While there has been some residential and commercial development, this growth has been offset by the closing of the last two textile plants located in Marion. This ends an era of textile and furniture manufacturing, which had been the single largest industry sector in the entire county for over a century. With it comes the need for Marion to redefine its strategies if it is to rebuild a more robust and sustainable economy.

The City has had the same tax rate of $ 0.51 per $100 in assessed valuation for 45 consecutive years. While the City is responsible for setting its own tax rate each year, the County is responsible for assessing of all real and personal property county-wide for taxation purposes. The N.C. General Statutes mandate that all real property must be reappraised at least once every eight years. The County recently conducted a revaluation of all property including property within the City. With the new valuation in place, the estimated revenues for fiscal year 2010-2011 will provide just over $1.8 million in City revenue.

Community Tapestry: Economic Market Assessment

Marion's socio-economic profile is based on market segmentation data obtained from ESRI Community Analyst and Business Analysis Software, which utilizes U.S. Census Bureau data to classify U. S. neighborhoods according to socioeconomic and demographic compositions. The Tapestry Segmentation System is used by companies to better understand and reach consumer markets.

The Tapestry Segmentation combines cluster analysis and geographic information system (GIS) mapping to create 65 individually defined neighborhood classification types (consumer markets) based on specific socioeconomic data unique to a defined areas including census block groups and/or by zip code. These segments are further combined into twelve groups based on particular lifestyle and lifestage. The Tapestry Segmentation data specific to Marion and the study area is included to provide a broad understanding of the consumer market groups located in and around the community.

Marion and its urban boundary include six tapestry segments. These classifications are identified in Table 2-5.2

Table 2-5.2 Tapestry Segments By Land Area

Tapestry Segment	Percent Total Land Area Marion	Percent Total Study Area
Heartland Communities	65.4%	42.7%
Home Town	14.4%	34.6%
Rural Bypass	12.7%	7.5%
Southern Satellites	6.6%	6.7%
Midlife Junction	1.0%	5.8%
Rooted Rural	0%	2.7%

Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

Each segment corresponds to a more defined broadly defined Lifemode category.

Tapestry Segment Lifemode Categories

Senior Styles

More than 14.4 million households in the nine *Senior Styles* segments comprise one of the largest LifeMode summary groups. As the U.S. population ages, two of the fastest growing American markets are found among *The Elders* and the *Silver and Gold* segments. *Senior Styles* segments illustrate the diversity among today's senior markets. Although incomes within this group cover a wide range, the median is $45,396, attributable mostly to retirement income or Social Security payments. Younger, more affluent seniors, freed of their child-rearing responsibilities, are traveling and relocating to warmer climates. Settled seniors are looking forward to retirement and remaining in their homes. Residents in some of the older, less privileged segments live alone and collect Social Security and other benefits. Their choice of housing depends on their income. This group may reside in single-family homes, retirement homes, or high rises. Their lifestyles can be as diverse as their circumstances, but senior markets do have common traits among their preferences. Golf is their favorite sport; they play and watch golf on TV. They read the newspaper daily and prefer to watch news shows on television. Although their use of the Internet is nearly average.

Traditional Living

The four segments in *Traditional Living* convey the perception of real middle America—hardworking, settled families. The group's higher median age of 38 years also conveys their lifestage—a number of older residents who are completing their child-rearing responsibilities and anticipating retirement. Even though they're older, many still work hard to earn a modest living. They typically own single-family homes in established, slow-growing neighborhoods. They buy standard, four-door American cars, belong to veterans' clubs and fraternal organizations, take care of their homes and gardens, and rely on traditional media such as newspapers for their news.

Factories and Farms

The segments in the *Factories and Farms* summary group represent rural life—from small towns and villages to farms. Employment in manufacturing and agricultural industries is typical in these small, settled communities across America's breadbasket. Population change is nominal, and the profile is classic. Most households are families, either married couples or married couples with children. By age, the residents of *Factories and Farms* mirror the U.S. distribution, with slightly more retirees. Median household income is a bit lower, almost $40,524, but so is the home value of $92,572. Most own their homes. Their lifestyle reflects their locale, emphasizing home and garden care, fishing and hunting, pets, and membership in local clubs.

American Quilt

Location in America's small towns and rural areas links the four segments in *American Quilt*. Unlike *Factories and Farms,* this group represents a more diverse microcosm of small-town life, including the largest segment of Tapestry Segmentation, *Midland Crowd*. Manufacturing and agriculture remain part of the local economy, but *American Quilt* also includes workers in local government, service, construction, communication, and utilities. In addition to farmers, *American Quilt* includes the *Rural Resort Dwellers* segment, an older population that is retiring to seasonal vacation spots, and *Crossroads,* young families who live in mobile homes. Households in *American Quilt* are also more affluent, with a median household income of $45,729, and more are homeowners. However, the rural lifestyle is also evident, with fishing, hunting, and power boats along with a preference for pickups and country music.

Source: ESRI Business Analyst

The following table identifies the four categories and the corresponding Tapestry Segment(s).

Table 2-5.3 Lifemode Category and Land Area

LifeMode Category	Tapestry Segment(s)	Percent Total Land Area Marion	Percent Total Area Urban Boundary
Senior Style	Heartland Communities	65.4%	42.7%
Traditional Living	Midlife Junction	1.0%	5.8%
Factories & Farms	Southern Satellites, Home Town, & Rural Bypasses	33.6%	48.8%
American Quilt	Rooted Rural	0%	2.7%

Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

The segments are also organized into 11 urbanization groups to highlight features such as population density, size of incorporated areas, and proximity to a metropolitan area. Marion and its study area falls into four different urbanization groups.

Tapestry Segment Urbanization Groups

Urbanization Group: Small Towns

Small towns represent the ideal in American communities— affordable, close-knit, and apart from the hustle and bustle of city life. The *Small Towns* Urbanization summary group is typical. Active members of their communities, residents participate in public activities, fund-raising, and public meetings. They make a modest living, with a median household income of $39,244, but their earnings are sufficient to afford a single-family or mobile home. Most of the labor force is employed in manufacturing, construction, or retail sectors; many are already retired. *Heartland Communities* is well settled, but *Small Towns* welcomes the ongoing migration of younger *Crossroads* and older *Senior Sun Seekers*. They are less likely to own a credit card; those who do rarely use it. Technology is not an integral part of life for this group. Many still use a dial-up Internet connection; few will shop online or by phone. Because of their location, satellite TV is preferred, but many households don't subscribe to cable or satellite TV. Favorite pastimes include gardening and lawn care.

Urbanization Group: Rural II

Rural II countryside is the extreme opposite of urbanization. Low population density characterizes life in the country with its inconveniences such as the need for multiple vehicles and advantages such as affordable single-family homes with land. Most of the population lives in rural farm areas; the rest live in the country or in small villages and work in mining or manufacturing. Residents are slightly older than the U.S. median, with a median age of 39.8 years; some are already retired. Most are homeowners. Residents of *Rural II* areas are settled; few of them will move. Family and home are central in their lives. Their lifestyles reflect a preference for comfort and practicality—western or work boots to dress shoes, kerosene heaters to espresso/cappuccino makers, recliners to patio furniture, garden tillers to trash compactors.

Urbanization Group: Suburban Periphery II

Suburban Periphery II incorporates a population density similar to *Suburban Periphery I* but is more likely to be found in urban clusters of smaller cities in metropolitan areas. Housing is still predominantly owner-occupied, single-family homes but is older and closer to employment. Households are a mix, similar to that of the United States as a whole. More than half are married-couple families; one-quarter are singles who live alone. Although the median household income and home value are below the U.S. median, their median net worth is higher. This is the oldest Urbanization summary group in Tapestry Segmentation, with a median age of 41.4 years, and the highest concentration of householders who are older than 65 years. They like to watch a variety of sports, news, or documentary shows on television; occasionally, they will also watch a movie or primetime drama. They prefer to read newspapers instead of magazines but have an equal preference for fiction or nonfiction books. They prefer domestic sedans.

Source: ESRI Business Analyst

Table 2-5.4: Urbanization Groups by Land Area

Urbanization Groups	Tapestry Segment(s)	Percent Total Land Area Marion	Percent Total Area Urban Boundary
Suburban Periphery II	Home Town, Midlife Junction	15.4%	13.3%
Small Towns	Heartland Communities	65.4%	42.7%
Rural II	Southern Satellites, Rural Bypasses & Rooted Rural	19.2%	44.0%

Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

HOUSING & NEIGHBORHOODS

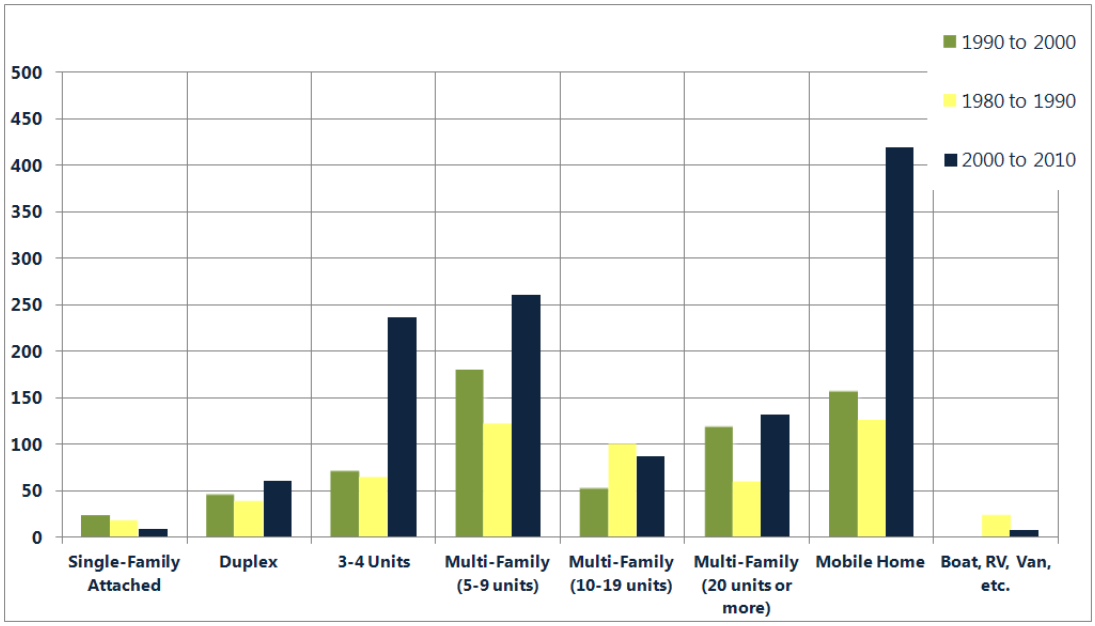
Housing addresses a basic human need providing shelter for residents, and is the predominant land use that defines neighborhoods. The housing element of this Plan serves to identify the existing conditions of residential structures, identify the character of existing neighborhoods, evaluate the current need for additional housing types, and project the future growth of housing to meet the needs of the community.

Housing Characteristics

Adequate, safe housing is a basic human need. The American Health Association ranks housing as one of the top three significant issues affecting personal and community health. The quality, availability, and affordability of the existing housing stock in the community is weighted heavily in the decision-making process of businesses and industries that are considering new locations. Newcomers to the City also consider a variety of factors when choosing a new home such as quality of schools, public safety, convenience to jobs and services, and other community amenities. It is difficult to predict future housing needs because it is subject to economic conditions. As seen in recent years, interest rates and the economy have a dramatic impact on the housing market. These factors often make the difference between home ownership and rental housing.

According to the most recent Census figures, 63 percent of housing is comprised of single-family detached homes, while the remaining stock includes other types of single- and multi-family housing. The second largest housing type is mobile homes, which account for 13 percent. Figure 2-6.1 and 2.62 identifies the type and number of dwelling units within the City.

Figure 2-6.1: Total Dwelling Units by Type



Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

Figure 2-6.2: Total Number of Single-Family Housing Units Percentage

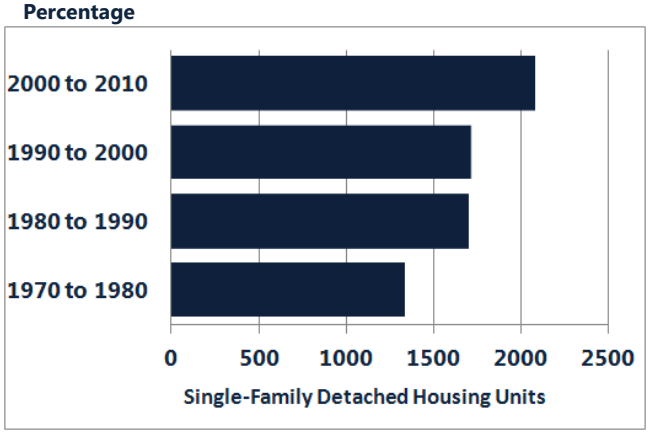
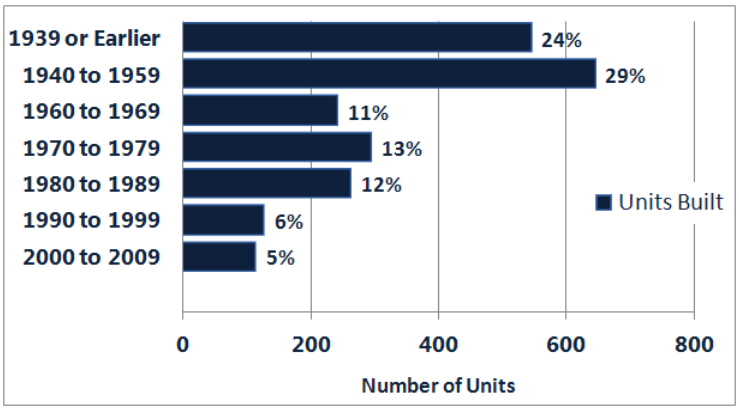


Figure 2-6.3: Year Housing Units Built and



According to U.S. Census data, the median year built of the existing housing stock in Marion is 1956 and is older than the median age of housing countywide. As seen in Figure 2-6.3, the highest percentage of existing housing was constructed between 1940 and 1959. The median age of owner-occupied housing unit is approximately 60 years, while the median age of renter-occupied units is slightly newer at 44 years in age.

The most recent 2010 Census housing figures estimate that there are 3294 housing units located within the City. The modest increase in the number of the housing units is largely attributed to the expansion of the City's municipal boundaries over the last forty years. Table 2-6.1 provides the total number of housing units over the last ten years.

Table 2-6.1: Total Number of Residential Building Permits for New Construction

	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Total Units	26	13	10	18	12	10	11	13	8	15

An examination of new housing development through the issuance of building permits issued since 2001 provides a realistic trend of new housing growth over the last decade. As shown in Table 2-6.1 new single-family residential construction was relatively low within the City.

As shown in Figures 2-6.1 and 2-6.2, Marion offers a diverse housing market in terms of housing types including single-family detached and attached housing, mobile homes, and multi-family housing. The figures are based on the Land Based Classification System (LBCS) and windshield survey of existing housing units in the City conducted November 2010. Detached single-family housing units are the most predominate housing type within the City, comprising of 63% percent of housing. This is down ten percent from the 2000 Census when single-family homes made up 73 percent of the housing stock.

Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

Most single-family housing is constructed entirely on-site, in compliance with the North Carolina Building Code. Although this is the most predominate type of housing, it is also the most expensive to construct. Over the last ten years, the number of Certificates of Occupancy issued for residential development has been for mobile homes, which is a more affordable housing option for some residents. The number of multi-family housing units has increased slightly over the last decade with the most significant number of units constructed at Spaulding Woods I and II. Just over 24% of the city's housing stock is comprised of multifamily housing units, including elder living facilities and group homes. The cost of attached single-family and duplex construction though generally less per unit than site-built single family homes, is significantly less (3%) than any other housing type.

Residential Growth

Population growth has a direct correlation with the growth of housing stock. As shown in Table 2-4.1, the City grew by 52 percent between 2000 and 2010, however the number of new housing units was significantly lower. In large part, this can be attributed to the annexation of existing neighborhoods as the City extended its boundaries over the previous decade. The City grew from approximately 3.5 square miles to 5.5 square miles in size. The largest residential area to be incorporated into the City was the Eastfield community. This community is completely contained within Census Tract 9704 as shown in Map 2-4.1, which has the highest density (persons per square mile) than any other Census Tract in the County.

Neighborhoods

For the purposes of this Plan, the City was divided into eleven different sectors. Of those sectors five areas are predominately residential and include 47 separate neighborhoods. Each neighborhood boundary was determined based on several different factors. Those include:

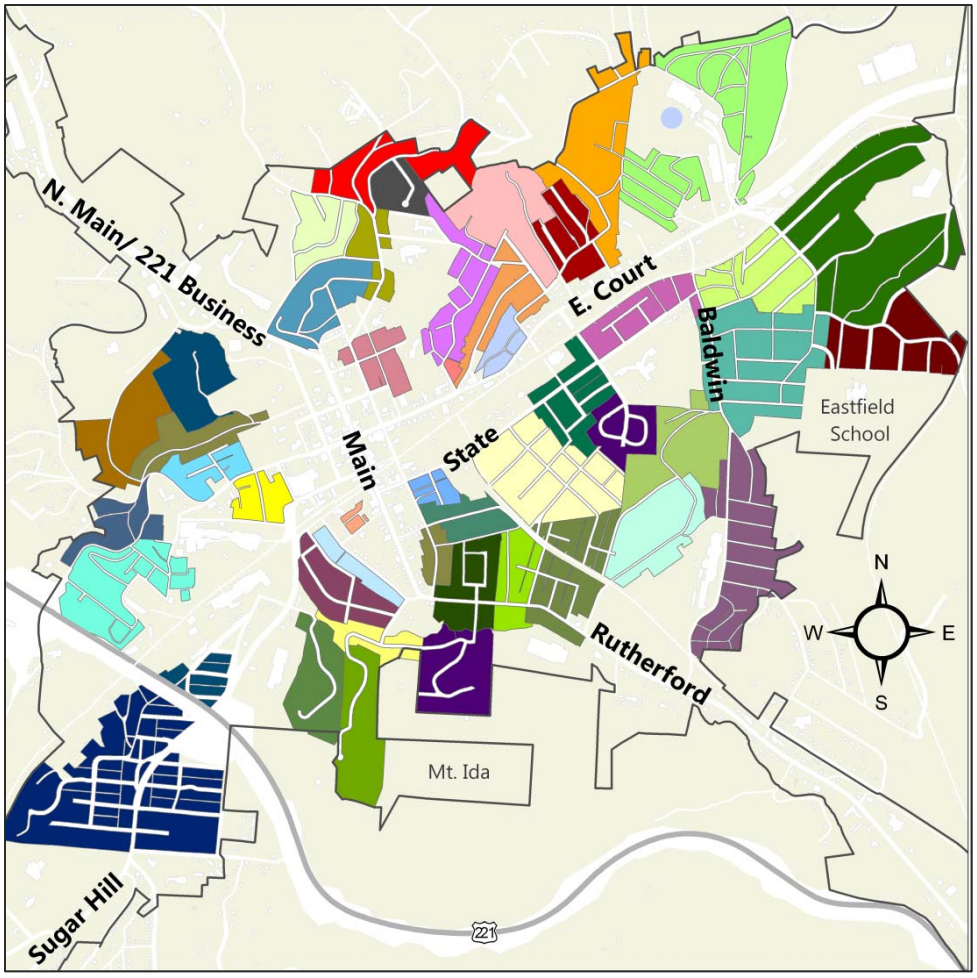
Boundaries follow rear property lines as much as practical to avoid splitting neighborhoods on the same residential street.

1. Boundaries follow platted subdivision boundaries.
2. Where placing a boundary line along a rear line or platted subdivision, topographic and/or other natural or man-made features were used to define a boundary.
3. Boundary lines follow existing city limit boundary.

Map 2.6-1 identifies the locations of all the existing neighborhoods within the City with a corresponding legend identifying the names of each.

Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

Map 2-6.1: City of Marion Neighborhoods



ESTABLISHED NEIGHBORHOODS

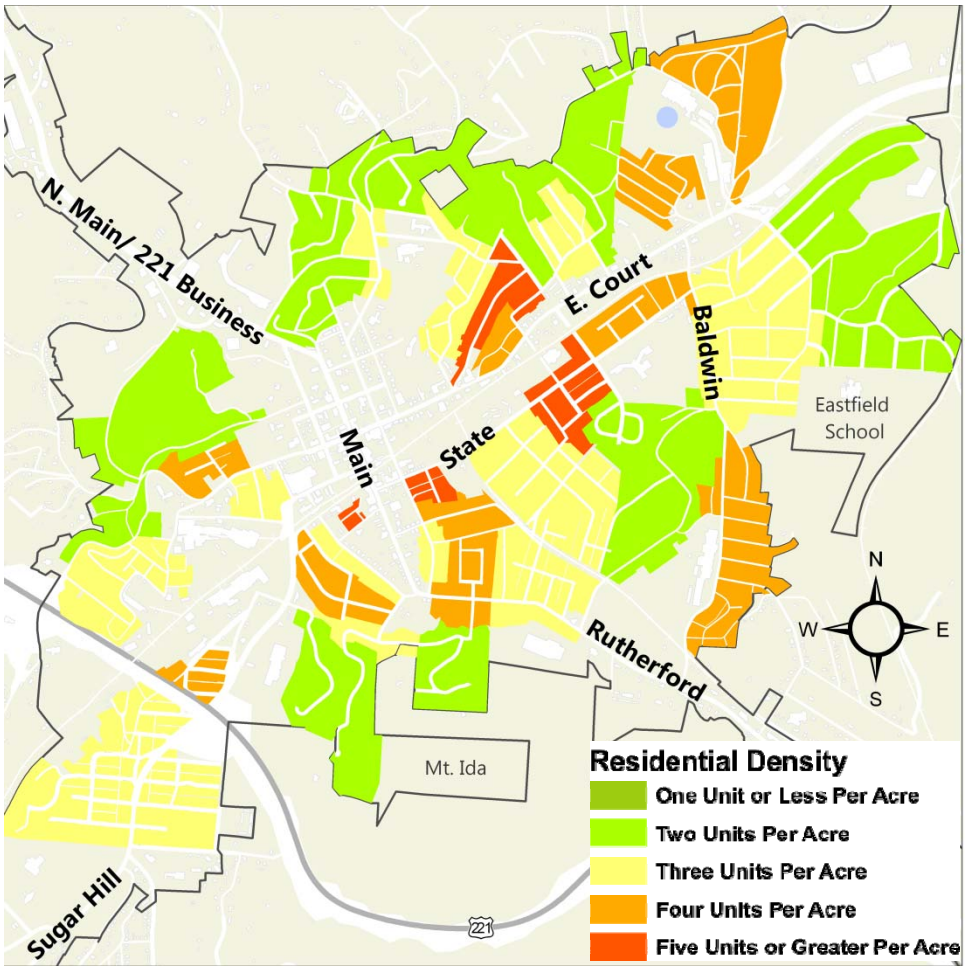
- A.B. GILKEY
- ASHEWORTH MORRIS
- CLAREMONT PARK
- CLINCHFIELD ANNEX
- CLINCHFIELD MFG.
- CROSS COTTON MILLS
- DAVIS HEIGHTS
- EC NEAL
- FAIRMONT PARK
- FINLEY HEIGHTS
- FINLEY RD
- FLEMING
- FOREST HEIGHTS
- FOREST PARK
- FOREST ROAD
- FOXFIRE
- GRANDVIEW PARK
- GREENWOOD PARK
- HILLCREST
- HOLLY HILL
- JW PLESS
- MADISON GARDEN
- MARION HEIGHTS
- MARION MFG. CO. ANNEX
- MARION MFG. CO. SUB
- MATTIE E PERRY
- MCDOWELL HIGHLAND
- MILLER AND HOUSE
- MONTEVISTA
- MOREHEAD RD
- MORGAN
- MORGAN TERRACE
- MT. IDA ESTATES
- MT. IDA PARK
- MT. MITCHELL PARK
- PARK HILL
- SINCLAIR
- SMOKERISE
- SOUTH GARDEN
- SOUTH MARION
- SPRING
- SUMMIT
- TATE AND JONES
- VIRGINIA AND GILKEY
- W.H. HAWKINS
- WISEMAN
- YANCEY AIRPORT

Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

Density: Dwelling Units Per Acre

An analysis of dwelling units per acre by neighborhood was conducted utilizing GIS software to determine where the highest density of residential land use has occurred. Map 2-6.1 shows the number of dwelling units per acre by neighborhood. The largest segment of residential neighborhoods has approximately three units per acre, with very few having more than five units per acre.

Map 2-6.2: Dwelling Units Per Acre by Neighborhood



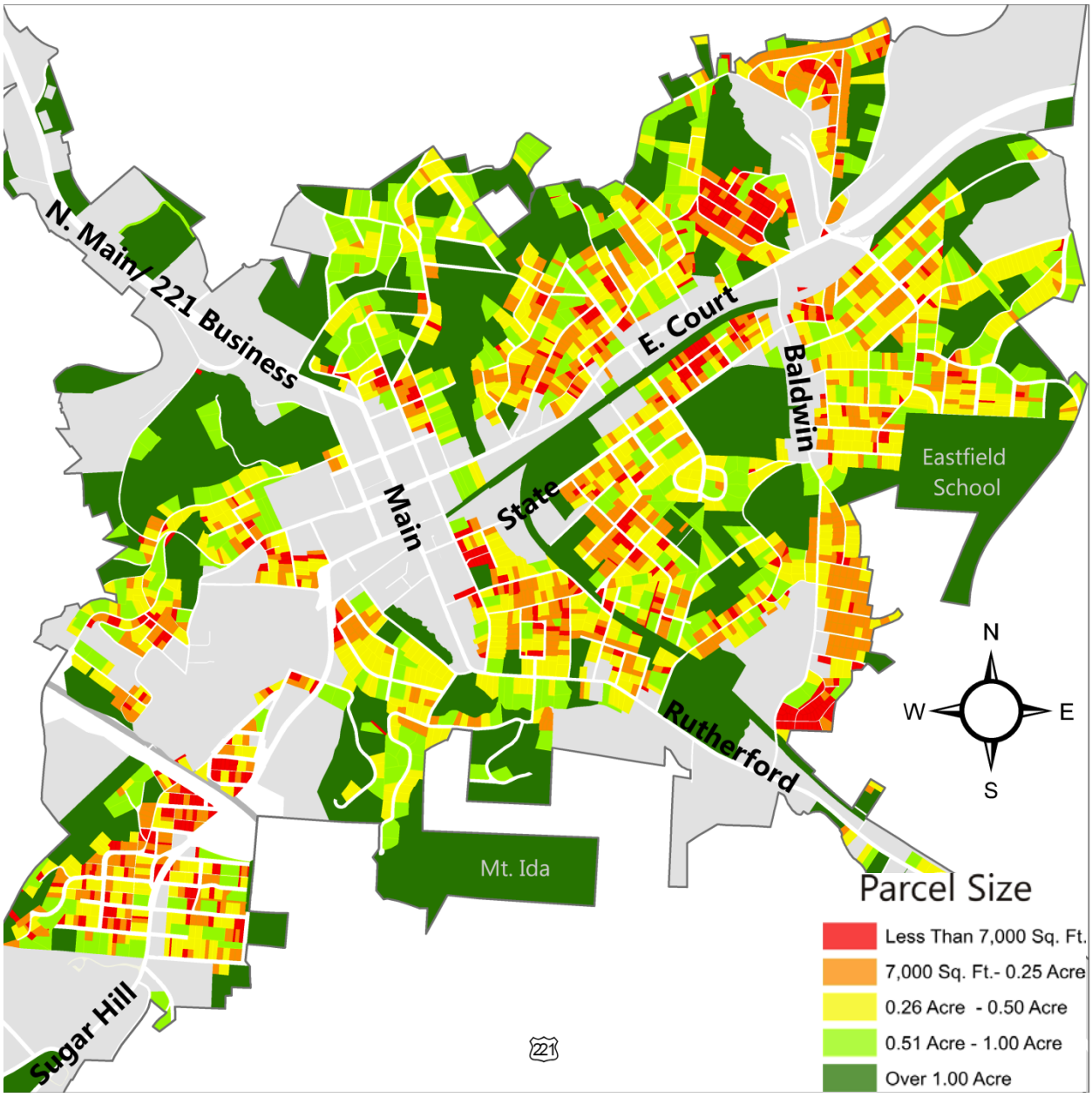
Five Units Per Acre Or More
Asheworth Morris
EC Neal
Marion Heights
Park Hill
Four Units Per Acre
Clinchfield Mfg.
Davis Heights
Grandview Park
Marion Mfg. Co.
Morgan Terrace
Mt. Mitchell Park
Sinclair
Spring
Tate & Jones
Three Units Per Acre
Claremont Park
Clinchfield Annex
Cross Cotton Mills
Fairmont Park
Fleming
Greenwood Park
Madison & Garden
Mattie E Perry
Miller & House
Morgan
Mt. Ida Park
South Garden
South Marion
W.H. Hawkins
Wiseman
Two Units Per Acre
Finley Heights
Forest Park
Foxfire
Hillcrest
JW Pless
McDowell Highland
Montevista
Morehead Road
Smokerise
Summit
Virginia & Gilkey
Yancey Airport
One Unit Or Less Per Acre
Finley Rd
Forest Heights
Forest Road
Holly Hill
Marion Mfg. Co. Annex
Mt. Ida Estates

Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

Residential Lot Sizes

There is a direct correlation between residential density and lot size as can be seen in Map 2-6.3. The largest segment within the lot size categories is the range between 7,000 square feet (0.16 ac.) to 0.25 acres. The most significant are the number of lots that do not conform to current zoning requirements for minimum lot sizes. There are 770 lots, identified in red on Map 2-6.3, that are non conforming to lot size and would be ineligible for development. The total land area for nonconforming lots is 64 acres scattered throughout nearly every neighborhood. It should be noted that some of the largest sites, while located within residential areas, include parks, schools, and churches.

Map 2-6.3: Parcel Based Residential Lot Size

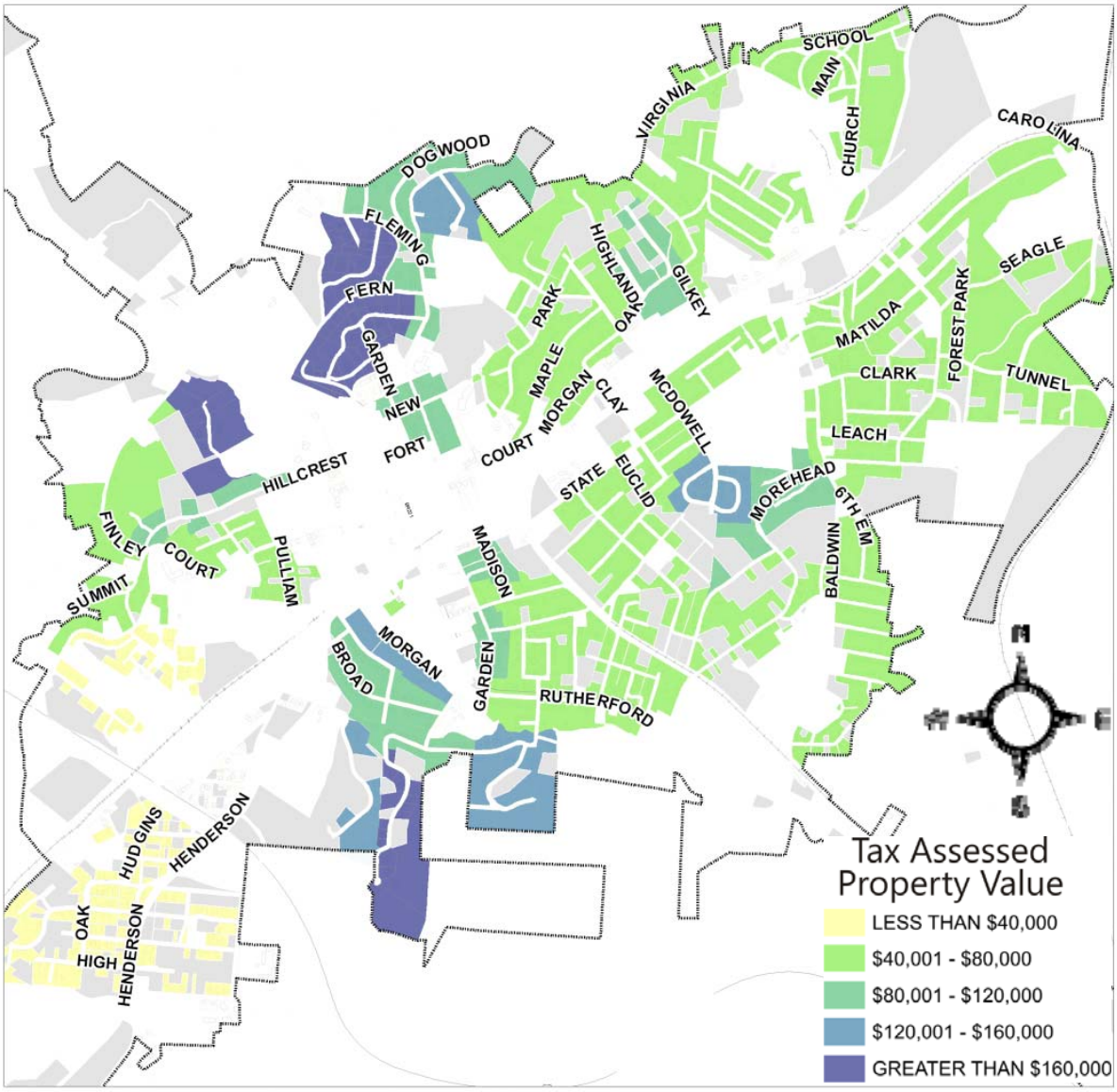


Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

Residential Assessed Value

A majority of the residential neighborhoods have properties with an average county tax assessed value between $40,000 and $80,000, while very few neighborhoods have average values above $160,000. The variation in property values is very similar to each areas original zoning classification.

Map 2-6.4: Tax Assessed Property Value Per Neighborhood



Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

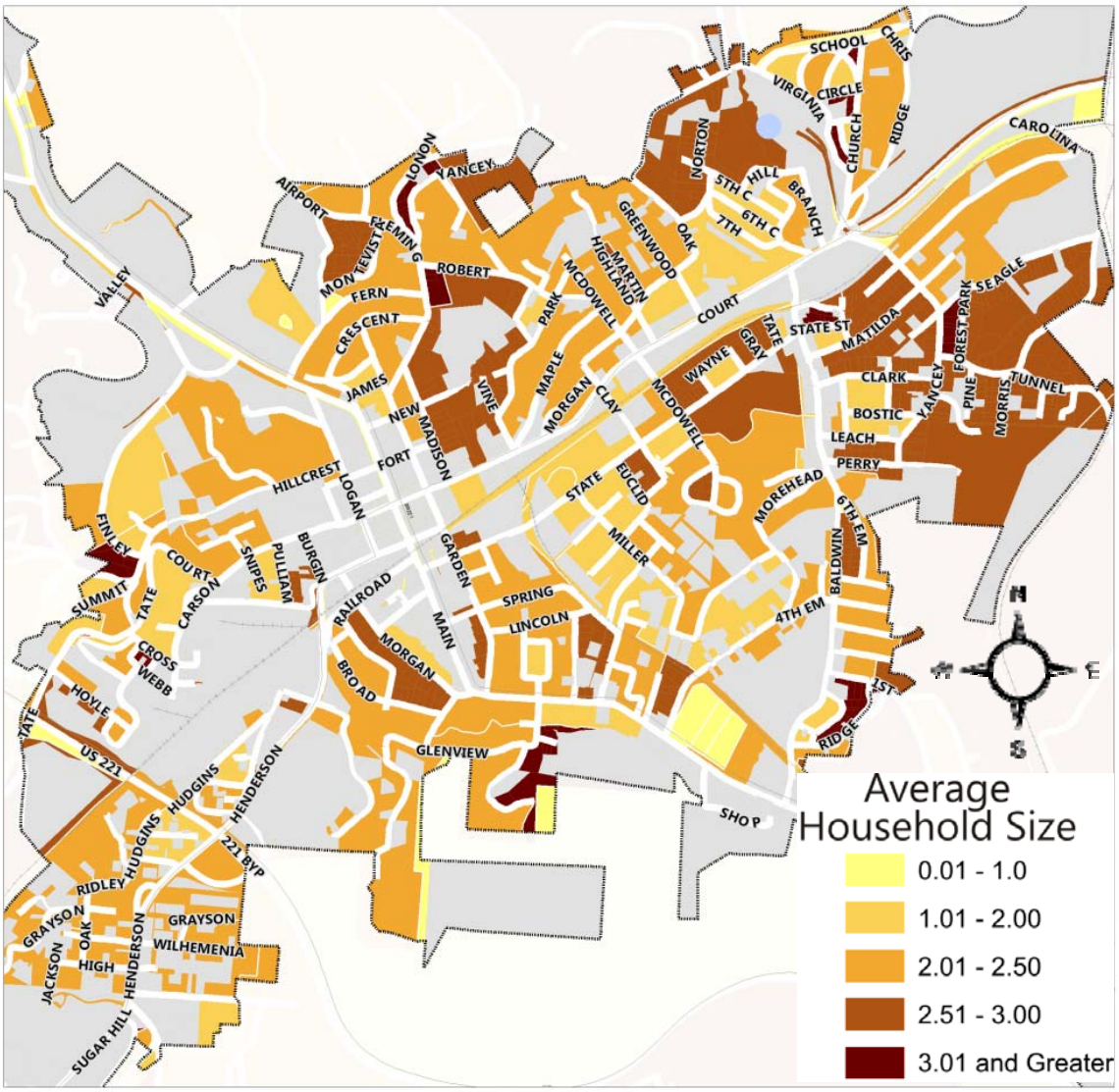
Average Household Size

Without a significant degree of fluctuation, the average household size for the City is 2.39 persons. A majority of the larger households (2.51 to 3.00) are located in close proximity to schools and employment areas. Map 2-6-5 provides a geographical reference to average household sizes by block group. The table to the left provides average household size by Census Tract

Table 2-6.2: Average Household Size by Census Tract

Average Household Size	
Census Tract	**Average Household Size**
9701	2.42
9702	2.51
9703	2.32
9704	2.37
9705	2.25
9706	2.49
9707	2.37
9709	2.58

Map 2-6.5: Average Household Size by US Census Block Group



Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

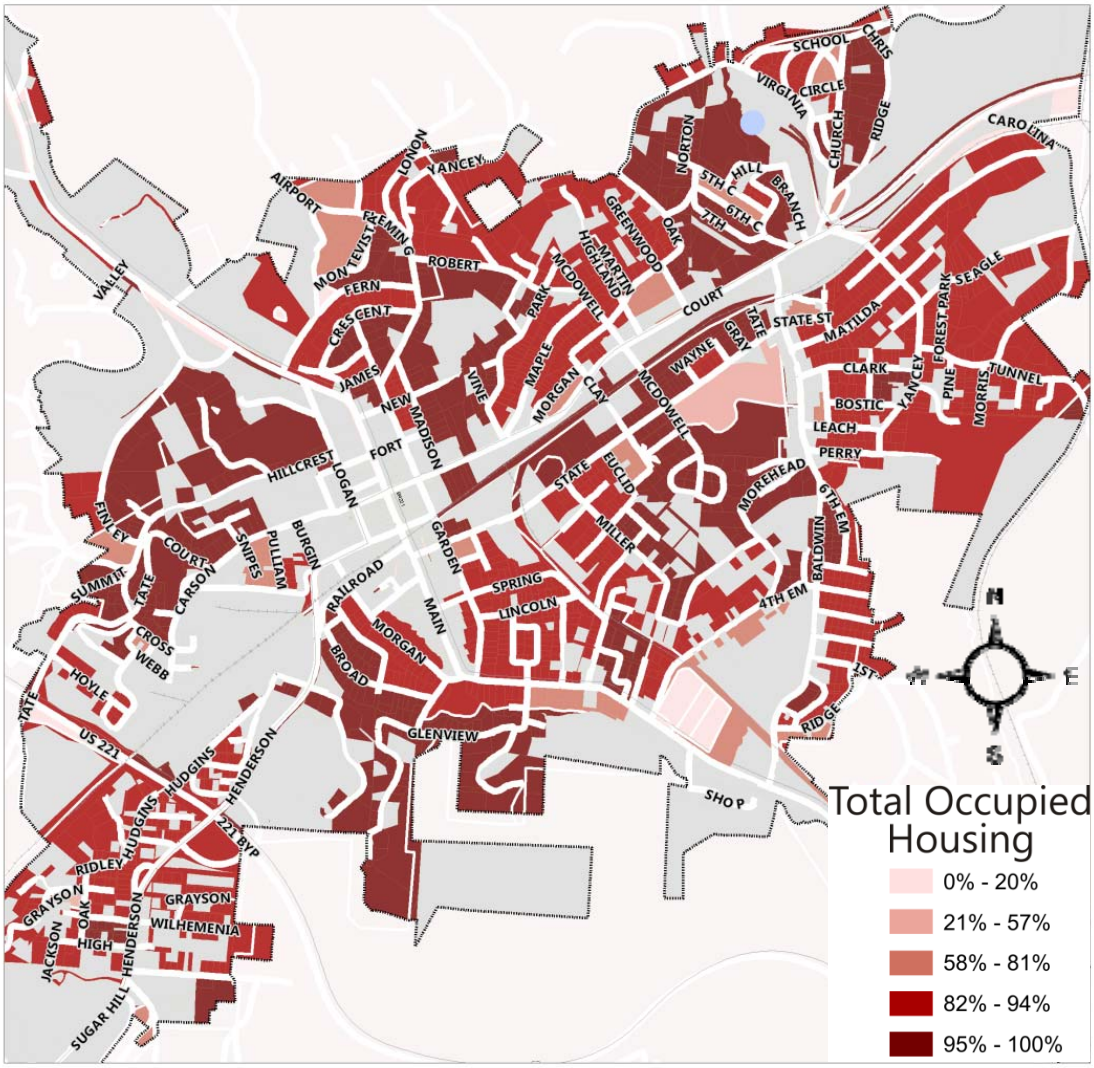
Residential Occupancy

The number of total occupied units has increased only slightly in the last half century, and remains at very high 93 percent occupancy rate. Only very few areas, as indicated on Map 2-6.6, indicate a low occupancy rate of 57 percent or less within the Census Block area. High occupancy rates provide a clear indication that demand is high for residential housing within the City.

Table 2-6.3 Total Number of Housing Units and Occupancy Rates

	1970	1980	1990	2000	2010
Total Units	1232	1605	2256	2363	3294
Occupied	1165	1460	2091	2157	3049
Percent Occupied	95%	91%	93%	91%	93%

Map 2-6.6: Total Occupied Dwelling Units by US Census Block Group



Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

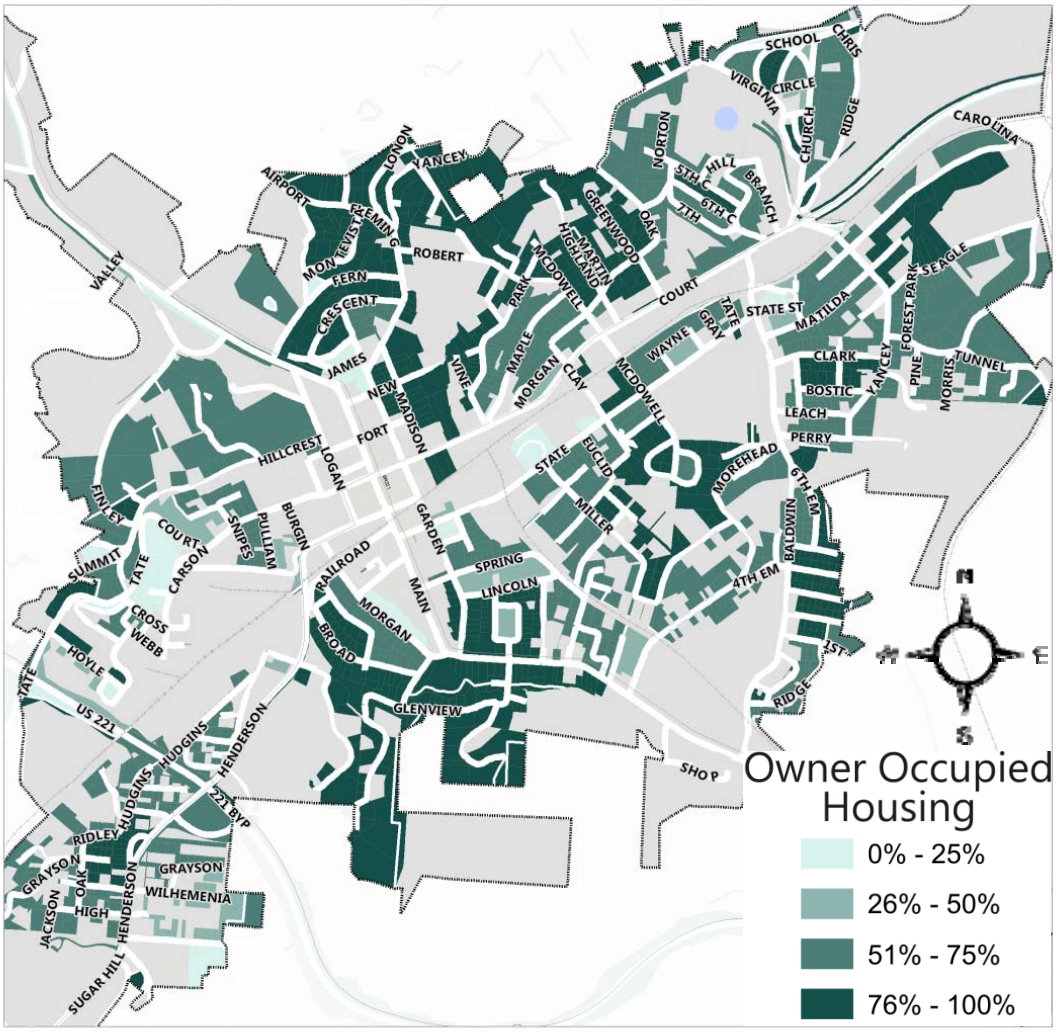
Owner Occupancy & Homeownership

Slightly more than half of the City's residential dwelling units are owner-occupied leaving 47 percent of the units renter occupied. The City's owner occupancy rate at is lower than both the County and the State. A brief survey of County tax records suggests that a majority of the renter-occupied units within the City are owned by a county resident. While not always the case, it appears from Map 2-6.7 below that Census Block Groups with higher owner occupancy rates also tend to have higher neighborhood-wide property values.

Table 2-6.4 Owner-Occupancy Rates

	2006-2010 (est.)
Marion	53%
McDowell	73%
North Carolina	68%

Map 2-6.7: Total Owner-Occupied Housing Units by Census Block: 2000 U.S. Census



Sources: U.S. Census Bureau http://www.census.gov/
McDowell County Tax Records
City of Marion Planning & Development GIS Database, ESRI Tapestry Segmentation Data

PARKS AND RECREATION FACILITIES

There are several basic parks, recreation and open space type facilities owned and maintained by the City. Since recreation space provided within Marion differs according to purpose, function and activity, a recreation space classification system was developed to profile Marion's recreation system. An additional category of community schools and private park resources has been added to highlight the importance of use of public school facilities and opportunities for public and private partnerships.

For some park types, standards are provided that are derived by national standards as identified in "Recreation, Park and Open Space Standards and Guidelines" (1983) by the National Recreation and Park Association (NRPA). For other park types, need is based on physical resources, rather than a population-driven standard. It is important to note, that the figures contained are general standards and guidelines and not requirements. Providing standards will assist in quantifying the need for parks, recreation and open space priorities in correlation with qualitative community-based priorities to improve the decision making process.

The national standard for neighborhood and community parks is 6 to 10 acres per thousand in population. This Plan identifies a city standard for combined neighborhood parks and community parks is five acres per 1,000 population. The reason for a combined neighborhood/ community standard is recognition that the individual neighborhood and community park standards may not be achievable in certain areas because of existing and proposed development which may eliminate the availability of parcels large enough to accommodate these parks. Within the combined five-acre standard, the preferred distribution is one to two acres for neighborhood parks and two to three acres for community parks. Urban open space or areas commonly referred to as pocket parks are generally no more than one acre per 1,000 in population.

Recreational Space Classification System

The following is a list of recreation area classifications and respective definitions that are referenced within the Plan.

Pocket Park. A small park of 0.25 to 1.0 acre in size, designated to serve a two to three block area. Pocket parks focus on informal recreation and are primarily provided as an area for social gathering or open space. These parks may contain a small play area, benches, natural elements and landscaping, or a gazebo. Pocket parks can be used in areas where it is difficult to acquire sufficient land for a neighborhood park or areas that serve as a public space within the downtown area.

Neighborhood Park. A park intended to serve residential areas within walking distance of the park site. Such parks may include, but are not limited to equipped playgrounds, field games, court games, picnic areas, gardens or other natural elements, and trails. Neighborhood parks are generally 1 to 5 acres and are accessible by foot or bicycle, from a service radius of about one-half mile uninterrupted by major roads or other physical barriers allowing safe and reasonable access.

Community Park. A park that serves a group of neighborhoods and provides a range of recreational and leisure activities greater than those found in neighborhood parks. These parks generally appeal to a diverse group of users. Such facilities may include, but are not limited to athletic fields, swimming pools, gymnasiums, community activity buildings, trails, and play equipment. A community park is typically a 'drive to' facility typically ranging in size of 5 to 40 acres. Community parks are ideally located near collector or arterial roads to accommodate adequate access. Community parks complement and expand on the services provided by public school grounds. Additionally, public schools can serve as a community park by default where land in the community is not available to develop a park.

Sources: City of Marion Parks and Recreation Master Plan 2006
Planning & Development Records
McDowell County Catawba River Greenway Plan 2007

Special Facilities. Special recreation facilities are generally identified as a facility that is unique in nature and purpose. Special facilities may include such facilities as golf courses, community centers, boat launching sites, performing arts center, stadiums and other single-purpose facilities. While development standards are available for such facilities, special facilities are based more on the desires or unique characteristics of the community rather than on the actual need.

District/Regional Park. A district or regional park is typically designated to provide recreational opportunities for more than one community, to an entire county, and to the surrounding region. These parks are often based on a resource that cannot be provided by a community park. District parks can serve an entire region and are typically located within 30 minutes driving time of the user. These parks may provide ample contact with natural aspects of the setting and may include large picnic areas, wildlife and scenic observation areas, areas for camping, nature trails, boating facilities and riding paths. An example of a district/regional park is Lake James State Park. Currently, there are no district or regional parks located within the City.

Natural Reserves. These parks are natural areas designated for conservation purposes. These areas may have limited passive recreation facilities including, but not limited to areas for viewing and studying land, aquatic, or avian wildlife, conservation activities, swimming, hiking, camping, trail facilities, nature centers or botanical gardens. Service areas and desirable acreages vary, but generally these areas are comprised of hundreds of acres. Pisgah National Forest is an example of a natural reserve. A natural reserve may also be one of the following:

Conservation/Open Space Area. These areas are preserved and managed to protect the natural environment or aesthetic quality or to protect health, safety and welfare by providing open spaces between roadways or developments or watershed protection, with recreation and leisure activities serving as a secondary function.

Habitat Protection Corridor. These corridors are designated to protect travel and migration routes and provide refuge for wildlife.

Greenways & Trails. Greenway systems are resource-based open spaces. They are acquired with the intent of little or no development. They are typically long, relatively narrow lands that follow roads, creeks, ridges, or other natural setting. Greenway systems serve various functions, including protection of environmentally sensitive areas and wildlife habitat, wildlife viewing, environmental education and trails.

Recreational Space Functions

In addition to the recreation area classification system, most recreation areas can be classified into two broad categories: active-based and passive-based recreation activities, depending on the facilities and natural resources located at the park site. These terms are defined as follows:

Passive-Based Recreation Activities

Passive-based recreation involves activities that do not necessarily raise the heart rate significantly above resting level, but do provide refreshment through furnishing visual and/or psychological release from the pressure of everyday life. In passive-based recreation facilities, emphasis is placed on the enjoyment of a natural resource or activity, and not on participation. The passive-based recreation facilities category includes seating areas or picnic tables, observation areas, botanical gardens, historical and archaeological sites and trails. Passive recreation activities may include hiking through a scenic area, wildlife observation, or visiting a historical site.

Passive-based recreation areas are often referred to as open spaces. Open spaces include fields, walking trails, scenic viewpoints and greenbelts. Generally, open space areas have minimal facilities. Open space areas can be characterized as areas unsuitable for development or as areas set aside for the protection of natural resources. Open space can also be used to enhance urbanized areas by providing relief from impervious surfaces such as parking lots and shopping centers.

Sources: City of Marion Parks and Recreation Master Plan 2006
Planning & Development Records
McDowell County Catawba River Greenway Plan 2007

Active-Based Recreation Activities.
Active-based recreation activities involve the pursuit of physical exertion that raises the heart rate to a level significantly above resting level. The benefit may be achieved through a variety of activities, which may include team sports such as baseball or soccer, as well as individual activities including jogging, bicycling, hiking, or playground activity. The main benefits of such recreation uses are increased cardiovascular fitness and improved mental health through the release of energy and tension or stress.

Active-based recreation activities rely on the presence of recreational facilities that enable certain activities to function. Without the provision of such facilities, the activity would either be limited in quality or eliminated altogether. Active-based recreation areas may include large open fields, ball fields, or more formally defined facilities such as tennis courts and swimming pools. Active-based recreation activities can be subdivided into two categories:

User-Oriented. User oriented activities can be provided anywhere, if funding and space are available. Such activities include baseball, football, soccer, basketball, golf and tennis. User-oriented facilities are generally man-made, and should be located to best serve the population of the community.

Resource-Based. Resource-based activities are those activities that can only occur in certain environments. This includes off-road sports, water and snow skiing and boating. Resource-based activities are typically designed to maximize the use of natural resources, such as waterways and woodlands.

Table 2-7.1: Recreational Space Classification System

Classification	Service Area	Park Size	Facilities
Pocket Park	2-3 block or quarter-mile radius	0.25 - 1	Seating areas, shade trees or other landscaping, commemorative features or public art displays
Neighborhood Park	Half-mile radius	1 - 5	Facilities in pocket parks plus sports fields, recreational buildings, paved multi-purpose courts, senior citizen area, picnic areas and landscaping.
Community Park	Multiple neighborhoods or community wide	5 - 40	All facilities found in a neighborhood park plus facilities to serve the entire family. Pools, athletic complex, softball/baseball fields, tennis courts, passive and active recreation areas, recreation building and related parking.
Special Facility	Community and Region	Varies	Facilities that serve one interest or have one primary function, stadium, golf course, skate park, senior center.
District/ Regional Park	Region	Varies	Wildlife and scenic observation areas, picnic areas, boating facilities, large open space.
Nature Reserve	Region and State	Varies	Minimal facilities-limited access.
Greenways & Blueways	Varies	Varies	Trails, observation areas, seating areas, boat launches.

User Groups

The City provides parks & recreation facilities for nearly 10,000 residents, and serves the greater McDowell County population at some of its more centrally located and popular park facilities. In recent years the area has attracted brought retirees and seasonal dwellers to the area. In the last ten years Marion has experienced a growth of 59 percent, placing it in the top 10 percent of communities experiencing growth

Sources: City of Marion Parks and Recreation Master Plan 2006
Planning & Development Records
McDowell County Catawba River Greenway Plan 2007

in the State. The town's age cohort is older than most North Carolina towns, but has fewer foreign born residents. Over half, approximately 55 percent, of residents within Marion are female and 17 percent of residents are 15 years old or younger.

- **Young people:** This user group generally avails itself of the opportunities to engage in active sports. They play softball, baseball and basketball. Their activities are often organized by school personnel at their facilities. The youngest of this group uses the playground equipment with parental supervision.

- **Seniors:** This rapidly increasing group enjoys walking and participating in many activities at the McDowell County Senior Center. They are avid users of downtown sidewalks for walking. They also use the picnic shelters and tennis courts at area neighborhood and community parks. They would like to see more opportunities for passive recreation where they can enjoy the natural environment closer to home. Such facilities specifically identified included wildlife observation areas and walking trails.

- **Adult Users:** Adult users often attend the fairs and festivals and use the downtown for walking. Families also often use the picnic shelters and playground equipment at many of the neighborhood and community parks. Many of these users also avail themselves of activities at Lake James, Pisgah National Forest, and the Blue Ridge Parkway, which are in close proximity to Marion.

Recreational Programs

- **Fairs and Festivals:** Marion plays host to the *Mountain Glory Festival* and the *Light Up Your Holiday Downtown* event. Many of these events are conducted in conjunction with the Downtown Business Association, who help coordinate many of the activities. Concert events are regularly held on Thursday evenings at the renovated Depot, and on Friday evenings in the summer on the courthouse lawn, with tremendous success. All the events are popular and well attended.

- **Walking trails:** Walking and jogging has been identified as one of the most pleasurable forms of recreation among adults 35 and over in Marion. Many residents enjoy walking and jogging in the downtown area utilizing sidewalks that connect the City's central business district to nearby residential neighborhoods. The City in coordination with the McDowell Trails Association is engaged in two projects that will provide more than 3 miles of trail system within the City.

- **Active/Organized Recreation:** The City provides facilities such as basketball courts and volleyball courts, but the City does not schedule their use. This type of recreational programming is primarily provided by the County.

Inventory of Existing Facilities

This section provides an inventory of the recreation resources within the City including both private and public facilities. For the purpose of this Plan, all recreation resources within the Marion have been classified as one the facilities as defined in the classification system stated previously.

Sources: City of Marion Parks and Recreation Master Plan 2006
Planning & Development Records
McDowell County Catawba River Greenway Plan 2007

City of Marion Park Facilities

Marion Community Building Park & Splash Pad

This community park is located in downtown Marion on 2.5 acres. Though smaller in size than a typical community park, the area is full of facilities to serve every age group and activity level. It has basketball and tennis courts, picnic shelters and tables, a large playground, recreation building and is slated for development of a new splash pad. Restrooms and parking are available. The park is very well used and was renovated in 2001. Various civic groups and individuals helped raised funds for new equipment making this park a jewel in the community. The park is open seven days a week on a first come first served basis.

A splash pad was installed in 2007, which is a popular summertime activity for children and their families.

West Marion Neighborhood Park

This neighborhood park was constructed in 2001 on 2.2 acres. Addie's Chapel United Methodist Church donated the land on Ridley Street in West Marion. The park contains a walking trail, a picnic shelter and tables, a basketball court and playground equipment. The park is available for use during daylight hours.

Cross Mill Neighborhood Park

This neighborhood park was completed in 2003 on 3 acres. It is located on Granby Street in the Cross Mill neighborhood. The park contains a walking trail, picnic shelter and tables, a basketball court, a volleyball court, a disc golf course and playground equipment. The park is open during daylight hours.

Eastfield Community Park

The Eastfield Community Park was constructed in 2011 by the City on four acres of property provided to the City by McDowell County Schools through a long term lease. Like other community parks in the West Marion and Cross Mill neighborhoods, the Eastfield Park contains playground equipment, swing sets, a basketball court, walking trail and picnic shelter. The park is available for is during daylight hours.

Clinchfield Community Park

The City recently acquired property off of Hill Street that will be the site of the new Clinchfield Community Park. The park will be located on ten acres of property donated to the City by Mr. Frank Boldon. The park will include a picnic shelter, walking track, basketball court, and playground equipment. A future greenway connecting the park to Virginia Road is also planned.

Sources: City of Marion Parks and Recreation Master Plan 2006
Planning & Development Records
McDowell County Catawba River Greenway Plan 2007

Downtown Gazebos

The City built and maintains two pocket parks with gazebos as an amenity to those visiting and enjoying the downtown area. One is located in the heart of downtown and the other is on the southern edge of Main Street. They are often used as social gathering areas and by walkers as a place to stop and rest. These areas also play a pivotal role during Marion's many street festivals and evening concerts.

The Depot & Courtyard:

The Depot, a highlight of Marion, is a favorite site for social gatherings and events. The Depot is a special facility that is centrally located one block from Main Street on 1.05 acres. The site includes Marion's historic train depot, which was fully renovated in 2004 as well as an award winning courtyard. This facility is frequently used for live music, festivals and other social gatherings sponsored by the City. When not in use by the City it serves as a popular location for family and civic events.

Historic Marion Tailgate Market

In 2010, the City constructed a pavillion to permenantly house a local farmer's market in the downtown. This amenity is also used for special events and other seasonal agriculute and horticulture sales. When not in use by local growers, the facility can rented for public use and non-profit fundraising events.

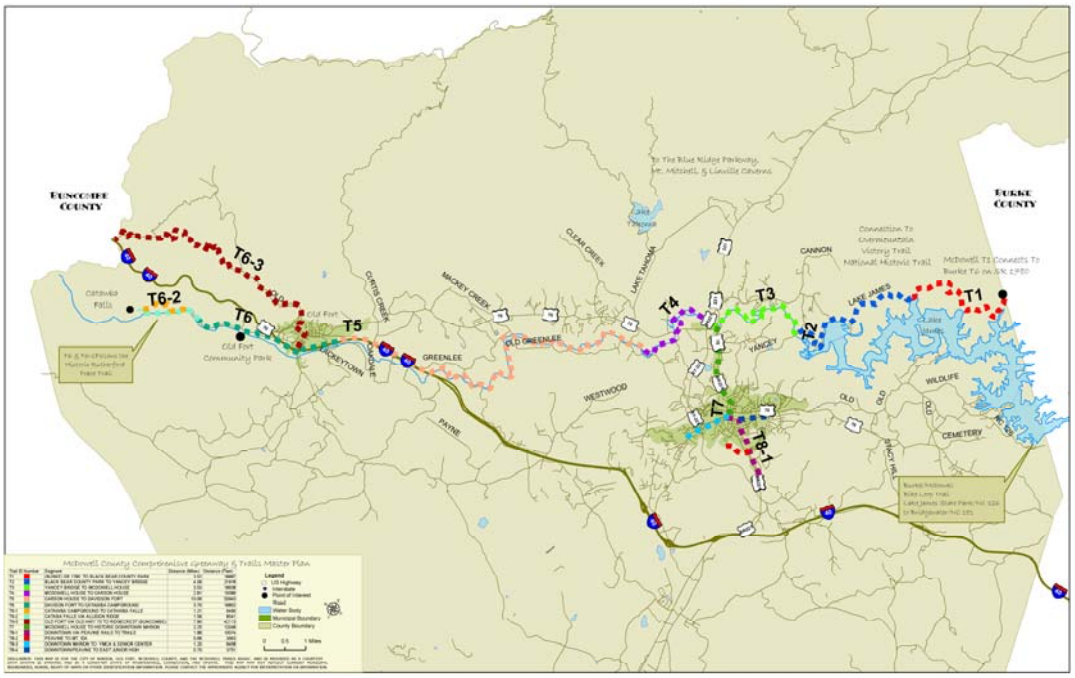
Catawba River Greenway & Other Trails

In the 2010, the City completed construction of phase one of the Joseph McDowell Historic Catawba Greenway on the northern edge of the City along the Catawba River. The greenway has generated overwhelming support as is evident by the number of daily users. The first phase includes a 1.5 mile corridor extending from US Highway 70 West to US Highway 221 Bypass behind Lowes. This area is well-suited for greenway development given the close proximity to the Catawba River and the surrounding commercial area. McDowell Highway School is conveniently located just across Highway 70 from the proposed trail, which will provide additional opportunities for recreation and alternative modes of transportation to and from school. The City has completed plans for the construction of phase II, and is in the process of seeking funding for its construction that will provide a 2800 linear foot extension to the Historic McDowell House.

In addition, the City recently acquired approximately 3.5 miles of inactive railroad for public trail use. The trail, known as the Peavine, will extend from State Street, one block from downtown, south parallel to properties that front on Rutherford Road. The trail serves as a multi-purpose public trail along the inactive rail corridor for biking, walking, jogging and similar activities.

Sources: City of Marion Parks and Recreation Master Plan 2006
Planning & Development Records
McDowell County Catawba River Greenway Plan 2007

Map 2-7.1: McDowell County Comprehensive Greenway Plan



County Parks and Facilities in the City

McDowell County Recreation Building & Skate Park

The McDowell County Recreation/Skate Park is located on Academy Street and includes a skate park, basketball court, tennis courts, playground, swimming pool and ball-fields. The skate park was built by the City in 2005. The County Recreation Park is open year-round and is the central location of the County's Parks and Recreation Department.

Maple Leaf Ball-fields

The Maple Leaf Ball-fields are located off of Finley Road in Marion and were acquired by the County several years ago from a private developer. With four baseball/softball fields located on the site, the park offers valuable opportunities for league sports and other group related activity.

McDowell County Senior Center

The McDowell County Senior Center is a multi-purpose center where persons sixty years of age and older come together for a variety of activities, programs and services. The Senior Center is located on Spaulding Road in Marion. Some of the Senior Center programs include Lunch with Friends, Senior Games, Health Promotion, and arts and crafts.

McDowell County Public School in Marion

There are three public schools located within the City including Marion Elementary School, Eastfield Elementary, and East McDowell Junior High School. In addition, there are two public schools including McDowell High School and West McDowell Junior High School that are located just outside the City Limits. Each school provides a variety of recreation opportunities and facilities for area residents. Facilities

Sources: City of Marion Parks and Recreation Master Plan 2006
Planning & Development Records
McDowell County Catawba River Greenway Plan 2007

include playgrounds with play equipment, a football field, running track, and open fields. The McDowell County School Board policies govern the general public use of school-based recreation facilities during non-school hours. School sites are included in the urban park inventory since their facilities are often used after school hours and reserved on weekends, summer and holidays for special events.

Private and Non-Profit Recreation Facilities

There are a few private and nonprofit recreation facilities that exist in the City and provide a wide range of recreation activities, generally on a membership or fee basis. These recreation facilities influence recreation planning by providing needed facilities, thereby reducing the need of similar public services.

YMCA

In 2003, the YMCA of Western North Carolina opened the Corpening Memorial YMCA in Marion. It is a not-for-profit organization open to all people by membership. It provides programs and facilities for aquatic sports, youth and adult sports and fitness. Highlights of the facility include Olympic size indoor swimming pool, state-of-the-art indoor climbing wall, and a league size soccer field.

McDowell Arts Council Association (MACA)/Performing Arts Center

MACA provides a wide variety of art classes for both adults and children. In addition to classes, MACA has an art gallery, which features local and traveling art exhibits as well as a performing arts auditorium that hosts the Foothills Community Theater and other performances.

The following table is an inventory of all parks and special facilities within the City.

Table 2-7.2: Public Park Inventory By Type

Park	Primary Function	Size
Pocket Park		
Downtown Gazebos	Passive	1 acre
Neighborhood Parks		
West Marion Park	Active	2.2 acres
Cross Mill Park	Active	3 acres
East Marion Park	Active	2 acres
Clinchfield Park	Active	10 acres
Community Parks		
Community Building Park	Active	2.5 acres
Mt. Ida Nature Preserve	Passive	33 acres
McDowell Community/ Skate Park	Active	6.7 acres
Maple Leaf Ballfields	Active	17 acres
Special Facilities		
The Depot		
Historic Downtown Marion Tailgate Market		
McDowell Senior Center		
McDowell Public Schools		
YMCA		
MACA		

Sources: City of Marion Parks and Recreation Master Plan 2006
Planning & Development Records
McDowell County Catawba River Greenway Plan 2007

Parks and Recreation Needs

Passive Recreation & Open Space

A reoccurring theme at both the community meetings and within parks and recreation surveys is the need for more designated open space in which passive recreational opportunities could take place. Some of the activities identified by both adults and seniors is a need within the community for wildlife observation areas, a scenic overlook for photography and painting enthusiasts, botanical gardens, a nature center, and amphitheater. There was strong community-wide support for the purchase of Mt. Ida to fulfill the various types of recreational needs identified by the community.

Additional Trails/Bikeway

The City recently completed phase I of the Joseph McDowell Historic Catawba Greenway, which has generated county-wide enthusiastic for more trail facilities. Of all the facilities provided in Marion, residents overwhelmingly expressed the need for more walking and bicycle trails. They identified the banks of the Catawba River and the abandoned Peavine railroad as ideal locations.

Urban Parks

Using both numeric data and the community-based needs assessment, there continues to be a need for both acquisition and development of neighborhood parks. Input from community meetings, residents expressed concern that as the urban area continues to grows future park sites will be eliminated. The community survey showed uniformity in the need to develop more urban parks. Since that time, the City has completed the construction of one new neighborhood park, and a second is currently under construction.

Park Land Acquisition

- Residents would like to see the City purchase of Mount Ida for passive recreation opportunities.
- Acquire land for open space preservation of the ridgeline the surrounds the City.
- Purchase land within the Clinchfield and East Marion communities to establish neighborhood park facilities.

Recreational Facilities

- Retreat space where groups can meet.
- Expand walking trails whenever possible
- Water Feature/Splash Pad for the Marion Community Building Park
- Greenway with boat launching, fishing, and wildlife observation facilities.

Sources: City of Marion Parks and Recreation Master Plan 2006
Planning & Development Records
McDowell County Catawba River Greenway Plan 2007

[This Page Intentionally Left Blank]

Sources: City of Marion Parks and Recreation Master Plan 2006
Planning & Development Records
McDowell County Catawba River Greenway Plan 2007

PUBLIC UTILITIES & SERVICES

The City operates facilities that supply both drinking water and wastewater utilities to the public. When Marion built its water and wastewater plant it capacities sufficient to serve the mill industries that were once in operation. It is estimated that the City has lost over $560,000 in utility revenue due to plant closings since 1990.

Data indicate that the City's Water Treatment Plant and main portions of the distribution system were constructed in 1954 and has the capacity to treat up to four million gallons per day (4mgd). At present, four million gallons of finished water can be stored at the existing holding tanks, and 1.2 million gallons can be stored in the clear wells located at the water filter plant. Current water demand is about 1.6 million gallons per day, meaning the City has about 3.5 days of supply of finished water.

Marion obtains its water from local creeks and is permitted to withdraw up to 4.25mgd from the combination of these sources.

Water Utilities

The City operates its own public water supply and distribution system. This water system presently provides service to approximately 4,300 customers, of which approximately 68% are located within the City's corporate limits.

The following table gives a listing of the major streams from which Marion obtains its public water supply.

Table 2-8.1: Summary of Stream Flow Data

Stream	Average Flow (MGD)	7 Day 10 Yr Low Flow (BGD)	Drainage Area (Acres)
Clear Creek at Intake	1.4	0.1	600
Mackey Creek at Intake	5.0	0.3	2,000
Buck Creek at Lake Tahoma	28.5	4.6	14,700
Buck Creek at Catawba River	31.7	5.2	17,500
Catawba River at US221	228.0	18.2*	110,000

** Low flows on the Catawba River reflect varying recording periods*

Sources of Water Supply

Clear Creek Watershed

Clear Creek Watershed, located approximately five (5) miles west of the City's water filter plant, was developed in 1903 as the original water source for Marion. Currently, raw water is diverted into an intake where it then flows through 6" diameter cast iron pipe to the City's filter plant. The watershed, all within the Pisgah National Forest, is approximately 0.9 square miles (576 acres) in size. It produces an average daily discharge of approximately 1.42 MGD and a seven consecutive day, ten year frequency low flow of approximately 0.13 MGD. Capacity of the 6" raw water line is estimated at 0.41 MGD.

Mackey Creek Watershed

The Mackey Creek Watershed is located approximately seven (7) miles west of the city's filter plant in the Pisgah National Forest. It was developed in 1923 to provide additional water to the City. Currently, it operates much the same as the Clear Creek basin, using an intake and diversion to direct raw water into 10" and 8" diameter cast iron pipe, where it flows to the City's filter plant. The watershed has a drainage area of approximately 3.1 square miles (1,984 acres). It produces an average daily discharge of approximately 5.0 MGD and a seven day, ten year low flow of approximately 0.26 MGD. Capacity of the 8" raw line is estimated at 0.84 MGD.

Sources: City of Marion Comprehensive Water & Sewer Study, McGill Associates, PA August 1989
City of Marion Water System Management Plan, Martin-McGill, December 2000
City of Marion Water and Sewer Asset Management Plan, Martin-McGill, February 2006
2006 and 2011 McDowell County 10 Year Solid Waste Plan

Buck Creek

Buck Creek is a raw water intake and pump station located just downstream from U.S. 70 approximately one-half mile northwest of the filter plant. This water source was developed in 1955 in conjunction with the water filter plant construction. Presently, it operates through the use of a diversion dam and three (3) raw water intake pumps with combined capacity of approximately 2,100 GPM, or 3.00 MGD, which pumps raw water o the filter plant through a 12" ductile iron water line, with an average daily flow of 28.5MGD and a seven day, ten year low flow of 4.59 MGD. However, these discharge figures are affected by Lake Tahoma which is located approximately three (3) miles upstream of the Buck Creek intake. This private lake, with a drainage area of 23 square miles at the dam, is used both for recreational and power generation purposes, and can significantly influence the average and minimum flows at the pump station.

These three sources have the potential raw (untreated) water availability for Marion as shown in the table below.

Table 2-8.2: Potential Water Availability

Source	Average Flow (MGD)	Minimum Flow (7-10) (MGD)
Clear Creek	1.42	0.13
Mackey Creek	5.00	0.26
Buck Creek	28.50	4.59
Total	34.92	4.98

The potential availability is limited by several factors. Only minimum flow (seven day – ten year) can be considered from each of the three (3) sources, and this minimum capacity from Clear Creek and Mackey Creek, and pump capacity at Buck Creek. The following table shows the actual capacity of the three (3) sources in terms of usable raw water supply in consideration of those limiting factors.

Table 2-8.3: Actual Water Availability

Source	Minimum Flow (7-10) (MGD)	System Limitation (MGD)	Actual Capacity (MGD)
Clear Creek	0.13	0.41	0.13
Mackey Creek	0.26	0.84	0.26
Buck Creek	4.59	3.00	3.00
Total	4.98	4.25	3.39
* Without changing existing pumps.			

The Marion Water Filter Plant is a 4.0 MGD facility built in 1955 and expanded in 1985 and is located on S.R. 1214 just west of the city limits. This plant involves conventional water treatment processes: coagulation, flocculation, sedimentation, filtration and chlorination. Additional, in 1987, alum sludge lagoons were added, and an auxiliary stand-by power supply was installed in 1988. The plant's finish water pumps, with combined capacity of 2,800 GPM, or 4.0 MGD, pump through three (3) water lines (6" and 10" cast iron, and 12" ductile iron) to the City's reservoir on Summit Street.

Marion's storage reservoirs include two concrete clearwells at the water plant with 1.2 MG of storage and two 2.0 MG reinforced concrete structure located on Summit Street, which is one of the highest points in Marion. The City total water storage capacity is 5.2 MG. The overflow elevation of these reservoirs is 1645 feet. Marion's water distribution system consists of approximately 290,550 linear feet of 2 inch through 12 inch diameter water lines, constructed of cast iron, PVC, ductile iron, asbestos-cement, and galvanized steel. Most of the downtown system and the transmission line from Clear Creek was installed in the early

Sources: City of Marion Comprehensive Water & Sewer Study, McGill Associates, PA August 1989
City of Marion Water System Management Plan, Martin-McGill, December 2000
City of Marion Water and Sewer Asset Management Plan, Martin-McGill, February 2006
2006 and 2011 McDowell County 10 Year Solid Waste Plan

1900's, with additional lines installed as growth demanded throughout the years. The following table gives a general listing of pipe sizes and lengths.

The City recently received a planning grant from the North Carolina Rural Center to study future needs at the Water Plant. It is anticipated that grants can be sought for water plant improvements, based on the recommendation of this plan.

Table 2-8.4: Water Distribution System

Water is conveyed from the reservoirs to the City through 6-inch, 8-inch, and 12-inch lines. Water flows northward along U.S. 221/226 to the U.S. 70 intersection through a 10-inch main line, and eastward along U.S. 70 from the downtown area through 6-inch and 12-inch lines. In the southeast area of the City, water flows through 6-inch and 12-inch mains along U.S. 221 and 226, and areas to the southwest along Sugar Hill Road are served by a 12-inch line. The Pleasant Gardens area is served by an 8-inch and 6-inch lines.

Map 2-8.1: Water Distribution System

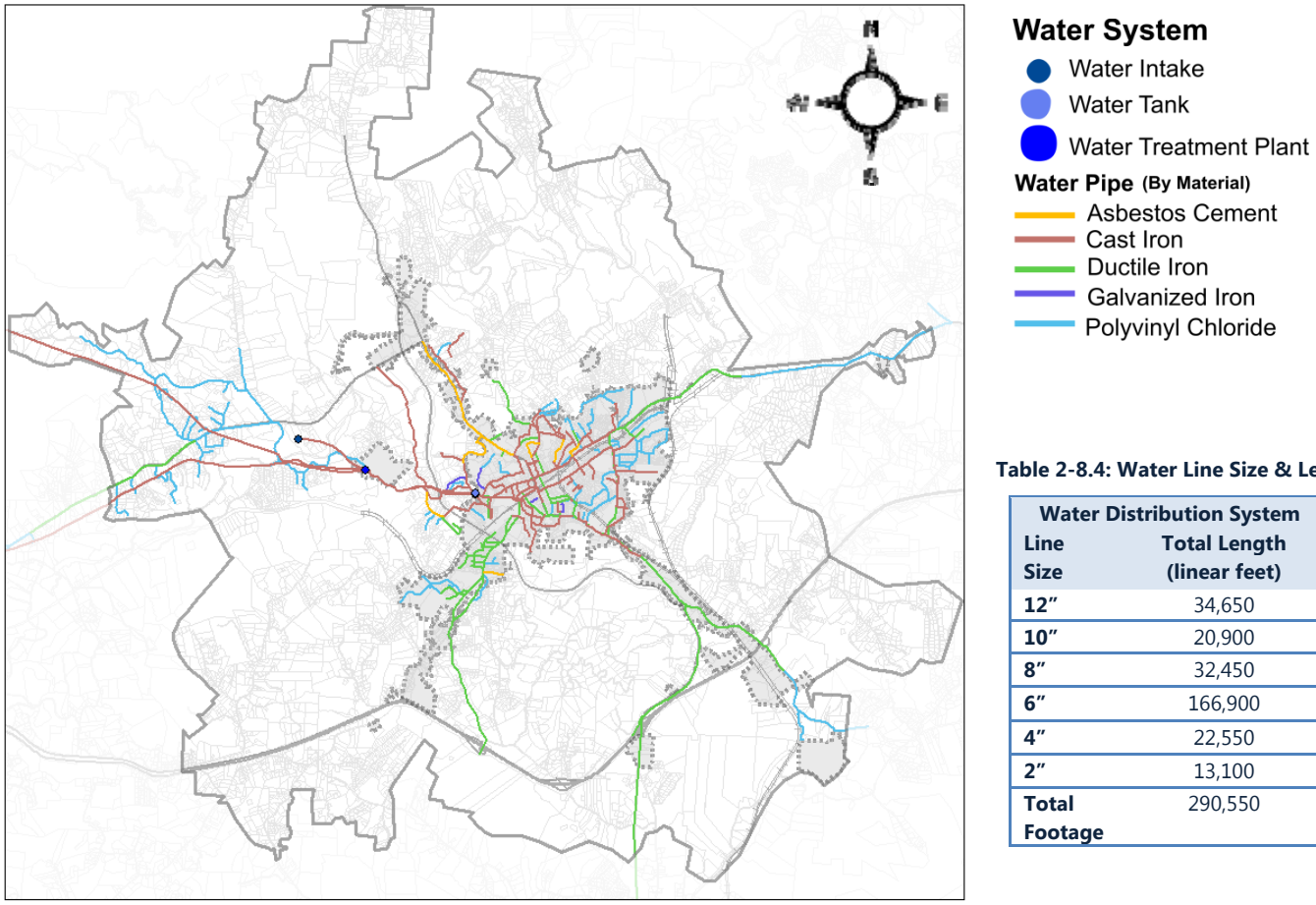


Table 2-8.4: Water Line Size & Lengths

Water Distribution System	
Line Size	**Total Length (linear feet)**
12"	34,650
10"	20,900
8"	32,450
6"	166,900
4"	22,550
2"	13,100
Total Footage	290,550

The City recently extended water and sewer service on Sugar Hill Road to Interstate 40 at Exit 81. The $2 million water and sewer extension will serve the new Wal-Mart Supercenter, the Stamey Chrysler Jeep Dodge area and the West Marion Business Park area, along with other properties fronting on Sugar Hill Road between Lukin Street and the interstate.

Sources: City of Marion Comprehensive Water & Sewer Study, McGill Associates, PA August 1989
City of Marion Water System Management Plan, Martin-McGill, December 2000
City of Marion Water and Sewer Asset Management Plan, Martin-McGill, February 2006
2006 and 2011 McDowell County 10 Year Solid Waste Plan

It is anticipated that surface water resources will continue to provide Marion's public water system with adequate supply over the next 20 years as long as water quality is maintained. All of the surface waters have their headwaters originating in the county and within federal and state-owned public lands, which will help to insure the protection of this vital city resource.

Waste Treatment

The City operates its own wastewater collection system and treatment plant. A sanitary sewer system of approximately 175,000 lineal feet of 6, 8, 10, 15, 18 and 24-inch diameter gravity sewer lines serves the City and immediate surrounding area to the northwest and to the southeast along U.S. Highway 226, including various commercial and industrial customers. The system at present has 20 pump stations in operation., The pump station below Monte Vista Street was replaced in late 1989 by a new gravity collector line and a 0.10 MGD package treatment plant which that now serves the North Main Street "five-lane" area. An area of the City known as "Clinchfield," to the northeast previously discharged to the Clinchfield treatment plant, owned and operated by the City. This plant had a 0.3 MGD capacity using a conventional activated sludge system with secondary treatment and chlorination, and has been in operation for many years, originally serving the mill and surrounding housing area, until it was modified into a pump station in the 1990s. The City constructed the 0.25 MGD Catawba River Wastewater Treatment Plant on Bungalow Drive in the northern part of the City in the late 1980s to serve the rapidly growing North Main Street and US Highway 70 West commercial area. This processing plant was modified into a pump station in 2010, as described below.

The main wastewater treatment plant for Marion is the 3.0 MGD Corpening Creek facility, located south of Interstate 40 and west of U.S. 226. This facility was constructed in 1978.

The City recently completed a $6.6 million plant upgrade, which will improve capacity and efficiency of treatment plant. This project also included taking the Catawba River Waste Treatment Plant offline and converting it to a pump station, and reducing inflow and infiltration in the wastewater collection system.

Both present and future wastewater flows to these plants were analyzed to determine the total wastewater needs and capacities. Marion's records indicate the 3.0 MGD Corpening Creek plant has an average daily flow of 2.16 MGD, with a peak daily flow of 5.5 MGD on February 28, 1987 and a low flow of 0.0325 MGD on November 22, 1988. The peak flows indicate that the problem of infiltration/inflow is creating occasional flow which exceeds plant capacity, and daily flows which are in excess of the average daily water consumption.

This revealed an average daily usage of water for the entire water system of 1.44 MGD, as compared to an average daily flow at the Wastewater treatment plant of 2.16 MGD. Obviously, a problem exists when more sewage is treated than water is used. This problem is further increased when two areas of the water system are not connected to the Corpening Creek plant (Pleasant Gardens and the Clinchfield area). This difference in average daily flow could be due to several different circumstances as follows:

1. Springs, steams, etc. flowing into the sewer system.
2. Inaccuracies in flow recording at the wastewater treatment plant.
3. The large percentage of unaccounted water related in Chapter 5 actually passing through the water system and into the sewer system.

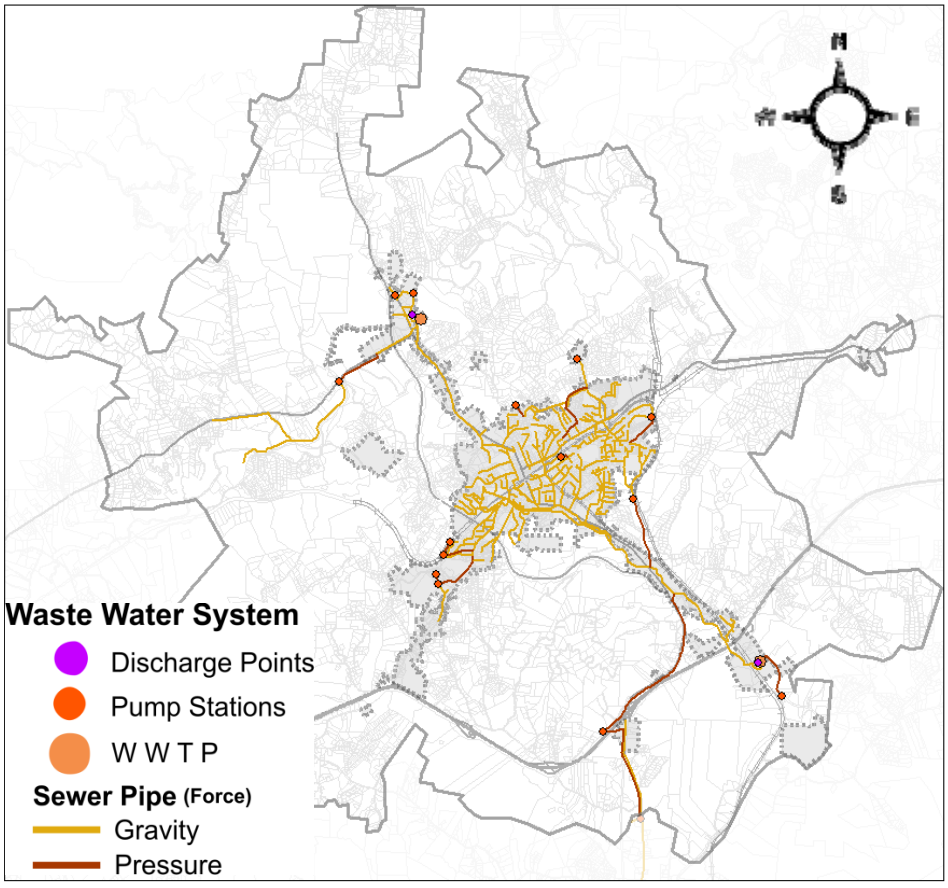
Sources: City of Marion Comprehensive Water & Sewer Study, McGill Associates, PA August 1989
City of Marion Water System Management Plan, Martin-McGill, December 2000
City of Marion Water and Sewer Asset Management Plan, Martin-McGill, February 2006
2006 and 2011 McDowell County 10 Year Solid Waste Plan

Base on average daily water usage, of 1.44 MGD in 1989 or 1.98 MGD in 2010, the Corpening Creek, Clinchfield and "5 lane" plants have adequate capacity to serve the Marion area and its current service boundary through the planning period.

It is recommended that Marion undertake and continue a program to identify and correct these possible problems with infiltration/inflow, flow measuring, and unaccounted water within their systems, thereby preventing needless and costly expansion of this wastewater treatment. However, if a major "wet" industry located in Marion, or if an outlying area installed a collection system and pump station for typing in Marion's system, expansions may be needed. These possibilities will need to be reviewed on a case-by case basis as they arise.

Several areas of Marion, however, do have 6- inch collector lines instead of 8-inch lines. These areas included Oak Street, Maple Avenue, Park Avenue, Ridge Street, North Garden Street, Fleming Avenue, West Fort Street, North Logan, West Court Street, Henderson Street, South Main Street, South Garden Street, Morgan Street, Hudgins Street and Williams Street. No sewer maintenance problems were reported in these areas, but future problems should be solved with installation of 8-inch lines.

Map 2-8.2: Waste Treatment System



It is anticipated that future growth will occur along the south and west along the I-40 Corridor, and provides the most suitable lands for both residential and commercial growth. In anticipation of this growth, the City has begun to evaluate and plan for future utility and service expansion in these areas.

Sources: City of Marion Comprehensive Water & Sewer Study, McGill Associates, PA August 1989
City of Marion Water System Management Plan, Martin-McGill, December 2000
City of Marion Water and Sewer Asset Management Plan, Martin-McGill, February 2006
2006 and 2011 McDowell County 10 Year Solid Waste Plan

Solid Waste

The City provides solid waste management services to over 3000 residences and businesses within the city limits through curbside and rear yard pick up services. The City operates in cooperation with McDowell County and their 10-Year Solid Waste Plan adopted in 2006. The Plan was prepared in accordance with N.C. General Statute 130A-309-09A (b) for meeting local solid waste needs and protecting the public health and the environment. The Solid Waste Plan is updated every three (3) years.

The City operates a curbside recycling program. In 1995, the City collected recycling from nearly 1600 households that recycled 178 tons of recyclable material. Within 10 years, the number of households increased 17% while the amount of recycled materials collected increased 310 percent. On a per household basis, the City's recycling program costs less than the collection and disposal of waste; and on a per ton basis, the cost of waste collection and disposal is greater than the cost of recycling. The recycling participation rate averages around 25 percent.

Table 2-8.5: City of Marion Solid Waste Program Costs

Fiscal Year	Collection & Disposal	Waste Reduction	Total
1995-1996			
Program Cost	$210,000	$88,500	$298,500
Cost Per Ton	$43	$245	$57
2005-2006			
Program Cost	$250,959	$86,770	$337,729
Cost Per Ton	$62.18	$119.19	
Per Household	$107.71	$54.57	
2010-2011			
Program Cost			
Cost Per Ton			
Per Household			

Table 2-8.6: Actual and Estimated Recycling Collection Per Ton

Material	Actual 2005/2006	Estimated 2010-2011	Estimated 2015-2016
Glass-Clear	3%	3%	5%
Glass-Brown	3%	3%	3%
Glass-Green	2%	2%	2%
Plastic-PETE	3%	3%	3%
Plastic-HDPE	2%	1%	1%
Aluminum Cans	1%	1%	1%
Steel cans	2%	2%	2%
White Goods	0%	0%	0%
Newspaper	15%	15%	15%
Corrugated Cardboard	68%	68%	67%
White Paper	0%	0%	0%
Yard Waste	0%	0%	0%

Table 2-8.7: Indicators of Efficiency

Fiscal Year 05-06	Total Solid Waste	Collection	Disposal	Recycling
Tons of Material Managed Per Year	4,036	4,036	4,036	728
# of Households or Clients Served	2330	2330	2330	1590
Total Cost Per Ton	99.47	37.99	47.91	75.23
Total Cost Per Household	172.32	65.61	83.00	34.45

Sources: City of Marion Comprehensive Water & Sewer Study, McGill Associates, PA August 1989
City of Marion Water System Management Plan, Martin-McGill, December 2000
City of Marion Water and Sewer Asset Management Plan, Martin-McGill, February 2006
2006 and 2011 McDowell County 10 Year Solid Waste Plan

PUBLIC SAFETY

Marion Police Department

The City's total crime rate has been steady for many years and the violent crime rate has decreased, despite substantial growth in the City's population. Since 2004, the City's total crime rate as reported by the North Carolina SBI has increased by 1.2 percent, but actually decreased by 15.6 percent on a per capita basis. Since 2004, the City's violent crime rate (accounting for murders, rapes, armed robberies and aggravated assaults) as reported by the North Carolina SBI has decreased by 25.6 percent and decreased by 37.7 percent on a per capita basis.

The Marion Police Department has 25 sworn positions, 1 full-time civilian position and 8 reserve positions, and maintains administrative, patrol and investigative divisions. Community policing and crime prevention are stressed through Neighborhood and Business Watch Programs, business visits and events such as National Night Out. The Department is involved in the schools by maintaining a School Resource Officer at East McDowell Junior High School. The Department provides property checks for residents and business checks for businesses in the City Limits.

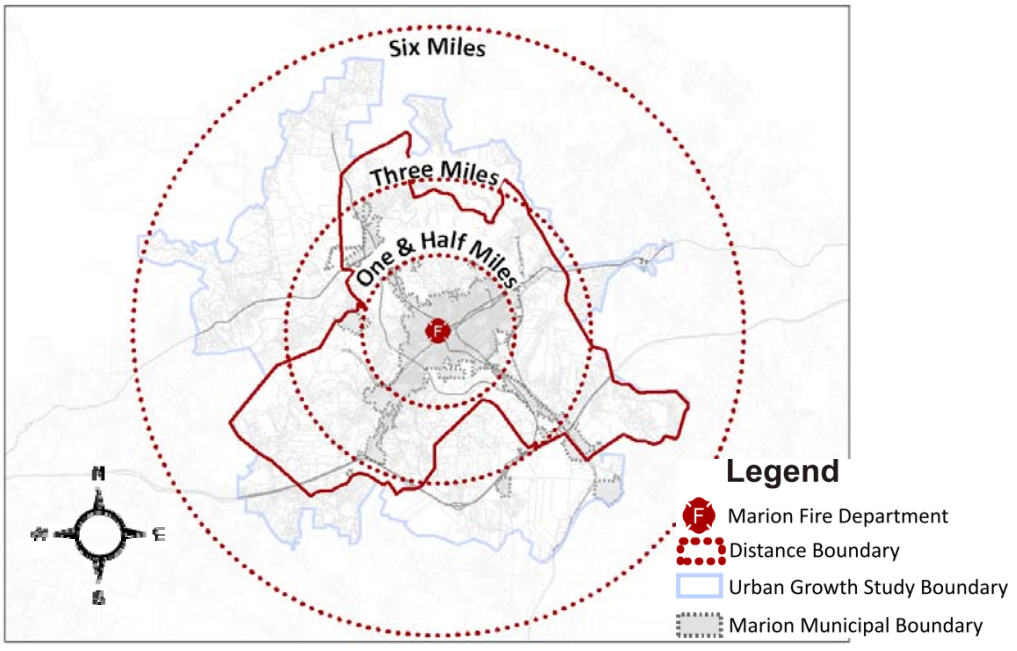
Fire Department

The City Fire Department is a combination of paid and volunteer fire fighters with six full time paid staff and 28 volunteers. The fire department responds to emergencies in both the city limits and a six-mile area around Marion. The Marion Area Fire District covers approximately thirty square miles (19,177 acres). In fiscal year 2009-2010, the Fire Department answered 588 alarms, conducted 674 fire inspections, and responded to 29 structure fires.

Fire protection is provided through a comprehensive system of fire hydrants, which are tested regularly, response equipment includes three pumper trucks, two tanker trucks, a 100-foot aerial ladder truck, and a four wheel drive brush unit.

The Fire Department has an ISO Public Protection Classification rating of Class 5, which is a standard rating classification that helps insurance companies set premiums on residential and commercial property. Class 1 represents the best public protection possible, while 10 indicates no protection available. As the City continues to grow, substations with engines and ladder trucks will be necessary to maintain the current ISO rating.

Map 2-8.3: Fire Department Service Boundary and Distances Evaluated By ISO



Sources: City of Marion Comprehensive Water & Sewer Study, McGill Associates, PA August 1989
City of Marion Water System Management Plan, Martin-McGill, December 2000
City of Marion Water and Sewer Asset Management Plan, Martin-McGill, February 2006
2006 and 2011 McDowell County 10 Year Solid Waste Plan

[This Page Intentionally Left Blank]

Sources: City of Marion Comprehensive Water & Sewer Study, McGill Associates, PA August 1989
City of Marion Water System Management Plan, Martin-McGill, December 2000
City of Marion Water and Sewer Asset Management Plan, Martin-McGill, February 2006
2006 and 2011 McDowell County 10 Year Solid Waste Plan

TRANSPORTATION

Existing Transportation System

Marion is served by a comprehensive system of highways, local roads, and railroads that were constructed in large part during the industrial development boom of the twentieth century. In large part, these routes were originally blazed by earlier settlers who created wagon trails that crisscrossed the landscape. These trails later transitioned into rural unpaved and paved roads to accommodate automobiles. Today, the City is served by highways U.S. 70, U.S. 221, N.C. 226, and Interstate 40, which are all maintained by the North Carolina Department of Transportation (NCDOT). While NCDOT does maintain a few other roads within the corporate limits, the City is primarily responsible for constructing and maintaining a majority of its own local roads. There are approximately 31 miles of City maintained roads, which serve as collector, arterial, and local streets that allow people and products to move freely to and from destinations. Another transportation-oriented asset, located just north of Marion, is the Blue Ridge Parkway. The Blue Ridge Parkway is a National Scenic Byway that borders McDowell County and accommodates thousands of visitors annually. It can be accessed from either U.S. Highway 221 North or State Route 80 between Marion and Pleasant Gardens.

Figure 2-9.1: Norfolk Southern Train Arriving at the Marion Depot

Marion remained a small mountain settlement town until the Western North Carolina Railroad arrived in 1868. By 1890 the Charleston, Cincinnati & Chicago Railroad arrived, and soon after, in 1908, the Clinchfield Railroad was established. The Clinchfield Railroad is best known for the state-of-the-art engineering techniques that were applied to its construction as is exemplified by the Clinchfield Loops climbing through the Blue Ridge Mountains north of Marion. The line extends from Ohio to South Carolina, and was in large part responsible for opening the region to industry and for spurring in-migration of many new residents. By 1916, rail lines extended in five directions with 18 passenger trains and 16 mail trains arriving daily. Rail lines remained active for passenger rail until the 1970's. Today, only freight service is available from either Norfolk Southern or CSX.

The City along with other partners is an active member of the Western North Carolina Passenger Rail Initiative that has been actively lobbying for the return of passenger rail service to the region since 1995. Efforts are being made to reestablish passenger rail service on the Northfolk Southern line which will provide service to and from Marion and other parts of the region between Asheville and Salisbury. The NC DOT Rail Division recently applied for federal funding for developing a plan for reestablishing passenger rail service.

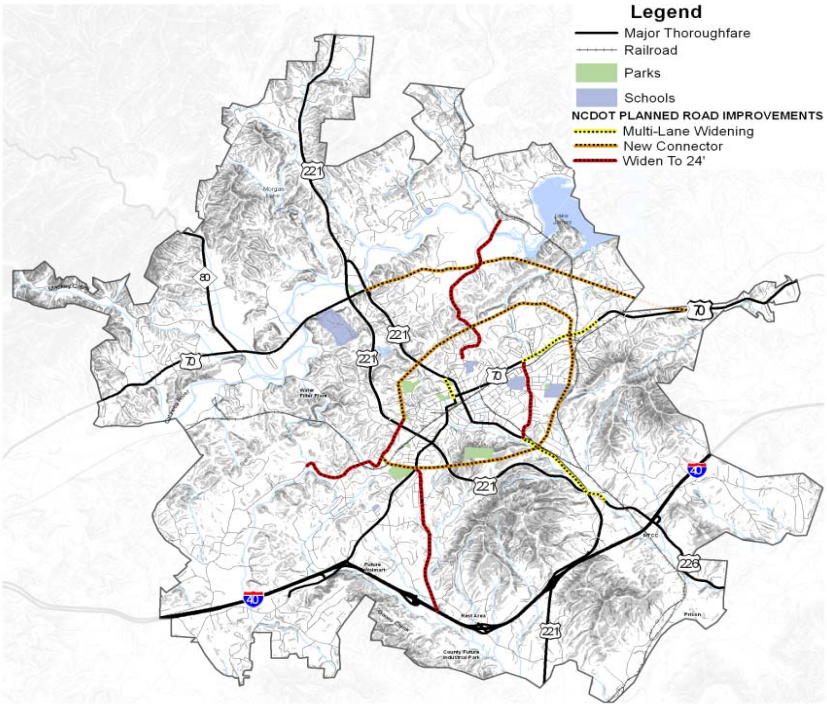
The City does not operate or fund any local public transportation services. However, there are two quasi-public transportation systems that operate within the city providing transportation service to specific population sectors including children, elderly, and disabled. The McDowell County School System provides bus service to eligible students who live two miles or further from their assigned school. Some exceptions are made for students who would otherwise be required to walk or bike to school under unsafe conditions. These occurrences are rare and exceptions are only made on a case by case basis and are typically provided when one stop can accommodate multiple children. The other service is operated

Sources: NCDOT Thoroughfare Plan for the City of Marion, July 2002
City of Marion safe Routes To School Plan, Pending Approval July 2011
Former Southern Railway Freight Dept, Marion, NC Documentary Research Report, Edwards-Pittman Environmental, September 2002

by McDowell County Transportation Planning Board Inc, which operates McDowell Transit providing service for three human service agencies that transport individuals to and from work, medical services, and other select destinations. Currently, there is no public transportation service offered to the general public, and it is most likely to remain so until demand dictates otherwise.

Marion's mild climate and natural setting make it a desirable location for cyclists, hikers, and other outdoor enthusiasts. The City has a comprehensive system of sidewalks that are continually expanded and improved to make pedestrian and bicycle mobility possible throughout the community. The City has over 12 miles of sidewalk that connect neighborhoods with the downtown, and over 4,000 feet of new sidewalk extensions planned on the City's sidewalk priority list. This does not include 3.8 miles of sidewalk extensions on Sugar Hill Road and Highway 70 West (N. Main St. to Catawba Greenway), which the City would like to accomplish in the future or other sidewalk priorities identified in the Safe Routes To School Action Plan. Efforts are also on going to improve bicycle and pedestrian mobility within the City to connect city trails, greenways, and sidewalks to regional bicycle and pedestrian routes.

Map 2-9.1: NCDOT Major Thoroughfare Improvements 2003



As the City continues to grow and transportation systems evolve, it will be the City's responsibility along with its partners to provide and maintain a comprehensive multi-modal system that will enhance and expand transportation options for all ages and ability levels. The goals, objectives, and policies within this Plan will help to ensure that the City is prepared to meet those demands in a complete and efficient manner.

Each year the North Carolina General Assembly allocates a percentage of the state's gas tax revenue to eligible municipalities to fund street improvement projects. This allocation is called the Powell Bill Fund, which can be used to fund a variety of projects including road, sidewalk, bicycle, drainage, or other transportation related improvements. To become eligible for funding, a municipality is required to submit a certified statement and street map identifying all of the locally maintained streets within its jurisdiction. These funds make up a significant portion of the City's budget for street and sidewalk improvements each year. The funding awarded to the City of Marion each year is outlined in the table below.

Table 2.9.1: Annual Powell Bill Allocation Fiscal Yrs 2006-2007 to 2010-2011

	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
Annual Allocation	$195, 335	$195,696	$233,089	$251,192	$192,803

Sources: NCDOT Thoroughfare Plan for the City of Marion, July 2002
City of Marion safe Routes To School Plan, Pending Approval July 2011
Former Southern Railway Freight Dept, Marion, NC Documentary Research Report, Edwards-Pittman Environmental, September 2002

NCDOT Maintained Thoroughfares

In July 2002, the North Carolina Department of Transportation along with local stakeholders adopted a Thoroughfare Plan for the City of Marion. As a result, several major transportation priorities were identified.

These projects included the following:

1. NC-226: Widen roadway to multi-lanes from US 221 Bypass to SR 1794 (Old Glenwood Rd)
2. US-70: Feasibility study of a northern bypass of US 70 around Marion and a connector road between US 70 east of Marion and Rutherford Rd (US 221 Business).
3. US-221 Business (Rutherford Rd): Widen roadway to multi-lane facility with curb and gutter from Georgia Avenue to the 221 Bypass.

In addition to the City's major transportation priorities other projects were identified:

1. East Court St (US 70): Widen to a multi-lane facility from Baldwin Ave east approximately 1.09 miles.
2. Baldwin Ave: widen to 12-foot travel lanes and improve safety for all users.
3. Marion Loop: Create an inner loop in Marion by connecting Sugar Hill Rd to N. Main St., N. Main St and E. Court St, and Sugar Hill Rd to Rutherford Rd to alleviate congestion and improve internal traffic circulation.
4. Southeastern Radial Connector: It was recommended that a two-lane connector between Rutherford Rd and East Court Street be constructed utilizing an abandoned rail line, however since the Plan's adoption. The abandoned rail line has been converted into a multi-use greenway known as the Peavine Rail Trail.
5. Sugar Hill Rd (SR 1001): Widen the 1.66 miles of the roadway to a multi-lane facility, which has been completed.

Minor thoroughfare improvements include:

1. Construction of a 0.33 mile two-lane connector between Henderson (SR 1001) at Lail St to Main St (US 221 Business).

Widening Projects Include:

1. Nix Creek (SR 1195): Widen from 9-foot to 12-foot travel lanes.
2. Reid St (SR 1168): Widen from 9-foot to 12-foot travel lanes from Sugar hill Rd to Burma St (SR 1169).
3. Ashworth (SR 1168): Widen from 9-foot to 12-foot travel lanes from Burma St (SR 1169) south.

Best Management Practices
Coordination of Transportation Planning and Land Use Planning

Why Should We Care?

Travel options: A mix of land uses promotes walking, transit, and biking.

Density & Connectivity: High density correlates with increased transit and decreased single occupancy vehicle use.

Increased Land Value: Housing and commercial values increase with greater diversity of transportation options, which then increases government revenues.

Efficient (Compact) Land Use: Compact development reduces road building costs. It is estimated that urban sprawl accounts for 20% increase in household transportation costs.

Resource Preservation: While prime farmland is not commonly valued as an essential resource, the loss of high-quality farmland to urban sprawl is putting food security at risk and attributes to higher food prices and access to nutritional foods.

Environment: Single vehicle uses increases poor air quality. Providing better connectivity and transportation alternatives reduces energy consumption and reduces pollution.

Health: More time spent in a vehicle increases the chances of obesity, which is linked to other serious health conditions and higher health care costs.

Safety: Safer roads reduce crime and increase quality of life. According to a national study, a one percent reduction in vehicle travel reduces crashes and casualties by 1.4 to 1.8 percent.

Source: Sam Seskin, CH2MHILL

Sources: NCDOT Thoroughfare Plan for the City of Marion, July 2002
City of Marion safe Routes To School Plan, Pending Approval July 2011
Former Southern Railway Freight Dept, Marion, NC Documentary Research Report, Edwards-Pittman Environmental, September 2002

4. Fleming Avenue: Widen from 9-foot to 12-foot travel lanes from Garden St to Yancey Road (SR 1501).
5. Baldwin Avenue: Widen from 9-foot to 12-foot travel lanes from Rutherford Rd (US 221 Business) to East Court Street (US 70).
6. Hankins Rd (SR 1501): Widen from 10-foot to 12-foot travel lanes.

Major Road Corridors

The challenges of Marion's transportation system are the collective result of growth in and around the city, continued reliance on automotive transportation for daily trips, and cost of improvements. As the community continues to grow and commutes increase it will be more difficult to address capacity and safety deficiencies in the transportation network.

Access Management

Access management allows local decision-makers to do more with less. As the City's most traveled corridors continue to attract commercial development, protecting the through capacity becomes essential for the efficiency of the transportation system and continued economic growth. Access management balances the needs of motorists using a roadway with the needs of adjacent property owners dependent upon access to the roadway.

In an environment with limited funds and route options, access management is critical to the health of the entire transportation system.

The Federal highway Administration (FHWA) defines access management as "the process that provides access to land development while simultaneously preserving the flow of traffic on the surrounding system in terms of safety, capacity, and speed". According to the Access Management Manual, access management results from cooperative effort between NCDOT, the City, and local landowners to systematically control the "location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway."

Poor access management directly affects the livability and economic vitality of a commercial corridor, ultimately discouraging consumer activity and in turn business retention or attraction. A corridor with poor access management lengthens commute times, creates unsafe conditions, lowers fuel efficiency, and increases vehicle emissions. Signs of a corridor with poor access management include the following:

1. Increased crashes between motorists, pedestrians, and cyclists;
2. Worsening efficiency of the roadway (decrease in level of service (LOS));
3. Spillover cut-through traffic on adjacent residential streets; and
4. Limited sustainability of commercial development.

Without access management, the function and character of a corridor can deteriorate rapidly and adjacent properties can suffer from declining property values and high occupant turnover. Conversely, good access management policies can have a wide-range of benefits to a variety of users as shown in the following Table 2-9.2.

Sources: NCDOT Thoroughfare Plan for the City of Marion, July 2002
City of Marion safe Routes To School Plan, Pending Approval July 2011
Former Southern Railway Freight Dept, Marion, NC Documentary Research Report, Edwards-Pittman Environmental, September 2002

Table 2-9.2: Access Management User Benefits

User	Benefit
Motorists	Fewer delays and reduced travel times
	Safer traveling conditions
Bicyclists	Safer traveling conditions
	More predictable motorist movements
	More options in a connected street network
Pedestrians	Fewer access point and median refuges increases safety
	More pleasant walking environment
Freight	Fewer delays and reduced travel times
Business Owners	More efficient roadway system serves local and regional customers
	More functional roadway corridor attracts customers
Government Agencies	Lower costs to achieve transportation goals and objectives
	Protection of long-term investment in transportation infrastructure
Communities	More attractive, efficient roadways without the need for constant road-widening.
	Cleaner and more healthy environment

Access management is not a one-size fits all solution to solving congestion, safety, and efficiency. However, there are number of strategies that can be utilized in different areas along the same roadway to improve its overall performance. The following is a general overview of various strategies available that mitigate congestion and its effects on the community to help engineers, planners, and elected officials make decisions that are the most practical and provide the greatest benefit to the community.

Site Access Treatments

The total number of vehicle conflicts can be reduced by promoting on-site traffic circulation and shared-use driveways during the development review process. Such improvements should also be considered during the review of redeveloped sites along roadways as well.

Improved On-Site Circulation

One way to reduce traffic congestion is to promote on-site traffic circulation. Pushing back the throat of an entrance is one way to help avoid spillover onto a roadway. This helps to improve both the safety and efficiency of the roadway. A minimum separation of 100 feet should be provided to prevent internal site operations from affecting an adjacent public street, intersection, or property.

Number of Driveways

Only the minimum number of connections necessary to provide reasonable access should be permitted. For situations where outparcels are under separate ownership, easements for shared access can be required during the development process to reduce the number of access points and decrease the number of conflict points, making the arterial safer and more efficient.

Driveway Placement/Relocation

Driveways located close to intersections contribute to operational and safety issues. These issues include intersection and driveway blockages, increased points of conflict, frequent and unexpected stops in the through travel lanes, and driver confusion as to where vehicles are turning. Driveways close to intersections should be relocated or closed, as appropriate where these conditions exist. Best management practices recommend that no driveway should be allowed within a 100 feet of an intersection. While this may not be as practical on smaller residential streets, in no case should a driveway be less than sixty feet from an intersection.

Sources: NCDOT Thoroughfare Plan for the City of Marion, July 2002
City of Marion safe Routes To School Plan, Pending Approval July 2011
Former Southern Railway Freight Dept, Marion, NC Documentary Research Report, Edwards-Pittman Environmental, September 2002

Cross Access

Cross access is a service drive or secondary roadway that provides vehicular access between two or more continuous properties. Such access prevents the driver from having to enter the public street system to travel between adjacent uses. Cross access can be function of good internal traffic circulation at large developments with substantial frontage along a major roadway. Similarly, side street and back door access occurs when a parcel has access to an adjacent street or parallel street behind the building and away from the major street. When combined with a median treatment, cross access, side street, and backdoor access ensure that all parcels have access to a median opening or traffic signal for left turn movements.

Median Treatments

Segments of a corridor with a combination of side street, cross access, backdoor access, and on-site circulation may be candidates for median treatments. A median-divided roadway improves traffic flow, reduces congestion, and increases traffic safety, which are all important goals of access management. While medians restrict some left-turn movements, access to business is enhanced and traffic delays are reduced. Landscaping and gateway features incorporated into the median treatments improve the aesthetics of the corridor, in turn encouraging investment and reinvestment in the area. In locations with poor connectivity the implementation of medians may require retrofit and improvements to on-site circulation and provisions for side street access.

Median U-Turn Treatment

These treatments involve prohibiting or preventing minor street or driveway left turns between signalized intersections. Instead, these turns are made by first making a right turn and then making a U-turn at a nearby median opening or signalized intersection. These treatments can increase safety and efficiency corridors with high volumes of through traffic, but should not be used where there is not sufficient space available for making the U-Turn movement. The location of U-turn bays must consider weaving distance, but also not contribute to excessive travel distance.

Advantages of median U-turn treatments include reduced delay for major intersection movements, potential for better two-way traffic progression on major and minor streets, fewer stops for through traffic, and fewer points of conflict for pedestrians and vehicles at intersections. Disadvantages include reduced delay for some turning movements, increased travel distance, increased travel time for minor street left turns, and increased driver confusion.

Directional Crossover (Left-Over Crossing)

When a median exists on a corridor, special attention must be given to locations where left turns are necessary. A left-over is a type of directional crossover that prohibits drivers on the cross road (side street) from proceeding straight through the intersection with the main road but allows vehicles on the corridor to turn left onto the cross road. Such designs are appropriate in areas with high traffic volumes on the major road and lower volumes of through traffic on the cross road, particularly where traffic needs to make left turns from the main road onto the cross road. A properly implemented left-over crossing reduces delay for through-traffic and diverts some left-turn maneuvers from intersections. These treatments improve safety by reducing the number of conflict points for vehicles along the corridor.

Sources: NCDOT Thoroughfare Plan for the City of Marion, July 2002
City of Marion safe Routes To School Plan, Pending Approval July 2011
Former Southern Railway Freight Dept, Marion, NC Documentary Research Report, Edwards-Pittman Environmental, September 2002

Left-Turn Storage Lanes
Where necessary, exclusive left-turn lanes should be constructed to provide adequate storage space exclusive of through traffic for turning vehicles. The provision of these lanes reduces vehicle delay related to waiting for vehicles to turn and also decrease the frequency of collisions attributable to lane blockages.

Intersection and Minor Street Treatments
The operation of signalized intersections can be improved by reducing driver confusion, establishing proper curb radii, and ensuring an adequate number of lanes of a minor street approach.

Skip Marks
These pavement markings can reduce driver confusion and increase safety by guiding drivers through complex intersections. Intersections that benefit from these lane markings include offset, skewed, or multi-legged intersections. Skip marks are also useful at intersections with multiple turning lanes. The dotted line markings extend the line markings of approaching roadway through the intersection. The markings should be designed to avoid confusing drivers in adjacent or opposing lanes.

Intersection and Driveway Curb Radii
Location with inadequate curb radii may cause turning vehicles to use opposing travel lanes to complete their turning movement. Inadequate curb radii may cause vehicles to "mount the curb" as they turn a corner and cause damage to the curb and gutter, sidewalk, and any fixed objects located on the corner. This maneuver also can endanger pedestrians standing on the corner waiting to cross. Curb radii should be adequately sized for the area context and likely vehicle usage.

Minor Street Approach
At signalized intersections, minor street vehicular volumes and associated delays may require that a disproportionate amount of green light time be allocated to the minor street, contributing to high-than-desired main corridor delay. With lane improvements to the minor street approaches, such as an additional left-turn or right-turn lane, signal timing can be reallocated and optimized for better efficiency.

Signalization
When the volume of traffic attracted to some side streets or driveways is more than can be accommodated acceptably under an unsignalized condition a signalized light may be needed. Delays for minor street movements as well as left-turn movements on the main corridor may create or contribute to the undue delays on the major roadway and numerous safety issues. The installation of a traffic signal at appropriate locations can mitigate these types of issues without adversely affecting the operation of the major roadway provided they are spaced appropriately.

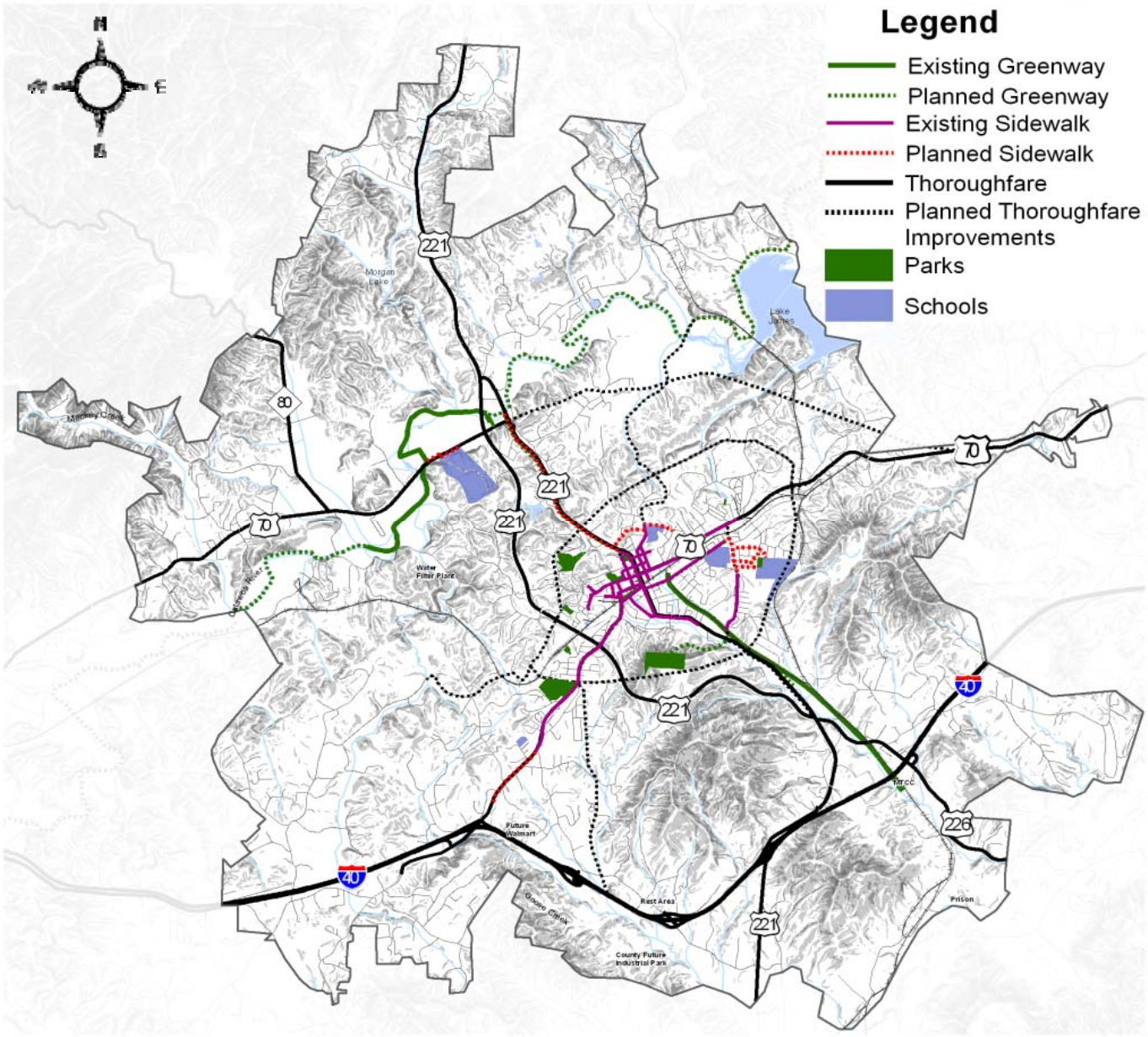
Bike & Pedestrian Transportation
Though pedestrian facilities exist in Marion, the 2002 Thoroughfare Plan noted that a bicycle and pedestrian plan for Marion had never been completed. As such, the Plan recommended that bicycle and pedestrian planning study be conducted so that when new transportation projects or improvements were being made, the study could be used as a tool to help with project planning.

In 2008 the City received a technical assistance grant from NCDOT to complete a Safe Routes to School Action Plan for five area schools to improve bicycle and pedestrian safety within a two-mile radius of each campus. The planning radius for each school essentially allowed for a citywide bicycle and pedestrian plan to be developed based on existing roadway conditions to improve bicycle and pedestrian safety

Sources: NCDOT Thoroughfare Plan for the City of Marion, July 2002
City of Marion safe Routes To School Plan, Pending Approval July 2011
Former Southern Railway Freight Dept, Marion, NC Documentary Research Report, Edwards-Pittman Environmental, September 2002

throughout the community. The Plan has been completed but has not yet been approved by NCDOT Bicycle and Pedestrian Division or adopted by the local government. The following map illustrates where existing and proposed pedestrian facilities are located.

Map 2-9.2 Pedestrian Facilities and Community Points of Interest



Sources: NCDOT Thoroughfare Plan for the City of Marion, July 2002
City of Marion safe Routes To School Plan, Pending Approval July 2011
Former Southern Railway Freight Dept, Marion, NC Documentary Research Report, Edwards-Pittman Environmental, September 2002

LAND USE

Existing Land Uses

The next step in the planning process was to complete an inventory of existing land uses within the City to better understand how the City is evolving and growing within its own boundaries, and to form a basis for future land use recommendations.

Utilizing the Land Based Classification System (LBCS). Planning staff coded every parcel within the city limits based on its principle land use then loaded the data into the City's GIS system correlating the information with each property's unique parcel identification number (PIN). Map 2-10.1 shows the 92 separate land use categories that were identified in the City as of February 2011.

Use and Benefits of the Land Based Classification Standards (LBCS) System for Marion

The purpose of completing the existing land use inventory was two-fold. First, it allows for a more detailed review of existing land use types for the comprehensive planning process. Second, it is a dynamic analytical tool that if maintained can be a valuable resource for both city government and the public. Each land use category can be selected by a four digit code which is tied to every parcel with an identical use. If someone, for example, wanted to know the number and locations of warehouse storage facilities within the city, and wanted determine the average cost per square foot for each site. A query report could be generated within a few short minutes by anyone with access to and capability of using an GIS software program by simply searching for all properties with a 3600 code number.

The City recently updated its zoning permit software system, and incorporated a field into that system which now allows Staff to update and maintain LBCS codes through the daily permitting process. And while only 92 separate land uses were identified within the city limits. The system contains 163 separate LBCS codes. For a complete review of the LBCS Codes and their corresponding definitions see Appendix A of this Plan.

Evolution of the Land Based Classification Standards (LBCS)

In 1965, the Federal Highway Administration (FHA) and Department of Housing and Urban Development (HUD) published the Standard Land Use Coding Manual (SLUCM), which was a comprehensive collection of land uses categorized based by the Standard Industrial Classification (SIC) system, which was a standard codification scheme developed by the federal government to track industry activity within the United States.

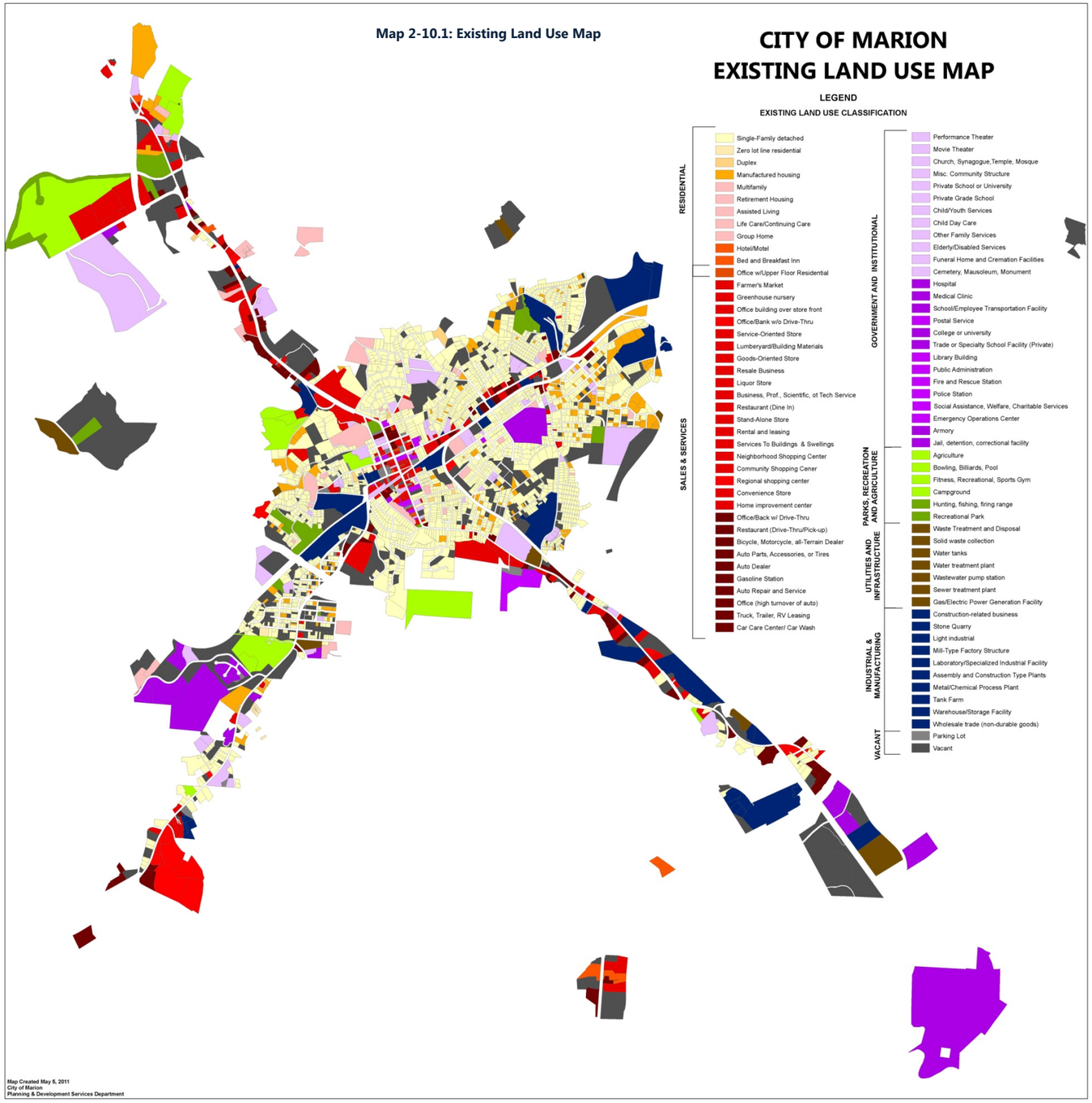
The Federal Office of Management and Budget (OMB) replaced the SIC with the North American Industry Classification System (NAICS) in 1997 to create a standard for collecting, analyzing, and publishing data related to the U.S. business economy. Although SIC had undergone several major revisions since 1965, the SLUCM had not been updated. As such, the American Planning Association (APA) along with participation from six federal agencies initiated the Land-Based Classification Standards (LBCS) project to update the 1965 SLUCM. Through this project, APA and its partners produced a new land classification system to allow jurisdictions, agencies, and institutions at the local, regional, state, and national level to share land-based data. The first version of LBCS was released in 2000, and the standards have been updated periodically in the intervening years. More information regarding the LBCS project can be obtained from the American Planning Association at their website http://www.planning.org/lbcs/.

Sources: City of Marion Land Use Analysis & Land Development Plan 1978
City of Marion Planning & Development Zoning & Building Records
McDowell County Tax Records
American Planning Association (APA) Land Based Classification System

[This Page Intentionally Left Blank]

Sources: City of Marion Land Use Analysis & Land Development Plan 1978
City of Marion Planning & Development Zoning & Building Records
McDowell County Tax Records
American Planning Association (APA) Land Based Classification System

Map 2-10.1: Existing Land Use Map



Sources: City of Marion Land Use Analysis & Land Development Plan 1978
City of Marion Planning & Development Zoning & Building Records
City of Marion Geographic Information (GIS) Data
McDowell County Tax Records
American Planning Association (APA) Land Based Classification System

Existing Land Use Data

In an effort to present the data in a more manageable and articulate way for users, each individual LBCS Classification Code has been condensed into one of seven land use categories that has been color coded according to each primary land use. The seven categories represent the first digit in the LBCS Code sequence (e.g. "1" for "1100 Single-Family (Residential)" or "2" for "2100 Office Building (Goods and Services)". Figure 2.9.1 illustrates the color-coded system used for this Plan. It should be noted that this color coding system, while consistent with national standards, can be modified within the ArcGIS system to conduct a variety of different land use studies. In fact, for the purpose of this Plan the primary color coding system has been further divided into twelve color categories that vary in shade based on the primary land use classification in which they are located. Map 2.9.1 identifies each of the 92 land uses identified and their corresponding color code. Color coding allows for the identification of particular land use within a specific geographical location that can in turn help to identify existing and/or potential conditions as growth and development occur. For example, the "Goods and Services" category, which includes 30 separate land uses, is divided into general good and services, and goods and services that generate a greater amount of vehicular traffic. Collectively these uses both existing and future have a greater potential for reducing roadway capacity and can create a need for costly transportation-related infrastructure improvements. In addition, residential uses were divided into separate groups to help identify concentrations of particular types of housing, in which population, density, neighborhood property values, and/or public safety may be a concern in a particular area.

The pie charts in Figure's 2-10..2 and 2-10.3 are color coded to correspond with the primary land use category, and show the total land area in acres as well as the number of parcels that are occupied by each use. As indicated it the charts, the single largest existing land use in both area and number of parcels is single-family residential. Twenty-seven percent of all land within the City is used for this purpose, and 61% percent of parcels within the city contain a single-family residence. All residential land uses combined, account for 34% of all land area within the city, and 69% percent of all parcels are primarily residential in nature. The total county appraised property value for all residential uses combined is 3.7 million dollars.

The second largest area is comprised of either vacant land or parcels that are specifically used for off-street parking. Parking lots were included with vacant parcels because they share similar development potential in the future. They make up 10% of the total number of parcels within this category and only 5% of the total Parking/Vacant land area classification

Figure 2-10.1: Primary Land Use Categories and Color Coding System

[This Page Intentionally Left Blank]

Sources: City of Marion Land Use Analysis & Land Development Plan 1978
City of Marion Planning & Development Zoning & Building Records
City of Marion Geographic Information (GIS) Data
McDowell County Tax Records
American Planning Association (APA) Land Based Classification System

The land area utilized for Goods and Services (14%), and Institutional and Assembly (15%) are very similar. Conversely, the number of parcels occupied by Goods and Services Land Uses occupies ten percent of all parcels within the City, while Institutional and Assembly Land Uses only occupy four percent. Industrial land uses and Parks & Recreational Land Uses are similar in that both occupy larger land areas, but are located on fewer parcels. With the exception of vacant land, the value between land area and number of parcels is largely the result of total land required for a particular type of land use. For example, while a half-acre allows for reasonable use of land for single-family residential it would not be suitable in size for an industrial development; and while there may appear to be a significant amount of vacant land available for development, parcel size, location, and environmental constraints often decrease the actual amount that can be developed. These factors will become more evident in the Sector profiles in Chapter Three, which compare existing land uses with the City's current Zoning District Map, the Future Land Use Classifications outlined in this Plan, as well as recommendations for amendments to the City's current zoning districts.

Figure 2-10.2: Percentage of Acres By Land Use

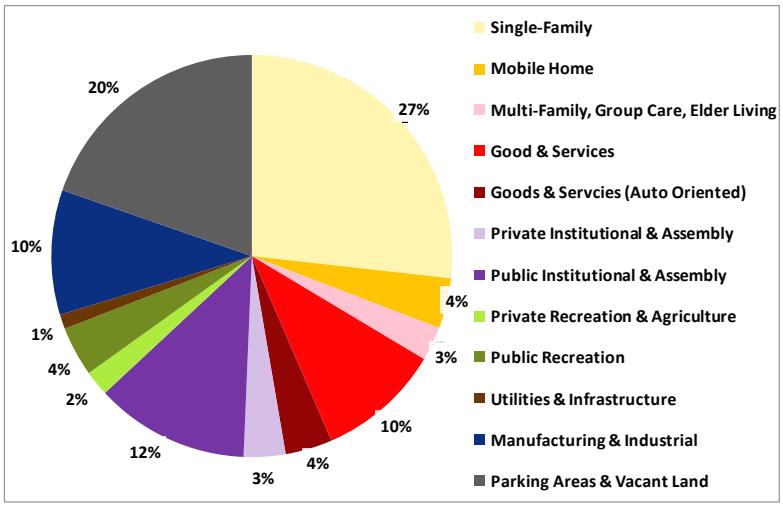
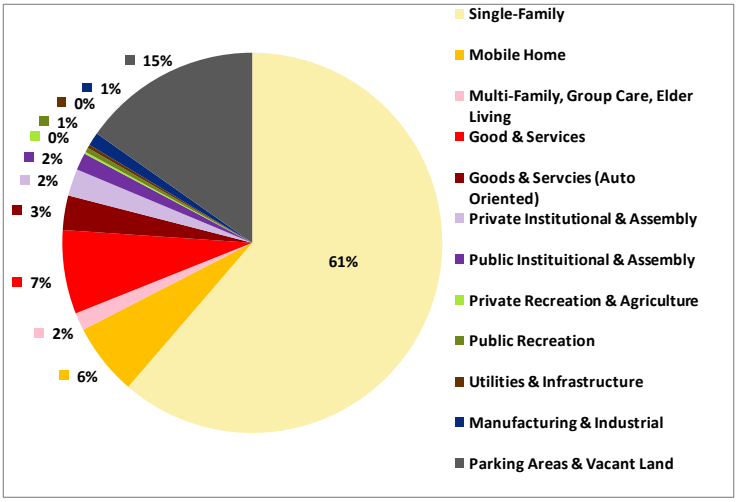


Figure 2-10.3: Total Percentage of Parcels by Land Use



Existing Land Uses and Zoning District Designations

After compiling the existing land use data, a comparison was made between existing land use data and the City's Official Zoning District Map to see how each compared in size and in number of parcels.

The City first adopted zoning in 1974, and with a few exceptions and periodic amendments, the number and purpose of each district remains largely unchanged from its original state. The City has eight zoning districts and one overlay district. This section focuses on a comparison between the eight zoning districts and their primary intended uses, and eleven of the LBCS Classifications. Since the LBCS Classifications and zoning districts are substantially different it was necessary to group them into five general categories for the purpose of general evaluation. The five general categories include Parks and Recreation, Residential, Commercial, Office and Institutional, and Industrial. Because vacant parcels lack a particular use, this category was excluded from the calculations. Table 2-10-1 provides a list of how zoning district designations and LBCS classifications and were combined into the five general categories. Figures 2-10.4 and 2-10.5 on the following page compare the similarities and differences between each group.

Sources: City of Marion Land Use Analysis & Land Development Plan 1978
City of Marion Planning & Development Zoning & Building Records
City of Marion Geographic Information (GIS)
McDowell County Tax Records
American Planning Association (APA) Land Based Classification System

Table 2-10.1: Land Use Category Comparison between Zoning District Designation and LBCS Classification

Review Category	Zoning Designations	LBCS Classification
Parks & Recreation	Parks & Recreation	Public Parks and Recreation Private Parks and Recreation
Residential	R-1 Single family Residential R-2 General Residential	Single-Family Mobile Home Multi-Family, Group Care, & Elder Living
Commercial	B-1 Neighborhood Business C-1 Central Business C-2 General Business	Goods & Services Goods & Services (Auto-Oriented)
Office and Institutional	O-I Office and Institutional	Private Institutional and Assembly Public Institutional and Assembly
Industrial	M-1 Industrial	Manufacturing & Industrial Utilities and Infrastructure

Figure 2-10.4: Percentage of Parcels by Land Use & Zoning

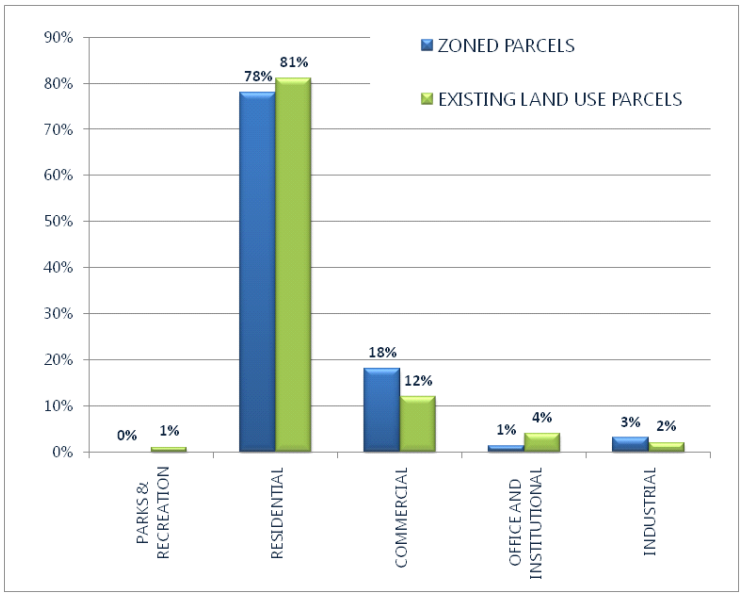
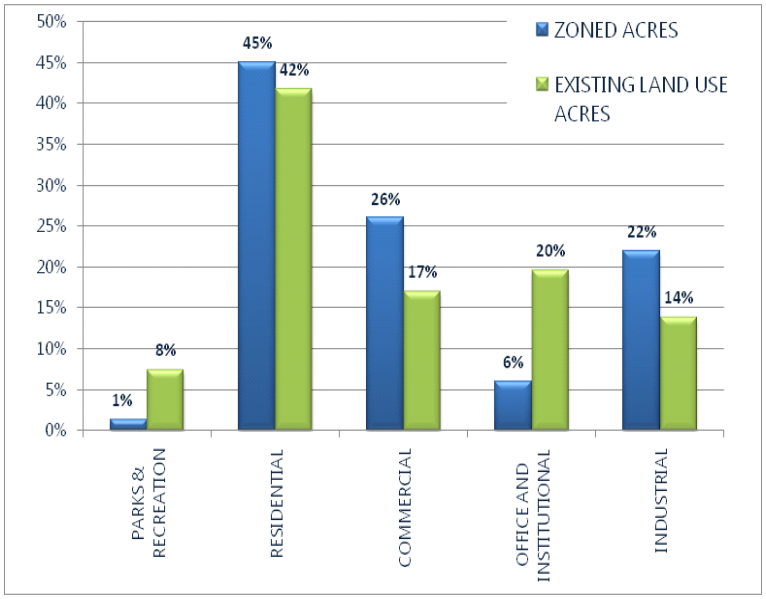


Figure 2-10.5: Percentage of Acres By Land Use & Zoning



With the exception of Office and Institutional, there is less than a ten percent difference between land and parcels zoned for particular land uses and the existing land uses that currently occupy that land. The primary reason for the large discrepancy in land zoned for Office and Institutional and land occupied by existing land uses is largely due to McDowell Correctional Facility located on 226 South, which is a large tract of land zoned as industrial.

Sources: City of Marion Land Use Analysis & Land Development Plan 1978
City of Marion Planning & Development Zoning & Building Records
City of Marion Geographic Information (GIS)
McDowell County Tax Records
American Planning Association (APA) Land Based Classification System

Development Tools for a Sustainable Future

As mentioned previously, twenty percent of the total land area is currently vacant, however due to parcel size, location, and environmental constraints development will be limited within the city's existing boundaries.

There are number of planning tools that the City can use to achieve a healthy balance between competing land uses, and for getting the highest and best use out of the existing land supply. The following are a few examples of tools used to help achieve land use goals when a finite amount of vacant, developable land is available.

Infill Development

With limited land supply, it is important to give special attention to locations that are prime for infill development and identify strategies and incentives that encourage greater private reinvestment in these areas, and identify and remove barriers that are discouraging and/or prohibiting reinvestment. The Local Government Commission's Center for Livable Communities has identified six obstacles to infill development. They are paraphrased to Include:

1. Infill redevelopment projects cost more to build than vacant land. Hard costs associated with land, demolition, and environmental mitigation are intrinsically higher as a result of the additional work required to prepare a site for redevelopment. In addition, soft costs for architectural, engineering, and legal services are higher as a result of design challenges and additional background research that is required. The marginal cost of permitting fees coupled by higher investment returns for developing on vacant land incentivizes building on an urban periphery, which contributes to urban sprawl and decline of inner city areas.
2. The cost of public investment for new services and infrastructure are often overlooked and/or undervalued in the development process. While decisions are often made by comparisons between costs for additional public services and tax revenue generated by new development, long-term maintenance on infrastructure improvements is not factored into development approvals. The costs for water, sewer, and streets are far less expensive to build and maintain in a compact and efficient community than one that has a pattern of urban sprawl.
3. Due to past experience with poorly planned projects, or inexperience and fear of the unknown, community members actively oppose infill and mixed-use projects. In large part local governments place the primary focus of development on individual land uses and densities or development, and not on issues of scale, landscaping, and the relationship of the building to the lot, street, and neighborhood. In addition citizens have concerns with increased traffic, more cars, over use of parks and other public spaces, and noise.
4. Developers avoid infill redevelopment projects in inner-city neighborhoods due to uncertainty in marketability. A study by the Urban Land Institute revealed that the both the actual and perceived perception of low quality education, crime, lack of code enforcement, blight, and neighborhood continuity all contributed to an unstable real-estate market making redevelopment too much of a risk.
5. Finance and capital markets can be barriers to an infill development project even if interest is there. Lenders perceive mixed-use projects appropriate to infill development as risky when there are no other projects to which they can be compared. This is compounded by the fact that many banks separate their residential and commercial loan functions, so an individual loan officer may not be familiar with all elements of the project. Additionally, most lenders are unwilling to count

Sources: City of Marion Land Use Analysis & Land Development Plan 1978
City of Marion Planning & Development Zoning & Building Records
City of Marion Geographic Information (GIS)
McDowell County Tax Records
American Planning Association (APA) Land Based Classification System

much of the potential rental income from retail and commercial space toward revenues to support a loan because of the potential for space not to lease. Mortgages for infill projects are also difficult to sell to quasi-public institutions like Fannie Mae and Freddie Mac who set the underwriting standards for most loans, and tend not to support condominiums, townhomes, live-work units, co-ops, or mixed-use developments.

6. Zoning for separate uses diminishes community interaction and diminishes quality of life in inner cities. What began as a response to pollution, the Euclidean zoning model of "separating uses" spread across the country prohibiting the mixture of housing types, and isolating neighborhoods from employment, goods, and services. Many communities continue to regulate development based on this modal, which often result in barriers to infill and mixed-use development projects.

Most often, a combination of some form of public and private investment is required to engage in development of under-utilized properties and areas skipped-over in pursuit of more marketable and profitable projects. Streamlining and customizing regulations for a particular area in need of infill development and revitalization is the first step in reducing barriers and providing incentives for quality development. Design guidelines or form-based standards can allow for compatible development between new and old enhancing the appearance, marketability, and equity of the entire area. Appropriate building scale, materials, color, window proportions, and façade articulation are all examples of standards that can turn a poorly planned mixed-use project into one that is compatible with the neighborhood and strengthens cohesion.

Other infill strategies include specific area planning activities, which take a comprehensive look at a particular area or neighborhood that includes neighborhood residents, business owners, and property owners to help create consensus for the type of infill development that would be welcomed or encouraged within the area and provide a clear direction for policy and regulatory changes needed for future infill redevelopment.

Financial Incentive are often necessary to encourage redevelopment. Cost reduction and subsidy strategies can include cost-sharing in public improvements, land acquisition, tax credits, abatement, low-interest loans, and other financial incentives.

Mixed Use and Transit-Oriented Development

Mixed-Use and Transit-oriented developments (TOD) are areas that include a dense combination of residential and commercial uses designed to provide access to public transportation and other alternative modes of transportation and providing convenient access to employment, goods, and services within a walkable (1/2 mile) area and creating an environment that is less reliant on a personal vehicle. Developments are designed on a pedestrian scale with greater density close to nodes of transportation such as transit stops or bike paths and greenways reducing the number of local vehicle trips and reducing congestion on neighborhood streets. This type of development pattern can be accomplished through thoughtful design within existing neighborhoods as well as areas that offer opportunities for infill development. Within the next twenty years, Baby Boomer's, the largest segment of the population, will be reaching an age where they will be more reliant on public transportation to access goods, services, and social activities; low and moderate income households will be juggling the high cost of food, gas, and energy; and children's only source of transportation to and from school will be either by walking or riding

Sources: City of Marion Land Use Analysis & Land Development Plan 1978
City of Marion Planning & Development Zoning & Building Records
City of Marion Geographic Information (GIS)
McDowell County Tax Records
American Planning Association (APA) Land Based Classification System

a bicycle. These and other socio-economic factors will make this type of development pattern more and more desirable.

Land Banking

Land Banking is a tool that allows local governments to acquire properties and convert them back into productive use or hold on to them for strategic public purposes. This tool can be used for a variety of purposes to revitalize and strengthen the local economy; clean-up blight, dilapidated structures, and corridors in economic decline; improve public infrastructure including roads, sidewalks, greenways, and utilities; or provide for affordable housing in areas of need. The benefits of land banking far exceed the cost to the local government and community. When an area is in decline, neglected, and/or lacks private investment it places a strain on the entire community. It reduces overall property values, reduces tax revenues, raises crime rates, and places a greater strain on resources that would have otherwise been allocated towards public assets and amenities.

Recommendations for Land Banking in Marion:

1. Establish a policy and process for land banking unmaintained, dilapidated, abandoned, and/or properties too small for commercial development or redevelopment along commercial corridors that lack private investment, so that if the opportunity were available to acquire these properties, recombined them into larger tracts, and/or improve their overall appearance and function the City would have a plan in place on how properties will be evaluated, improved, and put back into private ownership.
2. Properties acquired by the City through land banking or foreclosure are evaluated for future public purpose so that easements for infrastructure and restrictions on incapable land uses can be put in place before being put back onto the market.
3. Work with private investment groups, business associations, and community non-profit organizations to determine the most desirable, best, and/or most needed land uses in areas were properties have been identified as having land-banking potential.

Transfer of Development Rights (TDR)

A Transfer of Development Rights (TDR) program is a market-driven land use tool utilized by local governments to manage development in a fair and equitable manner when circumstances dictate that it is in the community's best interest that private land be protected for the public good. While the process might seem cumbersome, the outcome for compensation, preservation, and development has direct benefit to the entire community. It is also a voluntary program that does not require property owners to give up their land or the rights to it without their consent and approval. It does provide an opportunity for land owners to be compensated for the development rights attached to their land by selling a part or all of those rights to another more suitable property for development.

A good example of this limitation is a federally regulated special flood hazard area (SFHA), which limits development in order to protect public health and safety. Federal regulations regarding floodplain development have evolved and strengthened over time due to advances in technology, which have allowed experts, to better predict where flooding is most likely to occur. While, no one wants to argue the merits of protecting the public's safety and private property, this regulation leaves property owners in

Sources: City of Marion Land Use Analysis & Land Development Plan 1978
City of Marion Planning & Development Zoning & Building Records
City of Marion Geographic Information (GIS)
McDowell County Tax Records
American Planning Association (APA) Land Based Classification System

a floodplain at a disadvantage for development. While it may still be their right to develop, floodplain regulations limit the amount of development that can occur and contribute to a much greater cost in both construction and insurance, which makes any development financially unfeasible.

A well-structured TDR program can give affected property owners the option of selling and or transferring either a portion or all of their development rights from one property ("Sender Site") to another property ("Receiver Site"). Not only is a property owner compensated for their development rights, but the receiver is also rewarded with greater development potential on the Receiver Site. This may include additional allowances for the height or size of a building, reduced setback requirements, or number of dwelling units permitted per acre. These regulations can often be the deciding factor in the feasibility of a development project. For the community it preserves lands that have been identified as being the most valuable for the long-term public good, as well as for preserving environmentally sensitive areas that protect public health and safety. Rural communities often use TDR programs to protect sensitive farmlands from development, while others use it to preserve historic districts or increase density in central business districts. Whatever the purpose, the key to creating a successful TDR program is establishing an equitable market for transferring development rights that benefit the entire community.

There are several key factors that are essential for creating a successful TDR program. First, there must be a demand for development rights in order for the program to be successful. One way to create demand is to create a program that gives a TDR credit development value. This can be accomplished by giving greater development potential to a receiver site than what zoning would allow under existing regulations. Another way to create demand is by establishing a boundary area from which to purchase development rights that is much smaller in size than the boundary of where development rights may be transferred thereby creating a balance between supply and demand.

There are a number of ways to administer a TDR program. Two popular options include a government run "TDR Bank", where the government buys development rights from a sender site and then sells those rights at a future date to a developer, land trust, investor, or other interested party. The other less complicated, less costly, and less controversial option is a market-driven approach commonly brokered through the local real estate market allowing TDR credit transactions to occur between private entities, while the local government acts only as the administrator over the transfer process to ensure compliance with the program.

While the development market in Marion may not be prime for a TDR program under existing regulations, there are advantages to studying the potential benefits, feasibility, administration, and regulatory actions that would be required to establish a local TDR program. At the very least a successful program should be able to accomplish one if not more of the following, allow land owners to recoup their investment costs, protect environmentally sensitive lands in perpetuity; reduce risk to public health and safety; reduce long-term public safety expenditures; and promote private investment all in a manner that is equitable to both the City and private interests and provides greater long-term community sustainability.

Sources: City of Marion Land Use Analysis & Land Development Plan 1978
City of Marion Planning & Development Zoning & Building Records
City of Marion Geographic Information (GIS)
McDowell County Tax Records
American Planning Association (APA) Land Based Classification System