REGION II

Planning and Development Council of West Virginia

REGIONAL BROADBAND
STRATEGIC PLAN

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INTRODUCTION

At the request of the State, the Council has facilitated the development of a regional broadband strategic plan (strategic plan). In order to develop the plan, a Regional Broadband Planning Team (RBPT) was created with representatives from government, healthcare, education, and the private sector. The Council would like to thank all of the team members who volunteered their time and resources to make this a successful project. The goal of the project was to outline the current broadband environment, make recommendations for expanding and enhancing broadband in the region, and to provide strategies to state and local governments for implementation.

RBPT Members

- Tommy Adkins, Corridor G RDA
- Dennis Bloss, Frontier
- Dianne Caselly, City of Huntington
- Carol Damron, Wayne County EDA
- Aaron Michael Fox, City of Huntington
- Jeff Grimes, Frontier Communications
- Cara Hedrick, CVB
- Gary Holeman, Southern West Virginia Comm. & Tech College
- Steve Luby, MSCNS
- Gordon Merry, Cabell County EMS
- Sandra K. Mills, West Virginia DHHR
- Cheryl Mitchem, Larry Joe Harless Comm. Center
- Judy Rule, Cabell County Library
- Gary Selby, Wayne Extension
- Tony Simental, West Virginia Office of GIS
- Angie Strait, Cabell County Library
- Allen Taylor, Marshall University
- Tim Taylor, Frontier
- Zachary Tomblin, Frontier Communications
- Brenda Webb, Cabell County EMS
- Brandon White, City of Huntington
- Steven Zoeller, HADCO

Region II Planning and Development Council

- Michelle Craig, Region II Planning and Development Council
- Kathy Elliott, Region II Planning and Development Council
- Zack Browning, Region II Planning and Development Council
- Mike Webb, Region II Planning and Development Council
- Bethany Wild, Region II Planning and Development Council

Delta Development Group, Inc.

- Richard J. Rossi, Senior Vice President
- Debbie Tollett, Senior Associate
- Diane Lizambri, IT Consultant

PROJECT OVERVIEW

The RBPT conducted a broadband needs assessment to ensure that it had an understanding of the current broadband environment in Region II. To accomplish this, the RBPT surveyed residents and businesses throughout the region and reviewed existing studies (e.g., Federal Communications Commission (FCC) reports, state broadband maps, state speed test data, unserved and underserved areas, and economic development plans). With this knowledge, the RBPT identified the region's Strengths, Weaknesses, Opportunities, and Challenges (SWOC). Next, the RBPT outlined five (5) broadband strategic objectives to help improve broadband availability, reliability, and utilization throughout the region. Region II Planning and Development Council's staff effectively garnered the RBPT member's broad participation and support of the planning effort by conducting onsite planning meetings. This face to face engagement spurred significant discussion about the Region's need for broadband capabilities, expansion, and potential opportunities. The strategic objectives are outlined in this plan and include implementation strategies needed to successfully meet each goal. The strategic plan will be provided to the state and local government for implementation.

EXECUTIVE SUMMARY

The following matrix provides an at-a-glance summary of the five (5) strategic objectives and each of the corresponding goals defined during the strategic planning process. The summary provides a quick review of the overall objectives and the level of effort required to implement the objectives.

STRATEGIC OBJECTIVE	GOAL
Strategic Objective S.O.1: Support increased broadband services in eight (8) targeted economic development and growth areas of the region.	Goal S.O.1.1: Promote and support broadband and funding opportunities in the 8 targeted Economic Development and Growth areas of the Region.
	Goal S.O.1.2: Aggregate demand.
	Goal S.O.1.3: Engage broadband provider community.

STRATEGIC OBJECTIVE	GOAL
	Goal S.O.1.4: Monitor and support the implementation of disruptive technologies to provide broadband to unserved areas.
	Goal S.O.1.5: Discuss opportunity with the state.
	Goal S.O.1.6: Engage foundations for assistance.
	Goal S.O.1.7: Consider municipal or P3 options.
Strategic Objective S.O.2: Support a "Dig Once" policy to encourage broadband providers to lay fiber in conjunction with road, water, and sewer infrastructure.	Goal S.O.2.1: Work with local planning officials to encourage expansion of existing zoning, subdivision, and ordinance policies to include broadband infrastructure as part of the development process.
	Goal S.O.2.2: Identify subject matter experts to assist with technical guidance and development of amendments.
	Goal S.O.2.3: Coordinate a meeting of the local planning officials and subject matter experts.
Strategic Objective S.O.3: Increase widespread broadband utilization and take rates for businesses and residents through a targeted outreach strategy.	Goal S.O.3.1: Promote the importance of broadband thorough a regional awareness campaign.
	Goal S.O.3.2: Host broadband workshops.
Strategic Objective S.O.4: Advance broadband education throughout the region.	Goal S.O.4.1: Conduct a gap analysis on existing programs.
	Goal S.O.4.2: Promote existing educational opportunities and services.
	Goal S.O.4.3: Work with stakeholders to develop necessary courses.
Strategic Objective S.O.5: Identify and monitor funding and financing sources to support implementation of broadband strategy.	Goal S.O.5.1: Develop a comprehensive funding strategy.
	Goal S.O.5.2: Implementation of the Funding Strategy.

REGIONAL OVERVIEW

Socioeconomic Profile

The social and economic characteristics of a region provide some insight into the potential utilization rate and uses of broadband services. A recent study published by the U.S. Department of Commerce, *Exploring the Digital Nation: Computer and Internet Use at Home*, found that households in rural areas of the United States and households with lower incomes and less education are less likely to have computers and utilize broadband services than households in urban areas and those with higher incomes and higher education levels. The growing rate of people attaining bachelors or advanced degrees indicates a growing demand for broadband connectivity. Increased broadband provision in Region II of West Virginia may prove to be a catalyst for growth and an increase in quality of life factors. The following pages present a profile for each of the six Region II counties in comparison to both West Virginia and the continental United States.

Population

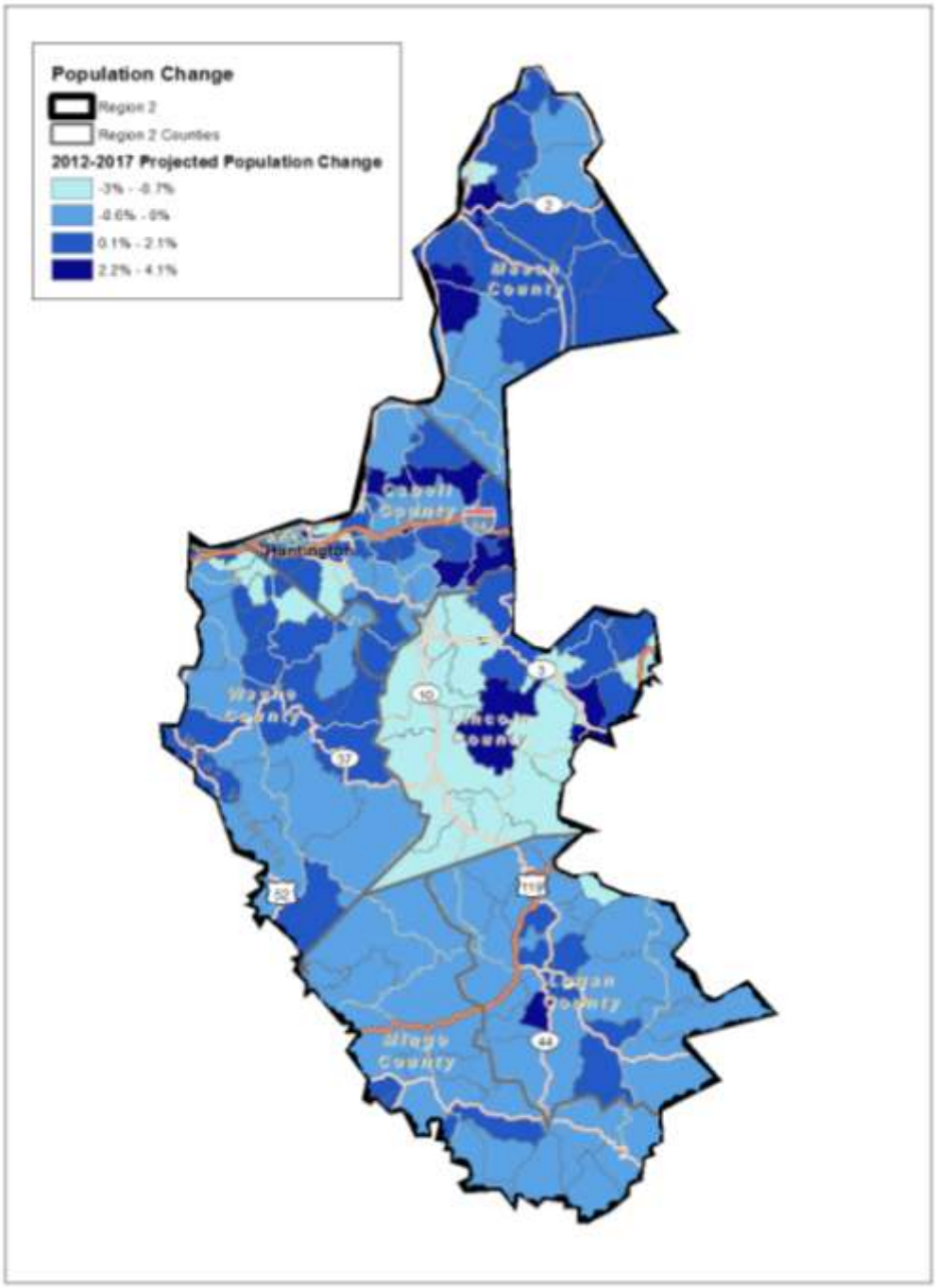
The population in Region II remained has relatively stable in recent years. From 2000 to 2010, the population decreased by 0.9%, and from 2012 to 2017, it is expected to increase by 0.8%. As shown in Table 1, Mason County led the region in growth between 2000 and 2010, with a growth rate of 5.3%. The other five counties in Region II declined in population during this time. In comparison, the population of West Virginia increased by 2.5% from 2000 to 2010, and the population of the continental United States increased by nearly 10%. Cabell County is expected to lead the region in population growth from 2012 to 2017 at 1.7%. West Virginia is also expected to grow by 1.7%, and the continental United States is expected to grow by 3.5% during this period. This stable population indicates a consistent demand for broadband service, and increased connectivity may be a factor for increased regional growth in the future. Table 1 presents actual, estimated, and projected population trends by county, and Figure 1 illustrates specific geographic areas where change is expected between 2012 and 2017.

TABLE 1 – REGION II POPULATION TRENDS

	2000 (Actual)	2010 (Actual)	2012 (Estimated)	2017 (Projected)	Change, 2000 to 2010	Change, 2012 to 2017
Cabell County	96,784	96,319	96,723	98,405	-0.5%	1.7%
Lincoln County	22,108	21,720	21,938	21,903	-1.8%	-0.2%
Logan County	37,710	36,743	37,300	37,671	-2.6%	1.0%
Mason County	25,957	27,324	27,552	27,970	5.3%	1.5%
Mingo County	28,253	26,839	26,955	26,716	-5.0%	-0.9%
Wayne County	42,903	42,481	42,704	42,405	-1.0%	-0.7%
West Virginia	1,808,344	1,852,994	1,875,033	1,907,313	2.5%	1.7%
Continental U.S.	279,583,437	306,675,006	311,019,603	321,777,839	9.7%	3.5%

Source: U.S. Census Bureau and ESRI Business Analyst

Figure 1 – Projected Population Change, 2012 to 2017 (by Census Block Group)



Source: ESRI Business Analyst

Age

The concentration of residents between the ages of 25 and 64 is relatively consistent in all six counties in Region II and is slightly higher than the national and statewide concentrations. Mason and Wayne Counties lead the region in the senior population, with a concentration of over 17% who are age 65 or older. In contrast, Mingo County has the lowest percentage of seniors, with a concentration of 14.1% who are age 65 or older. To compare, West Virginia's senior population was estimated at 16.6% and the national senior population at about 13.6% in 2012. The regional concentration of young people (i.e., under 25 years) is consistent with the state average, at about 29%, but is lower than the national average of 33.5%. Table 2 presents the details of the age group concentrations.

TABLE 2 – REGION II COMPARATIVE AGE DISTRIBUTION (2012 ESTIMATED)

Age Group	Cabell County	Lincoln County	Logan County	Mason County	Mingo County	Wayne County	West Virginia	Continental United States
0 - 4	5.7%	6.0%	5.0%	5.7%	6.0%	5.6%	5.6%	6.5%
5 - 9	5.3%	6.1%	5.5%	5.9%	6.0%	6.1%	5.7%	6.5%
10 - 14	5.2%	6.2%	5.9%	6.0%	6.1%	6.4%	5.8%	6.6%
15 - 24	15.3%	11.1%	10.6%	10.5%	11.2%	11.6%	12.6%	13.9%
25 - 34	13.8%	11.8%	12.5%	12.1%	12.6%	11.5%	12.1%	13.5%
35 - 44	11.8%	13.2%	13.1%	12.0%	13.0%	13.1%	12.4%	12.9%
45 - 54	12.9%	14.9%	15.0%	15.3%	15.2%	14.1%	14.4%	14.1%
55 - 64	13.5%	15.0%	16.7%	14.7%	16.0%	14.5%	14.9%	12.3%
65 - 74	8.8%	9.5%	8.9%	10.3%	8.3%	9.8%	9.4%	7.5%
75 - 84	5.5%	5.0%	5.2%	5.6%	4.4%	5.5%	5.2%	4.2%
85+	2.2%	1.2%	1.6%	1.8%	1.4%	1.8%	2.0%	1.9%

Source: ESRI Business Analyst (2012 age distribution estimated by ESRI, based on 2010 Census and local socioeconomic factors)

Income

As shown in Table 3 and in Figure 2, households in Region II have lower median incomes than those in West Virginia and the continental United States. Median household incomes increased from 2000 to 2010 in all Region II counties, dropped from 2010 to 2012, and are expected to increase between 2012 through 2017. Cabell, Mason, and Wayne Counties have lagged just behind the state in median household income, but all six counties in Region II fall below the national median household income. In 2012, median household incomes were estimated between $27,726 in Mingo County and $34, 202 in Mason County, compared to $37,003 in West Virginia and $50,098 in the continental United States.

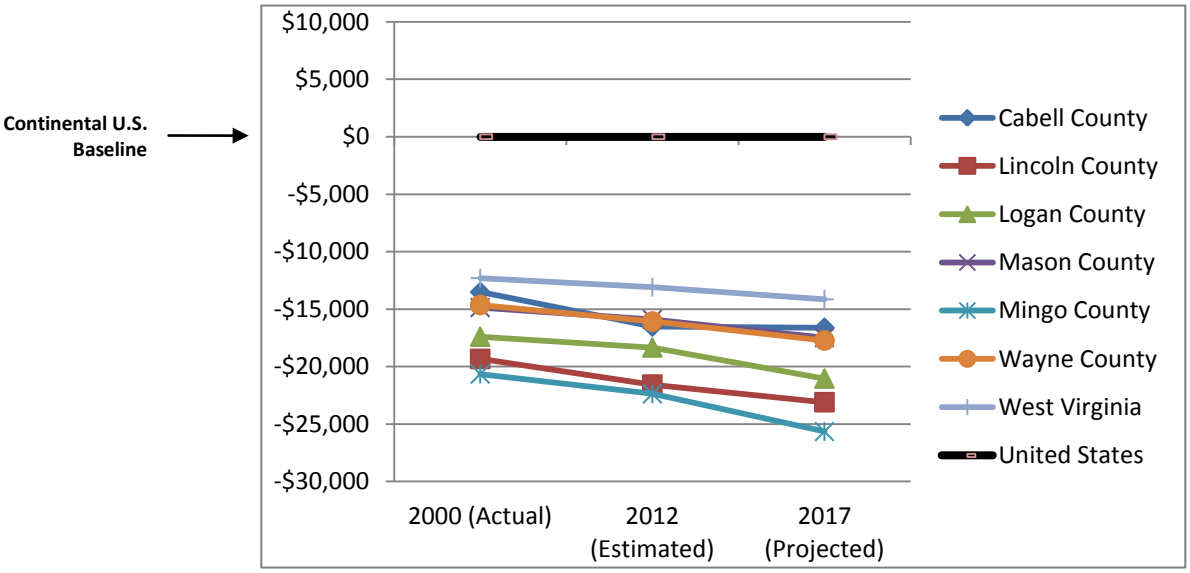
TABLE 3 – MEDIAN HOUSEHOLD INCOME TRENDS

	2000 (Actual)	2012 (Estimated)	2017 (Projected)	Change, 2000 to 2010	Change, 2012 to 2017
Cabell County	$28,479	$33,581	$40,200	21.9%	19.7%
Lincoln County	$22,662	$28,533	$33,725	41.4%	18.2%
Logan County	$24,603	$31,762	$35,784	46.2%	12.7%
Mason County	$27,134	$34,202	$39,337	35.3%	15.0%
Mingo County	$21,347	$27,726	$31,168	53.5%	12.4%
Wayne County	$27,352	$34,021	$39,096	29.0%	14.9%
West Virginia	$29,696	$37,003	$42,680	29.1%	15.3%
Continental United States	$41,994	$50,098	$56,822	22.0%	13.4%

Source: U.S. Census Bureau and ESRI Business Analyst

While Table 3 presents snapshots in time of median household income and income growth for the counties in Region II, as compared to West Virginia and the continental United States, Figure 2 presents a graphic illustration of the changes in the gap between median household incomes in the counties in Region II, West Virginia, and the continental United States. The gap represents the difference between the median income for each geographic area and the median income for the continental United States; therefore, for comparison purposes, the baseline median income for the continental United States is presented as $0. The state of West Virginia, as well as each county in Region II, has a median income below the national average. The gap is expected to increase through 2017.

FIGURE 2 – INCOME GAP TRENDS (COMPARED TO THE CONTINENTAL UNITED STATES)



Source: ESRI Business Analyst and Consultant Calculations

Education

The levels of educational attainment in Cabell County are higher than the levels in other Region II counties and in West Virginia (see Table 4). Nearly 22% percent of Cabell County's residents have at least a bachelor's degree, and almost 10% have masters, professional, or doctorate degrees. This is likely due to Marshall University being located in Cabell County. Logan, Mason, and Wayne Counties exceed the state level of associate's degrees achieved but fall below the state and national levels for bachelor's degrees or higher achieved. The other counties in Region II lag behind the state and national levels of educational attainment. These numbers, however, represent an increase in educational attainment from the year 2000, when less than 1% of the population aged 25 years and older obtained a bachelor's degree or higher, which may be an indicator of potential increased demand for broadband services.

TABLE 4 – EDUCATIONAL ATTAINMENT (POPULATION AGE 25+)

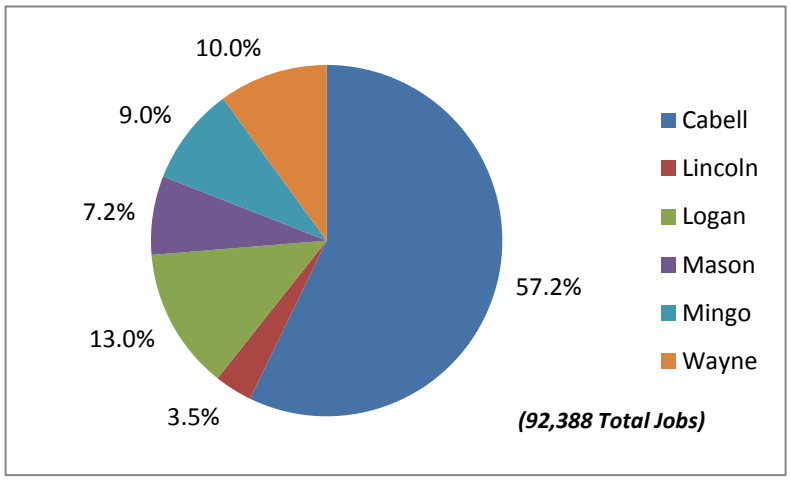
Level of Attainment	Cabell County	Lincoln County	Logan County	Mason County	Mingo County	Wayne County	West Virginia	Continental United States
No schooling completed	0.5%	2.5%	0.4%	1.1%	0.7%	0.6%	0.7%	1.1%
Nursery to 4th grade	0.4%	1.2%	1.4%	0.3%	1.1%	0.8%	0.5%	0.9%
5th and 6th grade	0.6%	1.6%	2.5%	0.9%	3.0%	1.4%	1.1%	1.9%
7th and 8th grade	3.4%	10.2%	6.9%	7.3%	8.2%	6.0%	4.7%	2.5%
9th grade	2.5%	5.0%	4.8%	2.9%	5.8%	3.3%	3.0%	2.0%
10th grade	3.2%	7.7%	5.4%	4.0%	4.8%	4.9%	3.8%	2.5%
11th grade	2.7%	5.2%	4.5%	3.4%	5.0%	3.5%	3.2%	2.6%
12th grade, no diploma	1.1%	1.4%	2.0%	1.2%	0.5%	1.5%	1.5%	2.0%
High school graduate, GED, or alternative	35.9%	38.7%	44.5%	43.3%	42.9%	39.8%	41.4%	29.3%
Some college, less than one year	6.0%	4.7%	3.8%	5.4%	4.5%	5.1%	5.7%	6.3%
Some college, one or more years, no degree	15.3%	9.2%	9.2%	12.7%	9.8%	13.2%	11.6%	14.0%
Associate's degree	6.5%	3.8%	5.9%	5.9%	5.0%	7.3%	5.7%	7.4%
Bachelor's degree	12.3%	5.5%	5.4%	7.1%	5.7%	7.8%	10.4%	17.4%
Master's degree	6.2%	2.6%	2.6%	3.8%	2.5%	3.5%	4.7%	7.0%
Professional school degree	2.5%	0.4%	0.5%	0.6%	0.3%	1.2%	1.3%	1.9%
Doctorate degree	0.9%	0.2%	0.1%	0.3%	0.2%	0.2%	0.7%	1.1%

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Employment

According to data obtained from the U.S. Census Bureau's Local Employment Dynamics, there were 92,388 jobs in Region II in 2011, of which, 57.2% were located in Cabell County, 13% in Logan County, 10% in Wayne County, 9% in Mingo County, 7.2% in Mason County, and 3.5% in Lincoln County (see Figure 3). This number of jobs represents an increase of 4.6% between 2006 and 2011, with an increase of nearly 15% in Mingo County, a 13.6% increase in Wayne County, and marginal increases in Cabell, Logan, and Mason Counties. Lincoln County was the only Region II county to experience a decline in the number of jobs in this period, at -2.7%.

FIGURE 3 – DISTRIBUTION OF JOBS IN REGION 9



Source: Local Employment Dynamics – On the Map

As shown in Table 5, the largest industry sector in Cabell County in 2011 was the health care and social assistance sector, comprising 24.5% of the County's employment base. The second largest industry sector in Cabell County was the retail trade sector, which comprised 13.8% of its employment base. Cabell County's top three employers in 2011, as reported by Workforce West Virginia, included St. Mary's Hospital, Cabell Huntington Hospital, and Cabell County Board of Education.

The largest industry sector in Lincoln County in 2011 was the educational services sector, comprising 19.1% of the County's employment base. The second largest industry sector in Lincoln County was the mining, quarrying, and oil and gas sector, which comprised 18.8% of its employment base. Lincoln County's top three employers in 2011, as reported by Workforce West Virginia, included the Lincoln County Board of Education, Coal River Mining, and the Lincoln County Opportunity Company.

The mining, quarrying, and oil and gas sector is the largest industry in Logan County, comprising over 16% of its employment base. The health care and social assistance sector is the second largest industry sector in the County, comprising 15.5% of the employment base. Logan County's top three employers in 2011, as reported by Workforce West Virginia, included the Logan County Board of Education, Logan General Hospital, and Cliffs Logan County Coal.

In 2011, the largest industry sector in Mason County was the health care and social assistance sector, comprising 18.9% of the employment base. The second largest industry in the County was the educational services sector, at 14.2% of the employment base. Mason County's top three employers in 2011, as reported by Workforce West Virginia, included the Mason County Board of Education, Pleasant Valley Hospital, and the Indiana Michigan Power Company.

The largest industry sector in Mingo County in 2011 was the mining, quarrying, and oil and gas sector, comprising 32% of the employment base. The second largest industry in Mingo County was the health care and social assistance sector, at 11.7%. As reported by Workforce West Virginia, the top three employers in Mingo County in 2011 were the Mingo County Board of Education, West Virginia Mine Power, and Brody Mining.

In Wayne County, the largest industry sector in 2011 was the health care and social assistance sector, comprising 24.2% of the employment base. The second largest industry was educational services, comprising 16% of the employment base. As reported by Workforce West Virginia, the top three employers in Wayne County in 2011 were the Wayne County Board of Education, the Huntington Veterans Affairs (VA) Medical Center, and Rockspring Development.

TABLE 5 – REGION II COMPARATIVE INDUSTRY MIX BY COUNTY (2011)

Industry Sector	Cabell County	Lincoln County	Logan County	Mason County	Mingo County	Wayne County
Agriculture, Forestry, Fishing, and Hunting	0.0%	0.0%	0.0%	3.6%	0.4%	0.2%
Mining, Quarrying, and Oil and Gas Extraction	0.4%	18.8%	16.2%	0.5%	32.0%	9.3%
Utilities	0.6%	0.8%	1.0%	7.2%	0.9%	1.0%
Construction	4.2%	9.8%	2.2%	3.1%	11.1%	4.3%
Manufacturing	9.2%	0.6%	6.6%	9.5%	2.5%	5.3%
Wholesale Trade	3.9%	1.6%	4.2%	2.2%	2.2%	4.0%
Retail Trade	13.8%	10.8%	14.2%	8.9%	5.9%	9.1%
Transportation and Warehousing	1.2%	4.4%	2.2%	8.7%	4.7%	7.3%
Information	1.4%	1.4%	1.3%	0.6%	0.9%	0.5%
Finance and Insurance	2.5%	1.5%	1.7%	1.7%	1.9%	1.3%
Real Estate and Rental and Leasing	1.1%	0.2%	0.9%	0.6%	1.0%	0.3%
Professional, Scientific, and Technical Services	4.1%	1.0%	2.8%	2.0%	2.6%	2.1%
Management of Companies and Enterprises	0.8%	0.0%	0.8%	0.7%	0.2%	0.2%
Administration & Support, Waste Management, and Remediation	6.8%	2.3%	2.3%	1.1%	5.0%	2.1%
Educational Services	8.8%	19.1%	10.5%	14.2%	9.6%	16.0%
Health Care and Social Assistance	24.5%	15.4%	15.5%	18.9%	11.7%	24.2%
Arts, Entertainment, and Recreation	0.8%	0.2%	0.5%	1.4%	0.2%	1.3%
Accommodation and Food Services	9.9%	4.5%	8.3%	5.0%	2.8%	5.3%
Other Services (excluding Public Administration)	3.0%	4.0%	4.2%	4.0%	2.1%	2.0%
Public Administration	3.1%	3.5%	4.7%	6.1%	2.4%	4.1%

Source: U.S. Census Bureau, Local Employment Dynamics – On the Map

Inflow and Outflow of Workers

Region II retains many of its working residents and has an overall net inflow of workers. The high rate of health care and education jobs, as well as an increase in the overall number of jobs in recent years, makes the region an attractive place to find employment. The growth in industries with high tech jobs such as the information sector and the health care and social assistance sector (specifically, rates of 14.7% and 20.3%), as well as industries requiring high levels of online connectivity, such as educational services and management (with rates of 23.1% and 44.1%) provide a basis for an increased need for broadband capabilities within the region. Table 6 and the figures that follow show the inflow and outflow of workers in Cabell, Lincoln, Logan, Mason, Mingo, and Wayne Counties in 2011.

TABLE 6 – INFLOW AND OUTFLOW OF WORKERS BY COUNTY (2011)

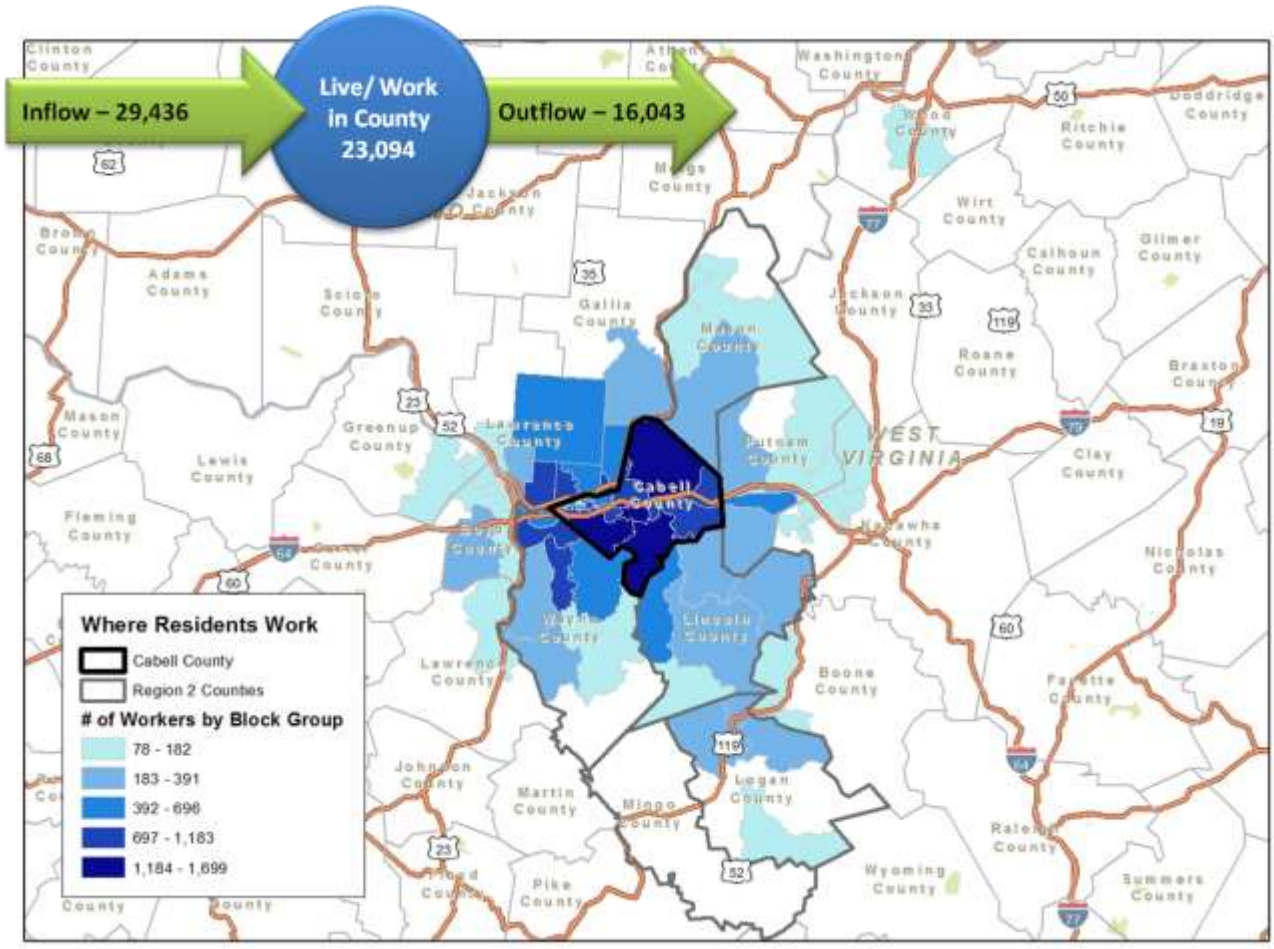
	Jobs in County	Inflow of Workers	Living and Working in County	Resident Workers	Outflow of Workers
Cabell County	52,530	29,436	23,094	39,137	16,043
Lincoln County	3,219	2,126	1,093	6,543	5,450
Logan County	12,059	6,764	5,295	14,734	9,439
Mason County	6,697	3,950	2,747	8,377	5,630
Mingo County	8,338	5,923	2,415	7,233	4,818
Wayne County	9,283	6,122	3,161	15,566	12,405

Source: U.S. Census Bureau, Local Employment Dynamics – On the Map

Cabell County

About 41% (16,043) of Cabell County's working residents travel outside the County to work (see Table 6 and Figure 4). Of the 52,530 jobs in the County, 44% (23,094) are held by Cabell County residents. About 11.1% (4,361) of residents travel to Kanawha County for work, and 4.6% (1,810) travel to Putnam County. Approximately 7.7% (3,017) of Cabell County working residents remain in the region for work. Slightly over 6% of resident workers leave the state for work, traveling primarily to Ohio and Kentucky.

FIGURE 4 –CABELL COUNTY INFLOW AND OUTFLOW OF WORKERS (2011)

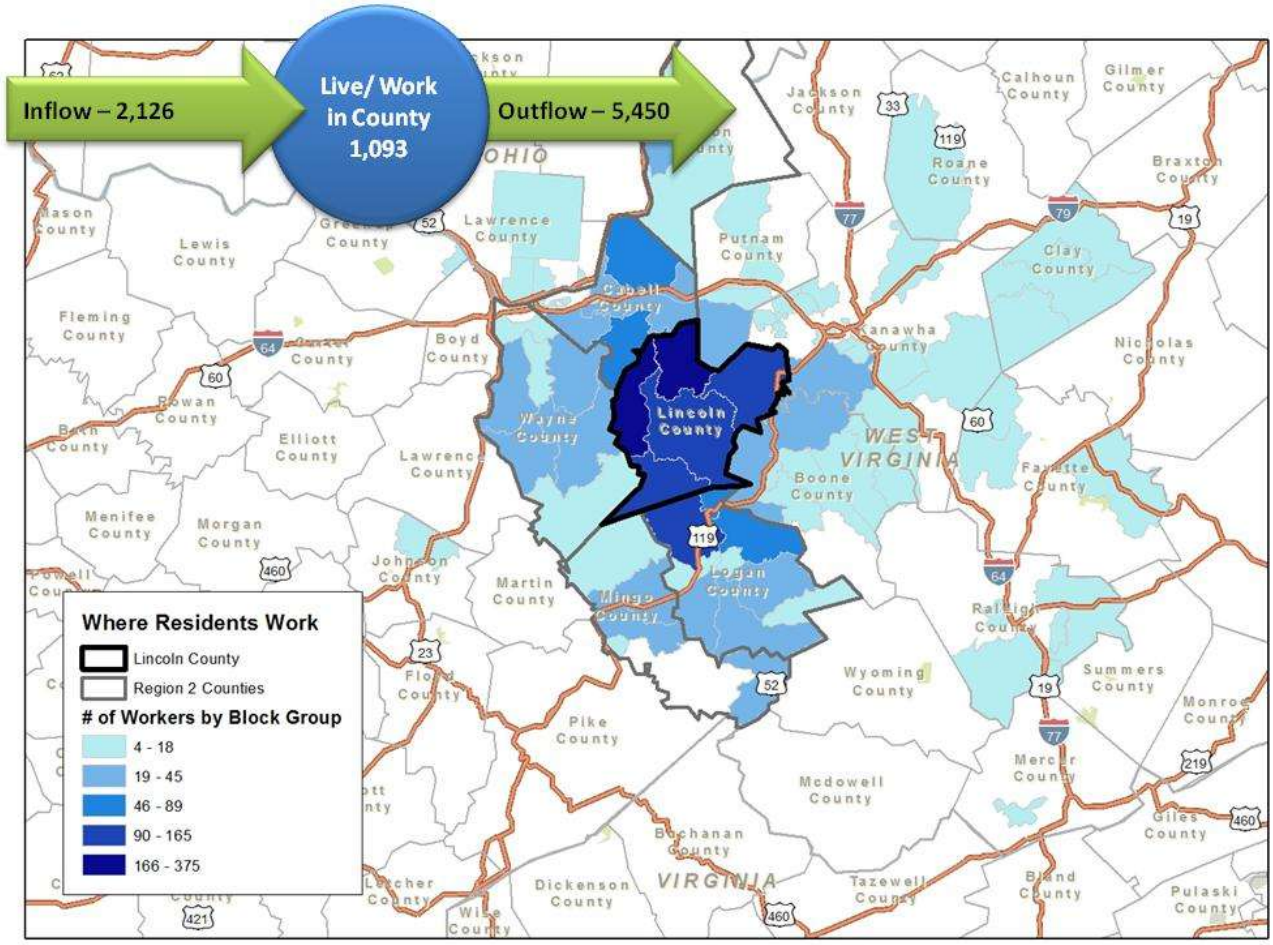


Source: Local Employment Dynamics – On the Map

Lincoln County

Nearly 84% (5,450) of Lincoln County's working residents travel outside the County to work (see Table 6 and Figure 5). About 33.2% (2,170) work in other counties within Region II, and about half of Lincoln County workers travel outside of the County for work. Few Lincoln County workers (about 307 workers or 5%) leave the state for work, and these people travel primarily to border counties in Kentucky or Ohio. Of the 3,219 jobs in Lincoln County, 34% (1,093) are held by Lincoln County residents.

FIGURE 5 – LINCOLN COUNTY INFLOW AND OUTFLOW OF WORKERS (2011)

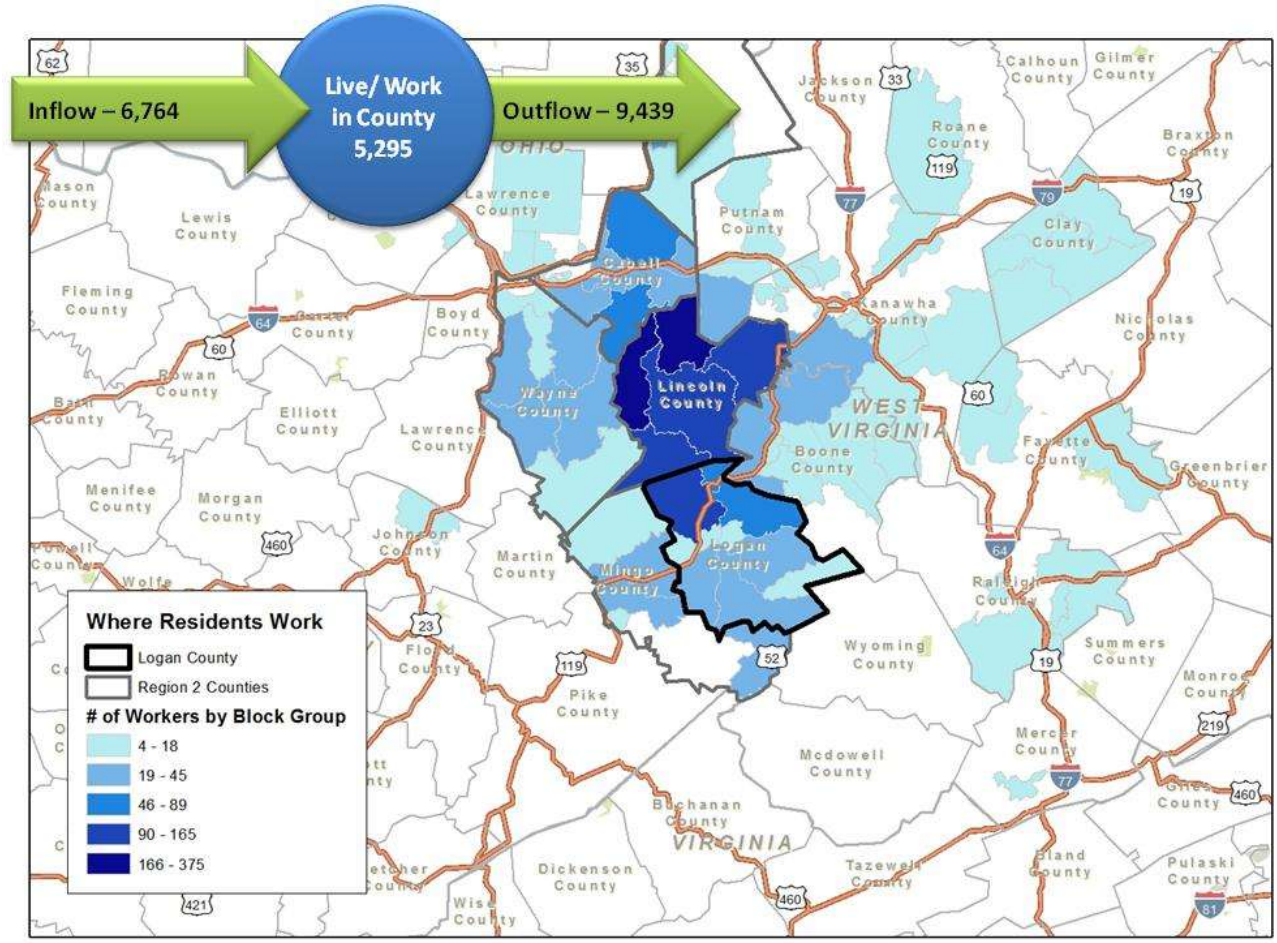


Source: Local Employment Dynamics – On the Map

Logan County

Nearly 62% (9,439) of Logan County's working residents travel outside the County to work (see Table 6 and Figure 6). Of the 12,059 jobs in the County, 43.9% (5,295) are held by Logan County residents. Kanawha and Mingo Counties are popular work destinations, with 27.6% of Logan County's workers finding employment in those areas. About 26.1% (2,709) of workers in the County find employment in other counties within Region II.

FIGURE 6 – LOGAN COUNTY INFLOW AND OUTFLOW OF WORKERS (2011)

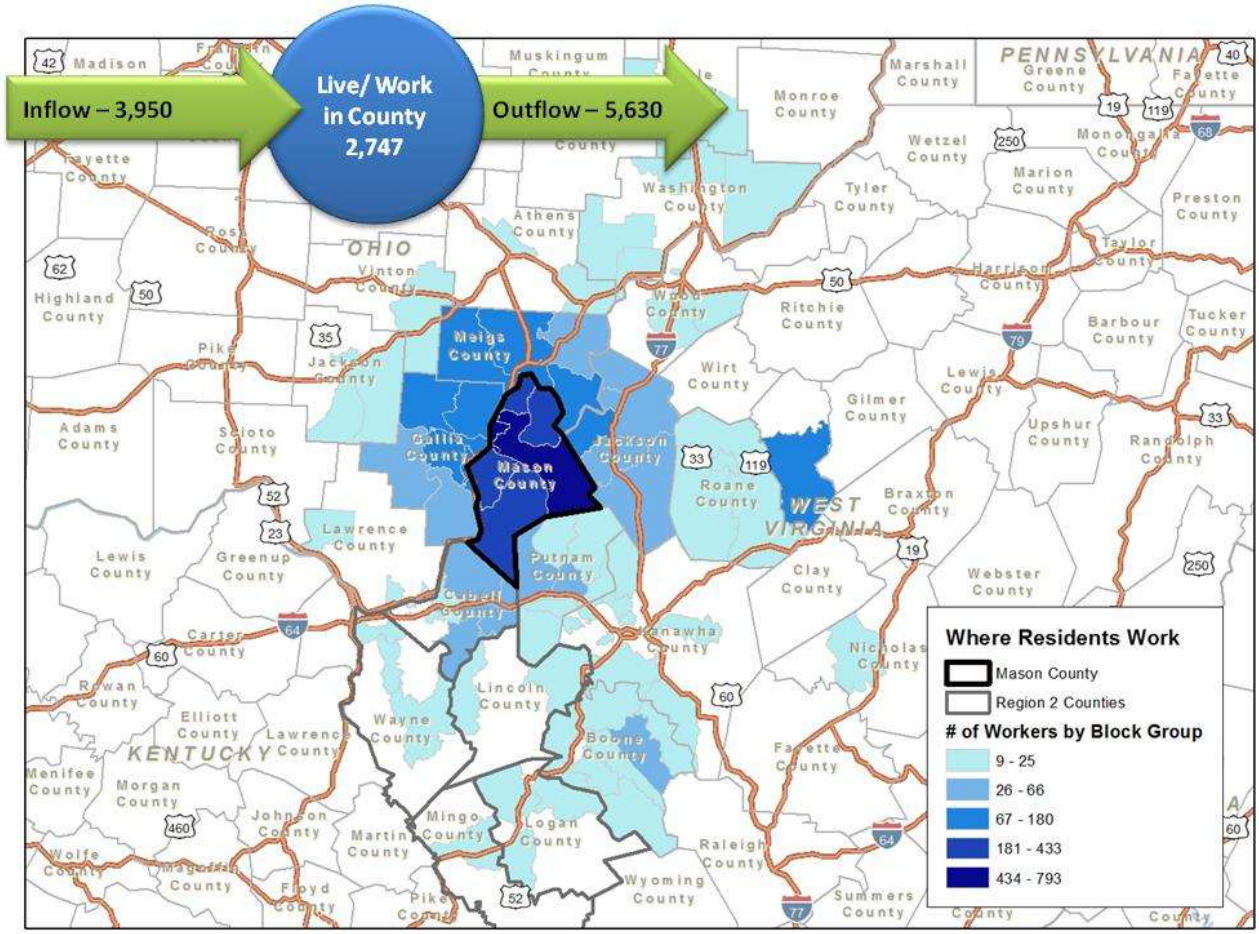


Source: Local Employment Dynamics – On the Map

Mason County

Nearly 68% (5,630) of Mason County's working residents travel outside the County to work (see Table 6 and Figure 7). Of the 6,697 jobs in the County, 41% (2,747) are held by Mason County residents. About 15.6% (1,308) of Mason County's working residents travel to other counties within Region II for employment. Almost 10% of the County's working residents travel to Gallia County in Ohio for work.

FIGURE 7 – MASON COUNTY INFLOW AND OUTFLOW OF WORKERS (2011)

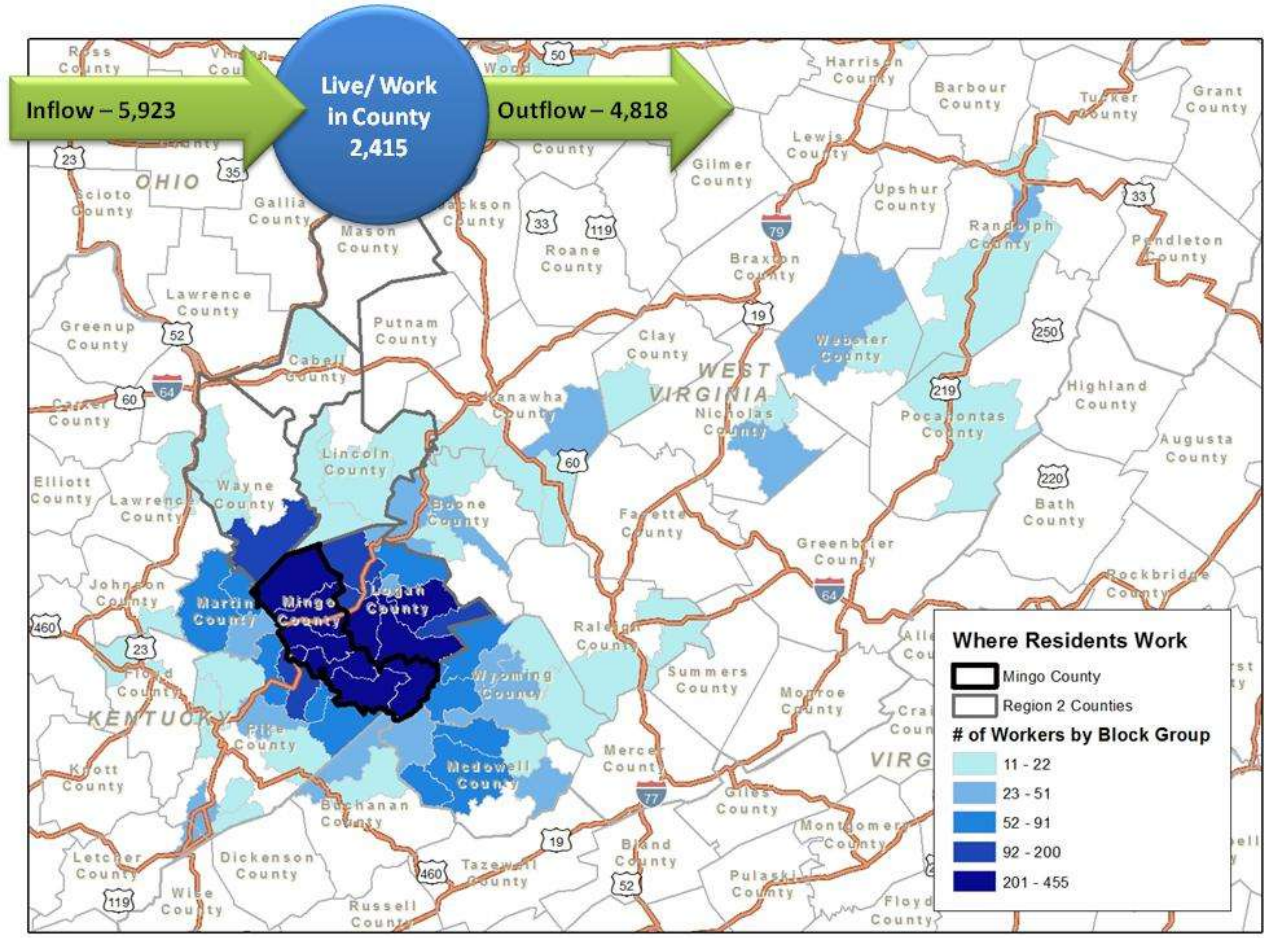


Source: Local Employment Dynamics – On the Map

Mingo County

Nearly 67% (4,818) of Mingo County's working residents travel outside the County for work (see Table 6 and Figure 8). About 27.2% (1,962) of the County's working residents work in other counties within the region. Nearly 85% (approximately 865) of County residents work in Kentucky counties, with Pike County as the primary location for employment. Of the 8,338 jobs in Mingo County, 29% (2,415) are held by Mingo County residents.

FIGURE 8 – MINGO COUNTY INFLOW AND OUTFLOW OF WORKERS (2011)

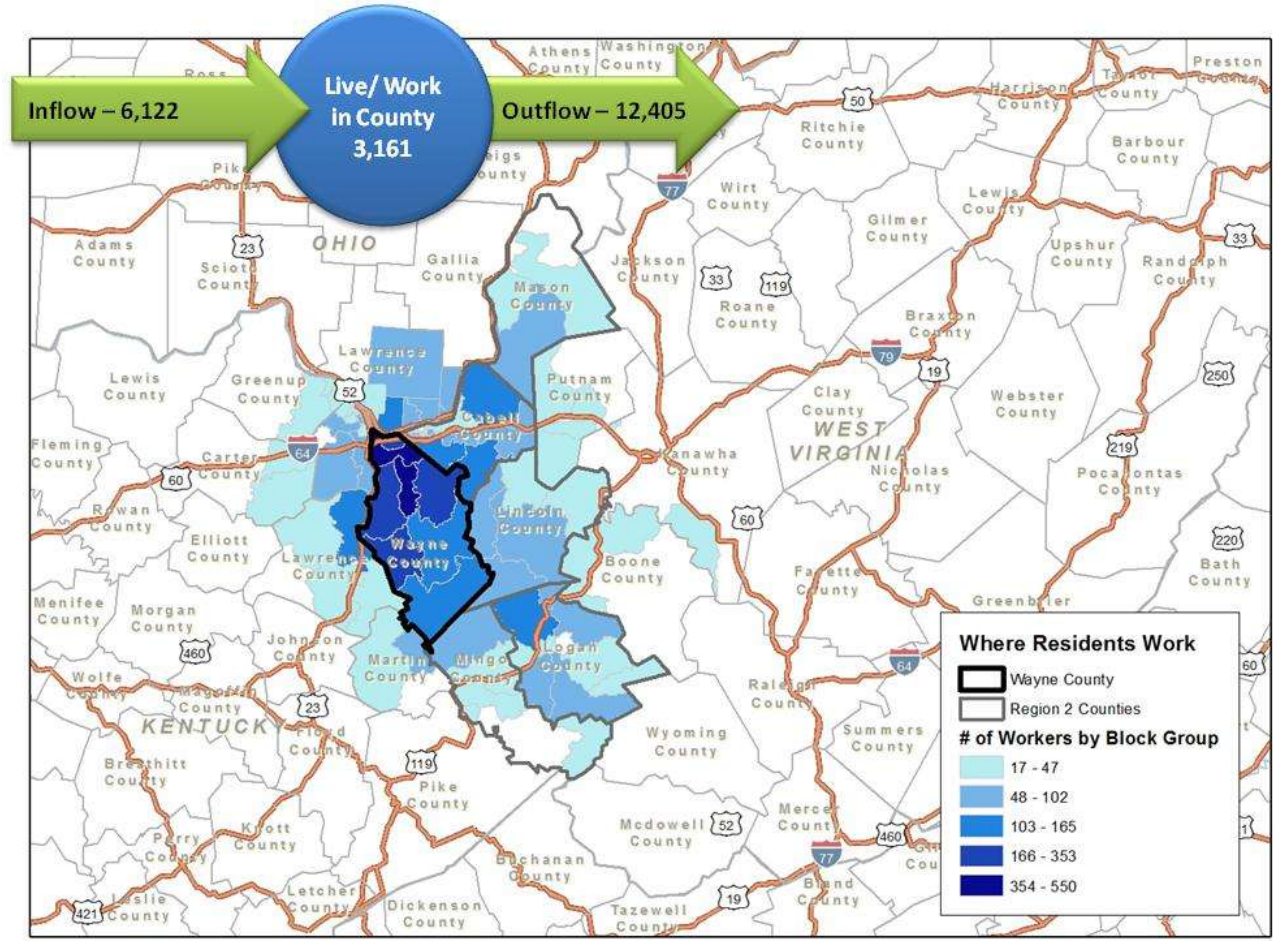


Source: Local Employment Dynamics – On the Map

Wayne County

Nearly 67% (10,422) of Wayne County's working residents travel outside the County to work (see Table 6 and Figure 9). About 25.5% (5,958) work in other counties within the region. Of the 9,283 jobs in the County, 34.1% (3,161) are held by Wayne County residents. Workers traveling outside the region are primarily traveling either east, to Kanawha and Putnam Counties, or north, to Harrison and Monongalia Counties in West Virginia.

FIGURE 9 – WAYNE COUNTY INFLOW AND OUTFLOW OF WORKERS (2011)

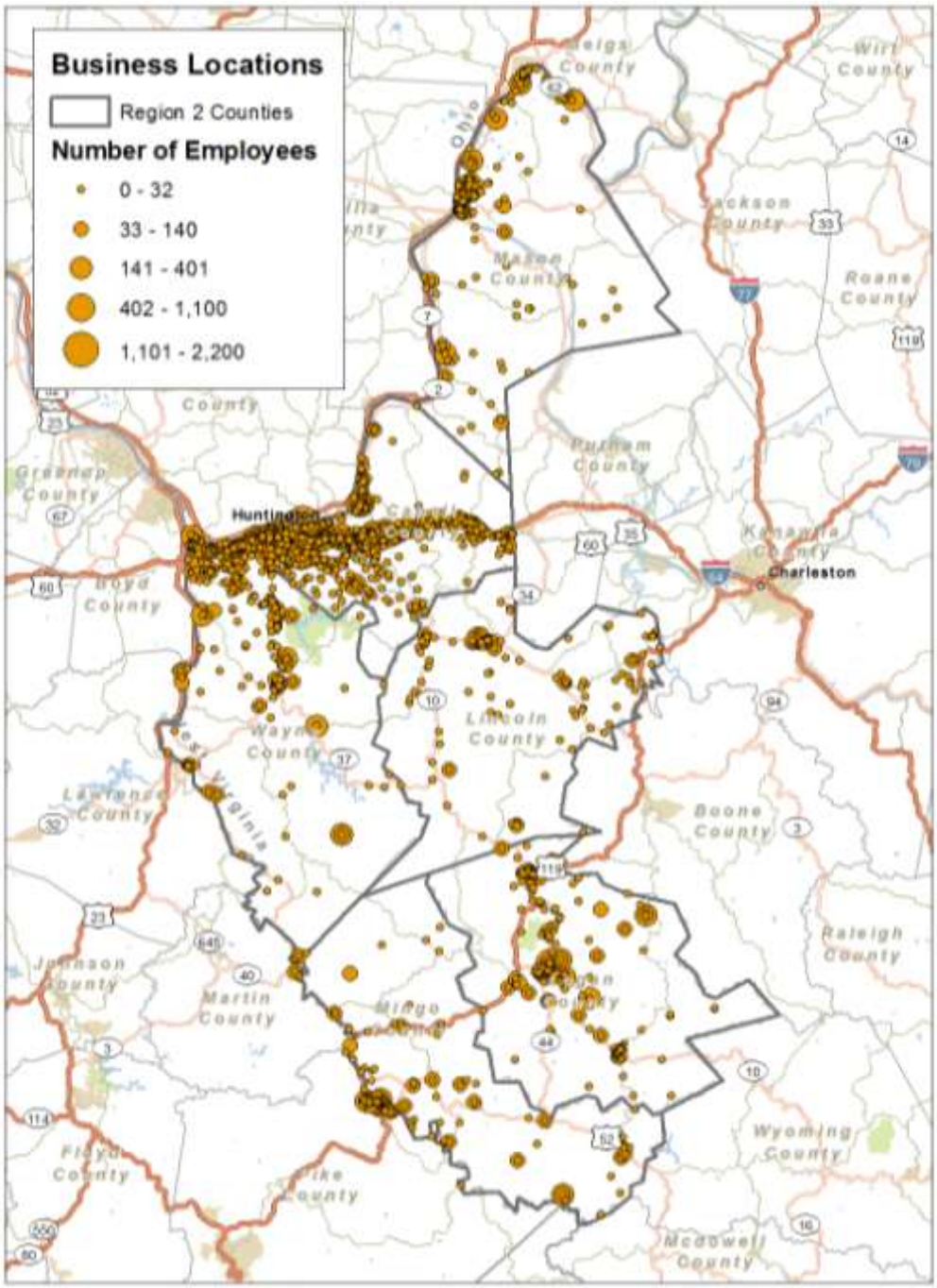


Source: Local Employment Dynamics – On the Map

Expected Growth Areas in Region II

A key consideration in developing a regional broadband strategy is to gain an understanding of where economic growth is expected to occur in the region. This information can help to shape priorities in a broadband strategy and can also help broadband providers prioritize their investments in broadband infrastructure, thus ensuring their investments are aligned with local growth priorities. The current business activity in Region II is largely clustered near population centers and along transportation corridors. These areas are also the areas where population growth is expected in the region over the next five years (see Figure 1 on page 2). Figure 10 below shows the locations of businesess throughout the region.

Figure 10 – Locations of Businesses in Region II



Source: ESRI Business Analyst

Priority Projects Overview

To identify specific priorities for development within the region, the RBPT reviewed priority projects from the West Virginia Multi-Modal Transportation Plan (Transportation Plan) and information from the West Virginia Development Office on available business and industrial parks, sites, and buildings in each county. The following is an overview of the information obtained. This information can serve as a starting point in developing and implementing the broadband strategies.

The historic economic growth of Huntington, the largest city in Region II, was largely based on its transportation assets and the manufacturing and shipping industries. Even though the area has lost some of its manufacturing base, it is still home to the largest inland port in the nation. The Port of Huntington-Tristate is the largest port in West Virginia, the eighth largest port in the United States, and the largest inland port in the United States. An expansion of the Panama Canal, which will double the Canal's freight capacity, is expected to be completed in 2014. The increased freight moving through east coast ports could mean increased activity for the Port of Huntington-Tristate, and because of its location, the area is also attractive as a hub for freight via rail and highway transportation. Based on information provided in the Transportation Plan, with the implementation of three priority transportation projects, Region II will have significant opportunities for economic development in the coming years, once again with activity centered on the shipping industry.

The West Virginia Department of Transportation (WVDOT) outlines three multi-modal transportation projects in its Transportation Plan, two of which are located in Region II. As a component of the Heartland Corridor Project, the proposed Prichard intermodal terminal would be located in Prichard, 13 miles south of I-64 and accessed by U.S. 52. The Heartland Corridor Project is a public/private initiative that will provide the Norfolk Southern Corporation (Norfolk Southern) with a direct route to operate double stack intermodal trains between Norfolk, Virginia, and Chicago, Illinois, as well as through Roanoke, Virginia; southern West Virginia; and Columbus, Ohio. The Prichard facility would provide a location for transferring containers between trucks and Norfolk Southern intermodal trains. Train service would be provided to Norfolk and to Chicago. Once at Chicago, containers could be transferred to western rail carriers for delivery to west coast ports.

According to the Transportation Plan, the $22.3 million Prichard terminal would primarily support international trade, as well as transportation markets, within southwestern Virginia, southeastern Ohio, and northeastern Kentucky. In addition, it would support Cabell, Putnam, Kanawha, and Jackson Counties, which have the highest manufacturing employment in West Virginia. The Prichard facility could offer shippers significant cost savings, ranging between $500 and $900 of savings per container.

Norfolk Southern estimates a traffic volume of 15,000 to 30,000 containers in the first several years of operation; however, once the area is established as an intermodal center, it is likely that businesses would relocate to the area to be in close proximity to the terminal, and traffic volumes would be higher. Ensuring the availability of adequate broadband service in the area of influence surrounding the Prichard terminal would add to its attractiveness to new businesses.

A second project included in the Transportation Plan would be located in Point Pleasant in Mason County. The project would convert a former military depot to a logistics center where private shippers can store and transfer products between truck and rail. The acquisition of an adjacent property, the Pointe Pleasant Marine property, will expand the center to include transload capabilities to barge as well.

One of the largest planned investments in transportation in West Virginia is the future expansion of I-73. The new interstate corridor would run from Myrtle Beach, South Carolina, to Sault Ste. Marie, Michigan, and would cross the southern and western portions of West Virginia. The West Virginia portion of the Interstate, the King Coal Highway, is a new four-lane highway approximately 90 miles long, running through McDowell, Mercer, Mingo, Wyoming, and Wayne counties and along or near the currently existing US Route 52.

According to the Federal Highway Administration (FHWA), "some of the construction work is being done by local mining companies as they extract coal from the surrounding areas near and along the new highway alignment. Regulatory agencies are more willing to allow permits for coal removal if there is a constructive use for the excess material that occurs as a by-product of the removal process. The coal companies participating in this partnership have provided input in determining the alignment of the highway to ensure that it provides good access to coal-rich areas."

The King Coal Highway project is a partnership among WVDOT, private enterprise, a local redevelopment authority, and FHWA, and it has been divided into 11 operationally independent sections that will be built in a phased sequence. Construction is nearing completion on the first phase of the highway, the "Red Jacket" section, which is located in Mingo County. The use of former mining properties for economic development in Mingo County has created over 500 jobs in recent years. The new King Coal Highway will open additional opportunities for the reuse of former mining properties for development. Ensuring the availability of adequate broadband in the areas surrounding the planned highway will make these areas more attractive for economic development.

In addition to these long-range plans, in Wayne County, the Corps of Engineers has approved plans for a new 75-room lodge at Beech Fork State Park that will bring new tourism dollars to Region II.

Table 7 below shows available business and industrial parks, sites, and buildings located in Region II that are being promoted for economic development by the West Virginia Development Office.

TABLE 7 – REGION II: BUSINESS AND INDUSTRIAL PARKS, SITES, AND BUILDINGS

Type	Name	Address	City	County
Industrial Building	Allied Warehousing Services Building #5	#20 - 26th Street	Huntington	Cabell
Industrial Building	Allied Warehousing Services Building #6	15 26th Street	Huntington	Cabell
Office Building	Ames Building	5th Street	Huntington	Cabell
Industrial Park	Barboursville Business Complex		Barboursville	Cabell
Industrial Site	Barboursville Site		Barboursville	Cabell
Industrial Building	Business Center at Commerce Park	Cheshire Way	Huntington	Cabell
Industrial Building	Central Sales Company Building	2986 Cyrus Creek Road	Barboursville	Cabell
Industrial Site	CSX Yard at 26-27th Street Site		Huntington	Cabell
Industrial Site	CSX Yard at 26-27th Street Site		Huntington	Cabell
Industrial Park	HADCO Business Park		Green Bottom	Cabell
Industrial Park	HADCO Business Park II		Greenbottom	Cabell
Industrial Building	HADCO Business Park Shell Building V	HADCO Business Park 8201 Frazier's	Lesage	Cabell

Type	Name	Address	City	County
		Lane (Rte. 2)		
Industrial Park	Kinetic Park		Huntington	Cabell
Industrial Park	Morris Memorial Business Park		Milton	Cabell
Industrial Building	Unisource Building Sublease	550 27th Street	Huntington	Cabell
Industrial Site	Demonstration Farm Site		Hamlin	Lincoln
Industrial Site	Steele Farm Site		West Hamlin	Lincoln
Industrial Park	Earl Ray Tomblin Industrial Park		Holden	Logan
Industrial Building	Logan Manufacturing Facility	110 Phico Street	Chapmanville	Logan
Industrial Site	McDonald Airfield Site		Taplin	Logan
Office Building	Midway Plaza	Route 10 South	Lyburn	Logan
Industrial Site	Three-Mile Curve Site		Dabney	Logan
Industrial Site	Apple Grove Site		Apple Grove	Mason
Industrial Site	Bartow Jones Site		Point Pleasant	Mason
Industrial Site	Deerfield Site		Point Pleasant	Mason
Industrial Site	Deerfield Site		Point Pleasant	Mason
Industrial Site	Jesco Corporation Site		Letart	Mason
Industrial Site	Lakin Site		Lakin	Mason
Industrial Park	Mason County Development Authority Industrial Park		Point Pleasant	Mason
Industrial Site	Pleasant Point Site		Point Pleasant	Mason
Industrial Site	Rolfe Lee Site		Gallipolis Ferry	Mason
Industrial Building	Stover Building	Lot 5, State Route 62, Pt. Pleasant, WV 25550	Point Pleasant	Mason
Industrial Site	Thompson Site		Point Pleasant	Mason
Office Building	Former Heilig Meyers Building	US Route 52 East	Kermit	Mingo
Industrial Building	Heilig Meyers Building	US Route 52 East	Kermit	Mingo
Industrial Park	Mingo County Wood Products Industrial Park		Williamson	Mingo
Office Building	Muncy Building	1717 West 3rd Avenue	Williamson	Mingo

Type	Name	Address	City	County
Industrial Site	Hammonds Bottom Site		Fort Gay	Wayne
Industrial Site	Hammonds Bottom Site		Fort Gay	Wayne
Office Building	Hanshaw Building	1040 Vernon Street	Huntington	Wayne
Industrial Building	Service Pump & Supply Building	4446 Waverly Road	Huntington	Wayne
Industrial Site	Tri-State Airport Site		Huntington	Wayne

Source: West Virginia Development Office

Broadband Planning Implications

Despite a national economic downturn that was the worst since the Great Depression, Region II has maintained a stable population base and has experienced an increase in its employment base. This is an indicator of the Region's quality of life and assets that make it attractive for business development. The Region's existing transportation corridors are critical assets that will likely help to make the area attractive for future economic development. These corridors, coupled with long range plans for two major freight hubs and a new Interstate Highway could position the region for unprecedented opportunities for economic growth. Ensuring that broadband infrastructure and redundancies are in place in priority development areas with affordable, reliable broadband service is critical to the attractiveness of Region II for economic development.

KEY ASSESSMENT FINDINGS

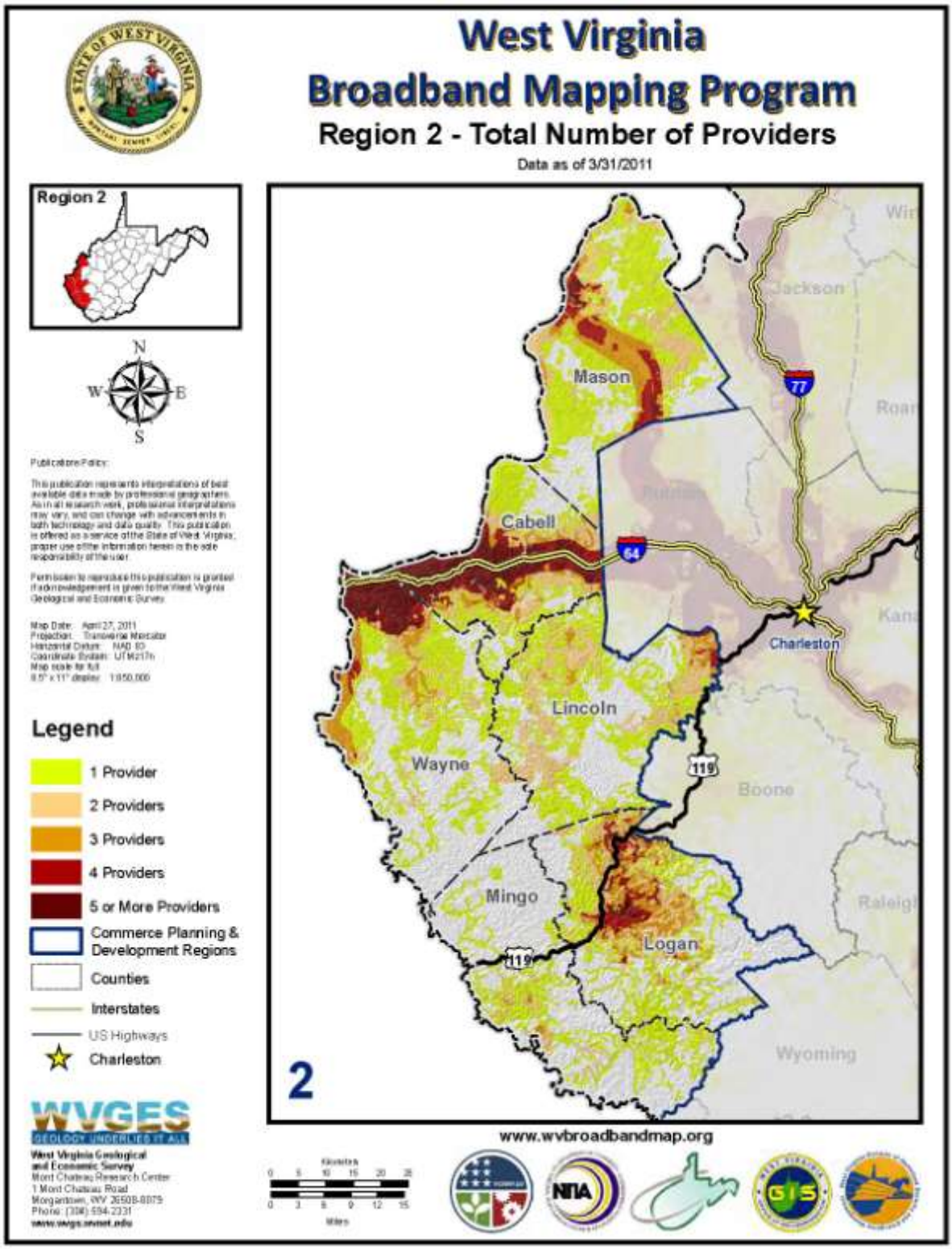
Through the analysis and independent research conducted by the RBPT, the following key assessments and findings have been assembled from county, regional, state, and federal surveys, studies, data sources, and reports. The RBPT reviewed best practices for sustainable adoption and increased utilization of high-speed broadband that were successfully implemented in other states. In some cases, high-speed broadband initiatives were a priority consideration, paramount to critical infrastructure such as roads, electricity, and water. Through this research, it was discovered that in order to provide fast, reliable access to underserved and unserved rural communities, motivation must exist for broadband and telecommunication providers to invest large capital expenditures. In other words, demand must be present in order to supply the need.

Resident and business consumers surveyed indicated an overwhelming need to have fast, reliable, and affordable robust broadband service considered essential to the daily operation of their businesses, and enhancing their quality of life. High speed Internet is viewed as a necessity to take advantage of online education and healthcare services, conduct online banking and bill payment, access entertainment, and serve as a communication tool. The lack of availability and low connection speeds in many areas potentially render the region unsuitable for home-based businesses. Additionally, based on the data results produced by the speed test taken and submitted by participants as part of the regional survey study, broadband speeds as defined by the FCC are not being met with the current technology and infrastructure that exists in Region II.

West Virginia Broadband Coverage

The West Virginia Broadband Mapping Program (WVBMP) worked with broadband providers throughout the state to map broadband availability information. The map below provides an overview of the number of broadband internet providers servicing Region II (see Figure 11 or Appendix A).

FIGURE 11 – NUMBER OF BROADBAND PROVIDERS



West Virginia Unserved Broadband Analysis

The State of West Virginia used various criteria to classify areas as unserved by existing broadband providers into three main categories: Type 1, Type 2/Type 2 Priority, and Type 3. The Types are defined in the following manner:

Type 1

A Type 1 unserved area is an area in which broadband may be deployed by service providers in an economically feasible manner.

Type 2 and Type 2 Priority

A Type 2 unserved area is an area in which broadband may be deployed by broadband service providers and other entities in an economically feasible manner, provided some form of public money is made available.

Type 2 Priority is an unserved area with population centers that should be targeted for grant funding. These areas have a higher likelihood of utilizing broadband service.

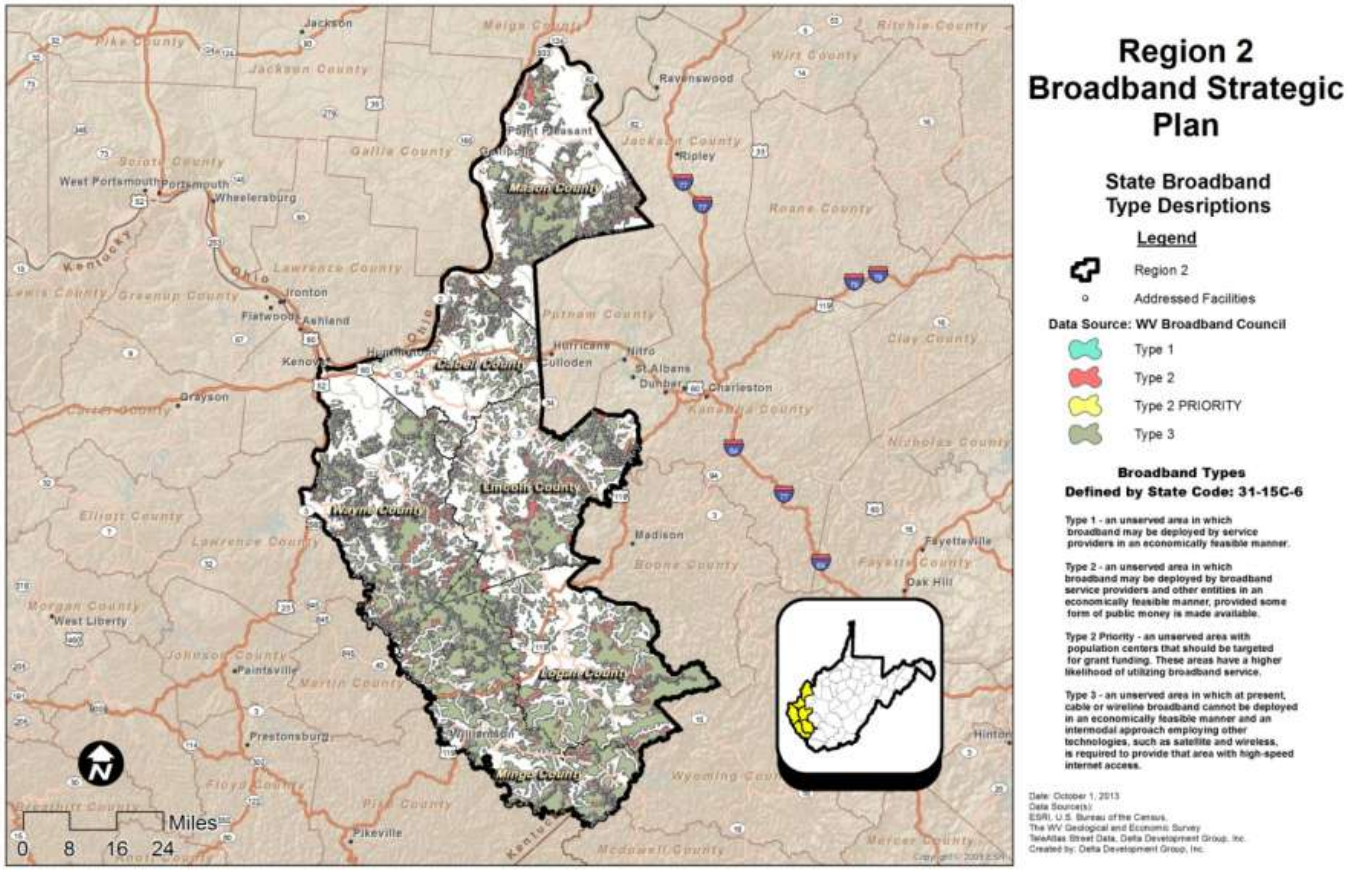
Type 3

A Type 3 unserved area is an area in which, at present, cable or wire-line broadband cannot be deployed in an economically feasible manner, and an intermodal approach employing other technologies, such as satellite and wireless, is required to provide that area with high-speed Internet access. These areas were determined using a methodology developed by the state, which included analyzing various factors such as population density, population age, income, and proximity to existing networks. Each category was weighted on a scale indicating the likelihood to receive broadband service. See Appendix A to view a map of the typed areas in Region II. The RBPT took the Type layers provided by the state and cross-referenced them with the West Virginia statewide 911 addressing data point layers (i.e., list of all addressed facilities in the state) to determine the number of facilities within each unserved type. Table 8 provides an overview of the analysis and Figure 12 maps the results.

TABLE 8– UNSERVED AREAS BY COUNTY, TYPE AND REGION

	Type I	Type II	Type II Priority	Type III
Cabell	120	81	646	1
Lincoln	120	486	1029	23
Logan	683	780	1453	40
Mason	216	988	2655	52
Mingo	510	1946	785	193
Wayne	391	1702	3218	76
Type Total	***2040***	***5983***	***9786***	***385***

FIGURE 12 – STATE BROADBAND TYPE DESCRIPTIONS (MAP)



RESIDENTIAL AND BUSINESS BROADBAND SURVEY FINDINGS

Region II, in coordination with the West Virginia Geological and Economic Survey (WVGES), developed and released two regional broadband-related surveys (residential and business) in March 2013 to establish a broadband usage and capability assessment for the region. The surveys were modeled based on the examples published in the Regional Broadband Planning Team Toolkit. The Toolkit was provided to each region by the state to serve as a reference guide for their broadband planning purposes. The surveys were made available to the public through an online survey tool, and paper-based surveys were distributed to schools, libraries, local businesses, etc.

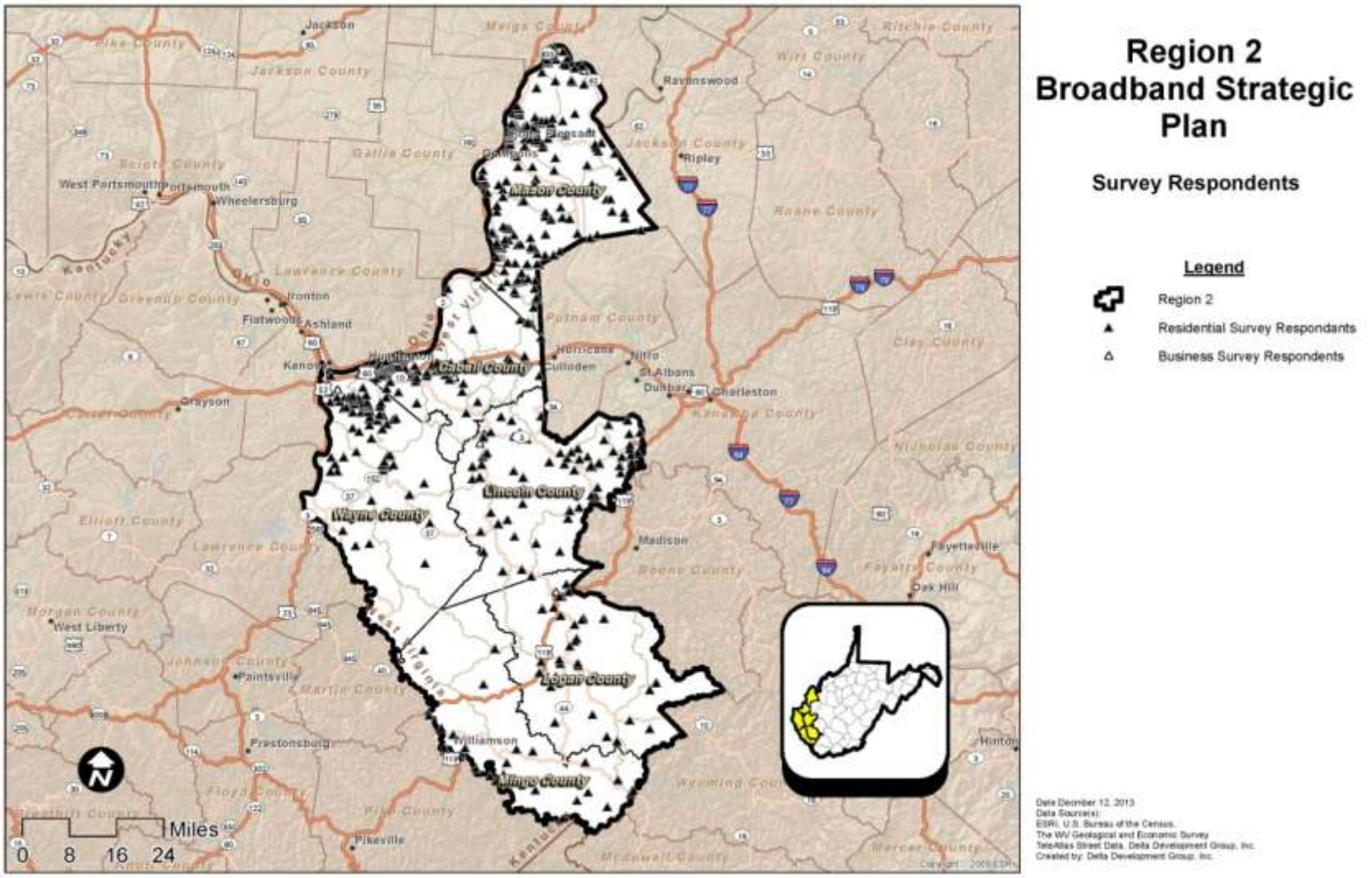
In total, 1,111 residential and business responses were received from the six-county area (see Appendix B for copies of the surveys). Table 9 provides a detailed breakdown of respondents by county. Figure 13 maps business and residential survey respondents in Region II. The map with the corresponding data can also be viewed in Appendix A.

TABLE 9: SURVEY RESPONDENTS BY COUNTY

County	Residential	Business	Total
Cabell	177	19	196
Lincoln	130	6	136
Logan	43	5	48
Mason	496	8	504
Mingo	55	4	59
Wayne	105	8	113
Other*	52	3	55
Total:	**1,058**	**53**	**1,111**

** - Represents areas beyond the region's six-county area (i.e., Boon, Gallia, Hancock, Kanawha, Martin, Meigs, Pike, Putnam, Raleigh, and Wyoming), and the respondents who skipped this question.*

FIGURE 13 – SURVEY RESPONDENTS



Survey Outreach

Initially, the RBPT developed an outreach strategy that served as a guideline to effectively market and distribute the surveys and to ensure the surveys were conducted successfully. The residential and business surveys were made available to the public in numerous formats including online access through a link provided on the Region's planning and development council website. These surveys were distributed in paper form at post offices, libraries, schools, and other public areas. Additionally, the outreach strategy included:

- engaging the Chambers of Commerce and Economic Development Authorities for local business community outreach
- promoting through the Region's Planning and Development Councils, County Commissioner's office, county offices, and local municipalities' websites
- utilizing the tri-state advertiser
- advertising in the local newspaper
- employing the help of public county libraries
- distributing the survey through the Region's public schools

Residential Survey Data

The RBPT conducted residential survey studies throughout the six-county area to gather critical information to gauge availability of high-speed Internet access that would help form the basis of a strategic broadband planning report. A total of 1,058 respondents participated in the survey, with 64% of the responses submitted by Cabell and Mason county residents. Those answering the survey were between the age range of 25 to 44 years old (62%), and 77.6% of the total responses were submitted by females.

According to the survey results, when the respondents were asked how they learned about the survey study, 61.3% answered that they learned about it through their schools. Other methods cited for learning about the survey included:

- e-mail
- libraries
- word of mouth
- work/co-workers
- social media (Facebook, Twitter)
- local printed and online newspaper
- television
- rotary club
- Women's Caucus
- local Chamber

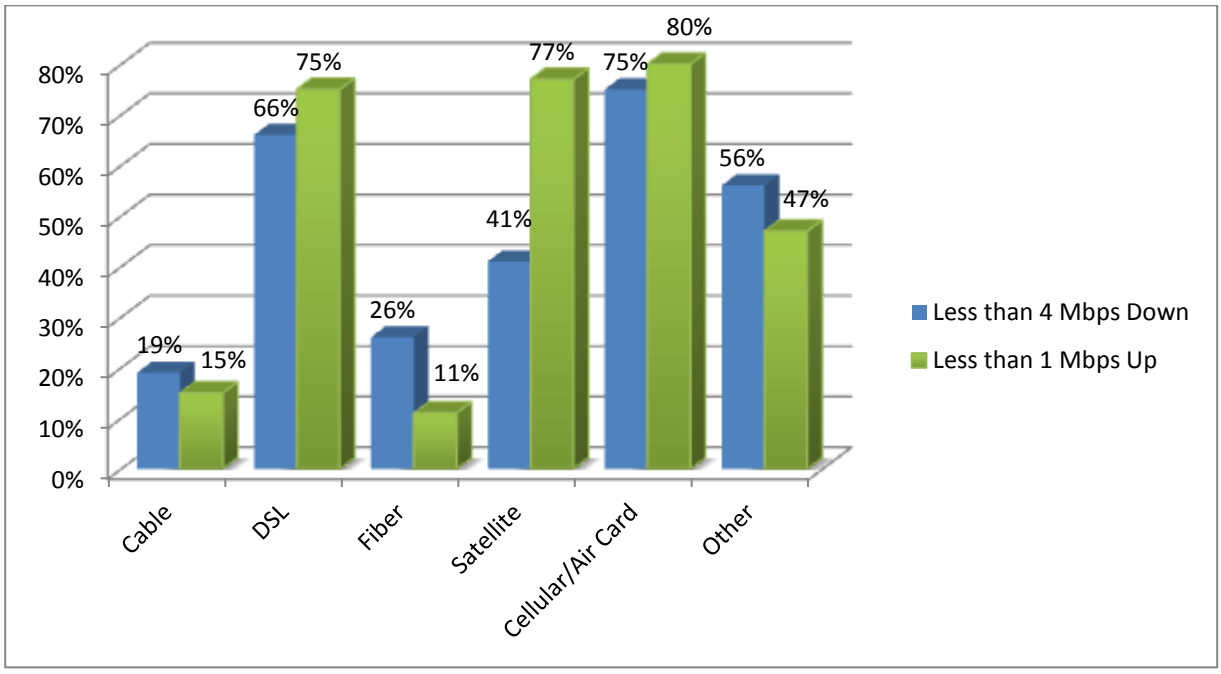
The survey questions were aimed at seeking information about the general characteristics of Internet service, such as type of connection, who provides Internet service, connection speed, availability, reliability, cost, and overall satisfaction with service. Examples of the residential and business survey can be found in Appendix B.

In addition to questions about the general characteristics of their Internet service, key pieces of information were collected, including who uses the Internet in the household, if telecommuting is an option, and other places where Internet is used outside of the home. Those who answered the survey (96.5%) were largely the users of the Internet. If they used the Internet other than at home, it was on their cellular phone (69.3%), at work (51.2%), at a relative or friend's house (48.1%), at retail shops, fast food restaurants, hotels/motels, doctor's offices, and hospitals equipped with wireless Internet service (26%), a public library (24%), or school (23.5%).

The surveys contained a link to the state's speed test tool. Survey respondents were asked to take a speed test to capture download and upload speeds. A variety of connection types were used for the speed tests – cable, DSL, fiber, cellular, satellite, however, the majority of the speed tests were conducted on cable or DSL connections (78%). The speed test data was integrated into the maps to achieve a more thorough picture of the areas where there is no broadband coverage and speeds do not meet the FCC's broadband definition of 4 Mbps down and 1 Mbps up.

Figure 14 below outlines the percentage of residential respondents not meeting FCC speeds by broadband provider type.

FIGURE 14 – PERCENTAGE OF RESIDENTS NOT MEETING FCC STANDARD



Residential respondents that indicated they do not have high-speed Internet access (e.g., none or dial-up) cited these top three reasons for not subscribing:

- 54.3% - Cost/too expensive
- 32.3% - Broadband service not available
- 27.3% - Don't own a computer

If these concerns were addressed, 89.6% of residential respondents that do not have high-speed Internet access indicated they would utilize broadband Internet service.

Other key findings drawn from the residential survey data demonstrate that

- 73.2% of residents surveyed have Internet access in their home
- 88% subscribe to either cable or DSL service
- 89.8% chose the connection type based on speed and availability of service
- 61.9% pay between $20 - $59 per month for Internet
- 69.8% of respondents indicated that their employer does not allow telecommuting
- 69.3% of respondents use their cell phone to connect to the Internet
- 65.7% of residents are serviced by two broadband providers, and
- only 49% of residents have broadband speed according to the FCC definition (4Mbps/1Mbps)

Table 10 illustrates the overall satisfaction rating of residents' Internet connection.

TABLE 10: RESIDENTIAL SATISFACTION

Internet Characteristics	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	N/A
Speed of Connection	27.3%	52.1%	14.2%	6.3%	0%
Cost of Internet	13.2%	39.7%	31.5%	14.7%	0.9%
Technical Support	21.7%	53.1%	12.4%	8.5%	4.2%
Reliability of Access	24.1%	50.2%	9%	32.1%	0.2%
Customer Service	23.9%	51.5%	12.6%	7.8%	4.3%
Number of Providers	11.7%	31.2%	21.6%	27.2%	8.3%

In summary, the results reveal that survey respondents are either satisfied or very satisfied with all of the characteristics of their current Internet service:

- 79.4 % - very satisfied or satisfied with the speed of their connection
- 52.9% - very satisfied or satisfied with the cost of Internet service
- 74.8% - very satisfied or satisfied with Internet providers' technical support
- 74.3% - very satisfied or satisfied with reliability of access
- 75.4% - very satisfied or satisfied with Internet providers' customer service, and
- 42.9% - very satisfied or satisfied with the available number of providers

Business Survey Data

A business survey study was conducted to determine the broadband usage, needs, and interests among local businesses. In total, 53 businesses responded to the survey study. A thorough analysis of the surveys revealed there is a profound need for an enhanced broadband environment to benefit customer and client-based services. Participants of the survey study were also provided a direct link on the survey form to conduct speed tests at their place of business. The speed test data analysis shows that 48.5% of businesses experience broadband speeds that meet or exceed the FCC standard transmission of 4 Mbps down and 1 Mbps up.

Over 64% of businesses seeking broadband Internet services to enhance operations described the

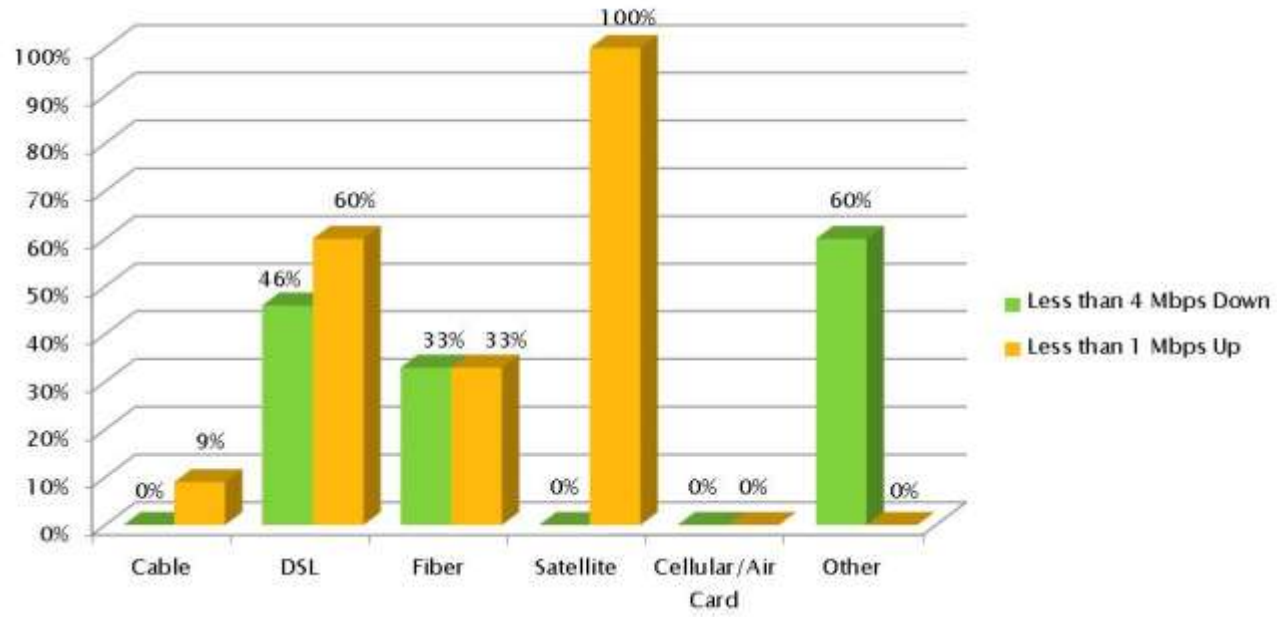
availability of multiple, competing broadband provider options as somewhat competitive, with two (2) providers to choose from, or not competitive at all, with only one (1) provider option available. Additionally, 16.3% of businesses responded high speed Internet service simply was not available for their location.

Key findings drawn from the business surveys are highlighted below.

- 98.1% - businesses surveyed have Internet access
- 63% - businesses are served by two (2) providers
- 97.8% - connect to the Internet using cable, DSL, or fiber
- 75% - employed from 1 to 25 employees
- 51.1% - allow their employees to telecommute
- 28.3% - pay more than $50 and less than $100 per month for service
- 97.8% - cited a robust broadband connection as very important to their day-to-day operations
- 97.7% - agree that if the broadband environment is enhanced, it would benefit their customers and clients
- Only 48.5% of businesses have broadband speed according to the FCC definition (4Mbps/1Mbps) – See Figure 15

Figure 15 below outlines the percentage of business respondents not meeting FCC speeds by broadband provider type.

FIGURE 15 – PERCENTAGE OF BUSINESSES NOT MEETING FCC STANDARD



Note – Businesses that took the speed test did not use a Cellular/Air Card connection type.

Businesses were asked to rate their overall satisfaction with aspects of their Internet service. Similar to the residential survey satisfaction ratings, Table 11 below clearly illustrates that, overall businesses are satisfied with their Internet services, if they can get service. Businesses are satisfied or very satisfied with the speed and reliability of their connection, the providers' billing practices, technical support, and customer service. Moreover, the survey data for businesses shows that they are satisfied with what they pay for their Internet service.

TABLE 11 – OVERALL SATISFACTION WITH INTERNET SERVICES: BUSINESS

Internet Characteristics	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	N/A
Speed of Connection	25.5%	42.6%	23.4%	8.5%	0%
Cost of Internet	10.6%	42.6%	23.4%	12.8%	10.6%
Technical Support	14.9%	38.3%	17%	19.1%	10.6%
Reliability of Access	34.8%	39.1%	13%	13%	0%
Customer Service	14.9%	40.4%	19.1%	14.9%	10.6%
Number of Providers	8.5%	42.6%	10.6%	21.3%	17%

Those business respondents that indicated they do not have high-speed Internet cited these top two reasons:

- 50% - Don't own a computer
- 50% - Cost/too expensive

100% of businesses that do not have to high-speed Internet stated they would utilize broadband Internet service if these concerns were addressed.

On a final note, businesses were asked to share how they learned about the survey. The majority received information through email (33.3%). Other respondents cited the Chamber of Commerce, the Economic Development Authority, word of mouth, work, and through their local libraries.

Industry Sector Survey Overview

As part of the business survey, the RBPT polled businesses to gauge how broadband service can transform their industries. The following is a summary of the questions that were asked and respondents' answers.

Those businesses that participated in the survey categorized their industry sector type as:

Please choose your Industry Sector type from the following list (check all that apply):

Answer Options	Response Percent	Response Count
Business, retail, and economic development	29.4%	15
Education	25.5%	13
Energy and environment	5.9%	3
Health care	9.8%	5
Libraries	5.9%	3
Local government	11.8%	6
Public safety	3.9%	2
Tourism	7.8%	4
Other (please specify)	33.3%	17
answered question		**51**
skipped question		**2**

The "Other" category comprised the largest percentage of a single response. The breakdown is shown below:

Other (please specify)
Construction
Entertainment
Funeral Home
Industrial, Municipal & Mining
Industrial, Municipal & Mining
Legal
Legal
Media/ Manufacturing
Professional Services
Religion - Non-profit
Retail Nursery/Greenhouse/Landscaping
Sales/Service Industrial Equipment
Transportation
Transportation Planning
Utility
Workforce & Employer Development - State

Over 97% of industry respondents agree it would be beneficial to enhance the broadband environment in their area to

- improve communications (fast, reliable service)
- meet demand and stay competitive
- enhance education and learning (interactive classrooms)
- improve customer service
- increase efficiencies in workflow
- access online applications for employment
- improve tourism opportunities
- conduct research
- support small business growth

According to 78.3% of the respondents, broadband access and availability meet minimum standards for effective industry applications. The remaining 21.7% identified the following locations for broadband enhancement and some of the challenges to overcome deployment of broadband to these areas:

Possible locations:	**Challenges:**
Huntington (and west end)	Access to fiber optic/FIOS
Southern Wayne County	Lack of investment in infrastructure
Delbarton	Decline in populations and technology in the state
All rural areas	Finding locations that offer affordable, fast service
Downtown	

Tools such as computers, networks, and applications need to be in place for an industry to leverage broadband. Out of the total respondents who answered, 84.4% agree the right tools are in place for their needs. The 15.6% respondents who felt the right tools were not in place suggested they needed the following to successfully take advantage of broadband:

- Need FIOS connections supported by a good provider
- Availability of T1 speeds
- Fiber options at reasonable prices for service

76.7% responded that the workforce is properly trained to use broadband/industry applications effectively. The remaining 23.3% respondents believe maximizing broadband potential for the industry workforce can be accomplished by

- providing more training opportunities
- providing educational and marketing initiatives
- ensuring business objectives meet technical objectives

60.5% of businesses indicated that broadband technology costs are NOT prohibitive.

SWOC Analysis

After reviewing federal, state, and regional data, studies and surveys, combined with the RBPT's local broadband experience and knowledge, the RBPT conducted a SWOC analysis of the region's broadband capabilities. Figure 16 provides an overview of the top priority items in each quadrant.

FIGURE 16 – SWOC ANALYSIS

STRATEGIC DIRECTION

The strategic direction section outlines the strategic objectives identified during the RBPT strategic planning process. The objectives are presented in order of priority as identified by the RBPT. This is followed by an implementation matrix that outlines the specific tasks and time frames for each strategic objective.

Currently an organization(s) and/or funding resources have not been identified to implement the Broadband Strategic Plan. In the following sections, the word implementation team refers to any organization or cooperative at the state or local level that decides to champion the implementation of one or all strategic objectives. The Council will assist its members, as needed, in project planning and preparing applications for funding.

Strategic Objective S.O.1: Support Increased Broadband Services in Eight (8) Targeted Economic Development and Growth Areas of the Region.

Region II continues to have areas that are unable to receive Internet service other than through dial-up or satellite connectivity. In fact, the survey data clearly shows that residents and businesses cite the top reason they don't have high speed Internet access is due to the lack of broadband service in their area. This limitation can affect the quality of life (e.g., healthcare, education, business opportunities) for residents and the competitiveness of businesses in these areas. Therefore, the implementation team may work to ensure broadband availability throughout the region. To accomplish this, the RBPT identified eight target areas to focus on increasing broadband access.

Goal S.O.1.1: Promote and support broadband and funding opportunities in the eight (8) targeted economic development and growth areas of the Region.

1. **The Ohio River Corridor – Huntington** – This corridor spans the area along the Ohio River along the northern border of Cabell County. The corridor currently is home to some of the Region's highest concentrations of business activity, and includes the City of Huntington, Marshall University, and significant private port activity – recognized as the largest inland port in the United States. ***The City is interested in deploying a downtown WIFI project leveraging the States BTOP investment in this area and the RBPT strategic plan supports this project.***

   According the 2010 census, the Ohio River Corridor – Huntingdon area has approximately 28,664 households and 2550 businesses, including 63 anchor institutions. The RBPT utilized the state's priority type data layers and the FCC data layer that maps unserved and partially served by fixed broadband against the statewide 911 addressing data points to identify unserved and underserved structures in the area. The analysis shows:

   - 175 unserved structures in the State's Priority Type layers
   - 973 unserved structures in the FCC data layers
   - 197 partially served structures in the FCC data layer

2. **WV Route 2 Corridor – Point Pleasant** – This corridor includes areas in Mason County bordering the Ohio River with Glenwood as the southern gateway to the corridor, and continues to the County's northernmost point along WV Route 62. Industrial growth has occurred in the corridor, specifically in the Point Pleasant area. Point Pleasant is also the location for the planned conversion of a former military to a logistics center, and the expansion of a marine property to include transload capabilities to barges. The fire academy and a new library are located in this corridor.

According the 2010 census, the WV Route 2 Corridor – Point Pleasant area has approximately 5,247 households and 535 businesses, including 29 anchor institutions. The RBPT utilized the state's priority type data layers and the FCC data layer that maps unserved and partially served by fixed broadband against the statewide 911 addressing data points to identify unserved and underserved structures in the area. The analysis shows:

- 128 unserved structures in the State's Priority Type layers
- 4,138 unserved structures in the FCC data layers
- 267 partially served structures in the FCC data layer

3. **WV Route 152 – Beech Fork Area** – Located in Wayne County, the Beech Fork Area is a major tourism area in the region. The area is located south of Huntington and is bounded by WV Route 152 to the west and the County boundary to the east, and spans south to include the Beech Fork State Park Area. A new 52-room lodge is in the planning stages and will be located on state park property.

   According the 2010 census, the WV Route 152 – Beech Fork area has approximately 3,110 households and 283 businesses, including 17 anchor institutions. The RBPT utilized the state's priority type data layers and the FCC data layer that maps unserved and partially served by fixed broadband against the statewide 911 addressing data points to identify unserved and underserved structures in the area. The analysis shows:

   - 230 unserved structures in the State's Priority Type layers
   - 2,992 unserved structures in the FCC data layers
   - 452 partially served structures in the FCC data layer

4. **WV Route 10 – Hamlin/West Hamlin** – Located in the northern portion of Lincoln County, this Corridor includes areas along WV Route 3 between the intersection of WV Routes 10 and 3 in West Hamlin to the intersection of WV Routes 3 and 34 east of Hamlin. A number of medical facilities, businesses, and other anchor institutions are located along this highway.

   According the 2010 census, the Hamlin/West Hamlin area has approximately 965 households and 164 businesses, including 15 anchor institutions. The RBPT utilized the state's priority type data layers and the FCC data layer that maps unserved and partially served by fixed broadband against the statewide 911 addressing data points to identify unserved and underserved structures in the area. The analysis shows:

   - 0 unserved structures in the State's Priority Type layers
   - 0 unserved structures in the FCC data layers
   - 0 partially served structures in the FCC data layer

5. **U.S. Highway 52 Corridor – Airport Area** – Located in Wayne County, this corridor is bounded by the Ohio River on the north and west, and spans approximately six (6) miles west to the east and 4.5 miles north to south. The Huntington Tri-State Airport is located in the heart of this area, and a new 10-acre business park is being planned adjacent to the airport.

According the 2010 census, the U.S. Highway 52 Corridor – Airport area has approximately 5,721 households and 353 businesses, including 18 anchor institutions. The RBPT utilized the state's priority type data layers and the FCC data layer that maps unserved and partially served by fixed broadband against the statewide 911 addressing data points to identify unserved and underserved structures in the area. The analysis shows:

- 0 unserved structures in the State's Priority Type layers
- 8 unserved structures in the FCC data layers
- 0 partially served structures in the FCC data layer

6. **U.S. Highway 119 Corridor** – This corridor encompasses properties along U.S. Highway 119 which spans northeast to southeast through Mingo and Logan Counties, and along the eastern border of Lincoln County. The corridor is home to anchor institutions such as the VA hospital and medical facilities. A new industrial park is planned in the corridor, and there are several other potential development sites along the corridor.

   According the 2010 census, the U.S. Highway 119 Corridor area has approximately 16,335 households and 374 businesses, including 55 anchor institutions. The RBPT utilized the state's priority type data layers and the FCC data layer that maps unserved and partially served by fixed broadband against the statewide 911 addressing data points to identify unserved and underserved structures in the area. The analysis shows:

   - 866 unserved structures in the State's Priority Type layers
   - 6,107 unserved structures in the FCC data layers
   - 1,857 partially served structures in the FCC data layer

7. **U.S. Highway 52 Corridor – Prichard Area** – This area includes properties within approximately two miles of U.S. Highway 52, and runs south from Prichard for approximately seven miles. While the area is sparsely populated, it is home to a number of anchor institutions and businesses, and has been identified as a priority area for economic development. The proposed site for the Prichard Intermodal Center is located in this corridor.

   According the 2010 census, the U.S. Highway 52 Corridor – Prichard area has approximately 393 households and 8 businesses, including 2 anchor institutions. The RBPT utilized the state's priority type data layers and the FCC data layer that maps unserved and partially served by fixed broadband against the statewide 911 addressing data points to identify unserved and underserved structures in the area. The analysis shows:

   - 193 unserved structures in the State's Priority Type layers
   - 607 unserved structures in the FCC data layers
   - 78 partially served structures in the FCC data layer

8. **King Coal Highway – Red Jacket** – The focus of this corridor is the "Red Jacket" section of the King Coal Highway, a planned four-lane highway that will include 90 miles of roadway in five West Virginia counties. The new highway will run along or near the existing U.S. Route 52. The Red Jacket is a 15 mile section of the highway in Mingo County. Approximately 11 miles of the Red Jacket Section has been completed. The roadway is being built on former mining lands, and a significant number of former mining properties are available for reuse throughout the corridor.

According the 2010 census, the King Coal Highway – Red Jacket area has approximately 9,562 households and 655 businesses, including 42 anchor institutions. The RBPT utilized the state's priority type data layers and the FCC data layer that maps unserved and partially served by fixed broadband against the statewide 911 addressing data points to identify unserved and underserved structures in the area. The analysis shows:

- 2,668 unserved structures in the State's Priority Type layers
- 6,668 unserved structures in the FCC data layers
- 4,187 partially served structures in the FCC data layer

Goal S.O.1.2: Aggregate demand.

In order to demonstrate market demand, the implementation team may survey the identified residents and businesses in the target areas to determine their desire to purchase broadband. The outreach may include educational information to demonstrate the benefits of broadband. This task may be accomplished through phone calls or a mailing. Furthermore, residents and businesses could be encouraged to sign a letter of intent stating that if broadband is provided at a specified service level for a specified price they will purchase the service. The information may be analyzed to determine if priority areas or regions exist.

Demand aggregation is an important step in increasing broadband availability. Broadband providers have informed the RBPT that when making network expansion decisions the key variables that are considered are capital improvement cost, operation cost, number of likely users, and return on investment. Identifying early adopters and likely users will help the provider community make clear investment decisions.

The implementation team may seek funding from the West Virginia Broadband Deployment Council to assist with demand aggregation. Demand aggregation in unserved and underserved areas is an eligible funding activity.

Goal S.O.1.3: Engage broadband provider community.

Once the total population and the initial level of interest have been assessed, the broadband provider community will be engaged to identify solutions. The implementation team may present the providers with an overview of the opportunity and discuss their ability and willingness to provide services. This may be accomplished through a provider conference or a request for information process. If no provider is interested in committing to providing services in the identified area, the implementation team may work with the provider community to identify barriers (e.g., capital expense, technical issues) to expanding broadband services.

Goal S.O.1.4: Monitor and support the implementation of disruptive technologies to provide broadband to unserved areas.

The implementation team may monitor the progress of potential disruptive technologies that may have the ability to provide broadband to unserved areas. Some of the technologies that will be monitored include the use of white space spectrum currently utilized by broadcast companies, advancements in broadband over power lines and increasing speed and reliability of broadband via satellite.

If these or new distribution methods prove promising, the implementation team may support funding efforts and pilot programs in the region.

Goal S.O.1.5: Discuss opportunity with the state.

The implementation team may engage the state government as a partner throughout this process and invite them to participate in the provider outreach program. Additionally, any barriers of entry identified by the providers may be shared with the state. The implementation team may engage the state to identify resources, funding, and assistance in the implementation and support of potential projects in unserved and underserved areas. Furthermore, the implementation team may work with the state to leverage its Broadband Technology Opportunities Program (BTOP) investment in fiber and high-performance routers to anchor institutions throughout the region to determine if the new resources can benefit the unserved and underserved areas. (See Appendix A for a map of Region 2 anchor institutions).

Goal S.O.1.6: Engage foundations for assistance.

In addition to state and federal funding, many foundations provide assistance to bring broadband services to unserved and underserved areas. The implementation team may present the foundations with an overview of the opportunity and discuss their ability and willingness to assist. Examples of potential foundation partners include: GigU, Google, Cisco, and Bill and Melinda Gates.

Goal S.O.1.7: Consider municipal or P3 options.

If the telecommunication community is unable to provide service once demand has been identified, the implementation team may research both municipal and public-private partnership (P3) opportunities to meet the demand. The implementation team may need to develop a business plan that identifies capital cost, operation cost, ownership, organizational structure, and potential partners. There are several examples of successful models throughout the country that can be used for reference and best practices (e.g., Dublin, OH; Crestone, CO; Orangeburg County, SC; and Chattanooga, TN).

Performance Measures – Strategic Objective S.O.1:

- Targeted communities that gain broadband access.

Strategic Objective S.O.2.: Support a "Dig Once" Policy to Encourage Broadband Providers to Lay Fiber in Conjunction with Road, Water, and Sewer Infrastructure

In order to support projected economic growth areas and broadband expansion, the RBPT encourages planning officials to adopt a dig once policy. Local planning officials can help to ensure that broadband access is a consideration in subdivision planning for residential, commercial, and industrial development through the use of regulatory requirements for land development. Subdivision and land development ordinances, especially in designated growth areas, can ensure that developers provide adequate broadband infrastructure that will support the land uses targeted for specific areas. Adequate broadband infrastructure, coupled with the lower-than-average cost of doing business in the region, can also be a key factor in attracting targeted businesses to the region.

Goal S.O.2.1: Work with local planning officials to encourage expansion of existing zoning, subdivision, and ordinance policies to include broadband infrastructure as part of the development process.

The implementation team may encourage local planning officials to amend zoning and subdivision and land development ordinances to include broadband requirements. These amendments can include the following types of items:

- Requirements that cell towers allow for multiple users.
- Inclusion of a "dig once" regulation requiring, at a minimum, infrastructure (conduit) is included in land development. Even if it is not feasible at the time of construction to run fiber, requiring the infrastructure at the time of development will minimize cost and inconvenience when fiber is feasible.
- Require the inclusion of dark fiber with transportation/streetscape improvements and new roadway construction.
- Require that external provider's investments conform to current local standards (e.g., visual impact, restrictions regarding types of antennas and towers, deployment of antennas to existing infrastructure such as light poles, etc.)
- Require, as a condition of approval, the removal of broadband and other advanced telecommunication towers and equipment when they are no longer needed.
- Require that new or renovated residential and commercial development projects include infrastructure components necessary to support broadband.
- Require publicly subsidized developments to provide broadband connectivity and include infrastructure components necessary to support broadband.

Goal S.O.2.2: Identify subject matter experts to assist with technical guidance and development of amendments.

As local planners consider regulatory amendments to support broadband infrastructure expansion and enhancement, they may require technical support in ensuring that ordinance revisions are aligned with locally specific broadband infrastructure, and that they are broad enough to anticipate and accommodate future technological advances. The implementation team may provide technical assistance to planning officials as needed in developing ordinance amendments, and therefore, should include partners who are subject-matter experts with the technical expertise to assist in this process.

While broadband needs and development priorities vary across the region's counties and municipalities, there is no "one size fits all" approach to these amendments, and each county and municipality may choose various approaches to regulating broadband infrastructure depending on their individual economic and regulatory environments. The American Planning Association's recent publication, *Planning and Broadband: Infrastructure, Policy, and Sustainability*[1], is a good resource for county and municipal planners.

[1] McMahon, K., Thomas, R.L. & Kaylor, C. (July 2012). *Planning and Broadband Infrastructure, Policy, and Sustainability*. Chicago, IL. American Planning Association

Goal S.O.2.3: Coordinate a meeting of the local planning officials and subject matter experts.

To further the efforts of the implementation team and to successfully affect change in local planning ordinances and policies, the implementation team may organize a meeting to assemble local planning officials, broadband providers, and subject matter experts to discuss changes and inclusions in current planning policies to address broadband as a required improvement and utility infrastructure.

Performance Measures – Strategic Objective S.O.2:

- Broadband infrastructure is included as a utility in all local zoning, subdivision, and development ordinances.

Strategic Objective S.O.3: Increase Widespread Broadband Utilization and Take Rates for Businesses and Residents through a Targeted Outreach Strategy

Widespread broadband adoption and usage are paramount to the region's competiveness and economic growth. Two methods to increase acceptance and proliferation of broadband is to 1) promote the importance of broadband service through an awareness program and 2) educate users to understand its advantages, inform them about available options, and demonstrate how it influences quality of life.

A prime example of broadband technology's influence on educational growth and opportunity is the adoption and implementation of the Flipped Classroom. In some of the region's counties (a limited number of Cabell County classrooms served as a pilot program), schools are utilizing this concept to advance learning techniques and improve student's grades. For families with students to really benefit from this emerging teaching practice, broadband acceptance and accessibility in each and every household is vital.

To accomplish this objective, the implementation team may consider developing a targeted outreach and education strategy that will transform the way residents and businesses in local communities and neighborhoods utilize and adopt high-speed broadband.

Goal S.O.3.1: Promote the importance of broadband through a regional awareness campaign.

As a facilitator of the advancement of broadband, the implementation team may consider promoting the importance of broadband through a regional awareness campaign. The awareness campaign shall be primarily geared to

- persuade consumers to adopt broadband services
- communicate the relevancy of broadband utilization
- demonstrate how broadband improves the way people live, work, and play

The implementation team may seek the support of volunteers to help coordinate and organize an awareness campaign that will educate citizens throughout the region. The campaign may include, but not limited to, the following elements:

- Target audience – identify who would be best served by increasing awareness (i.e., those who fear using the Internet, low-income populations, older citizens, etc.)
- Type of message – develop a cohesive, succinct message to inform and educate consumers, both residential and business.

- Media distribution format – determine the best methods to deliver the message. Print and Internet media may include, but not limited to, the following:
  - Press releases
  - Newspapers
  - Television
  - Radio
  - Advertisements
  - Posters/Flyers
  - E-mail blasts
  - Websites
  - Social media (e.g., Facebook, Twitter, LinkedIn)
  - Blogging
- Costs – identify associated "base" costs for the development and production of promotional materials and ways to reduce expenses (i.e., circulating materials through utility bills, bank statements, school handouts, etc.)
- Timeline and frequency – establish when and how often the message will be delivered

Additionally, the awareness campaign volunteers may

- gain an understanding of awareness efforts already underway (e.g., many service providers run awareness campaigns) and find ways to leverage those efforts
- take advantage of earned media opportunities to lower advertising expenses (i.e., free, public radio announcements)
- seek other resources to help offset costs, such as supplemental funding from local broadband providers to underwrite collateral materials
- enlist the help of local public officials to announce the regional campaign efforts through public broadcast messages
- encourage schools, libraries, chambers, and universities to promote the campaign and disseminate information by posting content and links on websites, and providing hard copies of brochures and literature to students, members, and the general public.
- identify other reputable resources and potential partners (e.g., organizations, councils, institutions, etc.) with regional breadth, garnering their voluntary participation to advocate public outreach efforts and support local broadband-related activities.

Goal S.O.3.2: Host broadband workshops.

In concert with the awareness campaign, the implementation team may organize and host broadband workshops to serve as a place for people to learn the how and why of safely becoming an online citizen. Consumers would be able to find information about broadband services, costs, and availability in their area, teach them the importance of being digitally connected, introduce them to new, emerging technologies, thereby ultimately increasing utilization and adoption of broadband services.

To successfully accomplish this goal, the implementation team may need to

- recruit local broadband providers to volunteer, getting their buy-in to cosponsor or underwrite the broadband workshops, and share valuable information about their broadband services and availability
- identify and target communities where there is great demand for broadband
- garner the support and participation of partners (e.g., broadband providers, community colleges, libraries, family resource networks, etc.) to help plan, coordinate, and market the workshops in these communities
- coordinate with organizations that already have planned events throughout the year to realize economies of scale, and take advantage of the potential exposure to mass audiences
- invite local government agencies, healthcare providers, utility companies, and other key stakeholders to serve as SMEs and keynote speakers, sharing their expertise and best practices.

Performance Measures – Strategic Objective S.O.3:

- Number of broadband workshops hosted in the region.
- Increases in broadband utilization, measured by predefined benchmarks to gauge success (e.g., FCC report measures, number of individuals subscribing to the Internet directly from hosted workshops).

Strategic Objective S.O.4: Advance Broadband Education throughout the Region

Education is a key element to increasing broadband demand and utilization within the Region. Largely an awareness issue, consumers can make better decisions if they are properly educated and informed about broadband technology choices that are available to them. Non-adopters may not understand the value of broadband, and therefore, they are at a distinct disadvantage. Isolation from broadband creates barriers to career and educational opportunities, health care assistance, governmental services, and social media. Potential adopters must perceive broadband access as a way to enrich their lives. However, there are some very valid reasons why some consumers don't subscribe:

- Content is irrelevant and it's a waste of time
- Potential risk of exposing children to inappropriate material
- A fear of having their identity stolen
- Uncertainty about broadband services, availability, cost, and reliability
- Unaffordable for fixed or low income families

Small business owners experience their own set of challenges connecting to broadband. These challenges limit their capabilities for growing and diversifying business operations. Without a thorough, working knowledge of what broadband is and how it can enhance their operations, businesses are at a competitive disadvantage if they truly don't understand the benefits of having access to robust broadband services. Understanding how to capitalize on opportunities such as having an effective web site presence, connecting with customers and suppliers, and expanding to global markets will contribute to a business's sustained growth. Broadband is a critical component of a successful company.

Goal S.O.4.1: Conduct a gap analysis on existing programs.

As a facilitator of the advancement of broadband, the implementation team may identify potential opportunities and programs that will address obstacles to broadband access, raise awareness about relevancy and affordability of connecting to high speed Internet, and help educate the community-at-large about the benefits broadband brings to their lives, and the communities they live and work in.

To assess broadband educational needs throughout the Region, the implementation team may conduct a gap analysis to 1) inventory existing programs or services that provide educational value (teach digital literacy, computer usage, online access, etc.), 2) identify relevant programs that need to be developed, and 3) determine which organizations or groups would be able to support or develop programs.

The implementation team may initially consult with credible stakeholders that are trusted in the community, may already have relevant, broadband educational programs in place, and can provide equipment and resources to support this effort. Potential stakeholders include:

- Amazon
- Chambers of Commerce
- Rotary clubs
- Women in Education (WE)
- Family Resource Networks
- Community Action Agencies
- Churches

Goal S.O.4.2: Promote existing educational opportunities and services.

The implementation team may partner with key stakeholders to promote existing educational opportunities identified in the gap analysis designed to instruct individuals about the advantages of broadband access. For example, the implementation team may collaborate with Community Action Agencies to help with outreach and training (i.e., the southwestern council has computer labs set up in town for public use) to parents, rural residents, vulnerable populations, the unemployed, and low-income families.

Goal S.O.4.3: Work with stakeholders to develop necessary courses.

In concert with promoting programs that do exist; the implementation team may collaborate with stakeholders to help develop the needed training programs identified through the gap analysis. Courses should be designed to be practical, provide hands-on training, and developed to accommodate all types of audiences. Several potential partners and programs are suggested below:

- Future Generations – set up community centers to train public
- MissionWV – offer free and reduced cost workstations
- Senior centers – provide computer labs for training
- Department of Agriculture – access to programs that offer training and community development programs
- Colleges – work with employers to offer distance learning programs to train employees

Performance Measures – Strategic Objective S.O.4:

- Number of courses offered/promoted.
- Number of students taking advantage of the educational opportunities.

Strategic Objective S.O.5: Identify and Monitor Funding and Financing Sources to Support Implementation of Broadband Strategy

A variety of funding and financing mechanisms are available at the local, state, and federal levels to assist with the advancement of strategic planning and capital improvements initiatives. These grant, loan, and tax incentive programs can be pursued to support the broadband strategic objectives of the RBPT. State and federal funding can be used to advance a variety of projects, including private-sector real estate development, commercial and residential revitalization, providing public services, and assisting state and local governments in developing solutions within West Virginia communities. The overarching goals and objectives for the Broadband Strategic Plan may be successfully achieved if the proper funding strategy is developed and implemented.

Goal S.O.5.1: Develop a Comprehensive Funding Strategy

It was acknowledged during the strategic planning process that there are significant funding challenges to overcome. These include capital costs needed for the initial deployment of infrastructure, sustainability, and finally, the return on investment for providers in rural areas. Some of the burden of these costs may be absorbed by finding and securing funding sources.

When initially approaching a funding strategy, costs associated with each targeted initiative must be evaluated and prioritized. Once eligible costs are aligned with applicable programs, a comprehensive funding strategy, including a detailed accounting of sources and uses, should be developed.

As funding and financing sources are identified, the implementers may monitor and vet specific funding sources for applicability and align them with the broadband strategic plan's priorities and initiatives, including provisions for broadband infrastructure.

A preliminary funding overview matrix was created during the broadband strategic planning process. It includes potential funding programs that are currently available and may be leveraged to help saturate broadband services throughout the Region. The funding overview matrix highlights key characteristics of the programs:

- type of program (grants, loans, or tax credits)
- applicant's eligibility requirements
- administering agency
- eligible use(s) for the funding
- matching fund requirements
- timeframe for submission and award

The implementers may review the funding overview matrix and determine which applicable programs shall be pursued.

Goal S.O.5.2: Implementation of the Funding Strategy

Upon determining the appropriate, eligible program(s) to pursue, an application with all supporting documentation should be developed, including a concise Executive Summary. Outreach to elected officials and other stakeholders at the local, state, and federal levels is critical to ensuring stakeholder support for funding or financing requests.

Once applications are submitted, a collective effort must be orchestrated for stakeholders to pro-actively engage the administering agency, or source, to voice support for the request and encourage its approval. If approvals are secured, facilitation and monitoring of the funds draw-down process is required to ensure compliance and maximize the fiscal benefit of the award. An on-going dialogue with all elected officials and stakeholders must be maintained throughout the process to facilitate a true collaborative effort.

A thorough, working knowledge of the application funding process is necessary to successfully secure funding awards. To support this level of effort, the implementers may assign a resource to monitor funding, and prepare, submit, and track the status of the applications. Additionally, this resource could work in a concerted effort with the implementers to continue to seek out diverse funding mechanisms from various federal, state, and local agencies.

For example, it is possible the bonds to be issued through the West Virginia Infrastructure and Jobs Development Council (IJDC) may include funding support for broadband as part of the overall infrastructure development in addition to water and sewer projects. It is recommended that the implementers monitor activity occurring within the IJDC and the bond issuance in order to take advantage of this funding opportunity.

Other notable potential funding sources the Connect America Fund. Early 2012, it was reported that the FCC would make $300 million available from its new Connect America Fund. The Connect America Fund was created through the FCC's reforms to the Universal Service Fund and provides money for widening broadband access in rural areas of the country. It emphasizes subsidized broadband service, rather than wireline service, establishing a goal of providing high-speed broadband to all residents of the U.S. by the end of the decade.

Performance Measures – Strategic Objective S.O.5:

- The number of funding opportunities sought.
- The amount of funding secured.

IMPLEMENTATION MATRIX

The following matrix outlines the 5 strategic objectives and details the goals and action items necessary to implement the strategy. The matrix can be used as a management tool to assist in the implementation process and will be updated and amended as necessary.

Strategic Objective S.O.1: Support Increased Broadband Services in Eight (8) Targeted Economic Development and Growth Areas of the Region.		
Goals	**Action Item**	**Time Frame**
Goal S.O.1.1: Promote and support broadband and funding opportunities in the 8 targeted economic development and growth areas of the Region.	1. Coordinate a meeting with local planning officials to discuss targeted areas.	Year 1 1st Quarter
	2. Review and prioritize targeted areas.	
	3. Identify viable approaches for increasing broadband access in these areas.	
Goal S.O.1.2: Aggregate demand.	1. Survey residents and businesses to determine their desire to purchase broadband • Include education information to demonstrate the benefits of broadband • Conduct outreach through phone calls or email	Year 1 Partial 1st and Full 2nd Quarter
	2. Develop letter of intent to encourage residents and businesses to buy services if they were made available.	
	3. Analyze data to determine if priority areas or regions exist.	
	4. Develop profile of priority areas and level of interest.	
	5. Seek funding from the West Virginia Broadband Deployment Council to assist with demand aggregation.	
Goal S.O.1.3: Engage broadband provider community.	1. Develop a list of current and potential providers.	Year 1 2nd and 3rd Quarter
	2. Present overview of opportunities to the providers.	
	3. Gauge provider willingness to provide services by • facilitating a provider conference or • request for information	
	4. Work with providers to identify barriers (e.g., capital expense, technical issues) to expanding broadband services.	

Strategic Objective S.O.1: Support Increased Broadband Services in Eight (8) Targeted Economic Development and Growth Areas of the Region.		
Goals	**Action Item**	**Time Frame**
Goal S.O.1.4: Monitor and support the implementation of disruptive technologies to provide broadband to unserved areas.	1. Monitor the progress of potential disruptive technologies that may potentially serve the identified areas • white space spectrum • power lines • satellite	Ongoing
	2. If proven to work, support funding efforts and pilot programs in the region.	
Goal S.O.1.5: Discuss opportunity with the state.	1. Meet with Representative from the West Virginia State Broadband Deployment Council and Mapping Project to discuss opportunities.	Year 1 2nd and 3rd Quarter
	2. Share any barriers of entry identified by the providers with the State.	
	3. Catalog any potential state assistance, including timelines, eligible uses, and next steps.	
	4. Help eligible applicants apply for funding.	
	5. Track targeted communities that gain broadband access.	
S.O.1.6: Engage foundations for assistance.	1. Develop a list of foundations that support broadband expansion efforts.	Year 1 3rd and 4th Quarter
	2. Draft a message statement that identifies potential opportunities and demand for the regions.	
	3. Present the foundations with an overview of the opportunity and identify potential assistance.	
S.O.1.7: Consider municipal or P3 options.	1. Research both municipal and public-private partnership (P3) opportunities to meet demand.	Year 2 1st – 3rd Quarter
	2. Develop an initial business plan that identifies • Capital cost • Operation cost • Ownership • Organizational structure, and • Potential partners	
	3. Identify potential funding sources.	Ongoing

Strategic Objective S.O.2: Support a "Dig Once" Policy to Encourage Broadband Providers to Lay Fiber in Conjunction with Road, Water, and Sewer Infrastructure.		
Goals	**Action Item**	**Time Frame**
Goal S.O.2.1: Work with local planning officials to encourage expansion of existing zoning, subdivision, and ordinance policies to include broadband infrastructure as part of the development process.	1. Coordinate a meeting between the local planning officials and the implementation team to discuss the inclusion of broadband infrastructure in the development process and • Introduce all parties involved in the process (planners, developers, providers, implementers, etc.) • Share vision and the benefits of broadband • Identify the need for broadband in planning • Facilitate discussions on zoning and policy changes	Year 1 1st and 2nd Quarter
	2. Collaborate to define the requirements that would be included in amendments and include; • Environmental concerns • Sustainability issues • Innovative solutions	
	3. Work with planning officials to implement changes to amendments.	
	4. Work with developers to implement changes.	
Goal S.O.2.2: Identify subject matter experts to assist with technical guidance and development of amendments.	1. Collaborate with officials to identify broadband champions to facilitate the process. They should have knowledge and expertise in • broadband technologies • housing and neighborhood development	Year 1 3rd Quarter
	2. Engage subject matter experts in all phases of the planning process.	
	3. For additional technical guidance, reference and employ certain guidelines and recommendations found in the American Planning Association's publication *Planning and Broadband: Infrastructure, Policy, and Sustainability*[2].	
Goal S.O.2.3: Coordinate a meeting of the local planning officials and subject matter experts.	1. Assemble a group of local planning officials, broadband providers, and SMEs to facilitate discussions on policy changes and amendments.	Year 1 4th Quarter
	2. Inform state and local public officials on policy issues and challenges such as • Right of ways • Licensing • Funding • Ownership	

[2] McMahon, K., Thomas, R.L. & Kaylor, C. (July 2012). *Planning and Broadband Infrastructure, Policy, and Sustainability*. Chicago, IL. American Planning Association

Strategic Objective S.O.2: Support a "Dig Once" Policy to Encourage Broadband Providers to Lay Fiber in Conjunction with Road, Water, and Sewer Infrastructure.		
Goals	**Action Item**	**Time Frame**
	3. Identify various approaches to regulating broadband infrastructure based on economic and regulatory environment.	
	4. Determine how and when the changes should take effect.	
	5. Conduct ongoing meetings annually to review and assess progress.	Ongoing

Strategic Objective S.O.3: Increase Widespread Broadband Utilization and Take Rates for Businesses and Residents Through a Targeted Outreach Strategy.		
Goals	**Action Item**	**Time Frame**
Goal S.O.3.1: Promote the importance of broadband through a regional awareness campaign.	1. Seek volunteers to assist with development and implementation of an awareness campaign. Volunteers would • determine who the target audience will be • develop the message to reach the target audience • estimate costs to promote the campaign • identify methods of delivery • establish timeline and frequency	Year 2 1st and 2nd Quarter
	2. Conduct research on existing outreach by various groups and providers and leverage their efforts.	
	3. Identify opportunities to utilize free public radio announcements.	
	4. Seek resources to assist with offsetting costs to publish materials, advertising, etc.	
	5. Enlist the help of public officials and other key stakeholders (schools, libraries, Chambers, etc.) to help promote awareness.	
Goal S.O.3.2: Host broadband workshops.	1. Recruit and organize broadband providers to host workshops to demonstrate • what broadband is • how it can enhance quality of life • where services are available • how much services cost	Year 2 3rd and 4th Quarter
	2. Identify and target communities where there is great demand for broadband.	
	3. Plan, coordinate, and market the workshops in these communities.	
	4. Seek assistance from providers to subsidize funding for hosting the workshops.	
	5. Coordinate with local organizations hosting planned events to realize economies of scale, and take advantage of the potential exposure to mass audiences.	
	6. Identify SMEs to serve as keynote speakers at the workshops.	

Strategic Objective S.O.4: Advance Broadband Education Throughout the Region.		
Goals	**Action Item**	**Time Frame**
Goal S.O.4.1: Conduct a gap analysis on existing programs.	1. Inventory current broadband programs or services that provide educational value.	Year 3 1st Quarter
	2. Identify relevant programs that need to be developed.	
	3. Identify stakeholders that would be capable of supporting and developing programs.	
Goal S.O.4.2: Promote existing educational opportunities and services.	1. Work with key stakeholder groups to help promote existing programs.	Year 3 2nd Quarter
	2. Incorporate information about these programs into the awareness campaign.	
	3. Conduct ongoing assessment of programs to align with educational needs.	
Goal S.O.4.3: Work with stakeholders to develop necessary courses.	1. Seek help from stakeholder groups to develop educational programs identified through the gap analysis.	Year 3 3rd Quarter
	2. Collaborate with stakeholders groups to develop programs designed to be • practical, real-world experiences • hands-on, using latest technology • intended for diverse audiences	
	3. Work with stakeholder groups to promote new programs, including incorporating into the awareness campaign.	
	4. Monitor programs to assess their relevancy and success.	Ongoing
Strategic Objective S.O.5: Identify and Monitor Funding and Financing Sources to Support Implementation of Broadband Strategy.		
Goals	**Action Item**	**Time Frame**
Goal S.O.5.1: Develop a comprehensive funding strategy.	1. Identify specific initiatives that need full or partial funding to be implemented.	Year 1 1st and 2nd Quarter
	2. Identify associated costs with each initiative.	
	3. Develop a detailed accounting of sources and uses.	
	4. Determine which funding sources are needed for the appropriate initiatives.	
Goal S.O.5.2: Implementation of the funding strategy.	1. Develop supporting documentation for applications.	Year 1 3rd and 4th Quarter
	2. Seek the support of public officials and stakeholders through Letters of Support.	
	3. Conduct outreach to administering agencies to encourage application approval.	
	4. Monitor and facilitate the funding draw-down process.	
	5. Possibly assign a dedicated resource to handle the funding application process. This resource would be responsible for • prepare and submit applications • track the statuses of applications • monitoring and vetting specific funding sources for applicability	
	6. Identify a set period of intervals that the resource would report back to the implementation team.	
	7. Maintain communications and dialogue with public officials and stakeholders throughout the process.	Ongoing

RESOURCE CONSIDERATIONS

One of the biggest challenges facing the RBPT is identifying the necessary resources (e.g., people, funding, and materials) to successfully implement the broadband strategic plan. The following matrix outlines funding programs that may be used to support the implementation of the strategic plan. It provides program name, eligible uses, and timeframe for application.

Funding Overview		
Program	**Uses**	**Window of Opportunity**
Appalachian Regional Commission (ARC) - Area Development Program	Project activities must be consistent with ARC/State of West Virginia Goals, Objectives, and Strategies. FY 2014 Goals include the following: • Increase job opportunities and per capita income in Appalachia to reach parity with the nation • Strengthen the capacity of the people of Appalachia to compete in the global economy • Develop and improve Appalachia's infrastructure to make the region economically competitive The highest priorities for the ARC program are in water, sewer, and telecommunication projects that lead to job creation or address a critical community need (such as public health). Please note that ARC is a regional economic development agency, and therefore, requests for ARC assistance should focus on economic development. Additionally, there is no longer a match requirement for ARC Local Access Road grants.	Submit applications through the state ARC office (West Virginia Development Office). Applications for FY2014 ARC funding are due on January 31, 2014. Approval of applications is a two-step process: West Virginia Development Office staff reviews projects and recommendations are made to the Governor for approval. Projects are then forwarded to ARC for final approval.
USDA Rural Broadband Loan Program	Broadband loans provide funding for: the construction, improvement, and acquisition of all facilities required to provide service at the broadband lending speed to rural areas, including facilities required for providing other services over the same facilities; the cost of leasing facilities required to provide service at the broadband lending speed if such lease qualifies as a capital lease under Generally Accepted Accounting Principles (GAAP); and an acquisition, under certain circumstances, and with restrictions.	Applications can be submitted throughout the year and will be reviewed and processed on a first-come, first-served basis according to the time the application is received.

Funding Overview		
Program	**Uses**	**Window of Opportunity**
Distance Learning and Telemedicine (DLT) CFDA # - 10.855	Purposes eligible for 100% grant, combination loan/grant, and 100% loan: • Acquisition of eligible capital assets (interactive video equipment, audio and video equipment, terminal equipment, data terminal equipment, inside wiring, computer hardware and software, computer network components, and other facilities that further DLT services) • Acquisition of instructional programming that is a capital asset • Acquisition of technical assistance and instruction for using eligible equipment	The application window for 100% grants is announced annually (typically after the first of the year) through a Notice of Funds Availability (NOFA) in the Federal Register. DLT 100% loan and loan/grant combination applications are accepted year-round and are non-competitive.
Community Connect Grant Program CFDA # - 10.863	Funds may be used to build broadband infrastructure and establish a community center that offers free public access to broadband for two years.	Funding through the Community Connect program is typically announced in December or January with applications do in June or July.
Telecommunications Infrastructure Loan Program	Loan funds may be used to finance telecommunications services in rural areas for:- Improvements- Expansions- Construction- Acquisitions (cost of acquisition must be incidental to cost of improvements in loan)- Refinancing (amount refinanced cannot exceed 40% of loan amount)	Applications are accepted year-round.
Expansion of 911 Access Loan Program	This program will finance the construction of interoperable, integrated public safety communications networks in rural areas. The program will also finance wireless upgrades for public safety and security.	Applications are accepted year-round. Applications are accepted through the RUS Telecommunications Infrastructure Loan Program.

Funding Overview		
Program	**Uses**	**Window of Opportunity**
Rural Health Care Program	**Telecommunications Services and Charges:** ATM, Centrex, DSL, Ethernet, Fiber, Fractional T1, Frame Relay, Internet Access Charges, ISDN, Mileage-related Charges, MPLS, NRS, OC-1, OC-3, Refundant Circuit, Satellite Service, Telephone Service, T1, T3, or DS3 **Internet Services and Charges:** • Monthly Internet access charges • E-mail • Web hosting • DSL	Applications are accepted annually. The USAC funding year runs from July 1 through June 30. The RHC accepts the first form in the application process (FCC Form 465) for the upcoming funding year in the spring of each year and will accept them until June 30 of the following year. To ensure a full year of support, applicants should submit the FCC Form 465 before June 1. FCC Form 465 outlines the HCP's requested services and must be posted on USAC's website for a minimum of 28 days to allow service providers to bid on the requested services. Once the 28-day bidding period has expired, the HCP's choose a service provider and submit FCC Form 466 and/or Form 466A for each service requested. USAC reviews and approves each Form 466/A and issues a funding commitment letter. The service provider then reduces the HCP's rate for the telecommunications/Internet services, and the service provider is issued a credit for the difference.

Funding Overview		
Program	**Uses**	**Window of Opportunity**
Schools and Libraries Program	Eligible services are organized in five sections that represent the five funding categories established by the FCC plus a miscellaneous section that is applicable to multiple categories: • Telecommunications Services • Telecommunications • Internet Access • Internal Connections • Basic Maintenance • Miscellaneous Only eligible products or services that will be used for educational purposes can be considered for funding. See the Eligible Services List (ESL) for more information.	Applications are accepted annually. The USAC funding year runs from July 1 through June 30. Submit Form 470 at least 28 days before filing Form 471 Submit Form 471 – This form will be available in early November to early February preceding the start of the Funding Year (exact dates for each funding year will be posted on the website). Must be received or postmarked no later than 11:59 p.m. EST on the last day of the Form 471 filing window. Submit Form 486 - Received or postmarked no later than 120 days after the date of the Funding Commitment Decision Letter or 120 days after the Service Start Date, whichever is later Form 472/474 - Received or postmarked no later than 120 days after the date of the Form 486 Notification Letter or 120 days after the last date to receive service, whichever is later The program is currently being rolled out across the nation. Applications will be accepted on an ongoing basis.
Connect to Compete	**Internet:** $9.95 per month, high-speed Internet for free school lunch families (no deposit or contract required; no installation or equipment fees; price lock for two years) **Computers:** $150 laptop or desktop computer for free school lunch families **Free Training:** Free digital literacy training online	Applications will be accepted on an ongoing basis.

Funding Overview		
Program	**Uses**	**Window of Opportunity**
HRSA Rural Health Grants	**Licensure Portability** is a competitive grant program that provides support for state professional licensing boards to carry out programs under which licensing boards of various states cooperate to develop and implement state policies that will reduce statutory and regulatory barriers to telemedicine. **Telehealth Network** is a competitive grant program that funds projects that demonstrate the use of telehealth networks to improve healthcare services for medically underserved populations in urban, rural, and frontier communities. **Telehealth Resource Center** is a competitive grant program that provides support for the establishment and development of Telehealth Resource Centers (TRCs). These centers are to assist healthcare organizations, healthcare networks, and healthcare providers in the implementation of cost-effective telehealth programs to serve rural and medically underserved areas and populations. **Telehealth Resource Center Grant Program (G22)** The purpose of the Telehealth Resource Center Grant Program (TRCGP) is to support the establishment and development of Telehealth Resource Centers. The Centers are to be an impartial, independent source of technical assistance to healthcare organizations, healthcare networks, and healthcare providers in the implementation of cost-effective, telehealth programs to serve rural and medically underserved areas and populations. This opportunity will fund three different types of resource centers: a national resource center, two regional telehealth resource centers, and two telehome care resource centers.	HRSA-14-043 **Rural Health Network Development Grant** Apply at Grants.gov by January 16

Funding Overview		
Program	**Uses**	**Window of Opportunity**
Media Democracy Fund	Areas of recent interest include, but are not limited to, the following: • Expanding/diversifying the base of constituencies engaged in creating a media environment that serves their communities. • Responding to the urgent need to keep the Internet and mobile web open. • Creating policies that promote access to and adoption of affordable broadband services in underserved areas. • Equitable spectrum allocation and expanding low-power radio licenses. • Promoting policies that preserve journalism and public media. • Rebalancing the copyright regime.	The Media Democracy Fund provides grants annually in December and maintains the capacity to support grantees' direct and grassroots lobbying efforts. The last round was due in Fall 2013. The Rapid Response Fund provides grants throughout the year for unanticipated policy threats or opportunities. The Rapid Response Fund has been established to respond to unanticipated threats or opportunities that may arise outside of MDF's regular grant cycles.
Community Development Block Grant (CDBG) Program	Projects must either assist in eliminating blight or primarily (51% or greater of service area) serve low-income individuals. Uses related to potential broadband service: • Acquisition of real property • Public facilities and improvements and privately owned utilities • Clearance, rehabilitation, reconstruction, and construction of buildings • Public services (must provide a new service or a quantifiable increase in existing service) • Public services can include computer training and education programs	Applications to the state are typically due by mid-March. Each entitlement city has its own project selection and award process.

Funding Overview		
Program	**Uses**	**Window of Opportunity**
Tax Increment Financing (TIF)	• Infrastructure construction or repair (sewers, storm drainage, street construction/expansion, water supply access expansion, park improvements, bridge construction/repair, curb/sidewalk improvements, devices for traffic control, street lighting, etc.) • Land acquisition • Land improvements (building demolition, brownfield remediation, site improvements, etc.) • Community revitalization construction (landscaping, street lighting) • Development or redevelopment of an area for housing, housing developments, public facilities, or industrial or commercial development • New infrastructure for housing developments, housing, or industrial or commercial development • Other development that eliminates unsanitary or unsafe conditions; reduces overcrowding in the area, reduces traffic congestion, eliminates traffic hazards, or eliminates obsolete or detrimental uses to the area • Other capital improvements to the area • Any other projects deemed appropriate by the county/municipality	N/A
Sales Tax Increment Financing (STIF)	Counties and municipalities may create economic opportunity development districts with state legislature approval and use state sales tax increment for up to 30 years to finance certain development costs, including transportation infrastructure, property acquisition, utilities, etc.	N/A

Funding Overview		
Program	**Uses**	**Window of Opportunity**
Business Improvement District (BID)	• Beautification of the district (landscaping, benches, decorations, etc.) • Provision of public services (sanitation, security, construction of public facilities) • Payment of principal or interest on bonds issued by the municipality for public improvements in the district • Financial support for public transportation and public parking facilities • Constructing, operating, and maintaining parking facilities • Developing plans for architectural design of public areas and developing plans for the future development of the district • Developing, supporting, and promoting community events • Providing administrative costs for a district management program • Providing any other services which the municipality or district board is authorized to perform	N/A
Neighborhood Investment Program (NIP)	**Eligible activities:** Projects generally eligible for program participation include but are not limited to the following: • Health clinics • Homeless shelters • Educational programs • Housing programs • Preservation/revitalization activities • Domestic violence shelters • Children's shelters • Meal delivery programs • Senior citizens' centers • Community foundations • Scholarship programs • Hospice care • Transportation programs • Day care centers • Counseling services • Services for the disabled	Annual application process. Applications are due on June 15 each year

TIMELINE AND SCHEDULE

The matrix below provides a high-level implementation schedule. Since the objectives are presented in priority order, the schedule assumes starting three (3) Strategic Objectives in year one, the one (1) strategic objectives in year two, and the one (1) strategic objectives in year three. The schedule may change according to available funding and local implementation champions. Green lines represent initial implementation time and blue lines represent ongoing support efforts.

Strategic Objective & Goals	Yr. 1/Qtr. 1	Yr. 1/Qtr. 2	Yr. 1/Qtr. 3	Yr. 1/Qtr. 4	Yr. 2/Qtr. 1	Yr. 2/Qtr. 2	Yr. 2/Qtr. 3	Yr. 2/Qtr. 4	Yr. 3/Qtr. 1	Yr. 3/Qtr. 2	Yr. 3/Qtr. 3	Yr. 3/Qtr. 4
Strategic Objective S.O.1												
Goal S.O.1.1												
Goal S.O.1.2												
Goal S.O.1.3												
Goal S.O.1.4												
Goal S.O.1.5												
Goal S.O.1.6												
Goal S.O.1.7												
Strategic Objective S.O.2												
Goal S.O.2.1												
Goal S.O.2.2												
Goal S.O.2.3												
Strategic Objective S.O.3												
Goal S.O.3.1												
Goal S.O.3.2												
Strategic Objective S.O.4												
Goal S.O.4.1												
Goal S.O.4.2												
Goal S.O.4.3												
Strategic Objective S.O.5												

Goal S.O.5.1												
Goal S.O.5.2												

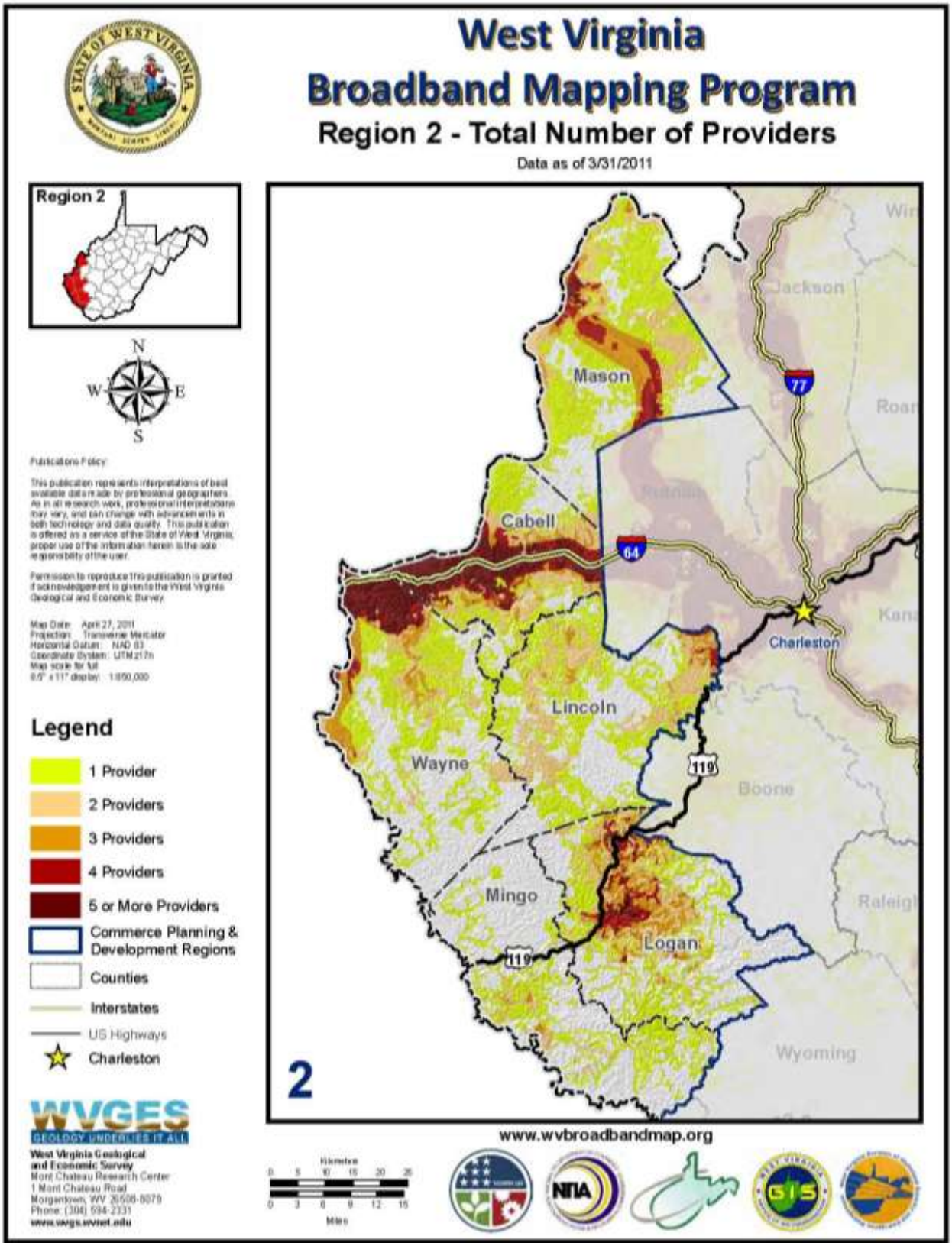
PERFORMANCE METRICS

The RBPT has identified the following metrics to track the success of the broadband strategic plan.

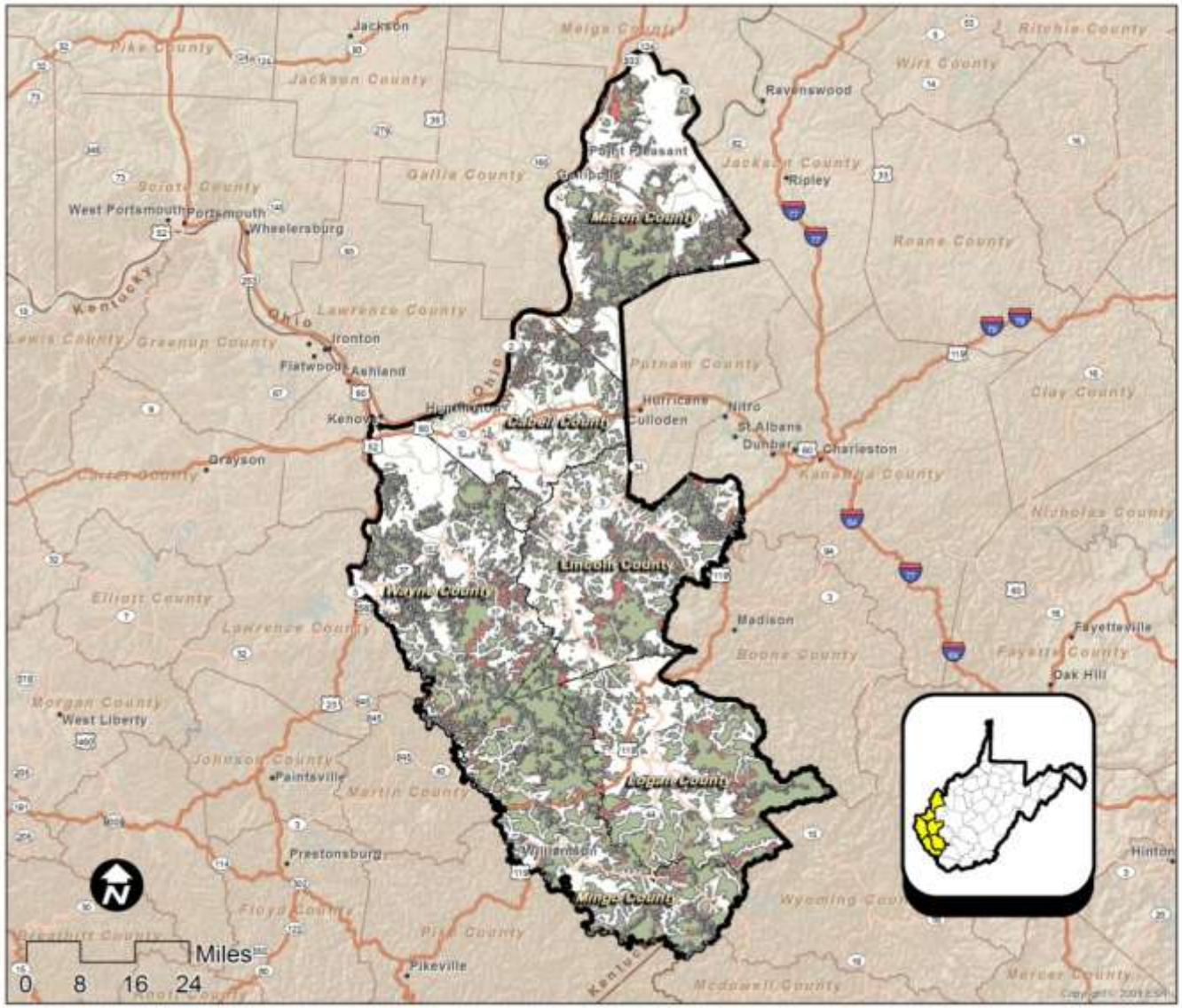
STRATEGIC OBJECTIVE	METRICS
Strategic Objective S.O.1: Support increased broadband services in eight (8) targeted economic development and growth areas of the Region.	• Targeted communities that gain broadband access.
Strategic Objective S.O.2: Support a "Dig Once" policy to encourage broadband providers to lay fiber in conjunction with road, water, and sewer infrastructure.	• Broadband infrastructure is included as a utility in all local zoning, subdivision, and development ordinances.
Strategic Objective S.O.3: Increase widespread broadband utilization and take rates for businesses and residents through a targeted outreach strategy.	• Number of broadband workshops hosted in the region. • Increases in broadband utilization, measured by predefined benchmarks to gauge success (e.g., FCC report measures, number of individuals subscribing to the Internet directly from hosted workshops).
Strategic Objective S.O.4: Advance broadband education throughout the Region.	• Number of courses offered/promoted. • Number of students taking advantage of the educational opportunities.
Strategic Objective S.O.5: Identify and monitor funding and financing sources to support implementation of broadband strategy.	• The number of funding opportunities sought. • The amount of funding secured.

APPENDIX A: BROADBAND MAPS

Number of Broadband Providers



Addressed Facilities Located in State Priority Areas



Region 2 Broadband Strategic Plan

State Broadband Type Desriptions

Legend

- Region 2
- Addressed Facilities

Data Source: WV Broadband Council

- Type 1
- Type 2
- Type 2 PRIORITY
- Type 3

Broadband Types
Defined by State Code: 31-15C-6

Type 1 - an unserved area in which broadband may be deployed by service providers in an economically feasible manner.

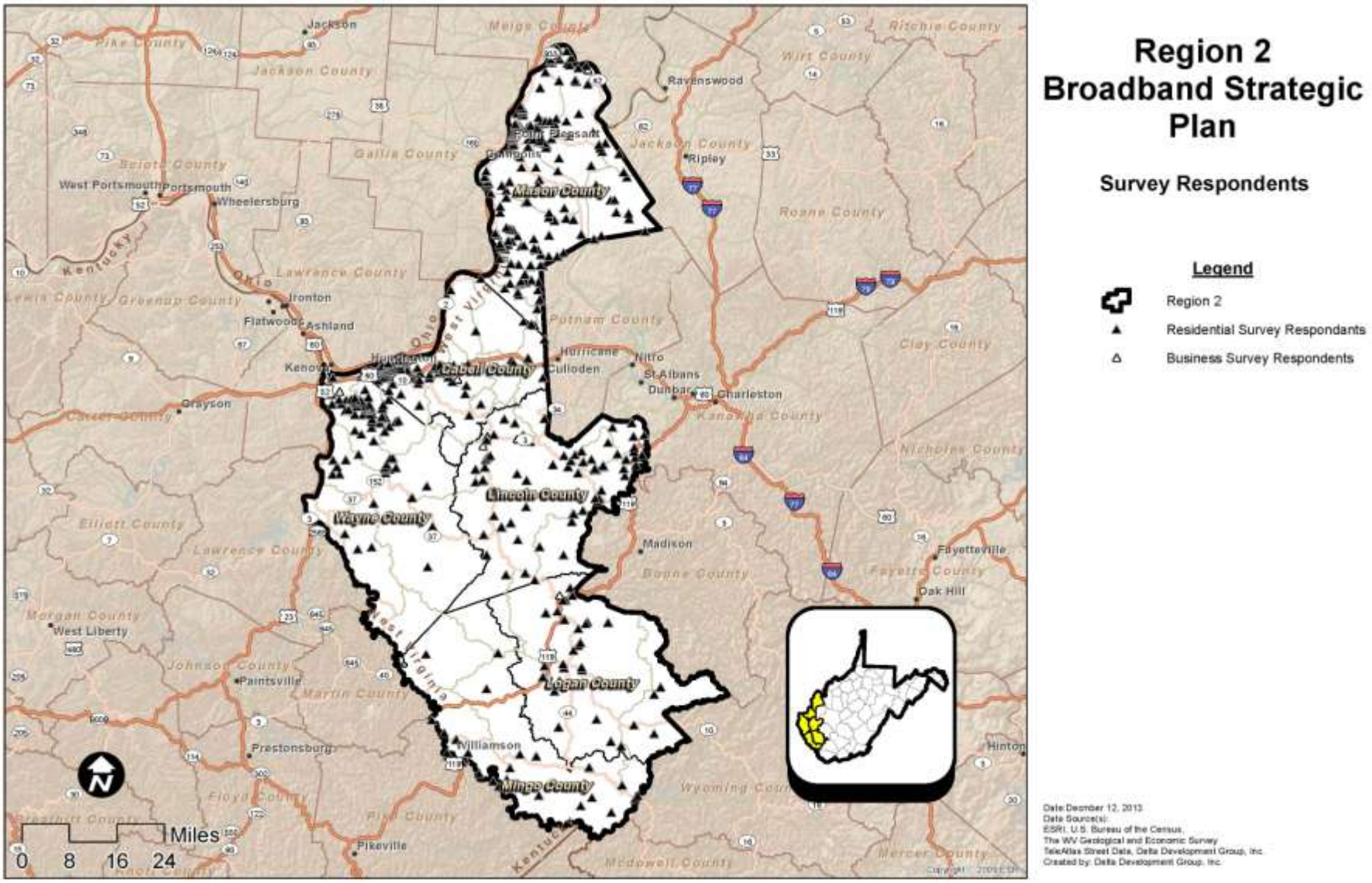
Type 2 - an unserved area in which broadband may be deployed by broadband service providers and other entities in an economically feasible manner, provided some form of public money is made available.

Type 2 Priority - an unserved area with population centers that should be targeted for grant funding. These areas have a higher likelihood of utilizing broadband service.

Type 3 - an unserved area in which at present, cable or wireline broadband cannot be deployed in an economically feasible manner and an intermodal approach employing other technologies, such as satellite and wireless, is required to provide that area with high-speed internet access.

Date: October 1, 2013
Data Source(s):
ESRI, U.S. Bureau of the Census,
The WV Geological and Economic Survey
TeleAtlas Street Data, Delta Development Group, Inc.
Created by: Delta Development Group, Inc.

Total Survey Respondents



APPENDIX B: BUSINESS AND RESIDENTIAL SURVEY FORM

Regional Broadband Planning Teams Project
Residential Broadband/High-Speed Internet Survey

Dear West Virginia Resident:

Our regional planning and development council is working to better understand your high-speed Internet needs and create a strategic plan to meet these needs. As part of this process, we are gathering vital information from residents about their Internet access that can help us improve service. Broadband is typically defined as a service that enables high-speed Internet access as opposed to low speed services such as dial-up. Please have a person in your household who is 18 years or older, and makes household decisions about computers or the Internet, complete this survey. Your responses will remain anonymous and will only be reported as part of a larger statistical analysis to determine where the state could use federal grant funding to enhance Internet speed and availability. **We particularly urge you to TAKE THE SPEED TEST.**

If you have any questions, please feel free to contact Mike Webb at the Region II Planning and Development Council by e-mail at mwebb@ntelos.net or by phone at (304) 529-3357.

Thank you for your assistance!

Region II

DEMOGRAPHICS

To assist in the Region's efforts to direct federal and state spending, it is necessary to provide the most accurate answers to the questions below. By providing us with such detailed information as your street address and zip code, the Region could be able to better identify the gaps in coverage. Your responses will remain anonymous.

1. Street Address: _____
2. Zip Code: _____
3. County: _____
4. How old were you on your last birthday? _____
5. Gender: ☐ Male ☐ Female
6. Number of household occupants: _____

INTERNET ACCESS

7. Do you have Internet access in your home? ☐Yes ☐No ***(If "No," please go to Question 15 of this survey.)***
8. Who uses the Internet at your home? (Check all that apply.)

   ☐ I do ☐ Spouse/Partner ☐ Children ☐ Friend ☐ Grandparent ☐ Parent

   ☐ Housemate or Roommate ☐ Other (specify) _____

9. Who is your Internet Service Provider?

- ☐ AT&T Mobility LLC
- ☐ CityNet
- ☐ Comcast
- ☐ Frontier Communications Corporation
- ☐ HugesNet
- ☐ NTELOS
- ☐ Sprint
- ☐ Suddenlink Communications
- ☐ T-Mobile
- ☐ Verizon Wireless
- ☐ WildBlue Communications, Inc.
- ☐ Other (specify): _____

10. What type of connection do you use at home to access the Internet? (Check all that apply.)

☐ Cable ☐ DSL ☐ Fiber ☐ Satellite ☐ Dial-Up ☐ ellular/Air Card

☐ Other (specify): _____

11. Why did you choose this connection type? (Check all that apply.)

☐ Cost ☐ Speed ☐ Only available service ☐ Best reliability

12. How much do you pay per month for Internet service? (If you have indicated several services, indicate your total expense for these services.)

- ☐ $0 - $19
- ☐ $20 - $39
- ☐ $40 - $59
- ☐ $60 - $79
- ☐ $80 - $99
- ☐ $100 - $119
- ☐ $120+

13. The following is a list of characteristics about your Internet service. Please indicate whether you are "very satisfied," "satisfied," "dissatisfied," or "very dissatisfied" with that aspect of your Internet service.

SERVICE ISSUE	VERY SATISFIED	SATISFIED	DISSATISFIED	VERY DISSATISFIED	DON'T KNOW/NA
Speed of connection	☐	☐	☐	☐	☐
Cost of Internet	☐	☐	☐	☐	☐
Technical support	☐	☐	☐	☐	☐
Reliability of access	☐	☐	☐	☐	☐
Customer service	☐	☐	☐	☐	☐
Number of providers	☐	☐	☐	☐	☐

2

14. Does your employer allow employees to telecommute? ☐ Yes ☐ No

15. Do you use the Internet anywhere else other than your home? ☐ Yes ☐ No

16. If you do use the Internet anywhere else other than your home, please indicate other places where you use the Internet:

Work? ☐ Yes ☐ No

School? ☐ Yes ☐ No

Public Library? ☐ Yes ☐ No

A relative or friend's house? ☐ Yes ☐ No

A retail shop with wireless Internet service? ☐ Yes ☐ No

Cell phone? ☐ Yes ☐ No

Other (specify): _____

17. IF you indicated you **DO NOT** have Broadband (high-speed) Internet service (e.g., none or dial-up), please check all reasons for not having Internet service. (Check all that apply.)

☐ I don't own a computer ☐ Cost/too expensive ☐ Broadband service not available

☐ Do not Need Broadband services ☐ Security reasons ☐ Do not know how to use Internet

☐ Other (specify): _____

18. IF concerns in the previous question were addressed, would you utilize Broadband (high-speed) Internet service?

☐ Yes ☐ No

19. How important is it for all RESIDENTS of the State of West Virginia to have access to computers and the Internet?

☐ Very important ☐ Important ☐ Somewhat important ☐ Not at all important

☐ Don't know

20. How did you learn about this survey?

☐ School ☐ Newspaper ☐ E-mail ☐ Word of Mouth ☐ Library ☐ Television

☐ Other (please specify): _____

SPEED TEST

21. Please check your speed at this website http://gis2.kimballdata.com/WVSpeedTest/WVSpeedTest.html?id=speedtest. The Speed Test takes approximately 30 seconds.

Please enter connection speeds below as indicated in the Speed Test results.

SPEED TEST RESULTS	
Download (Mbps)	
Upload (Mbps)	

22. What type of connection you are using for the Speed Test? Please choose one of the following:

- ☐ Cable
- ☐ DSL
- ☐ Fiber
- ☐ Satellite
- ☐ Cellular/Air Card
- ☐ Dial up
- ☐ Other (indicate speed)

23. If you have any additional comments about Broadband (high-speed) Internet service in the State of West Virginia, please include them here:

_____

_____

_____

_____

Thank you for responding to this survey. We know your time is valuable. Your response will remain anonymous. If you have any questions, please contact Mike Webb at the Region II Planning and Development Council by e-mail at mwebb@ntelos.net or by phone at (304) 529-3357. Please drop off or mail survey forms to:

Region II Planning and Development Council
214 Fourth Street, Huntington, West Virginia 25701

Regional Broadband Planning Teams Project
Regional Business Broadband/High-Speed Internet Survey

Dear West Virginia Business:

Our regional planning and development council is working to better understand your high-speed Internet needs and create a strategic plan to meet these needs. As part of this process, we are gathering information and conducting this survey to determine the Broadband usage, needs, and interests of local businesses. Broadband is typically defined as a service that enables high-speed Internet access as opposed to low-speed services, such as dial-up. The results of this survey will be used to determine who is using Broadband and how federal grant funding can be applied to improve Broadband access and online marketing opportunities for your business community. **We particularly urge you to TAKE THE SPEED TEST**.

Please take a few minutes to let us know if you currently utilize Broadband Internet service and what impact Broadband has on your business. If you have any questions, please feel free to contact Mike Webb at the Region II Planning and Development Council by e-mail at mwebb@ntelos.net or by phone at (304) 529-3357.

Thank you for your assistance!

Region II

DEMOGRAPHICS

1. Business Contact Information:

   Name of Business: _____

   Address: _____

   Address 2: _____

   City/Town: _____

   Zip Code: _____

   E-mail Address: _____

2. County: _____

3. Respondent's Information:

   Name of person responding: _____

   Title of person responding: _____

4. Which department do you work in? _____

5. How many employees work at your location?

   ☐ 1-4 ☐ 5-25 ☐ 26-100 ☐ 101-250 ☐ 251-500 ☐ 501 or more

1

6. Please choose your Industry Sector type from the following list (check all that apply):

- ☐ Business, Retail, and Economic Development
- ☐ Education
- ☐ Energy and Environment
- ☐ Health Care
- ☐ Libraries
- ☐ Local Government
- ☐ Public Safety
- ☐ Tourism

INTERNET ACCESS

7. Do you have Internet service at your business? ☐ Yes ☐ No (***If "No," go to Question 15 of this survey.***)

8. Who currently provides your business's broadband Internet service?

- ☐ AT&T Mobility LLC
- ☐ CityNet
- ☐ Comcast
- ☐ Frontier Communications Corporation
- ☐ HugesNet
- ☐ NTELOS
- ☐ Sprint
- ☐ Suddenlink Communications
- ☐ T-Mobile
- ☐ Verizon Wireless
- ☐ WildBlue Communications, Inc.
- ☐ Other (specify): _____

9. What type(s) of Internet connection do you have? (Check all that apply.)

☐ Cable ☐ DSL ☐ Fiber ☐ Satellite ☐ Dial-Up ☐ Cellular/Air Card

☐ Other (specify): _____

10. Please rate the following aspects of your service by checking the appropriate column.

	VERY SATISFIED	SATISFIED	DISSATISFIED	VERY DISSATISFIED	DON'T KNOW/NOT APPLICABLE
Speed of connection	☐	☐	☐	☐	☐
Cost of Internet	☐	☐	☐	☐	☐
Technical Support	☐	☐	☐	☐	☐
Reliability of access	☐	☐	☐	☐	☐
Customer service	☐	☐	☐	☐	☐
Number of providers	☐	☐	☐	☐	☐

11. Does your business allow employees to telecommute? ☐ Yes ☐ No

12. IF your business does not allow employees to telecommute, is it due to affordability and/or reliability deficiencies with the broadband (high-speed) Internet service? ☐ Yes ☐ No

13. When you sought broadband (high-speed) Internet service for your business location, how would you describe the availability of multiple, competing broadband Internet options?

☐ Competitive, several options ☐ Not competitive, only one provider

☐ Somewhat competitive, two providers ☐ Suitable Broadband is not available

14. What do you currently pay each month for Internet service? (If you have indicated several services, indicate your total expense for these services.)

☐ Less than $50 ☐ Between $200 and $300

☐ More than $50 and less than $100 ☐ More than $300 per month

☐ Between $100 and $200 ☐ Don't know how much we pay

☐ Other (please specify): _____

15. IF you indicated you DO NOT have broadband Internet service (e.g., none or dial-up), please check all reasons for not having broadband Internet service. (Check all that apply.)

☐ I don't own a computer ☐ Cost/too expensive ☐ Broadband service not available

☐ Do not need broadband service ☐ Security reasons ☐ Need Training

☐ Other (specify): _____

16. IF concerns in the previous question were addressed, would you utilize broadband Internet service?

☐ Yes ☐ No

17. How important is a robust broadband (high-speed Internet access) connection to the day-to-day operations of your business? (Check one.)

☐ Very important ☐ Important ☐ Somewhat important ☐ Not at all important

18. Would it be beneficial to your customers/clients if the broadband environment in your area was enhanced? ☐ Yes ☐ No

19. IF it would be beneficial to your customers/clients to enhance the broadband environment in your area, why?

_____

_____

_____

20. Does broadband access and availability meet minimum standards for effective industry applications?

☐ Yes ☐ No

21. IF no, what are the locations that need broadband enhancements and the challenges in getting it there?

_____
_____
_____

22. Are the right tools (e.g., computers, network, applications) in place for your industry to leverage broadband? ☐ Yes ☐ No

23. IF not, what hardware, software, and other equipment do you need?

_____
_____
_____

24. Do current processes and procedures encourage the use of broadband and industry applications?

☐ Yes ☐ No

25. Is everyone properly trained to use broadband and your industry applications effectively?

☐ Yes ☐ No

26. How can we better prepare the industry workforce to utilize broadband to its maximum potential?

_____
_____
_____

27. Is broadband technology cost prohibitive? ☐ Yes ☐ No

28. IF so, how much would you be willing to pay for broadband?

_____
_____
_____

29. How did you learn about this survey?

☐Chamber of Commerce ☐Economic Development Authority ☐Newspaper
☐E-mail ☐Word of Mouth ☐Library ☐Television
☐Other (please specify): _____

SPEED TEST

30. Please check your speed at this website http://gis2.kimballdata.com/WVSpeedTest/WVSpeedTest.html?id=speedtest. The Speed Test takes approximately 30 seconds.

Please enter connection speeds below as indicated in the Speed Test results.

SPEED TEST RESULTS	
Download (Mbps)	
Upload (Mbps)	

31. What type of connection you are using for the Speed Test? Please choose one of the following:

- ☐ Cable
- ☐ DSL
- ☐ Fiber
- ☐ Satellite
- ☐ Cellular/Air Card
- ☐ Other (indicate speed)

32. Do you have any other comments about broadband Internet service availability in your region?

Thank you for responding to this survey. We know your time is valuable. Your response will remain anonymous. If you have any questions, please feel free to contact Mike Webb at the Region II Planning and Development Council by e-mail at mwebb@ntelos.net or by phone at (304) 529-3357.

Please drop off or mail survey forms to:

Region II Planning and Development Council
214 Fourth Street, Huntington, West Virginia 25701