

# Logan County

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## History and Population<sup>1</sup>

The Virginia General Assembly formed Logan County in 1824 from parts of Cabell, Giles, Kanawha, and Tazwell counties. The County and county seat were named for the Mingo Indian Chief Logan whose tribe resided in the area. Logan County is approximately 455.6 square miles and borders Lincoln, Boone, Wyoming, and Mingo counties. The major cities within Logan include Man and Chapmansville. Coal, lumber, and electric power are the major industries in the county. Leading agricultural products include livestock, dairying, corn, and potatoes.

The population of Logan County has been declining. The 1999 estimate is 40,183, about 3,000 less than the 1990 U.S. Census count of 43,032 and 10,000 less than the 1980 Census count of 50,679. This has largely been due to an employment decline in the mining industry. The 1990 U.S. Census reported 93.6 percent of the population reside in rural areas and 7.8 percent reside in urban areas. In 1990, over 96 percent of Logan County residents were white and only 3.2 percent were of African American ancestry. Logan County is a typical Appalachian county.

## Education

Logan County consists of sixteen elementary schools, three middle or junior high schools, three high schools, and one vocational center. There is one higher educational facility in the county, *Southern West Virginia Community College*. Nearby colleges include the *University of Charleston* in Kanawha County and *Marshall University* in Cabell County.

In 1990, only 53.4 percent of people twenty-five years of age or older were high school graduates. This is below the state average of 66 percent and even further below the national average of 77.6 percent. Of those with a high school degree, only 6.3 percent were college graduates.

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<sup>1</sup> All data obtained from internal Center estimates (baseline and simulations) or from the following publicly available sources: *West Virginia Blue Book 1997*, *U.S. Census*, *U.S. Bureau of Labor Statistics*, *WV Bureau of Employment Programs Labor Market Information and County Profiles*, *WV Department of Education Reports Cards*, *U.S. Census American Factfinder*.

## The Economy

Two US Routes (52, Corridor G - 119) and four WV Routes (10, 17, 44, 80) are located within Logan County. CSXT operates a railroad in the county. There are two airports, Logan County Airport Authority and McDonald Field located within the county. Motor freight and parcel service is available. The only navigable river is the Kanawha River, from which only a minor amount of Logan coal passes.

In 1997, 85 percent of workers residing in Logan County worked in the county while 11.1 percent worked in other counties. Less than 1 percent worked in another state (with 3 percent not reporting). Automobile registration has declined roughly 11 percent this decade and as of 1999 averaged only about 27,000 cars. Logan County is notable for having one of the smallest commuter rates out of the County in our study region.

The largest employers in Logan County in 1999 include the *Logan County Board of Education*, *Logan General Hospital*, *Hobert Mining*, *Wal-Mart Stores Inc.*, and *Apogee Coal Company*. In 1999, there were 13,390 people in the civilian labor force, 11,750 employed and 1,640 unemployed. The 1999 unemployment rate was 12.2 percent, almost double the state average of 6.6 percent and almost three times the national average of 4.1 percent.

The industries with the most workers are services, retail trade, and government. Mining, transportation and public utilities, and wholesale trade have the highest average wages. Although only 13.2 percent of workers are employed in the mining industry, Mining wages are 63 percent higher than the second highest paying industry, transportation and public utilities. The average wage in Logan County, \$25,278, would be significantly lowered if there were negative changes to the Mining industry without positive comparable changes in other industries, see Table 1.

**Table 1**  
**1998 Employment and Wages, by Industry**

Industry	Employment	Average Annual Wages (\$)
West Virginia	678,568	25,278
Logan County	12,510	26,997
Mining	1,647	53,615
Construction	425	24,739
Manufacturing	750	23,981
Transportation & Public Utilities	614	32,887
Wholesale Trade	491	29,879
Retail Trade	2,901	13,785
Finance, Insurance, and Real Estate	339	23,407
Services	3,240	26,634
Government	2,070	24,721

Table 2 illustrates the structure of the mining industry in the county. These data, from 1999, offer the most recent count of mining and mining related firms in the county. Their average sales and the average number of employees illustrate the distribution of firm size in the county. The issues of firm size and regional *economies of scale* are discussed in more detail in Chapter 3 and Appendix C of this study.

**Table 2**  
**The Structure of Coal Mining in Logan County (1999)**

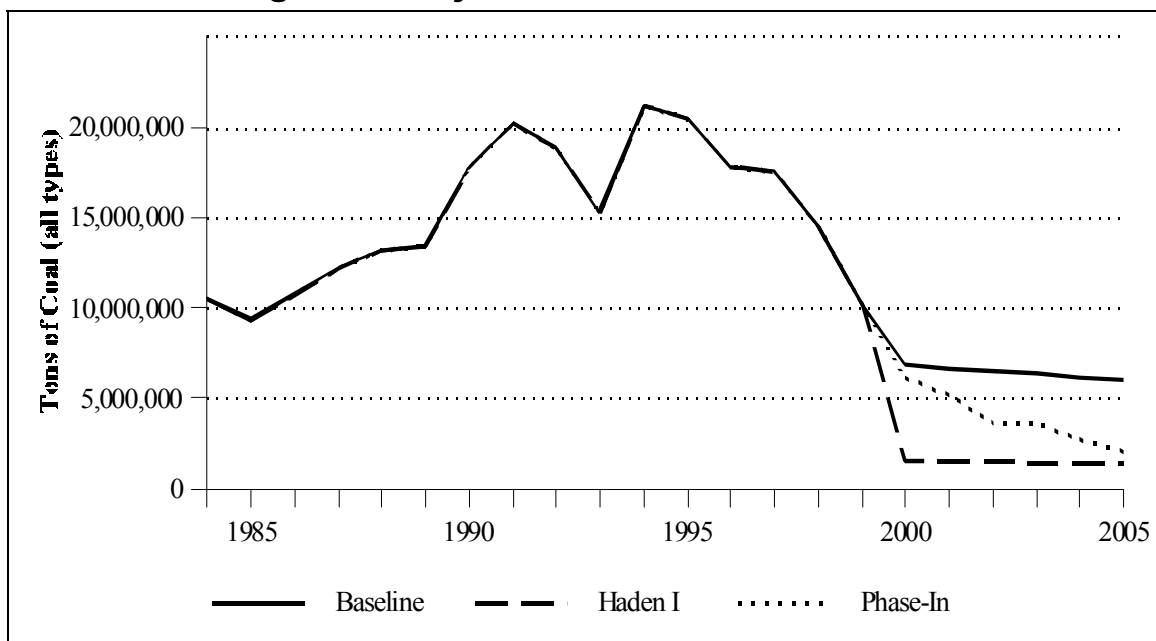
Activity	# of Firms	Mean Employees	Average Sales (\$millions)
Bituminous coal and lignite-surface mining	2	10	0.9
Bituminous coal surface mining	2	189	77.2
Bituminous coal-underground mining	5	127	2.2
Coal mining services	6	21	0.6
Coal mining services, nec	2	6	0.4

*Note: This is the most current firm structure available.*

## Forecast and Simulations

Using the method described in the main text of this study we estimate the baseline forecast of economic activity surrounding coal production in the county for 2000. From this we also constructed two simulations, that of a phased in Haden Decision (effectively restricting new surface coal permits) and a restrictive Haden Decision (which limits any valley fill activity by surface mining operations). This baseline forecast is a benchmark against which the effects of pending litigation may be judged. The benchmark and two simulations appear in Figure 1.

**Figure 1**  
**Logan County: Baseline and Simulations**



## The Baseline

The effect of current regulation and market influences on the production of coal in Logan County are illustrated in a baseline forecast. The expected baseline forecast would result in decreases in wages, employment, and output in Logan County. The effects are illustrated in Table 3.

**Table 3**  
**Logan County: Baseline**

Industry	Employment	Wages	Output
Agriculture	1	14,000	25,000
Mining	336	18,014,000	93,258,000
Construction	19	549,000	1,220,000
Manufacturing	7	210,000	819,000
TCPU	26	993,000	3,630,000
Trade	175	2,990,000	6,831,000
FIRE	25	497,000	4,092,000
Services	133	3,399,000	6,539,000
Other	5	34,000	34,000
<b>Total</b>	<b>-727</b>	<b>-\$26,700,000</b>	<b>-\$116,448,000</b>

*Note: figures may not sum due to independent rounding and exclusion of some minor categories. TCPU is transportation, communications and public utilities, FIRE is finance, insurance and real estate.*

Absent from Table 3 are additional public sector job losses of over 130 persons. The potential decline in public sector employment due to this scenario occur as a result of declining demand and revenue shortfalls.

### **The Haden Decision Phase-In**

The first simulation assumes that the pending litigation described in the Haden Decision is phased-in. This phase-in results in no further valley fill permits approved for surface mines. The remaining time each currently approved seam can be mined has not been the subject of research; however, we feel that assuming a seven year life-span of each seam conservatively estimates the period of phase-in of the Haden Decision. The expected Haden Decision phase-in simulation would result in decreases in wages, employment, and output in Logan County. The effects are illustrated in Table 4.

**Table 4**  
**Logan County: Haden Phase-In**

Industry	Employment	Wages	Output
Agriculture	1	17,000	30,000
Mining	414	22,196,000	114,671,000
Construction	23	675,000	1,500,000
Manufacturing	8	259,000	1,008,000
TCPU	32	1,222,000	4,463,000
Trade	215	3,677,000	8,399,000
FIRE	31	611,000	5,032,000
Services	163	4,180,000	8,040,000
Other	6	42,000	42,000
<b>Total</b>	-893	-\$32,879,000	-\$143,185,000

*Note: figures may not sum due to independent rounding and exclusion of some minor categories. TCPU is transportation, communications and public utilities, FIRE is finance, insurance and real estate.*

Table 4 reflects the commercial impact of the Haden phase-in scenario. Absent in these figures is the considerable public sector impact of this scenario. The declining demand for public services combined with a reduction in available revenues would endanger an additional 160 public safety, administration and education related positions within the county.

### **The Restrictive Haden Decision**

If the currently pending litigation results in a full closure of all mines in which valley fill activities occur, this would result in the loss of virtually all surface mining. The forecasted outcome would result in decreases in wages, employment, and output in Logan County. The effects are illustrated in Table 5.

**Table 5**  
**Logan County: Restrictive Haden Decision**

Industry	Employment	Wages	Output
Agriculture	3	36,000	65,000
Mining	877	47,020,000	243,184,000
Construction	49	1,431,000	3,182,000
Manufacturing	18	549,000	2,137,000
TCPU	68	2,591,000	9,465,000
Trade	456	7,798,000	17,813,000
FIRE	66	1,296,000	10,671,000
Services	346	8,864,000	17,051,000
Other	13	90,000	90,000
	-1,896		
<b>Total</b>		-\$69,675,000	-\$303,658,000

*Note: figures may not sum due to independent rounding and exclusion of some minor categories. TCPU is transportation, communications and public utilities, FIRE is finance, insurance and real estate.*

As in the previous projection and simulation this table does not include public sector job losses which we estimate at roughly 340 positions within the county. The bulk of these would reflect county level job losses due to decreased demand and revenue losses generated by this scenario.

Of course the Haden Decision phase-in and the restrictive Haden Decision simulations converge at seven years, or the beginning of 2007. The impact of this affects the aggregate employment, output and wages within the counties. The impact on individual firms is more difficult to simulate. Firm response to decreased demand can result in lay-offs, a shift in the focus of the firms activity or a complete closure of the firm.

A potential impact on the number of firms in a sample set of industries in Logan County is illustrated in Table 6.

**Table 6**  
**Logan County: Selected Restrictive Haden**  
**Decision Induced Firm Losses**

Industry	Job Losses	Total Employment	Total Firms (1999)	Potential Firms Lost
Motor Freight Transportation/Warehousing	37	180	13	8
Wholesale Trade	78	464	69	24
Building Materials and Gardening	26	141	20	8
General Merchandise Stores	41	170	15	5
Food Stores	63	498	42	19
Automotive Dealers and Service Stations	61	231	38	17
Eating and Drinking Places	98	473	44	17
Miscellaneous Retail	69	322	61	22
Doctors and Dentists Offices	32	183	31	13
Nursing and Protective Care	22	256	7	1
Hospitals	61	1,062	4	1
Legal Services	16	94	16	8
Engineering - Architectural Services	21	23	4	3
Banking	19	109	9	3

### **The Impact on Public Services**

The Full Haden Decision may potentially impact not only the private sector jobs, wages and output, but also the public sector which supports them. While a full accounting of the change in both tax revenues and expenditures is outside the scope of this study, it seems apparent that a loss in employment will dramatically affect the county. Building from considerable recent historical evidence, the dramatic decline in jobs, due to the Haden Decision, will reduce demand for key public services through out-migration. Indeed, there is little evidence that the potential decline in employment following these events will differ substantially from that of the early 1980's. This means that the jobs lost through the dissipation of coal mining activity will not be absorbed in other sectors. The highly skilled workers displaced in Logan County however will find ample similar opportunities elsewhere. A simple adjunct to this simulation is to estimate the declining demand for public education caused by this impact. Declines in employment have continued to reduce public school enrollment. Potential out-migration due to the restrictive Haden Decision may result in a decline in enrollment of 14.5 percent (or roughly 980 of 6,771 students in the county). The rate at which this occurs is outside the scope of this study. This impact will have dramatic implications regarding the staffing and potential consolidation of schools within the county.

Part of this impact is reflected in the public sector job losses, but consolidation of services would doubtless occur above and beyond that projected in this analysis. In this final scenario, the severance tax losses to the State and County would be considerable. The loss of output under the final scenario would reduce Severance Tax collections in the state by roughly \$9.5 million of which \$7.1 million is a direct loss to the County's tax revenues. Logan County currently levies roughly \$17 million in property taxes on an assessed base of \$818. Therefore, this loss of Severance Taxes represents a critical component of the County's tax revenues. The impact on property taxes and revenues other than severance taxes has not been estimated in this study.

## **Summary & Conclusions**

The impacts on Logan County described in this section reflect our best estimate of the baseline forecast and simulated effects of the Haden Decision given its two potential outcomes of litigation. The impacts outlined here are conservative, and are not intended to be alarmist, but instead seek to offer planning guidance to local planning officials, both public and private. Clearly a comparison with other counties suggests that the impact on coal production in Logan county is profound. However, this analysis does not include the cross border commuting from the County that is a hallmark of the labor force. Hence any impacts on the adjacent counties will also influence Logan County.