

U.S. Department of Labor



GENERAL WAGE DECISION NO. WV90-3

Supersedes General Wage Decision No. WV89-3

State: WEST VIRGINIA

County(ies): STATEWIDE

Construction
Type: Heavy & HighwayConstruction
Description: Heavy and Highway Construction Projects

Modification Record:

No.	Publication Date	Page No.(s)
1	Feb. 2, 1990	1416, 1418-1424
2	Mar. 2, 1990	1415-1419
3	Mar. 23, 1990	1418
4	Apr. 6, 1990	1416
5	June 15, 1990	1417-1419



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	Basic Hourly Rates	Fringe Benefits
BRICKLAYERS & STONEMASONS:		
AREA 1	17.95	3.50
AREA 2	17.89	2.82 + a
AREA 3	16.98	3.95
AREA 4	17.85	3.20
AREA 5	18.80	2.71
AREA 6	17.67	2.94
AREA 7	15.24	3.15
AREA 8	14.00	.10
CARPENTERS & PILEDRIVERMEN:		
Area 1:		
Heavy Construction:		
Carpenters	16.79	3.64
Piledrivermen	17.48	31% + .10
Highway Construction:		
Carpenters	16.48	3.64
Piledrivermen	17.48	31% + .10
Area 2:		
Heavy Construction:		
Carpenters	16.98	3.45
Piledrivermen	17.53	3.45
Highway Construction:		
Carpenters	16.67	3.45
Piledrivermen	17.17	3.45
Area 3:		
Heavy Construction:		
Carpenters	16.59	3.84
Piledrivermen	17.14	3.84
Highway Construction:		
Carpenters	16.28	3.84
Piledrivermen	16.78	3.84
CEMENT MASONS:		
Area 1:		
Heavy Construction	16.90	1.60
Highway Construction	16.54	1.60
Area 2:		
Heavy Construction	19.20	1.60
Highway Construction	18.84	1.60
*ELECTRICIANS:		
AREA 1		
Wiremen	18.89	4.02+ 3%
Cable Splicers	20.78	4.02+ 3%
AREA 2		
Electrical Contracts \$15,000 or less:		
Wiremen	13.25	3.52+ 3%
Cable Splicers	13.55	3.52+ 3%
Electrical Contracts over \$15,000:		
Wiremen	16.27	3.52+ 3%
Cable Splicers	16.57	3.52+ 3%
AREA 3		
Wiremen	14.65	6.06+ 3%
Cable Splicers	16.11	6.06+ 3%
AREA 4		



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Wiremen	15.18	4.54+	3%
Cable Splicers	15.43	4.54+	3%
*AREA 5			
Wiremen	19.50	46%+	a
AREA 6			
Electrical work under \$100,000:			
Wiremen	10.86	5.74+	3%
Electrical work over \$100,000:			
Wiremen	15.56	5.74+	3%
Cable Splicers	15.71	5.74+	3%
AREA 7			
Wiremen	15.30	5.56+	3%
Cable Splicers	15.55	5.56+	3%
AREA 8			
Wiremen	17.70	5.26+	3%
Cable Splicers	18.58	5.26+	3%
AREA 9			
Wiremen	17.70	5.26+	3%
Cable Splicers	18.58	5.26+	3%
AREA 10			
Wiremen	17.70	5.26+	3%
Cable Splicers	18.58	5.26+	3%
*AREA 11			
Wiremen	17.00	4.75+	4%
AREA 12			
Wiremen	14.56	1.00+	3.5%
Cable Splicers	14.56	1.00+	3.5%
AREA 13			
Electrical Contracts \$15,000 or less:			
Wiremen	13.55	3.52+	3%
Cable Splicers	13.85	3.52+	3%
Electrical Contracts over \$15,000:			
Wiremen	16.57	3.52+	3%
Cable Splicers	16.87	3.52+	3%
AREA 14			
Electrical Contracts \$15,000 or less:			
Wiremen	13.75	3.52+	3%
Cable Splicers	14.05	3.52+	3%
Electrical Contracts over \$15,000:			
Wiremen	16.77	3.52+	3%
Cable Splicers	17.07	3.52+	3%
AREA 15			
Electrical Contracts including labor & material under \$70,000:			
Wiremen	9.00	1.00+	4%
Electrical Contracts including labor & material \$70,000 or more:			
Wiremen	13.95	1.00+	4%
AREA 16			
Wireman	19.64	4.02+	3%
Cable-Splicer	21.60	4.02+	3%
AREA 17			
Wireman	19.89	4.02+	3%
Cable Splicers	21.88	4.02+	3%
AREA 18			
Wiremen	20.89	4.02+	3%
Cable Splicer	22.98	4.02+	3%



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IRONWORKERS:

AREA 1	16.96	4.66
AREA 1A	18.46	4.66
AREA 2	15.96	6.90+ 8%
AREA 3	18.43	4.62
AREA 4		
Zone 1 - 10 miles from Union Hall	17.94	4.51
Zone 2 - 10 to 15 miles from Union Hall	18.27	4.51
Zone 3 - 15 to 20 miles from Union Hall	20.23	4.51
AREA 5	16.47	3.80
AREA 6	15.00	3.54

LABORERS:

Heavy Construction:

Group 1	16.07	3.50
Group 2	15.45	3.50
Group 3	14.99	3.50
Group 4	14.47	3.50
Group 5	14.07	3.50
Group 6	13.27	3.50
Group 7	7.23	3.50

Highway Construction:

Group 1	15.80	3.50
Group 2	15.16	3.50
Group 3	14.65	3.50
Group 4	14.13	3.50
Group 5	13.67	3.50
Group 6	12.17	3.50
Group 7	7.23	3.50

All classifications who are required to work in open vertical ditches and man-holes that are 6 feet or more in depth shall receive .15 per hour above their regular rate of pay.

*LINE CONSTRUCTION:

AREA 1		
Linemen	18.86	4.50+ 3.5%
Cable splicer	20.80	4.50+ 3.5%
Mechanized equipment operators	14.70	4.50+ 3.5%
Groundmen	11.57	4.50+ 3.5%
AREA 2		
Linemen & operators (all mechanized equipment)	16.42	4.02+ 3.5%
Cable splicers	16.72	4.02+ 3.5%
Groundmen	12.14	4.02+ 3.5%
AREA 3		
Linemen and equipment operators	16.91	5.25+ 3.5%
Cable splicers	18.60	5.25+ 3.5%
Groundmen	13.53	5.25+ 3.5%
AREA 4		
Linemen and equipment operators	14.65	6.01+ 3.5%
Cable splicers	16.11	6.01+ 3.5%
Groundmen and truck drivers	11.72	6.01+ 3.5%
AREA 5		
Linemen & operators (all mechanized equipment)	17.08	5.29+ 3%
Cable splicers	17.33	5.29+ 3%



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Groundmen	13.86	5.29+	3%
AREA 6			
Linemen & operators (all mechanized equipment)	18.00	44.5%	
Groundmen	10.80	44.5%	
AREA 7			
Linemen & operators (all mechanized equipment)	15.56	5.40+	3.5%
Cable splicers	17.13	5.40+	3.5%
Groundmen & truck drivers	12.45	5.40+	3.5%
*AREA 8			
Linemen	17.00	4.75+	4%
Equipment Operators	16.15	4.75+	4%
Truck drivers & groundmen	11.05	4.75+	4%
*AREA 9			
Linemen	17.00	4.75+	4%
Equipment Operators	16.15	4.75+	4%
Truck drivers & groundmen	11.05	4.75+	4%
*AREA 10			
Linemen	17.00	4.75+	4%
Equipment Operators	16.15	4.75+	4%
Truck drivers & groundmen	11.05	4.75+	4%
AREA 11			
Linemen, cable splicers & equipment operators)	19.93	1.25+	8%
Truck with winch, pole or steel handling	10.35	1.25+	8%
Groundmen	10.06	1.25+	8%
AREA 12			
Linemen and operators (all mechanized equipment)	16.72	4.02+	3.5%
Cable Splicers	17.02	4.02+	3.5%
Groundmen	13.38	4.02+	3.5%
AREA 13			
Linemen and operators (all mechanized equipment)	16.92	4.02+	3.5%
Cable Splicers	17.22	4.02+	3.5%
Groundmen	13.54	4.02+	3.5%
AREA 14			
Linemen	14.56	1.00+	3.5%
Cable Splicers	14.56	1.00+	3.5%
Equipment Operators	12.55	1.00+	3.5%
Trucks with earth boring auger	10.10	1.00+	3.5%
Truck with winch, groundmen	8.15	1.00+	3.5%
PAINTERS:			
AREA 1			
Painters			
An area within 50 miles of Huntington, W.V	12.12	2.96	
An area 50 miles and beyond of Huntington, W.V	13.88	2.96	
Hazardous work (includes bridges, structural steel, painters skinning or cooning; working from bosun-chair, swing, spider; all cable-scaffold work; and conveyors when working 25 ft. or more above ground level)			



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while conveyor is in operation)

An area within 50 miles of Huntington, W.V

14.70 2.96

An area 50 miles and beyond of Huntington, W.V

16.45 2.96

AREA 2

Painters

15.28 .50

Structural steel

16.32 .50

Bridge painting

16.32 .50

Spray painters

16.78 .50

Towers, tanks & stacks

16.32 .50

Repaint industrial

15.12 .50

Sand blasters

16.78 .50

Anything 40 ft. and over

1.50 per hour above prevailing rate

Materials emitting toxic vapors

1.00 per hour above prevailing rate

AREA 3

New Construction:

Brush/Roller

Under 30 feet

16.19 1.43

Over 30 feet

17.91 1.43

Spray, Sand & Water Blast & Potmen

Under 30 feet

17.08 1.43

Over 30 feet

18.91 1.43

Repaint Work:

Brush/Roller

10.86 1.43

Spray, Sand & Water Blast & Potmen

Under 30 feet

17.08 1.43

Over 30 feet

18.91 1.43

Bridge

Brush/Roller

17.39 1.43

Spray, Sand & Water Blast, Glove

18.26 1.43

Open Structural steel

Stacks, Vent Pipes, Flag Poles, electrical Raldo and TV Towers & Tanks

Under 30 feet

17.08 1.43

Over 30 feet

18.91 1.43

AREA 4

Brush

15.45 1.78

Air Compressor operator

15.45 1.78

Roller, spray, dipping & mitten work

15.89 1.78

Water blasters, steam jenny nozzle

men, swinging scaffold & boatswain chair, window jack work

15.89 1.78

Brush painters on bridges needle beam

cable work, power tool work, brush & flame cleaning

16.42 1.78

Sand blaster

16.87 1.78

All stacks, vent pipes, flag poles in excess of 30' high, all towers, elevated tanks, electrical switch yards,

transformer banks, televisin towers

18.21 1.78

Spray painter or sandblaster on bridges needle beam cable work

16.87 1.78

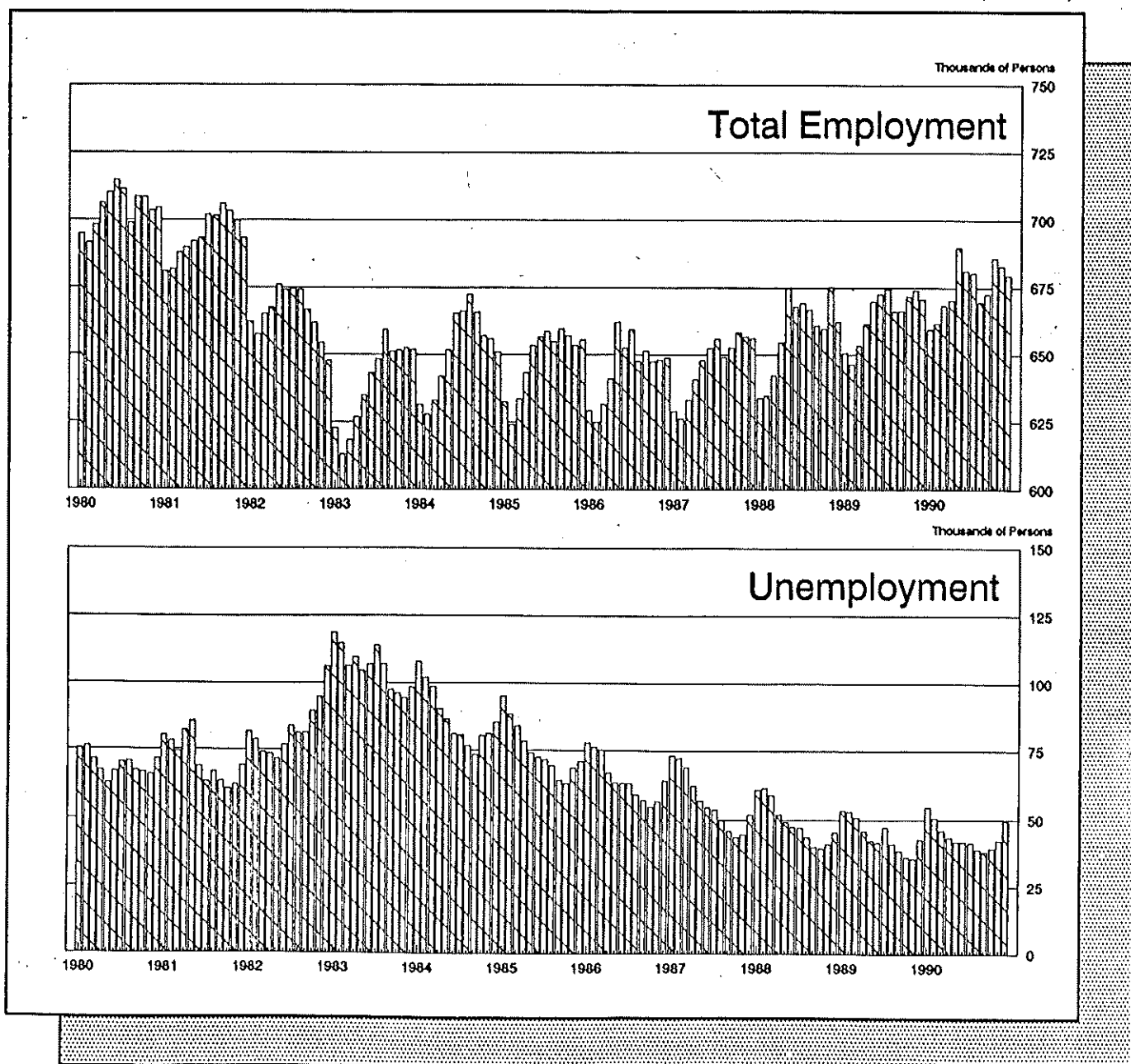
AREA 5:

PX 001 764 744

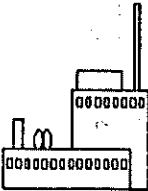



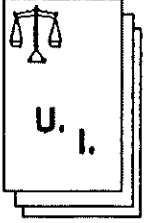
West Virginia Economic Summary



A Monthly Newsletter on Economic Activity in West Virginia December 1990



West Virginia Economic Indicators

	Dec. 1990	Nov. 1990	Dec. 1989
 Average Weekly Hours in Manufacturing			
Unadjusted	42.0	41.1	41.3
Seasonally Adjusted	41.8	41.0	41.1
Total Production Worker Hours in Manufacturing (000), Weekly, Unadjusted	2,686	2,640	2,745
Average Weekly Earnings in Manufacturing, Unadjusted	\$491.40	\$477.58	\$464.63
 Average Weekly Hours in Bituminous Coal Mining, Unadjusted	43.3	44.0	45.6
Average Weekly Earnings in Bituminous Coal Mining, Unadjusted	\$771.17	\$790.68	\$810.81
Coal Production (000 Tons)			
Unadjusted	12,300	13,530	11,402
Seasonally Adjusted	12,850	13,737	11,912
 Commercial and Industrial Electric Power Sales (000,000 KWH)			
Unadjusted	1,151	1,099	1,189
Seasonally Adjusted	1,165	1,182	1,203
 New Motor Vehicle Registrations, Unadjusted	5,323	4,849	4,727
 Interstate Initial Claims			
Unadjusted	1,394	1,281	1,251
Seasonally Adjusted	1,180	1,222	1,059
Average Weekly Initial Claims			
Unadjusted	2,237	2,220	2,271
Seasonally Adjusted	1,794	2,323	1,822
Insured Unemployment Rate			
Unadjusted	3.6	2.5	2.8
Seasonally Adjusted	3.4	3.0	2.7
Total Unemployment Rate, Seasonally Adjusted (WV Series)	6.8	6.5	6.0

NOTE: Data for prior month and year may be revised from previously published figures.

State of West Virginia

Gaston Caperton

Governor

Department of Health and

Human Resources

Taunja Willis Miller

Secretary

Bureau of Employment Programs

Andrew N. Richardson

Commissioner

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112 California Avenue

Charleston, WV 25305-0112

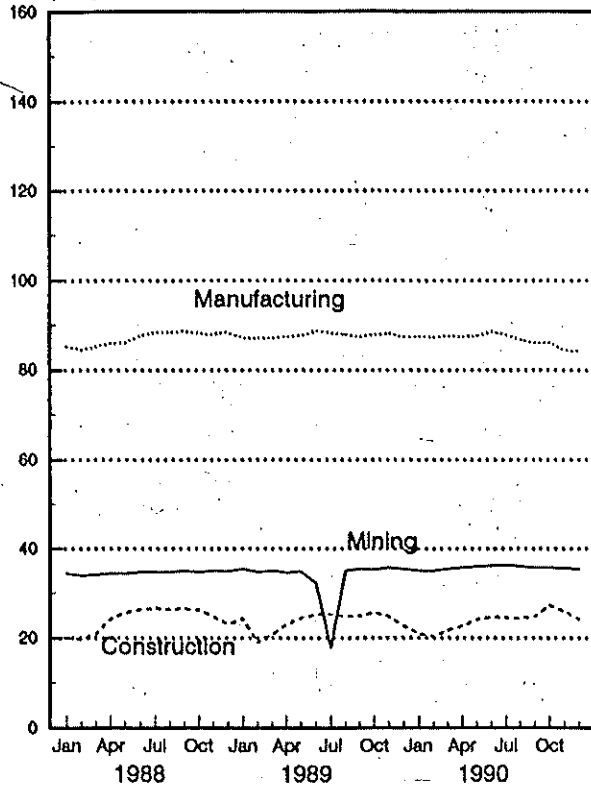
Selected National Data

	Dec. 1990	Nov. 1990	Dec. 1989
Civilian Unemployment Rate			
Unadjusted	5.9	5.8	5.1
Seasonally Adjusted	6.1	5.9	5.3
Consumer Price Index, All Urban Consumers			
Unadjusted			
1982-84 Base	133.8	133.8	126.1
1967 Base	400.9	400.7	377.6
Producer Price Index, Finished Goods			
Unadjusted, 1982 Base	121.9	122.9	115.4
Initial Claims for Unemployment Insurance (000)			
Week including 12th, Unadjusted	522.9	430.2	417.4
Insured Unemployment Rate, Week including 12th			
Unadjusted	2.9	2.3	2.3
Seasonally Adjusted	2.8	2.7	2.2

Trends in the West Virginia Labor Market

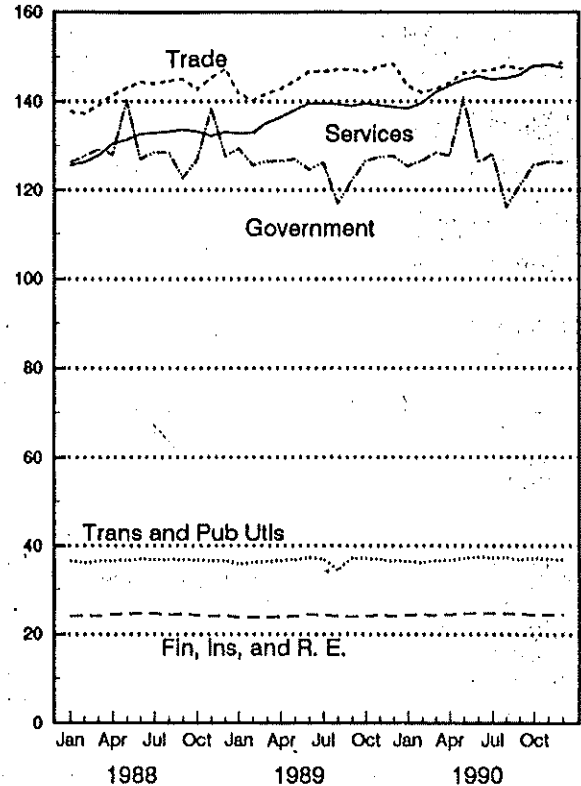
Goods Producing Employment

Employment in Thousands



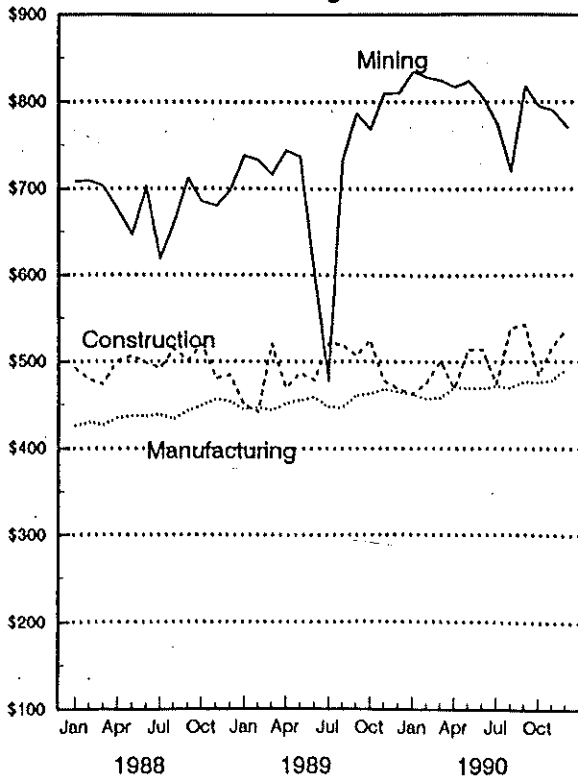
Service Producing Employment

Employment in Thousands



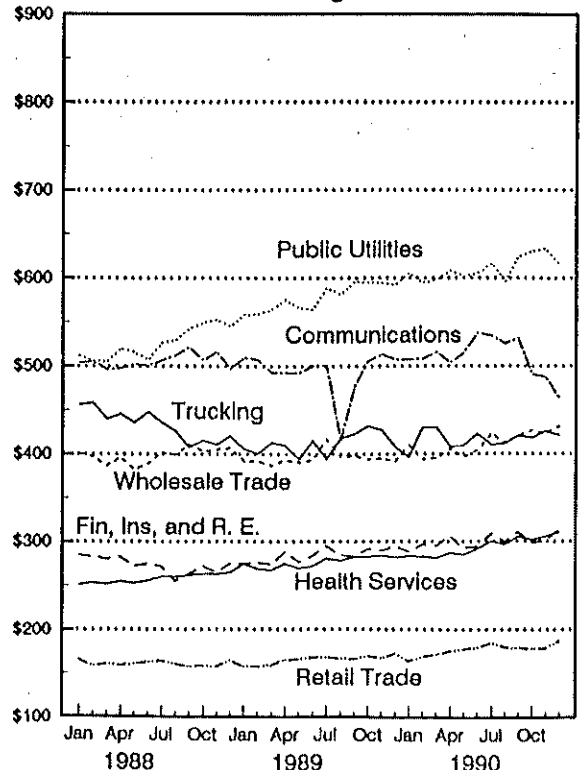
Average Weekly Earnings

Goods Producing Industries



Average Weekly Earnings

Service Producing Industries



Total Employment, Unemployment, and Civilian Labor Force In West Virginia

WV Series Labor Force Data

(In Thousands - Not Seasonally Adjusted)

	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Change From: Nov. 1990	Dec. 1989
Civilian Labor Force	728.8	725.4	713.3	3.4	15.5
Total Employment	679.3	683.0	670.6	-3.7	8.7
Total Unemployment	49.5	42.4	42.7	7.1	6.8
Unemployment Rate	6.8	5.8	6.0	xx	xx

BLS Series Labor Force Data

(In Thousands - Not Seasonally Adjusted)

	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Change From: Nov. 1990	Dec. 1989
Civilian Labor Force	778.5	770.7	767.5	7.8	11.0
Total Employment	704.3	703.3	702.8	1.0	1.5
Total Unemployment	74.3	67.4	64.7	6.9	9.6
Unemployment Rate	9.5	8.7	8.4	xx	xx

EMPLOYMENT: Total employment in West Virginia decreased 3,700 between November and December, due largely to seasonal factors. Nonetheless, employed State residents numbered 679,300 in mid-December 1990, which was 8,700 more than in December 1989.

The count of payroll jobs in the nonagricultural sectors of West Virginia's economy stood at 627,500 in mid-December, 2,300 fewer than a month earlier. The monthly losses were concentrated in construction and tourism related industries, while several service-producing areas increased employment. Seasonal declines of 1,300 in heavy construction, 200 among general building contractors and 300 for the special trade contractors combined to pull overall construction employment down by 1,800. Smaller reductions occurred in mining (-200) and manufacturing (-100). In the service-producing sector there were upturns in general merchandise stores (+400) and apparel and accessory stores (+600) as a result of both economic growth and seasonal factors. Health services added 300 workers, which makes the tenth month of 1990 in which health services has expanded employment. On the other hand,

the winter tourism slowdown made itself felt through losses of 600 at restaurants within trade, and reductions of 500 in hotels and 200 in amusements within services. A winter seasonal decline of 300 was also noted in the agricultural services sector. Other major sectors experienced only slight changes: finance, insurance and real estate (+100), transportation and public utilities (-100), and total government (-200).

Compared with December of last year, nonagricultural payroll employment has grown by 6,500 jobs. The improvements have been centered in the service-producing industries, which are up 8,300 over the year, while the goods-producing sector has contracted by 1,800 since December a year ago.

UNEMPLOYMENT: Total unemployment increased 7,100 to an estimated 49,500 in mid-December. The December 1991 unemployment rate rose to 6.8 percent, up from 5.8 in November and 6.0 in December a year ago. Historically, unemployment rises between November and December due to seasonal factors. The current increase is a little steeper than usual, however.

Average Hours and Earnings, West Virginia Production Workers, Select Industries

	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings		
	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89
Manufacturing	\$491.40	\$477.58	\$464.63	42.0	41.1	41.3	\$11.70	\$11.62	\$11.25
Stone, Clay & Glass Products	464.89	477.99	432.19	39.7	41.1	41.2	11.71	11.63	10.49
Primary Metals Industries	726.53	666.79	591.65	47.3	44.1	43.6	15.36	15.12	13.57
Fabricated Metal Products	457.75	396.00	403.28	41.5	37.5	37.1	11.03	10.56	10.67
Industrial Machinery & Equipment	446.17	431.29	455.41	37.1	37.7	40.4	12.00	11.44	11.52
Electronic & Electrical Equipment	555.66	495.51	523.84	44.1	39.8	43.4	12.60	12.45	12.07
Chemical & Allied Products	704.93	702.21	678.61	44.9	44.5	44.6	15.70	15.78	15.22
Coal Mining	771.17	790.68	810.81	43.3	44.0	45.5	17.81	17.97	17.82
Construction	537.23	516.46	468.58	39.3	38.2	36.1	13.67	13.52	12.98

Statewide Nonagricultural Payroll Employment by Industry

(In Thousands - Not Seasonally Adjusted)

December, 1990

	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Change Nov. 1990	From: Dec. 1989
TOTAL NONAGRICULTURAL	627.5	629.8	621.0	-2.3	6.5
GOODS PRODUCING	143.8	145.9	145.6	-2.1	-1.8
Mining	35.4	35.6	35.4	-0.2	0.0
Coal Mining	29.8	30.0	29.7	-0.2	0.1
Oil & Gas Extraction	4.5	4.5	4.6	0.0	-0.1
Other Mining	1.1	1.1	1.1	0.0	0.0
Construction	24.2	26.0	22.8	-1.8	1.4
General Building Contractors	6.9	7.1	6.6	-0.2	0.3
Heavy Construction	6.1	7.4	5.0	-1.3	1.1
Special Trade Contractors	11.2	11.5	11.2	-0.3	0.0
Manufacturing	84.2	84.3	87.4	-0.1	-3.2
Durable Goods	46.7	46.7	49.8	0.0	-3.1
Lumber, Wood Products & Furniture	7.4	7.5	7.6	-0.1	-0.2
Stone, Clay & Glass Products	8.0	7.9	8.2	0.1	-0.2
Primary Metals Industries	12.9	13.0	14.9	-0.1	-2.0
Fabricated Metal Products	5.4	5.3	5.6	0.1	-0.2
Industrial Machinery & Equipment	5.7	5.6	5.8	0.1	-0.1
Electronic & Electrical Equipment	2.3	2.3	2.6	0.0	-0.3
Transportation Equipment	2.6	2.6	2.6	0.0	0.0
Other Durable Goods	2.4	2.5	2.5	-0.1	-0.1
Nondurable Goods	37.5	37.6	37.6	-0.1	-0.1
Food & Kindred Products	4.6	4.6	4.1	0.0	0.5
Textile Mill Products	0.8	0.9	0.9	-0.1	-0.1
Apparel & Other Textile Products	4.0	3.9	4.1	0.1	-0.1
Paper & Allied Products	1.3	1.2	1.2	0.1	0.1
Printing & Publishing	5.0	5.1	5.0	-0.1	0.0
Chemical & Allied Products	17.5	17.5	17.9	0.0	-0.4
Other Nondurable Goods	4.3	4.4	4.4	-0.1	-0.1
SERVICE PRODUCING	483.7	483.9	475.4	-0.2	8.3
Transportation & Public Utilities	36.8	36.9	36.5	-0.1	0.3
Railroad Transportation	3.9	3.8	4.0	0.1	-0.1
Trucking & Warehousing	9.1	9.3	8.9	-0.2	0.2
Other Transportation	3.5	3.5	3.4	0.0	0.1
Communications	8.0	8.0	8.0	0.0	0.0
Electric, Gas & Sanitary Services	12.3	12.3	12.2	0.0	0.1
Trade	148.7	148.1	148.4	0.6	0.3
Wholesale Trade	30.6	30.5	30.4	0.1	0.2
Retail Trade	118.1	117.6	118.0	0.5	0.1
Building Materials & Garden Supplies	5.2	5.3	4.9	-0.1	0.3
General Merchandise Stores	18.8	18.4	19.8	0.4	-1.0
Food Stores	23.4	23.3	23.1	0.1	0.3
Automotive Dealers & Service Stations	14.4	14.6	14.3	-0.2	0.1
Apparel & Accessory Stores	6.5	5.9	6.0	0.6	0.5
Home Furniture & Equipment Stores	4.8	4.8	4.8	0.0	0.0
Eating & Drinking Places	33.6	34.2	33.3	-0.6	0.3
Miscellaneous Retail	11.4	11.1	11.8	0.3	-0.4
Finance, Insurance, & Real Estate	24.4	24.3	24.1	0.1	0.3
Finance	13.7	13.7	13.6	0.0	0.1
Insurance	6.5	6.5	6.4	0.0	0.1
Real Estate	4.2	4.1	4.1	0.1	0.1
Services	147.7	148.3	138.7	-0.6	9.0
Agricultural Services	2.4	2.7	2.1	-0.3	0.3
Hotels & Other Lodging Places	8.2	8.7	8.1	-0.5	0.1
Personal Services	6.2	6.2	6.1	0.0	0.1
Business Services	14.3	14.3	13.3	0.0	1.0
Automotive & Miscellaneous Repair Services	6.1	6.1	5.6	0.0	0.5
Amusements, incl. Motion Pictures	5.6	5.8	5.6	-0.2	0.0
Health Services	56.5	56.2	53.1	0.3	3.4
Nursing & Personal Care Homes	10.5	10.4	9.7	0.1	0.8
Hospitals	28.6	28.5	27.0	0.1	1.6
Other Health Services	17.4	17.3	16.4	0.1	1.0
Legal Services	3.9	3.9	3.6	0.0	0.3
Educational Services	6.2	6.4	5.2	-0.2	1.0
Social Services	9.6	9.4	8.5	0.2	1.1
Membership Organizations	19.7	19.6	19.5	0.1	0.2
Engineering & Management Services	8.0	8.0	7.0	0.0	1.0
Government	126.1	126.3	127.7	-0.2	-1.6
Federal	15.4	15.6	16.0	-0.2	-0.6
Hospitals	2.9	2.9	2.9	0.0	0.0
U S Postal Service	4.9	4.9	5.1	0.0	-0.2
Other Federal	7.6	7.8	8.0	-0.2	-0.4
State	40.3	40.6	40.5	-0.3	-0.2
Hospitals	2.7	2.7	2.9	0.0	-0.2
Education	19.4	19.6	18.4	-0.2	1.0
Other State	18.2	18.3	19.2	-0.1	-1.0
Local	70.4	70.1	71.2	0.3	-0.8
Hospitals	4.9	4.9	4.8	0.0	0.1
Education	46.3	45.9	46.8	0.4	-0.5
Other Local	19.2	19.3	19.6	-0.1	-0.4
Total Private Sector	501.4	503.5	493.3	-2.1	8.1
Labor-Management Dispute Status	2.2	2.2	0.7	xx	xx



Women Workers Statewide Nonagricultural Payroll Employment by Industry

(In Thousands - Not Seasonally Adjusted)

December 1990

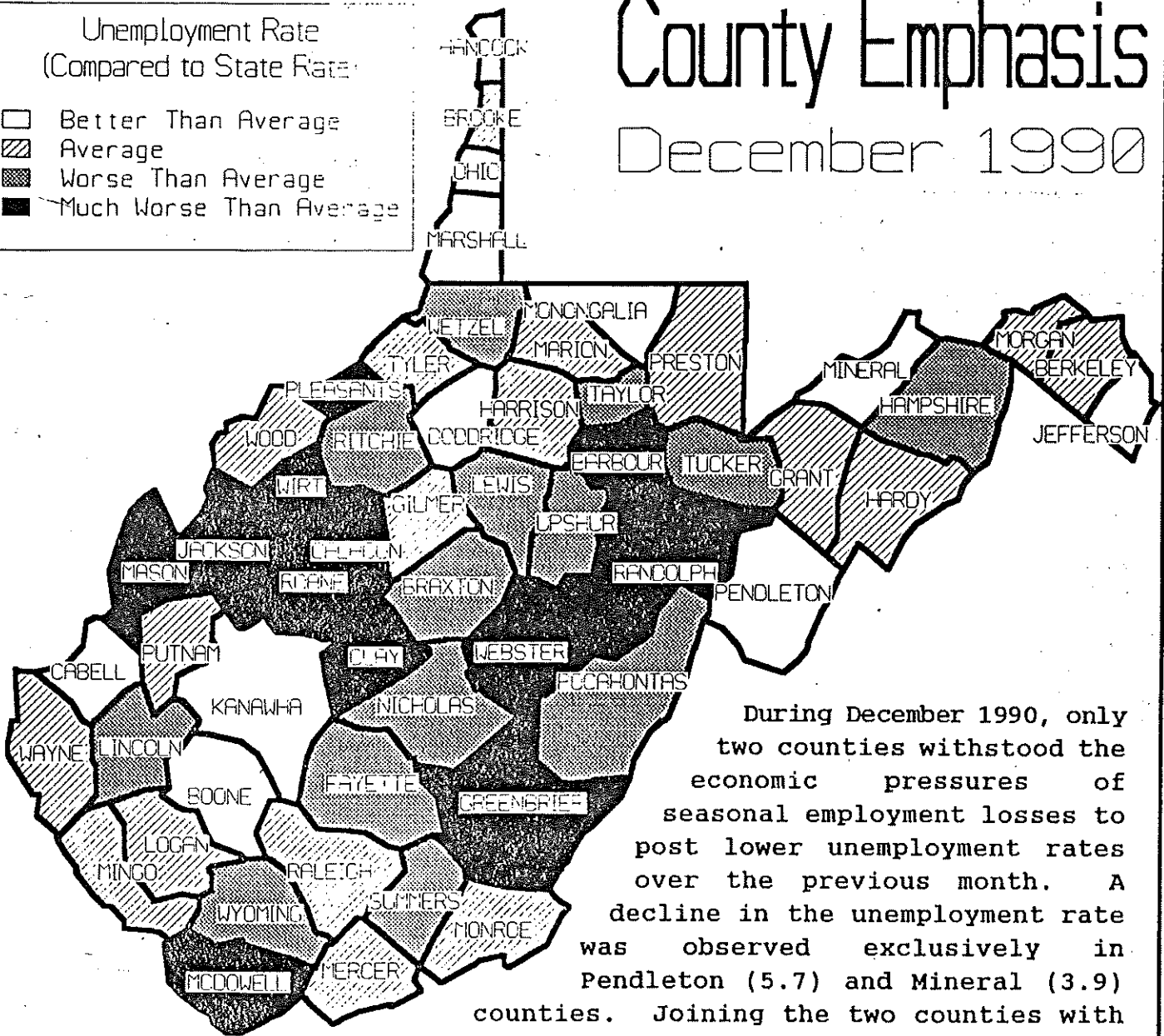
	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Change Nov. 1990	From: Dec. 1989
TOTAL NONAGRICULTURAL	277.9	277.8	262.1	0.1	15.8
GOODS PRODUCING	24.1	24.0	23.6	0.1	0.5
Mining	2.1	2.0	2.0	0.1	0.1
Coal Mining	1.2	1.1	1.1	0.1	0.1
Oil & Gas Extraction	0.8	0.8	0.8	0.0	0.0
Construction	2.0	2.0	1.6	0.0	0.4
General Building Contractors	0.5	0.5	0.4	0.0	0.1
Heavy Construction	0.4	0.4	0.3	0.0	0.1
Special Trade Contractors	1.1	1.1	0.9	0.0	0.2
Manufacturing	20.0	20.0	20.0	0.0	0.0
Durable Goods	7.7	7.8	8.1	-0.1	-0.4
Lumber, Wood Products & Furniture	0.7	0.8	0.8	-0.1	-0.1
Stone, Clay & Glass Products	2.4	2.4	2.5	0.0	-0.1
Primary Metals Industries	1.1	1.1	1.1	0.0	0.0
Fabricated Metal Products	0.8	0.8	0.9	0.0	-0.1
Industrial Machinery & Equipment	0.7	0.7	0.7	0.0	0.0
Electronic & Electrical Equipment	0.8	0.8	0.9	0.0	-0.1
Transportation Equipment	0.4	0.4	0.4	0.0	0.0
Other Durable Goods	0.8	0.8	0.8	0.0	0.0
Nondurable Goods	12.3	12.2	11.9	0.1	0.4
Food & Kindred Products	1.2	1.2	0.9	0.0	0.3
Textile Mill Products	0.6	0.6	0.6	0.0	0.0
Apparel & Other Textile Products	3.4	3.3	3.4	0.1	0.0
Paper & Allied Products	0.5	0.5	0.4	0.0	0.1
Printing & Publishing	1.9	1.9	1.8	0.0	0.1
Chemical & Allied Products	3.0	3.0	3.0	0.0	0.0
Other Nondurable Goods	1.7	1.7	1.8	0.0	-0.1
SERVICE PRODUCING	253.8	253.8	238.5	0.0	15.3
Transportation & Public Utilities	7.5	7.8	7.8	-0.3	-0.3
Trucking & Warehousing	0.9	0.9	0.8	0.0	0.1
Other Transportation	0.6	0.7	0.7	-0.1	-0.1
Communications	3.3	3.4	3.6	-0.1	-0.3
Electric, Gas & Sanitary Services	2.3	2.4	2.3	-0.1	0.0
Trade	69.5	68.8	64.0	0.7	5.5
Wholesale Trade	5.8	5.7	5.4	0.1	0.4
Retail Trade	63.7	63.1	58.6	0.6	5.1
Building Materials & Garden Supplies	0.9	0.9	0.8	0.0	0.1
General Merchandise Stores	12.5	12.2	12.0	0.3	0.5
Food Stores	12.3	12.2	10.7	0.1	1.6
Automotive Dealers & Service Stations	3.4	3.4	3.0	0.0	0.4
Apparel & Accessory Stores	5.4	4.9	4.7	0.5	0.7
Home Furniture & Equipment Stores	1.7	1.7	1.6	0.0	0.1
Eating & Drinking Places	19.1	19.6	17.6	-0.5	1.5
Miscellaneous Retail	8.4	8.2	8.2	0.2	0.2
Finance, Insurance, & Real Estate	15.1	14.8	15.3	0.3	-0.2
Finance	10.6	10.5	10.1	0.1	0.5
Insurance	2.9	2.8	3.3	0.1	-0.4
Real Estate	1.6	1.5	1.9	0.1	-0.3
Services	95.7	95.9	88.2	-0.2	7.5
Agricultural Services	1.0	1.0	0.8	0.0	0.2
Hotels & Other Lodging Places	4.6	4.8	4.2	-0.2	0.4
Personal Services	4.0	3.9	3.3	0.1	0.7
Business Services	7.0	7.0	5.9	0.0	1.1
Automotive & Miscellaneous Repair Services	1.1	1.1	1.2	0.0	-0.1
Amusements, incl. Motion Pictures	2.7	2.7	2.6	0.0	0.1
Health Services	46.2	45.9	43.3	0.3	2.9
Nursing & Personal Care Homes	9.2	9.1	7.8	0.1	1.4
Hospitals	23.5	23.3	22.2	0.2	1.3
Other Health Services	13.5	13.5	13.3	0.0	0.2
Legal Services	3.1	3.2	2.8	-0.1	0.3
Educational Services	3.5	3.7	2.9	-0.2	0.6
Social Services	7.0	6.7	6.0	0.3	1.0
Membership Organizations	11.9	12.3	11.7	-0.4	0.2
Engineering & Management Services	2.9	2.9	2.8	0.0	0.1
Government	66.0	66.5	63.2	-0.5	2.8
Federal	6.7	6.7	6.7	0.0	0.0
Hospitals	1.6	1.6	1.6	0.0	0.0
U S Postal Service	1.3	1.3	1.3	0.0	0.0
Other Federal	3.8	3.8	3.8	0.0	0.0
State	19.4	19.4	18.2	0.0	1.2
Hospitals	1.8	1.9	2.0	-0.1	-0.2
Education	10.2	10.3	8.6	-0.1	1.6
Other State	7.4	7.2	7.6	0.2	-0.2
Local	39.9	40.4	38.3	-0.5	1.6
Hospitals	4.1	4.1	3.9	0.0	0.2
Education	29.3	29.6	27.9	-0.3	1.4
Other Local	6.5	6.7	6.5	-0.2	0.0
Total Private Sector	211.9	211.3	198.9	0.6	13.0

County Emphasis

December 1990

Unemployment Rate
(Compared to State Rate)

- Better Than Average
- Average
- Worse Than Average
- Much Worse Than Average



During December 1990, only two counties withstood the economic pressures of seasonal employment losses to post lower unemployment rates over the previous month. A decline in the unemployment rate was observed exclusively in Pendleton (5.7) and Mineral (3.9) counties. Joining the two counties with

rates considered better-than-average are Marshall (5.7), Boone (5.6), Doddridge (5.5), Hancock (5.2), Jefferson (5.0), Cabell (5.0), Kanawha (4.4), Ohio (3.8), and Monongalia (3.1).

A predictable seasonal rise in construction and services unemployment, coupled with a significant labor management dispute, worsened the unemployment picture in several counties. Counties producing rates regarded as much-worse-than-average are Randolph (11.1), Pleasants (11.2), Greenbrier (11.2), McDowell (11.6), Barbour (12.3), Roane (13.1), Wirt (13.3), Mason (13.8), Clay (14.3), Webster (14.9), Calhoun (16.4), and Jackson (18.8).

West Virginia Labor Force Statistics by County

(WV Series Labor Force Data --as calculated by the WV Division of Employment Security)*

December 1990
(Revised November 1990 in parentheses)

THESE LABOR FORCE STATISTICS WERE DESIGNED TO BE USED FOR ECONOMIC ANALYSIS

County	Civilian Labor Force		Employment		Unemployment		Unemployment As Percent of Civilian Labor Force	
Barbour	5,170	(5,130)	4,540	(4,580)	640	(550)	12.3	(10.6)
Berkeley	26,980	(27,050)	25,400	(25,660)	1,580	(1,390)	5.8	(5.1)
Boone	7,760	(7,790)	7,330	(7,390)	440	(400)	5.6	(5.1)
Braxton	5,650	(5,550)	5,070	(5,090)	580	(460)	10.3	(8.3)
Brooke	10,620	(10,490)	9,980	(10,020)	650	(480)	6.1	(4.5)
Cabell	42,940	(42,770)	40,800	(40,790)	2,140	(1,990)	5.0	(4.6)
Calhoun	2,940	(3,020)	2,460	(2,660)	480	(350)	16.4	(11.7)
Clay	2,750	(2,710)	2,360	(2,410)	390	(300)	14.3	(10.9)
Doddridge	2,350	(2,340)	2,220	(2,240)	130	(100)	5.5	(4.4)
Fayette	16,860	(16,620)	15,430	(15,490)	1,430	(1,120)	8.5	(6.8)
Gilmer	2,960	(3,010)	2,750	(2,850)	210	(170)	7.1	(5.5)
Grant	4,250	(4,260)	3,930	(4,040)	320	(230)	7.5	(5.3)
Greenbrier	14,760	(14,550)	13,110	(13,420)	1,650	(1,130)	11.2	(7.8)
Hampshire	6,720	(6,790)	6,060	(6,210)	670	(570)	9.9	(8.4)
Hancock	14,090	(14,080)	13,360	(13,420)	730	(660)	5.2	(4.7)
Hardy	5,850	(5,780)	5,470	(5,540)	390	(250)	6.6	(4.3)
Harrison	29,290	(29,100)	27,260	(27,380)	2,030	(1,720)	6.9	(5.9)
Jackson	10,250	(10,540)	8,320	(8,720)	1,920	(1,820)	18.8	(17.3)
Jefferson	19,500	(19,600)	18,530	(18,790)	970	(810)	5.0	(4.1)
Kanawha	96,340	(96,060)	92,100	(92,310)	4,250	(3,750)	4.4	(3.9)
Lewis	6,870	(6,800)	6,270	(6,330)	600	(470)	8.8	(7.0)
Lincoln	7,170	(7,080)	6,530	(6,570)	650	(500)	9.0	(7.1)
Logan	12,650	(12,780)	11,840	(12,000)	810	(780)	6.4	(6.1)
McDowell	6,280	(6,240)	5,550	(5,570)	730	(670)	11.6	(10.7)
Marion	21,670	(21,530)	20,250	(20,340)	1,430	(1,190)	6.6	(5.5)
Marshall	14,690	(14,720)	13,850	(13,900)	840	(820)	5.7	(5.6)
Mason	8,770	(8,710)	7,560	(7,670)	1,210	(1,040)	13.8	(12.0)
Mercer	26,070	(26,000)	24,550	(24,700)	1,520	(1,300)	5.8	(5.0)
Mineral	10,540	(10,600)	10,120	(10,160)	410	(430)	3.9	(4.1)
Mingo	10,090	(10,060)	9,500	(9,510)	590	(550)	5.9	(5.4)
Monongalia	38,940	(38,740)	37,750	(37,830)	1,190	(910)	3.1	(2.4)
Monroe	4,950	(4,960)	4,620	(4,730)	330	(230)	6.7	(4.6)
Morgan	5,100	(5,060)	4,780	(4,840)	310	(220)	6.2	(4.3)
Nicholas	8,680	(8,650)	7,810	(7,860)	870	(790)	10.0	(9.1)
Ohio	24,400	(24,380)	23,470	(23,550)	930	(830)	3.8	(3.4)
Pendleton	3,870	(3,980)	3,650	(3,690)	220	(280)	5.7	(7.1)
Pleasants	2,220	(2,230)	1,980	(2,010)	250	(230)	11.2	(10.1)
Pocahontas	5,120	(4,380)	4,570	(3,920)	550	(460)	10.7	(10.4)
Preston	12,680	(12,510)	11,760	(11,780)	920	(730)	7.2	(5.8)
Putnam	16,750	(16,660)	15,450	(15,480)	1,300	(1,180)	7.7	(7.1)
Raleigh	26,940	(26,650)	25,090	(25,010)	1,850	(1,640)	6.9	(6.2)
Randolph	11,660	(11,630)	10,370	(10,570)	1,290	(1,070)	11.1	(9.2)
Ritchie	4,910	(4,900)	4,470	(4,510)	440	(390)	8.9	(7.9)
Roane	4,670	(4,640)	4,060	(4,130)	610	(510)	13.1	(11.0)
Summers	4,080	(4,150)	3,670	(3,800)	410	(350)	10.1	(8.5)
Taylor	5,860	(5,730)	5,340	(5,370)	520	(360)	8.9	(6.3)
Tucker	3,840	(3,810)	3,510	(3,520)	330	(290)	8.6	(7.6)
Tyler	4,580	(4,550)	4,260	(4,270)	320	(280)	7.0	(6.1)
Upshur	8,780	(8,640)	7,980	(8,020)	800	(620)	9.1	(7.2)
Wayne	15,680	(15,580)	14,640	(14,630)	1,040	(940)	6.6	(6.0)
Webster	3,010	(2,980)	2,560	(2,580)	450	(400)	14.9	(13.4)
Wetzel	9,060	(8,960)	8,330	(8,350)	730	(610)	8.1	(6.8)
Wirt	2,110	(2,120)	1,830	(1,890)	280	(220)	13.3	(10.5)
Wood	41,290	(41,050)	38,690	(38,710)	2,600	(2,340)	6.3	(5.7)
Wyoming	6,820	(6,770)	6,200	(6,240)	620	(530)	9.1	(7.8)

All data have been revised to March 1989 benchmark.

*The West Virginia Division of Employment Security and the U. S. Department of Labor, Bureau of Labor Statistics use different methodologies in calculating the unemployment rate.

West Virginia Labor Force Statistics by County

(BLS Series Labor Force Data -Using U. S. Bureau of Labor Statistics Methodology)*

December 1990
(Revised November 1990 in parentheses)

APPROVED BY THE U. S. BUREAU OF LABOR STATISTICS TO ALLOCATE FEDERAL FUNDS
AND DETERMINE ELIGIBILITY FOR FEDERAL ASSISTANCE PROGRAMS

County	Civilian Labor Force		Employment		Unemployment		Unemployment As Percent of Civilian Labor Force	
Barbour	5,660	(5,580)	4,700	(4,720)	950	(870)	16.9	(15.5)
Berkeley	28,700	(28,630)	26,340	(26,420)	2,370	(2,210)	8.2	(7.7)
Boone	8,250	(8,240)	7,590	(7,610)	650	(630)	7.9	(7.7)
Braxton	6,130	(5,970)	5,260	(5,240)	870	(730)	14.2	(12.3)
Brooke	11,310	(11,070)	10,340	(10,310)	970	(760)	8.6	(6.8)
Cabell	45,510	(45,160)	42,300	(42,000)	3,210	(3,160)	7.0	(7.0)
Calhoun	3,270	(3,300)	2,550	(2,740)	720	(560)	22.1	(17.0)
Clay	3,040	(2,950)	2,440	(2,480)	590	(470)	19.5	(15.9)
Doddridge	2,500	(2,470)	2,310	(2,300)	190	(170)	7.8	(6.7)
Fayette	18,140	(17,740)	16,000	(15,950)	2,150	(1,790)	11.8	(10.1)
Gilmer	3,170	(3,200)	2,850	(2,930)	310	(260)	9.9	(8.3)
Grant	4,550	(4,520)	4,080	(4,160)	480	(360)	10.5	(8.0)
Greenbrier	16,070	(15,610)	13,590	(13,820)	2,470	(1,800)	15.4	(11.5)
Hampshire	7,280	(7,310)	6,280	(6,400)	1,000	(910)	13.7	(12.5)
Hancock	14,950	(14,870)	13,850	(13,810)	1,100	(1,050)	7.4	(7.1)
Hardy	6,250	(6,090)	5,670	(5,700)	580	(390)	9.3	(6.5)
Harrison	31,300	(30,920)	28,260	(28,200)	3,040	(2,730)	9.7	(8.8)
Jackson	11,520	(11,870)	8,630	(8,980)	2,890	(2,900)	25.1	(24.4)
Jefferson	20,670	(20,640)	19,210	(19,350)	1,460	(1,290)	7.1	(6.2)
Kanawha	101,850	(101,020)	95,490	(95,050)	6,370	(5,970)	6.3	(5.9)
Lewis	7,400	(7,270)	6,500	(6,510)	900	(750)	12.2	(10.4)
Lincoln	7,730	(7,570)	6,770	(6,770)	970	(800)	12.5	(10.6)
Logan	13,490	(13,590)	12,280	(12,350)	1,210	(1,240)	9.0	(9.1)
McDowell	6,850	(6,800)	5,750	(5,730)	1,100	(1,070)	16.0	(15.7)
Marion	23,130	(22,830)	20,990	(20,950)	2,140	(1,880)	9.2	(8.3)
Marshall	15,620	(15,610)	14,360	(14,310)	1,250	(1,300)	8.0	(8.3)
Mason	9,660	(9,560)	7,840	(7,900)	1,820	(1,660)	18.8	(17.4)
Mercer	27,730	(27,500)	25,450	(25,430)	2,280	(2,070)	8.2	(7.5)
Mineral	11,110	(11,150)	10,500	(10,470)	620	(690)	5.6	(6.1)
Mingo	10,740	(10,660)	9,850	(9,790)	890	(870)	8.3	(8.2)
Monongalia	40,930	(40,400)	39,140	(38,950)	1,780	(1,450)	4.4	(3.6)
Monroe	5,290	(5,230)	4,790	(4,870)	500	(360)	9.4	(6.9)
Morgan	5,430	(5,340)	4,960	(4,990)	470	(350)	8.7	(6.5)
Nicholas	9,400	(9,350)	8,100	(8,090)	1,300	(1,260)	13.8	(13.4)
Ohio	25,720	(25,570)	24,330	(24,240)	1,390	(1,320)	5.4	(5.2)
Pendleton	4,120	(4,250)	3,780	(3,800)	330	(450)	8.1	(10.6)
Pleasants	2,420	(2,420)	2,050	(2,070)	370	(360)	15.4	(14.8)
Pocahontas	5,560	(4,770)	4,740	(4,040)	830	(730)	14.8	(15.3)
Preston	13,570	(13,290)	12,190	(12,130)	1,380	(1,150)	10.1	(8.7)
Putnam	17,960	(17,810)	16,020	(15,940)	1,940	(1,870)	10.8	(10.5)
Raleigh	28,790	(28,360)	26,020	(25,750)	2,780	(2,610)	9.6	(9.2)
Randolph	12,680	(12,580)	10,750	(10,880)	1,940	(1,700)	15.3	(13.5)
Ritchie	5,290	(5,260)	4,630	(4,650)	660	(620)	12.4	(11.7)
Roane	5,120	(5,060)	4,210	(4,250)	920	(810)	17.9	(16.1)
Summers	4,420	(4,470)	3,800	(3,910)	620	(560)	13.9	(12.5)
Taylor	6,320	(6,100)	5,540	(5,530)	780	(570)	12.3	(9.4)
Tucker	4,130	(4,090)	3,640	(3,630)	490	(460)	12.0	(11.3)
Tyler	4,900	(4,840)	4,420	(4,400)	480	(440)	9.9	(9.2)
Upshur	9,470	(9,250)	8,280	(8,260)	1,190	(990)	12.6	(10.7)
Wayne	16,740	(16,560)	15,180	(15,070)	1,560	(1,500)	9.3	(9.0)
Webster	3,330	(3,290)	2,660	(2,650)	670	(640)	20.2	(19.3)
Wetzel	9,730	(9,570)	8,630	(8,600)	1,100	(970)	11.3	(10.2)
Wirt	2,320	(2,300)	1,900	(1,950)	420	(350)	18.1	(15.3)
Wood	44,010	(43,580)	40,120	(39,860)	3,900	(3,730)	8.8	(8.6)
Wyoming	7,350	(7,260)	6,430	(6,430)	930	(840)	12.6	(11.5)

All data have been revised to March 1989 benchmark.

*Calculated according to Current Population Survey adjusted to BLS procedures.

West Virginia Labor Force Statistics by Local Area

WV Series Labor Force Data
(In Thousands - Not Seasonally Adjusted)

BLS Series Labor Force Data
(In Thousands - Not Seasonally Adjusted)

	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89		Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89
Charleston MSA				Charleston MSA			
Labor Force	113.1	112.7	109.6	Labor Force	119.8	118.8	117.0
Employment	107.5	107.8	104.9	Employment	111.5	111.0	110.0
Unemployment	5.5	4.9	4.7	Unemployment	8.3	7.8	7.1
Rate (%)	4.9	4.4	4.3	Rate (%)	6.9	6.6	6.1
Huntington - Ashland - Ironton MSA				Huntington - Ashland - Ironton MSA			
Labor Force	126.8	125.4	125.4	Labor Force	131.4	130.3	130.8
Employment	120.1	119.9	120.2	Employment	122.3	122.0	123.5
Unemployment	6.7	5.5	5.2	Unemployment	9.0	8.4	7.3
Rate (%)	5.3	4.4	4.1	Rate (%)	6.9	6.4	5.6
Parkersburg - Marietta MSA				Parkersburg - Marietta MSA			
Labor Force	70.1	69.5	68.4	Labor Force	73.8	73.0	72.4
Employment	66.3	66.3	65.4	Employment	68.3	68.0	67.8
Unemployment	3.7	3.2	3.0	Unemployment	5.5	5.0	4.6
Rate (%)	5.4	4.6	4.4	Rate (%)	7.5	6.8	6.4
Wheeling - Bridgeport MSA				Wheeling - Bridgeport MSA			
Labor Force	69.8	69.6	68.5	Labor Force	73.2	72.7	72.4
Employment	66.8	67.0	65.6	Employment	68.8	68.7	67.9
Unemployment	3.0	2.6	2.9	Unemployment	4.4	4.0	4.5
Rate (%)	4.3	3.7	4.3	Rate (%)	6.0	5.5	6.3
Clarksburg LMA				Clarksburg LMA			
Labor Force	37.5	37.2	35.9	Labor Force	40.1	39.5	38.7
Employment	34.8	35.0	33.7	Employment	36.1	36.0	35.3
Unemployment	2.7	2.2	2.2	Unemployment	4.0	3.5	3.4
Rate (%)	7.1	5.9	6.2	Rate (%)	10.0	8.8	8.7
Gauley LMA				Gauley LMA			
Labor Force	11.7	11.6	12.0	Labor Force	12.7	12.6	13.2
Employment	10.4	10.4	10.6	Employment	10.8	10.7	11.2
Unemployment	1.3	1.2	1.3	Unemployment	2.0	1.9	2.0
Rate (%)	11.2	10.2	11.0	Rate (%)	15.5	15.0	15.2
Morgantown - Kingwood LMA				Morgantown - Kingwood LMA			
Labor Force	51.6	51.2	49.7	Labor Force	54.5	53.7	52.9
Employment	49.5	49.6	48.0	Employment	51.3	51.1	50.3
Unemployment	2.1	1.6	1.7	Unemployment	3.2	2.6	2.6
Rate (%)	4.1	3.2	3.4	Rate (%)	5.8	4.8	4.8
New Martinsville LMA				New Martinsville LMA			
Labor Force	13.6	13.5	13.8	Labor Force	14.6	14.4	14.9
Employment	12.6	12.6	12.7	Employment	13.0	13.0	13.3
Unemployment	1.1	0.9	1.1	Unemployment	1.6	1.4	1.6
Rate (%)	7.7	6.6	7.8	Rate (%)	10.8	9.8	10.9
Ronceverte - White Sulphur Springs LMA				Ronceverte - White Sulphur Springs LMA			
Labor Force	19.7	19.5	19.9	Labor Force	21.4	20.8	21.7
Employment	17.7	18.1	18.0	Employment	18.4	18.7	18.9
Unemployment	2.0	1.4	1.9	Unemployment	3.0	2.2	2.8
Rate (%)	10.0	7.0	9.4	Rate (%)	13.9	10.4	13.0

Charleston Metropolitan Statistical Area

(Counties of Kanawha and Putnam, West Virginia)

HIGHLIGHTS

EMPLOYMENT: Total nonagricultural payroll employment increased by 200 during December 1990 in the Charleston Metropolitan Statistical Area. Gains in the service-producing sector (+400), primarily retail trade (+400) were offset by a slight seasonal decline in the goods-producing sector (-200). Contract construction declined slightly (-200), while total mining fell by 100. Manufacturing advanced by 100 over the month. Comparison with year-ago December 1989 indicates an increase of 1,700 jobs. Nearly all of the increase occurred in the service-producing industries (+1,300). Services increased by a robust 1,000 jobs over the year. The goods-producing sector increase of 400 reflects primarily job gains realized in construction (+900). The decline in manufacturing (-400) merely reflects a continuing labor-management dispute.

UNEMPLOYMENT: Total unemployment experienced a moderate increase (+600) due primarily to seasonal factors. The MSA unemployment rate increased to 4.9 percent of the civilian labor force. The current figure is somewhat higher than the year-ago rate of 4.3 percent.

WV Series Labor Force Data (In Thousands - Not Seasonally Adjusted)

	Prelim. Dec.'90	Revised Nov.'90	Revised Dec.'89
Labor Force	113.1	112.7	109.6
Employment	107.5	107.8	104.9
Unemployment	5.5	4.9	4.7
Rate (%)	4.9	4.4	4.3

BLS Series Labor Force Data (In Thousands - Not Seasonally Adjusted)

	Prelim. Dec.'90	Revised Nov.'90	Revised Dec.'89
Labor Force	119.8	118.8	117.0
Employment	111.5	111.0	110.0
Unemployment	8.3	7.8	7.1
Rate (%)	6.9	6.6	6.1

NONAGRICULTURAL PAYROLL EMPLOYMENT BY INDUSTRY

	Prelim. Dec.'90	Revised Nov.'90	Revised Dec.'89	Change From: Nov. 1990	Dec. 1989
TOTAL NONAGRICULTURAL	111.8	111.6	110.1	0.2	1.7
GOODS PRODUCING	17.2	17.4	16.8	-0.2	0.4
Mining	1.9	2.0	2.0	-0.1	-0.1
Construction	4.8	5.0	3.9	-0.2	-0.9
Manufacturing	10.5	10.4	10.9	0.1	-0.4
Durable Goods	1.6	1.6	1.6	0.0	0.0
Nondurable Goods	8.9	8.8	9.3	0.1	-0.4
Chemical & Allied Products	7.5	7.4	7.9	0.1	-0.4
Other Nondurable Goods	1.4	1.4	1.4	0.0	0.0
SERVICE PRODUCING	94.6	94.2	93.3	0.4	1.3
Transportation & Public Utilities	9.1	9.1	9.3	0.0	-0.2
Trade	30.6	30.2	29.6	0.4	1.0
Wholesale Trade	7.2	7.2	7.2	0.0	0.0
Retail Trade	23.4	23.0	22.4	0.4	1.0
Finance, Insurance, & Real Estate	6.2	6.2	6.3	0.0	-0.1
Services	28.7	28.8	27.7	-0.1	1.0
Health Services	10.8	10.8	10.3	0.0	0.5
Government	20.0	19.9	20.4	0.1	-0.4
Federal	1.6	1.7	1.7	-0.1	-0.1
State	9.9	9.7	10.1	0.2	-0.2
Local	8.5	8.5	8.6	0.0	-0.1
Labor-Management Dispute Status	0.4	0.4	0.0	XX	XX

Average Hours and Earnings of Production Workers in Manufacturing

	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings		
	Prelim.	Revised	Revised	Prelim.	Revised	Revised	Prelim.	Revised	Revised
	Dec.'90	Nov.'90	Dec.'89	Dec.'90	Nov.'90	Dec.'89	Dec.'90	Nov.'90	Dec.'89
Manufacturing	\$586.09	\$596.70	\$592.26	44.1	44.2	44.8	\$13.29	\$13.50	\$13.22
Nondurable Goods	609.70	631.01	634.79	43.8	44.5	45.8	13.92	14.18	13.86
Chemical & Allied Products	711.87	729.41	708.08	45.4	46.4	46.8	15.68	15.72	15.13

Huntington-Ashland-Ironton Metropolitan Statistical Area

(Counties of Cabell and Wayne, West Virginia;
Boyd, Carter and Greenup, Kentucky; Lawrence, Ohio)

HIGHLIGHTS

EMPLOYMENT: Total nonagricultural payroll employment in the Huntington-Ashland-Ironton MSA increased 400 during December 1990. The December 1990 figure was 600 below the same period in 1989. The goods-producing sector decreased by 200 in December 1990 while the service-producing sector increased by 600. Retail trade (+300) and services (+200) experienced the greatest improvement during the month. Construction (-100) and durable goods manufacturing (-100) experienced a monthly decline in the goods-producing sector.

UNEMPLOYMENT: Total unemployment increased by 1,200 during the month of December 1990. This produced an increase in the unemployment rate to 5.3 percent of the civilian labor force. The December rate is significantly above the December 1989 rate of 4.1 percent.

WV Series Labor Force Data (In Thousands - Not Seasonally Adjusted)

	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89
Labor Force	126.8	125.4	125.4
Employment	120.1	119.9	120.2
Unemployment	6.7	5.5	5.2
Rate (%)	5.3	4.4	4.1

BLS Series Labor Force Data (In Thousands - Not Seasonally Adjusted)

	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89
Labor Force	131.4	130.3	130.8
Employment	122.3	122.0	123.5
Unemployment	9.0	8.4	7.3
Rate (%)	6.9	6.4	5.6

NONAGRICULTURAL PAYROLL EMPLOYMENT BY INDUSTRY

	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Change Nov. 1990	From: Dec. 1989
TOTAL NONAGRICULTURAL	111.4	111.0	112.0	0.4	-0.6
GOODS PRODUCING	26.7	26.9	27.5	-0.2	-0.8
Mining	1.6	1.6	1.4	0.0	0.2
Construction	4.7	4.8	5.5	-0.1	-0.8
Manufacturing	20.4	20.5	20.6	-0.1	-0.2
Durable Goods	12.0	12.1	12.2	-0.1	-0.2
Stone, Clay & Glass Products	1.6	1.6	1.7	0.0	-0.1
Primary Metals Industries	7.6	7.7	7.7	-0.1	-0.1
Other Durable Goods	2.8	2.8	2.8	0.0	0.0
Nondurable Goods	8.4	8.4	8.4	0.0	0.0
Apparel & Other Textile Products	1.4	1.4	1.6	0.0	-0.2
Chemical & Allied Products	4.6	4.6	4.5	0.0	0.1
Other Nondurable Goods	2.4	2.4	2.3	0.0	0.1
SERVICE PRODUCING	84.7	84.1	84.5	0.6	-0.2
Transportation & Public Utilities	7.6	7.6	8.0	0.0	-0.4
Trade	29.1	28.8	29.0	0.3	-0.1
Wholesale Trade	5.5	5.5	5.6	0.0	-0.1
Retail Trade	23.6	23.3	23.4	0.3	0.2
Finance, Insurance, & Real Estate	3.8	3.8	3.8	0.0	0.0
Services	24.9	24.7	24.2	0.2	0.7
Health Services	10.4	10.3	10.0	0.1	0.4
Government	19.3	19.2	19.5	0.1	-0.2
Federal	2.8	2.8	2.9	0.0	-0.1
State	5.0	5.0	5.2	0.0	-0.2
Local	11.5	11.4	11.4	0.1	0.1
Labor-Management Dispute Status	0.1	0.1	0.0	XX	XX

Average Hours and Earnings of Production Workers in Manufacturing

	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings		
	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89
Manufacturing	\$556.93	\$591.82	\$536.13	41.5	42.7	41.4	\$13.42	\$13.86	\$12.95
Durable Goods	557.44	599.31	561.88	40.6	42.9	41.9	13.73	13.97	13.41
Stone, Clay & Glass Products	576.07	541.93	468.34	44.9	43.6	41.3	12.83	12.43	11.34
Primary Metals Industries	564.73	657.41	609.10	37.8	42.8	41.1	14.94	15.36	14.82
Nondurable Goods	558.14	579.51	497.35	43.0	42.3	40.7	12.98	13.70	12.22

Parkersburg-Marietta Metropolitan Statistical Area

(Counties of Wood, West Virginia; Washington, Ohio)

HIGHLIGHTS

EMPLOYMENT: Total nonagricultural payroll employment inched forward (+200) in the Parkersburg-Marietta MSA during December 1990. Goods producing employment remained steady for the month. An improvement in manufacturing (+200) was offset by a decline (-200) in construction. Service producing businesses realized a net gain of 200 jobs for December. A noticeable advance (+300) in trade overshadowed a loss (-100) in services. Compared to December 1989 data, nonagricultural payroll employment increased 600. Jobs within the goods producing sector decreased 300. Construction employment sustained losses (-300) over the previous twelve month period, while a retreat (-100) in durable goods was balanced by a rise (+100) in nondurable goods. Service producing employment increased 900 for the year, with gains posted in trade (+200), services (+400), and government (+300).

UNEMPLOYMENT: December 1990 unemployment in the Parkersburg-Marietta MSA added 500 over November 1990. The unemployment rate increased as a result from 4.6 to 5.4 percent of the civilian labor force. Compared to December 1989 the unemployment rate rose one percentage point to 5.4 percent.

WV Series Labor Force Data (In Thousands - Not Seasonally Adjusted)

	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89
Labor Force	70.1	69.5	68.4
Employment	66.3	66.3	65.4
Unemployment	3.7	3.2	3.0
Rate (%)	5.4	4.6	4.4

BLS Series Labor Force Data (In Thousands - Not Seasonally Adjusted)

	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89
Labor Force	73.8	73.0	72.4
Employment	68.3	68.0	67.8
Unemployment	5.5	5.0	4.6
Rate (%)	7.5	6.8	6.4

NONAGRICULTURAL PAYROLL EMPLOYMENT BY INDUSTRY

	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Change Nov. 1990	From: Dec. 1989
TOTAL NONAGRICULTURAL	62.4	62.2	61.8	0.2	0.6
GOODS PRODUCING	17.6	17.6	17.9	0.0	-0.3
Mining	0.5	0.5	0.5	0.0	0.0
Construction	2.9	3.1	3.2	-0.2	-0.3
Manufacturing	14.2	14.0	14.2	0.2	0.0
Durable Goods	7.1	6.9	7.2	0.2	-0.1
Lumber, Wood Products & Furniture	1.0	1.0	1.0	0.0	0.0
Stone, Clay & Glass Products	1.8	1.7	1.8	0.1	0.0
Primary Metals Industries	3.0	2.9	3.0	0.1	0.0
Other Durable Goods	1.3	1.3	1.4	0.0	-0.1
Nondurable Goods	7.1	7.1	7.0	0.0	0.1
Chemical & Allied Products	5.3	5.3	5.2	0.0	0.1
Other Nondurable Goods	1.8	1.8	1.8	0.0	0.0
SERVICE PRODUCING	44.8	44.6	43.9	0.2	0.9
Transportation & Public Utilities	2.5	2.5	2.5	0.0	0.0
Trade	15.7	15.4	15.5	0.3	0.2
Wholesale Trade	2.8	2.8	2.9	0.0	-0.1
Retail Trade	12.9	12.6	12.6	0.3	0.3
Finance, Insurance, & Real Estate	2.2	2.2	2.2	0.0	0.0
Services	14.7	14.8	14.3	-0.1	0.4
Health Services	4.4	4.5	4.4	-0.1	0.0
Government	9.7	9.7	9.4	0.0	0.3
Federal	1.7	1.7	1.7	0.0	0.0
State	1.2	1.2	1.1	0.0	0.1
Local	6.8	6.8	6.6	0.0	0.2
Labor-Management Dispute Status	0.0	0.0	0.0	XX	XX

Average Hours and Earnings of Production Workers in Manufacturing

	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings		
	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89
Manufacturing	\$571.20	\$567.88	\$562.47	42.0	41.3	43.3	\$13.60	\$13.75	\$12.99
Durable Goods	490.82	478.17	492.24	40.1	38.5	42.0	12.24	12.42	11.72
Stone, Clay & Glass Products	574.57	607.78	575.03	44.3	43.6	47.8	12.97	13.94	12.03
Primary Metals Industries	472.31	449.40	498.13	35.7	35.0	39.1	13.23	12.84	12.74
Nondurable Goods	671.77	676.75	651.60	44.4	44.7	45.0	15.13	15.14	14.48

Wheeling-Bridgeport Metropolitan Statistical Area

(Counties of Marshall and Ohio, West Virginia; Belmont, Ohio)

HIGHLIGHTS

EMPLOYMENT: Total nonagricultural payroll employment remained unchanged during December 1990 in the Wheeling-Bridgeport MSA. The goods-producing sector fell slightly (-200) due to a seasonal decline in construction (-200). The service-producing sector increased by 200, due primarily to gains noted in retail trade (+400). Transportation and public utilities declined by 100. Comparison with year-ago December 1989 data reveals an increase of 1,100 jobs. Surprisingly, the goods producing sector advanced by 600, with increases noted in mining (+300), construction (+100) and manufacturing (+200). The service-producing industries grew by 500 over the year with predictable gains noted in both trade (+300) and services (+200).

UNEMPLOYMENT: Total unemployment increased seasonally by 400 during December 1990. The MSA unemployment rate showed a corresponding increase to 4.3 percent of the civilian labor force. Comparison with December 1989 reveals the current rate is unchanged from a year ago.

WV Series Labor Force Data (In Thousands - Not Seasonally Adjusted)

	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89
Labor Force	69.8	69.6	68.5
Employment	66.8	67.0	65.6
Unemployment	3.0	2.6	2.9
Rate (%)	4.3	3.7	4.3

BLS Series Labor Force Data (In Thousands - Not Seasonally Adjusted)

	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89
Labor Force	73.2	72.7	72.4
Employment	68.8	68.7	67.9
Unemployment	4.4	4.0	4.5
Rate (%)	6.0	5.5	6.3

NONAGRICULTURAL PAYROLL EMPLOYMENT BY INDUSTRY

	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Change Nov. 1990	From: Dec. 1989
TOTAL NONAGRICULTURAL	61.9	61.9	60.8	0.0	1.1
GOODS PRODUCING	11.9	12.1	11.3	-0.2	0.6
Mining	2.4	2.4	2.1	0.0	0.3
Construction	2.1	2.3	2.0	-0.2	0.1
Manufacturing	7.4	7.4	7.2	0.0	0.2
Durable Goods	3.0	3.0	3.0	0.0	0.0
Nondurable Goods	4.4	4.4	4.2	0.0	0.2
SERVICE PRODUCING	50.0	49.8	49.5	-0.2	-0.5
Transportation & Public Utilities	3.3	3.4	3.4	-0.1	-0.1
Trade	17.6	17.2	17.3	0.4	0.3
Wholesale Trade	2.9	2.9	2.8	0.0	0.1
Retail Trade	14.7	14.3	14.5	0.4	0.2
Finance, Insurance, & Real Estate	3.1	3.1	3.0	0.0	0.1
Services	16.8	16.8	16.6	0.0	0.2
Health Services	7.8	7.8	7.8	0.0	0.0
Government	9.2	9.3	9.2	-0.1	0.0
Federal	0.7	0.7	0.7	0.0	0.0
State	1.8	1.9	1.7	-0.1	0.1
Local	6.7	6.7	6.8	0.0	-0.1
Labor-Management Dispute Status	0.0	0.0	0.0	XX	XX

Average Hours and Earnings of Production Workers in Manufacturing

	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings		
	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89	Prelim. Dec. '90	Revised Nov. '90	Revised Dec. '89
Manufacturing	\$574.67	\$557.56	\$549.61	42.6	42.4	41.2	\$13.49	\$13.15	\$13.34
Nondurable Goods	645.41	601.73	582.54	43.2	41.7	39.9	14.94	14.43	14.60
Durable Goods	490.31	505.44	511.20	41.8	43.2	42.6	11.73	11.70	12.00

Applicants and Nonagricultural Job Openings in West Virginia Job Service Offices

Occupational Category	Applicants Available Program Year to Date 2/	Active File	NONAGRICULTURAL JOB OPENINGS				Applicant/ Openings Program Year to Date	Active File/ Unfilled Openings End of Month
			Received Program Year to Date 2/	UNFILLED 30 Days or More	FILLED Total	Total		
TOTAL 3/	118,663	51,187	23,588	2,766	2,244	17,725	5.0	18.5
Professional, Technical & Managerial	11,127	5,154	624	164	120	219	17.8	31.4
Clerical & Sales	33,597	13,242	4,589	845	682	2,957	7.3	15.7
Services	15,117	5,969	3,603	655	556	2,130	4.2	9.1
Agricultural, Fishery & Forestry	840	314	70	1	0	41	12.0	314.0
Processing	6,978	3,840	425	118	108	278	16.4	32.5
Machine Trades	7,576	3,685	614	112	89	263	12.3	32.9
Benchwork	5,357	2,575	847	129	87	663	6.3	20.0
Structural Work	17,858	3,850	1,558	324	246	889	11.5	11.9
Miscellaneous	23,814	8,617	11,258	418	356	10,285	2.1	20.6
Transportation	4,994	2,544	588	89	62	301	8.5	28.6
Packaging & Materials Handling	16,447	4,801	10,517	276	249	9,893	1.6	17.4
Other 4/	2,373	1,272	153	53	45	91	15.5	24.0
Entry Total 5/	92	13	0	0	0	0	xx	xx

- 1/ Source of Data: SAMS (State Employment Security Automated Management System); Table A96 containing fully registered applicants.
 2/ Period Covered: July 1, 1990 through December 31, 1990. Program Year 1990 defined as July 1, 1990 through June 30, 1991.
 3/ Total excludes invalid occupational data.
 4/ Includes mining, logging, utilities, miscellaneous amusement and recreation, and graphic art work.
 5/ Applicants for whom a complete occupational code cannot be assigned because of lack of training/experience.

Select Unemployment Compensation Claims Activities

State UI Program Activity	December 1990	November 1990	December 1989	Percent Change to December 1990 from	
				Nov. 1990	Dec. 1989
Total Initial Claims 1/	9,397	9,776	9,538	-3.9	-1.5
Total Continued Weeks	77,785	65,440	66,557	18.9	16.9
Total Benefits Paid	\$10,171,215	\$7,215,075	\$7,670,293	41.0	32.6
Total Weeks Compensated	66,362	49,549	55,089	33.9	20.5
Average Weekly Payment	\$153.27	\$145.61	\$139.23	5.3	10.1
Monthly Insured Unemployment Rate 2/	3.6	2.5	2.8	xx	xx
UC Fund Balance, End of Month	\$147,706,528	\$157,231,747	\$140,989,561	-6.1	4.8

- 1/ Excluding transitional claims.
 2/ Seasonally unadjusted.

When you need workers, contact your local Job Service:

Beckley	300 Valley Drive, S	256-6792	Morgantown	304 Scott Avenue	285-3120
Bluefield	5 Mercer Plaza	327-7155	New Martinsville	249 Clark Street	455-2280
Charleston	1321 Plaza East	348-0342	Parkersburg	36th St at Murdoch Av	420-4525
Clarksburg	153 W Main Street	627-2125	Point Pleasant	225 Sixth Street	675-2770
Elkins	7-11 Randolph Avenue	636-1810	Ronceverte	299 E Edgar Avenue	647-7415
Fairmont	109 Adams Street	363-5550	Summersville	806 Broad Street	872-2950
Huntington	914 Fifth Avenue	528-5525	Weirton	203 Three Springs Drive	748-8500
Logan	195 Dingess Street	792-7010	Welch	20 Elkhorn Street	436-3131
Martinsburg	617 W King Street	267-0030	Wheeling	22 Tenth Street	238-1045
	Williamson	120 W First Avenue		235-4090	

West Virginia Division of Employment Security
Labor and Economic Research, 112 California Avenue, Charleston 25305-0112
Telephone 304/348-2660

State of West Virginia
 Division of Employment Security
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MONONGAHELA POWER COMPANY
Fairmont, West Virginia

Fifteenth Revision of
Original Sheet No. 11A1
P.S.C. W. Va. No. 21
Canceling Fourteenth Revision of
Original Sheet No. 11A1

GENERAL SERVICE RATE
SCHEDULE "D"

AVAILABLE at a single place of use for any purpose when all deliveries are at the standard distribution voltage of the immediate area as designated by Company but not less than 1,000 volts, and through one metering point. An Electric Service Agreement shall be executed.

RATE PER MONTH

(A) Demand Charge	
First 500 kilowatts or less	\$7.770 gross per kilowatt
All over 500 kilowatts	6.361 gross per kilowatt
All kilovars in excess of 35% of the current kilowatt billing demand370 gross per kilovar
(R) Energy Charge	
All kilowatt-hours	\$0.02499 gross per kilowatt-hour

MINIMUM MONTHLY BILL

The minimum monthly bill shall not be less than the highest of the following:

1. \$1,899.00 gross, or
2. \$ 2.44 gross per KW of the highest billing demand established during the preceding 12 months, or
3. \$ 2.44 gross times 50% of the kilowatt capacity set forth in the Agreement.

PROMPT PAYMENT DISCOUNT

2% of the gross monthly bill if paid in full within 20 days from the date mailed.

STATE FRANCHISE TAX SURCHARGE

Charges computed under this schedule shall be adjusted in accordance with the temporary surcharge for recovery of West Virginia Franchise Tax as contained in Sheet No. 5B of this tariff as ordered in Case No. 86-524-E-SC.

DETERMINATION OF BILLING DEMAND

The monthly billing demand will be the maximum kilowatts and kilovars each integrated over any fifteen-minute interval, except as modified under the provisions for off-peak service.

Off-Peak Service

Customer may contract for off-peak service of a demand in excess of the on-peak demand by not less than fifty (50) kilowatts, in which case the billing demand will be the maximum on-peak demand plus 50% of the excess of the maximum off-peak demand over such on-peak demand.

The on-peak hours for determination of the on-peak demand shall be:

1. For the seven- (7) month period following the first regular meter reading date occurring on or after September 15 in each year, from 7:00 a.m. until 10:00 p.m. Monday through Friday.
2. For the five- (5) month period following the first regular meter reading date occurring on or after April 15 in each year, from 7:00 a.m. until 4:00 p.m. Monday through Friday.

The off-peak hours for determination of the off-peak demand shall be all other times.

All times stated above apply to the local prevailing time.

WETA POWER COMPANY
Martinsburg, West Virginia

Third Revision of
Original Sheet No. 11A2
P.S.C. W. Va. No. 21
Canceling Second Revision of
Original Sheet No. 11A2

**GENERAL SERVICE RATE
SCHEDULE "D"**

LOCAL TAX ADJUSTMENT

Within municipalities or political subdivisions which impose taxes based upon the amount of electric service sold or revenues received by the Company, as specified in Rule No. 18 of "Rules and Regulations for Electric Service," there shall be added to the total bill a surcharge equal to the percentage shown on Sheet No. 5A.

TERM

Initial term as specified in Electric Service Agreement, but not less than one year.

GENERAL

Rates and provisions are subject to "Rules and Regulations for Electric Service."

(A) Denotes Advance
(R) Denotes Reduction

Issued: July 2, 1990

Issued by
B. H. Hayes
President

Effective: July 1, 1990

(N)

WEST VIRGINIA
BUSINESS & OCCUPATION TAX SURCHARGE

Effective October 1, 1990, there will be applied a West Virginia Business and Occupation Tax Surcharge factor, as adopted by the West Virginia Legislature in its S. B. No. 8 passed at the West Virginia Legislature's Third Extraordinary Session of 1990, to each Kwh billed under any of the Company's filed tariff rate schedules. In the case of the Company's SLP, OSL, MV and SV schedules, the surcharge factor shall apply to each lamp billed under these schedules on a per lamp equivalent Kwh basis. This tax surcharge factor shall also apply to Kwh's included in any minimum bill. The tax surcharge factor applied to Kwh's billed under each rate schedule shall be as follows:

<u>Rate Schedule</u>	<u>Sheet Nos.</u>	<u>Tax Surcharge Factor/Kwh</u>
A	7A1	\$0.00051
B	8A1	.00051
C	9A1-9A2	.00051
CSH	10A1-10A2	.00051
GH	12A1-12A2	.00051
D	11A1-11A2	.00049
K	13A1-13A2	.00048
P	14A1-14A2	.00047
SLP	15A1-15A3	.00051
OSL	17A1-17A2	.00051
MV	16A1-16A2	.00051
SV	18A1	.00051
IP	20A1	.00047
AGS	22A1-22A7	.00047

(N) Denotes New.

Effective on Less than Statutory Notice
by Authority of an Order of the Public Service Commission of West Virginia
in Case No. 90-618-E-T, dated September 28, 1990

Issued: September 20, 1990

Issued by
B. H. Hayes
President

Effective: October 1, 1990

Annual Electric Power Cost Estimate
February 22, 1991

Assume a fairly constant electrical load of 1,000 kilowatts (Kw) for thirty, 24 hour days, per month.

Kilowatt demand = 1,000 Kw

Kilowatt-hours of energy = 1,000 X 30 X 24 = 720,000 (Kwh)

Electric power cost for sample month =

Kw Demand Charge for 30 days:

500 X \$7.770 = \$3,885.00

(1,000 - 500) X \$6.361 = \$3,180.50

Kwh Energy Charge for 30 days:

720,000 X \$0.02499 = \$17,992.80

Business and Occupation Tax Surcharge

720,000 X \$0.00049 = \$352.80

Monthly Electric Bill \$25,411.10

Annual Electric Bill

12 X \$25,411.10 = \$304,983.20

Cost calculated using current Monongahela Power Company, General Service Rate Schedule "D", effective July 1, 1990.

NRAO
SALARY AND WAGE MANUAL

Introduction

The Salary and Wage Manual has been prepared as an aid for supervisory and administrative personnel. It contains all job classifications currently in use, a brief summary description of each job, the labor or salary grade of each job, and the current rate ranges.

The jobs have been grouped into four schedules as follows:

- I - Scientific, Professional, Administrative and Monthly Technical
- II - Technical
- III - Clerical
- IV - Maintenance Crafts and Service

The rate range applicable to each schedule is listed first, followed by a list of jobs within the schedule and their labor or salary grade, and finally the summary job descriptions. The jobs and the descriptions are grouped according to similar occupations and types of work.

The Supervisor's Manual contains detailed information on NRAO's salary and wage administrative procedures. This Salary and Wage Manual will enable supervisors and administrative personnel to answer their own and employees' questions on jobs, rates, and the adequacy of the summary descriptions. Employees may be given access to information in this Manual in answer to specific questions about their own jobs, or in answer to specific questions that will help them to more adequately fulfill their responsibilities as employees.

The salary and wage administration policy of the Observatory is based on two sound and widely accepted procedures - job evaluation and rate surveys.

1. Job evaluation is the basis for placing each job in the salary or labor grade that will most equitably reflect its relationship to all other jobs within that schedule.
2. Rate surveys, made on an area and on a similar location basis, are used to help determine the proper value of the salary and labor grades in each structure.

In this manner, and with the assistance of continuing survey and evaluation checks, the policy can assure fair and equitable rates for each job.

As indicated, the value of this Manual, and of the salary and wage administration procedure it outlines, is primarily dependent on its being maintained on a current, up-to-date basis.

1. The Personnel Manager shall assume the responsibility for making certain that continuing surveys keep the rate ranges up-to-date.
2. The supervisor shall assume the responsibility for making certain that each job under his jurisdiction is adequately, currently, and correctly described. Job descriptions and classifications are intended to be flexible, and subject to change when necessary.
3. Each holder of this Manual shall assume the responsibility for keeping his copy of the Manual current, by making such changes to his copy as may be indicated.

SCHEDULE I

SCIENTIFIC, PROFESSIONAL, ADMINISTRATIVE, AND MONTHLY TECHNICAL

Salary Grades and Ranges

January 1991

<u>Salary Grade</u>	<u>Minimum</u>	<u>Maximum</u>
9	\$36,600	\$65,600
8	32,200	53,400
7	28,300	49,600
6	25,000	44,400
5	22,600	39,900
4	21,000	35,600
3	19,400	31,900
2	17,600	29,500
1	16,800	27,600

SCHEDULE I

SCIENTIFIC, PROFESSIONAL, ADMINISTRATIVE, AND MONTHLY TECHNICAL

Classification and Grades

SCIENTIFIC

<u>Position</u>	<u>Salary Grade</u>	<u>Description Page No.</u>
Senior Scientist	--	I-5
Scientist	--	I-5
Associate Scientist	9	I-5
Assistant Scientist	7	I-5
Research Associate	5	I-5
Junior Research Associate	--	I-5
Graduate Research Assistant	--	I-6
Research Assistant	--	I-6
Research Collaborator	--	I-6
Guest	--	I-6
Technical Collaborator	--	I-6
Consultant	--	I-6

PROFESSIONAL AND ADMINISTRATIVE

Systems Scientist	9	I-6
Scientific Associate I	8	I-7
Scientific Associate II	6	I-7
Scientific Associate III	4	I-7
(Functional) Engineer I	9	I-7
(Functional) Engineer II	7	I-7
(Functional) Engineer III	5	I-8
Sr Scientific Programming Analyst	9	I-8
Scientific Programming Analyst	7	I-8
Senior Scientific Programmer	5	I-8
Scientific Programmer	3	I-8
Senior Systems Analyst	9	I-8
Systems Analyst	6	I-9
Junior Systems Analyst	2	I-9
Director of the Observatory	--	I-9
Deputy Director	--	I-9

SCHEDULE I

SCIENTIFIC, PROFESSIONAL, ADMINISTRATIVE, AND MONTHLY TECHNICAL

Classification and Grades

PROFESSIONAL AND ADMINISTRATIVE

<u>Position</u>	<u>Salary Grade</u>	<u>Description Page No.</u>
Associate Director	--	I-9
Assistant to the Director	--	I-9
Assistant Director	--	I-10
Division Head	--	I-10
Telescope Operations Manager	--	I-10
Public Education Officer	5	I-10
Information Services Coordinator	5	I-10
Librarian	5	I-10
Assistant Librarian (NE)	1	I-11
Foreman (Machine Shop, Plant Maintenance)	5	I-11
Fiscal Officer	--	I-11
Chief Accountant	7	I-11
Accountant	5	I-11
Accounting Assistant (NE)	2	I-11
Business Manager	--	I-12
Associate Business Manager	9	I-12
Contract Administrator	9	I-12
Senior Buyer	5	I-12
Buyer (NE)	2	I-12
Supply and Material Coordinator (NE)	2	I-12
Personnel Manager	--	I-13
Personnel Assistant (NE)	2	I-13
Housing and Food Services Supervisor	4	I-13

SCHEDULE I

SCIENTIFIC, PROFESSIONAL, ADMINISTRATIVE, AND MONTHLY TECHNICAL

Classification and Grades

<u>Position</u>	<u>Salary Grade</u>	<u>Description Page No.</u>
Senior Administrative Assistant	6	I-13
Administrative Assistant	3	I-13
Administrative Aide (NE)	1	I-14
Executive Secretary (NE)	1	I-14
 <u>TECHNICAL</u>		
Senior Designer	5	I-14
Technical Support Supervisor	8	I-14
Technical Specialist I	8	I-14
Technical Specialist II (NE)	5	I-15
Technical Specialist III (NE)	2	I-15

SCHEDULE I

SCIENTIFIC, PROFESSIONAL, ADMINISTRATIVE, AND MONTHLY TECHNICAL

Summary Descriptions

Senior Scientist

Responsible for the planning and conducting of original research or creative development work, (or for the direction of a group of scientists involved in such efforts) of a level requiring a doctorate degree or its equivalent, plus several years' broad experience in research, development or associated fields. In addition, has attained distinction by specific outstanding contributions to scientific knowledge or through a sustained, superior level of activity in advancing research or a phase of the Observatory's program.

Scientist

Responsible for the planning and conducting of original research or creative development work, (or for the direction of a group of scientists involved in such efforts) or for the operation of a major scientific program, of a level requiring a doctorate degree or its equivalent, plus several years' experience in research, development or associated fields.

Associate Scientist

Responsible for the independent conduct of scientific research or creative development work (on own or with assistance), or for the operation of a major scientific program, of a level requiring a doctorate degree or its equivalent, plus at least one year of experience in research, development or associated fields.

Assistant Scientist

Under minimum supervision, responsible for the independent carrying out of programs of scientific work that may have been formulated by superiors, and of a level requiring a doctorate degree or its equivalent.

Research Associate

Responsible for engaging in investigations in research as may be formulated by a member of the scientific staff, and of a level requiring a doctorate degree or its equivalent. Primarily intended to provide the opportunity for supplementing and broadening research experience within a specifically limited period.

Junior Research Associate

Responsible for engaging in directed and guided investigations in research, of a level requiring a Bachelor's degree. Intended to be directly

applied toward the completion of graduate degree requirements, with the appointment made for a specifically limited period.

Graduate Research Assistant

Responsible for engaging or assisting in various phases of research as assigned, directed and instructed, of a level requiring completion of undergraduate work and intended to serve as field training during school recess periods.

Research Assistant

Responsible for engaging or assisting in various phases of research as assigned, directed and instructed, of a level requiring completion of two years of undergraduate work and intended to serve as field training during school recess periods. May also apply to co-op students.

Research Collaborator

An individual granted a non-salaried appointment for the purpose of working with members of the scientific staff as assigned.

Guest

An individual granted a non-salaried appointment for the purpose of working with members of the scientific staff as assigned. Individuals will be given specific title of field involved (i.e., Guest Astronomer, Guest Physicist, etc.).

Technical Collaborator

An individual granted a non-salaried appointment of a temporary nature covering an individual assigned to work with and assist a Guest, Visiting Scientist, or Research Collaborator.

Consultant

An individual, normally a specialist in his or her field, appointment for the specific purpose of providing counsel and advice on a phase of the Observatory's programs. Consultants are paid a daily rate subject to approval by the Director.

Systems Scientist

Functioning as a member of the operations staff, carries out broadly defined responsibilities of a level normally requiring a doctorate degree or its equivalent, which are aimed at evaluating and improving performance capabilities of radio telescopes and/or associated instrumentation. Determines nature and courses of instrumental effects and develops algorithms to control such effects. Assists in design and development of computer systems and procedures used in analysis of observational data. Provides orientation, technical advice, and assistance to visiting observers. Is expected to maintain competence in his or her area of specialization by pursuing individual research projects up to 25 percent of his or her time.

Scientific Associate I

Within the limits of a initially predetermined course of investigation, supplies highly skilled assistance to members of the scientific staff. Involves the exercise of a very high degree of judgment and initiative, normally requiring an advanced degree or its equivalent and extensive experience in the field of work involved. Interprets results of work involving the establishment or modification of a method, and may assist the scientist in experimental interpretations. Performs miscellaneous related duties, such as maintenance and servicing of facilities.

Scientific Associate II

Within the limits of an initially predetermined course of investigation, supplies skilled assistance to members of the scientific staff. Involves the exercise of a high degree of judgment and initiative, normally requiring an advanced degree or its equivalent and considerable experience in the field of work in allied fields. Interprets results of work involving the establishment or modification of a method, and may assist the scientist in experimental interpretations. Performs miscellaneous related duties such as maintenance and servicing of facilities.

Scientific Associate III

Within the limits of an initially predetermined course of investigation, supplies skilled assistance to members of the scientific staff. Involves the exercise of initiative and judgment requiring a Bachelor's degree or its equivalent and some experience in the field of work or in allied fields. In investigations where the establishment or modification of a method is the desired goal, may interpret results of work. Performs miscellaneous related duties such as maintenance and servicing of facilities.

(Functional) Engineer I

Responsible for the carrying out and assisting in engineering analysis, design, and general prosecution of major projects and systems. Responsibilities include decisions, recommendations and coordination of such aspects as design, procurement, manufacture, erection, test and some degree of initial operation. Requires a Bachelor's degree or its equivalent and sufficient experience to have demonstrated capabilities of responsible engineering leadership.

(Functional) Engineer II

Under broad assignment, responsible for the carrying out and assisting in engineering analysis, design, and general prosecution of a project or whole system. Responsibilities include recommendations, coordination and assisting in decisions on such aspects as design, procurement, manufacture, erection, test and some degree of initial operation. Requires a Bachelor's degree or its equivalent and sufficient experience to have demonstrated capabilities of executing broad engineering activities.

(Functional) Engineer III

As assigned, responsible for carrying out and assisting in a phase of the engineering analysis, design and general prosecution of a limited project, or portion of a project. Responsibilities include recommendations and coordination of such aspects as design, procurement, manufacture, erection, test and some degree of initial operation. Requires a Bachelor's degree or its equivalent and sufficient experience to have demonstrated capabilities of executing engineering functions within a designated area.

Senior Scientific Programming Analyst

Responsible for the supervision of programming and coding activities, under the over-all direction of the scientific staff. In addition, working from a broad statement of a mathematical problem, performs or supervises programming, coding and some aspects of numerical analysis necessary to obtain a solution, using modern computers. Works and assigns others to work closely with scientists in the initial formulation of mathematical problems. Provides technical advice and assistance to scientists as necessary. May participate in the development of advanced programming systems.

Scientific Programming Analyst

Working from a broad statement of a mathematical problem, responsible for programming, coding and some aspects of numerical analysis necessary to obtain a solution, using modern computers. Works closely with scientists in the initial formulation of mathematical problems. Provides technical advice and assistance to scientists as necessary. May participate in the development of advanced programming systems.

Senior Scientific Programmer

Under minimum supervision, writes codes and programs for large-scale digital computers, checks out same, and assists senior personnel in the maintenance of automatic programming and operator systems. Must be capable of understanding the general scientific area in which the computer programs originate. Requires a Bachelor's degree in mathematics or the equivalent and sufficient experience to have demonstrated capabilities of executing programming functions.

Scientific Programmer

Under general supervision of senior personnel, writes codes and programs for large-scale digital computers, and checks out same. Must have some knowledge of the scientific areas in which the programs originate. In special circumstances, may be required to operate digital computing equipment. Requires a Bachelor's degree in mathematics or the equivalent.

Senior Systems Analyst

Responsible for the design, development, and implementation of systems and procedures to maximize the efficient use of electronic data processing services. Plans, organizes and directs the activities of systems analysis

personnel. Consults with and advises Observatory personnel on appropriate systems and procedures. Responsible for preparation of computer systems manuals. Assists in writing complex computer programs.

Systems Analyst

As assigned, develops and implements systems and procedures to maximize the efficient use of electronic data processing services. Confers with Observatory personnel to determine the problem and type of data to be processed. Recommends computer system specifications. Confers with programming and operational personnel to ensure the adequacy and accuracy of any new or revised system. Prepares computer systems manuals. Assists in writing complex computer programs.

Junior Systems Analyst

Under minimum supervision, assists in the development and maintenance of computer operating systems. Assists in the development and programming of new system functions. Is available to the general user community to help in resolving problems associated with the use of computer systems. May carry out additional assignments as directed by his or her supervisor.

Director of the Observatory

Responsible for the over-all formulation, direction, management and administration of the entire operations of the Observatory, including all phases of research as well as non-scientific operations, coordination and proper relationships with the corporation, governmental agencies, and academic and research and other such institutions. Responsible for the creation, execution and modification of basic policy that determines and controls the over-all programs and operations of the Observatory.

Deputy Director

Responsible for the administration and direction of assigned aspects of the Observatory's program. Serves as Acting Director in the Director's absence. Responsible for the execution and implementation of basic policy, and assists in creation of such policy.

Associate Director

Responsible for the administration and direction of assigned aspects of the Observatory's operations. Responsible for the execution and implementation of the basic policy controlling these functions and assists in creation of general Observatory policy. May serve as Acting Director with responsibilities as designated.

Assistant to the Director

Serves as primary assistant to the Director in an assigned aspect of the Observatory's program. Responsible for the execution of basic policy affecting such assigned activity and for making available to the Director broad staff advisory assistance as may be required.

Assistant Director

Responsible for the administrative functions of an assigned aspect of the Observatory's program. Responsible for advising on the creation, execution and modification of basic policy affecting such assigned activity.

Division Head

Responsible for administration, direction and management of that portion of the Observatory's program assigned to and carried out by a Division component. Responsible for the execution and implementation of basic policy affecting the Division, and for recommending modifications to such policy. Responsible for charting Divisional program and for the broad supervision of its execution.

Telescope Operations Manager

Responsible for the management of all operations activities associated with a major telescope installation. Plans, directs, and coordinates the work of telescope operations employees to ensure the accurate and efficient operation of the telescope. Determines and schedules manpower and training needs; plans and implements operational activities and corrects operational irregularities. Maintains all necessary records and provides reports as required. Supervises mechanical maintenance and coordinates electronic and computer maintenance activities.

Public Education Officer

Plans and develops tours, exhibits and programs for the lay public visiting the Observatory. Arranges suitable exhibits, develops lecture programs on the proper intellectual level, and arranges tours to the telescopes for the public. May deliver such lectures and programs, and supervise organized tours of the Observatory. Also delivers lectures to appropriate groups at locations other than the Observatory.

Information Services Coordinator

Responsible for the preparation, cataloging, and distribution of audiovisual and written materials to fill internal and external requests for information related to the activities of the Observatory. Determines best method and most economical means for the production and/or purchase of materials and coordinates same between in-house and external vendors. Involves the exercise of a high degree of judgement and initiative requiring extensive knowledge of commercial printing and photographic processes, layout, and design, copywriting, editing and computer applications. Provides technical advice and guidance to individuals for whom work is performed.

Librarian

Responsible for one or more major phases of library operations, requiring a professionally qualified individual familiar with technical library procedures. Operations include such functions as reference and bibliographical services, and classification and cataloging.

Assistant Librarian

As assigned and directed, responsible for the control and coordination of a section of library operations, including such phases as acquisitions and circulation. Makes available such technical assistance as may be required, to individuals using these facilities.

Foreman (Machine Shop, Plant Maintenance)

Responsible for all phases of first-line supervision of assigned work within established procedures. Directs employees on jobs, including all aspects of assignment, training, scheduling, grievance handling, and continuing technical direction and control of work. Coordinates all work of unit, referring complex problems to superior. Maintains records and reports involved. Supplies technical assistance and information as requested.

Fiscal Officer

Responsible for the administration, coordination and supervision of fiscal activities of the Observatory. Responsible for advising and assisting in formulation and execution of basic Observatory fiscal policies and for providing to the various levels of Observatory management advisory information, guidance, interpretations and services connected with fiscal administration.

Chief Accountant

Responsible for the supervision and control, within existing policy, of all accounting, payroll and accounts payable activities, including all phases of work direction, training and assignment. Interprets accounting procedures to ensure proper work in the field, referring special problems to appropriate individuals. Responsible for special studies of needs for management procedures and controls.

Accountant

Responsible, as directed and assigned, for the preparation of financial reports that will fulfill management and Foundation requirements, including all journal entries, made from any of several sources, and all such functions as balancing and checking out. Exercising high degree of judgment, determines whether or not items involved are correct in theories of reporting according to generally accepted accounting procedures and Observatory requirements, referring only specific, complex cases to supervisor.

Accounting Assistant

Responsible for a variety of service functions in the following areas: Accounts Payable, Payroll, Data Processing and General Accounting. With latitude for the exercise of initiative and judgment, may be responsible for the preparation of reports and correspondence requiring contacts within the Observatory and with outside organizations. In addition, may be responsible for the effective operation of office procedures in an assigned area. As required, may direct the work of other support personnel.

Must have comprehensive knowledge of a specific area of Observatory operations and policy and demonstrate a high level of competence. Requires several years relevant work experience, of which a minimum of three to five years should normally be with NRAO.

Business Manager

Responsible for the administration and management of business functions for a major Observatory unit. Normally controls the following activities: Budgeting, purchasing, personnel and general business.

Associate Business Manager

Assists in the overall administration and management of business functions for a major Observatory unit. Normally is responsible for control of one or more of the following activities: Budgeting, purchasing, property, personnel, and general business.

Contract Administrator

Responsible for development and implementation of Observatory procurement policies and procedures. Prepares, negotiates and executes major subcontracts entered into by the Observatory. Ensures that such contracts are in legal and procedural compliance with Federal procurement laws and regulations. Advises on changes in regulations or statutes affecting procurement policy. Prepares special terms and conditions as required for Observatory purchase orders and subcontracts. May be responsible for special legal and administrative projects as directed.

Senior Buyer

Responsible for economic and efficient procurement of a broad category of materials and products in the most desirable form, and within necessary deadlines. Applies standard and unique methods and procedures within Observatory policies and regulations. Responsible for complete buying function from requisition to delivery as well as customer and vendor relationships.

Buyer

Under supervision, responsible for economic and efficient procurement of desired materials and products in the most desirable form, and within necessary deadlines. Applies standard methods and procedures within Observatory policies and regulations. Coordinates complete buying function from requisition to delivery.

Supply and Material Coordinator

As directed, coordinates and expedites the receiving, warehousing and distribution of supplies and materials at an Observatory facility. Responsible for all inventory record keeping and for initiating orders to maintain inventories at prescribed levels. Contacts vendor and delivery

representatives to plan and coordinate receiving activities. Confers with division personnel and develops schedules for timely distribution of supplies and materials. Responsible for packing and shipping of outgoing items. Directs the work of subordinate personnel engaged in the supply function.

Personnel Manager

Responsible for making available to the various levels of Observatory management all aspects of advisory information, guidance, interpretation and services connected with personnel administration. Coordinates work of sections of the personnel office with Observatory requirements. Responsible for advising on and assisting in formulation and execution of basic policy affecting Observatory personnel. Establishes or recommends salary and wage, and employee benefit programs and administers such programs for other than scientific staff employees.

Personnel Assistant

As directed, is responsible for administration of specific personnel assignments. Such assignments may be in one or several of the major personnel functions.

Housing and Food Services Supervisor

Within established policy, responsible for first-line supervision of housing and food services. Plans, coordinates, directs, and carries out all aspects of housing not handled directly by his superior. Directs the operations of the cafeteria, including menu planning, food preparation and all related activities. Assigns and schedules work to carry out regular as well as special requirements. Reviews systems and procedures, recommends changes to ensure expeditious and proper services. Advises as required on housing layout, decoration and equipment placement.

Senior Administrative Assistant

Responsible for the coordination or direction of assigned administrative activities within a major project or division. Usually has primary responsibility for specific administrative function within his organization. Secures, coordinates and presents reports, and reviews information and recommendations as requested. Supervises service and clerical personnel as necessary.

Administrative Assistant

Responsible for the coordination and operation of assigned administrative activities. Coordinates service functions within the department or division, and similar services provided by others. Supervises and directs service of clerical personnel as assigned. Closely coordinates needs and functions or various assigned phases of the administrative activities of the department or division, serving management requirements for administrative assistance as necessary in such areas as payroll, budget, purchasing and follow-up, etc. Secures and makes available to department or divisional management any administrative reports, studies, information, and recommendations as requested.

Administrative Aide

As directed, responsible for carrying out or coordinating necessary administrative procedures, controls, studies, and records. May direct and lead personnel performing related duties. Performs various administrative tasks and functions as assigned, or as deemed necessary to continuing efficient organizational activities and functions. Suggests and assists in installing or modifying clerical or other service procedures. May recommend areas of study for such modifications. Carries out assigned miscellaneous administrative functions.

Executive Secretary

Responsible for supplying all needed executive or broad office-level secretarial assistance, covering the broad range of the activities of superior or office, and requiring a high degree of judgment, initiative and tact. Directs work of others as required. Handles all phases of office procedures, correspondence and the establishment and maintenance of file and record systems, including administratively private matters. Handles special problems, contacts and arrangements as necessary, both within the Observatory and with outside agencies, institutions and committees. Performs all regular secretarial duties as necessary.

Senior Designer

Responsible for the full implementation of any one basic plan at a time, through complete lay-out, determination of material usage and general follow-up. Coordinates all steps to carry out plan, working from broad directions. Must evidence thorough working knowledge of engineering fundamentals and standard handbook formulas covering such subjects as machine design, strength of materials, mechanisms, and fluid flow. Maintains close contact with engineer, individual for whom work is being done, and outside suppliers. Follows up job as it progresses, schedules work to be done, reporting changes and modifications to engineer. May coordinate and check the work of designers and draftsmen.

Technical Support Supervisor

Responsible for the control and coordination of assigned technical support functions. Plans and directs the work of subordinate technical personnel in such areas as construction, maintenance operation or development of research equipment or facilities. Schedules and coordinates the work of his/her unit to ensure expeditious and efficient completion of assigned projects. As required, provides technical advice, guidance, and assistance to other Observatory personnel. Generally operates with latitude for unreviewed action and decision making.

Technical Specialist I

Within limits of an initially predetermined course of action, supplies or directs a very high level of skilled technical assistance to scientific investigations. Exercises extensive judgment and initiative, requiring a wide, comprehensive technical background, in the form of specialized and lengthy experience (and commensurate education) in the field of work. Makes

available any very highly skilled technical assistance and guidance in such areas as design, construction, operation and testing, as may be required. May perform miscellaneous allied functions as needed.

Technical Specialist II

Within limits of an initially predetermined course of action, supplies or directs highly skilled technical assistance to scientific investigations. Exercises a high degree of initiative and judgment, requiring a very broad technical background, in the form of very considerable experience (and commensurate education) in the field of work. Makes available any highly skilled technical assistance and guidance in such areas as design, construction, operation and testing, as may be required. Performs miscellaneous functions, such as maintenance and servicing of facilities and equipment, records and reports, as needed.

Technical Specialist III

Within limits of an initially predetermined course of action, supplies or directs skilled technical assistance to scientific investigations. Exercises a high degree of initiative and judgment, requiring a broad technical background, in the form of considerable experience (and some education) in the field of work or in allied fields. Makes available any skilled technical assistance and advice in such areas as design, construction, operation and testing, as may be required. Performs miscellaneous functions, such as maintenance and servicing of facilities and equipment, records and reports.

SCHEDULE II

TECHNICAL

Labor Grades and Yearly Wage Ranges

January 1991

<u>Grade</u>	<u>Minimum</u>	<u>Midpoint</u>	<u>Maximum</u>
4-T	\$23,900	\$28,100	\$32,300
3-T	21,000	23,800	26,600
2-T	14,200	17,600	21,000
1-T	11,300	13,900	16,500

SUPPLEMENTAL SCHEDULE II

TECHNICAL TRAINEES

January 1991

<u>Grade</u>	<u>Six-Month Steps</u>			
	<u>(A)</u>	<u>(B)</u>	<u>(C)</u>	<u>(D)</u>
2-T	\$14,200	\$14,900	\$15,700	\$16,500
1-T	11,300	11,900	12,700	13,500*

*Employee eligible for promotion to Wage Grade 2-T after six months.

SCHEDULE II

TECHNICAL

Classification and Grades

<u>Classification</u>	<u>Labor Grade</u>	<u>Description Page No.</u>
Staff Shop Technician I	4-T	II-4
Staff Shop Technician II	3-T	II-4
Staff Shop Technician III	2-T	II-4
Senior Technician	4-T	II-4
Advanced Technician	3-T	II-5
Intermediate Technician	2-T	II-5
Junior Technician	1-T	II-5
Designer	4-T	II-5
Drafter I	3-T	II-5
Drafter II	2-T	II-6
Tracer	1-T	II-6
Technical Illustrator I	4-T	II-6
Technical Illustrator II	3-T	II-6
Graphic Arts Technician I	4-T	II-6
Graphic Arts Technician II	3-T	II-6
Graphic Arts Technician III	2-T	II-7
Lead Computer Operator	4-T	II-7
Advanced Computer Operator	3-T	II-7
Intermediate Computer Operator	2-T	II-7
Junior Computer Operator	1-T	II-7
Computing Aide	3-T	II-8
Technical Trainee II	2-T	II-8
Technical Trainee I	1-T	II-8

SUPPLEMENTAL SCHEDULE II

TECHNICAL TRAINEES

Employees hired in a technical training capacity may be classified as Technical Trainees and are covered by Supplemental Schedule II. Such employees are relatively inexperienced or untrained for the work they are assigned but normally make such rapid progress that once a year increases at the annual personnel review are insufficient to adequately compensate them for their increased value to the Observatory. Under Supplemental Schedule II each fully satisfactory employee receives an automatic increase every six months until he or she reaches a specified proficiency rate (Step D, Labor Grade 2-T.) Upon attaining this rate, the employee will be given a job classification appropriate for the work he has been trained to perform (e.g.: Intermediate Technician, Intermediate Computer Operator, etc.)

Assignment to Schedule

A Technical Trainee may be assigned to a labor grade and step rate on Supplemental Schedule II, which reflects the amount of prior experience, training or education he possesses for his or her position at the time he or she is hired. A new employee with no prior experience, training or education for his or her classification shall be paid the minimum rate for Labor Grade 1-T.

Administration

Personnel Action Notices for employees assigned to Supplemental Schedule II shall contain the following:

- (1) Appropriate classification (e.g.: Technical Trainee I or II)
- (2) Labor grade to which they are assigned (e.g.: Wage Grade 1-T or 2-T)
- (3) Appropriate Step Rate

The Personnel Office in Charlottesville will initiate all Personnel Action Notices for Technical Trainees due automatic increases. At least two weeks prior to the effective date of each such increase, a Personnel Action Notice will be sent to the employee's Division Head for approval. If the Division Head disapproves of the increase or wishes to withhold it for a period pending an improvement in the employee's performance, he or she should return the Personnel Action Notice unsigned, together with a memorandum explaining his or her reasons therefor.

SCHEDULE II

TECHNICAL

Summary Descriptions

Staff Shop Technician I

Under minimum supervision executes a variety of assignments requiring a broad range of shop skills and involving unique or complex procedures. Normally is assigned tasks where standards of operation may not have been developed and where individual ingenuity is required. Sets up and operates all machine tools and/or welding equipment and performs benchwork. Works from prints, rough sketches or verbal instructions. Makes own tools, performs maintenance incidental to operation of machines and equipment. May direct the work of junior personnel.

Staff Shop Technician II

Under general supervision executes assignments requiring a variety of shop skills and involving specialized procedures. Normally is assigned tasks where a high degree of competence is required but where standards of operations generally have been well defined. Sets up and operates machine tools and/or welding equipment and performs benchwork. Works from prints, sketches or verbal instructions. Makes own tools and performs maintenance incidental to operation of machines and equipment.

Staff Shop Technician III

Under immediate supervision performs semi-standardized duties requiring a basic knowledge of shop skills. Normally is assigned duties where standards of operation are well defined and only limited resourcefulness and discretion are required. Must be semi-proficient in the setup and operation of machine tools and/or welding equipment. Generally works from prints and detailed sketches. Performs routine maintenance incidental to operation of machines and equipment.

Senior Technician

Under minimum supervision, performs a wide variety of construction, test maintenance, assembly, operation and data collection functions on experimental and specialized equipment, machines or apparatus. Duties require the exercise of considerable discretion, and the highly skilled application of practical principles of mechanics, electrical technology, physics or related fields. May coordinate, instruct and direct the work of other technicians. Determines characteristics and modifications of components, materials and parts necessary to achieve required performance of completed unit or equipment. Advises on necessary modifications of alterations in design or construction of equipment.

Advanced Technician

Under minimum supervision, performs a variety of construction, test, maintenance, assembly, operation and data collection functions of experimental and specialized equipment, machines or apparatus. Duties require the skilled application of practical principles of mechanics, electrical technology, physics or related fields. May occasionally coordinate and direct the work of other technicians. Assists in the determination and modification of component, material or parts characteristics necessary to achieve required performance of completed unit or equipment. Given established definite objective, plans, arranges and performs all required duties.

Intermediate Technician

Under general supervision, performs phases of construction, test, maintenance, assembly, operation and data collection functions on assigned experimental and specialized equipment, machines or apparatus. Duties require a general knowledge of practical principles of mechanics, electrical technology, physics or related fields. Follows standard procedures in performing assigned duties.

Junior Technician

Under immediate supervision, performs routine phases of construction, test, maintenance, assembly, operation and data collection functions on assigned experimental and specialized equipment, machines and apparatus. Duties require some knowledge of practical principles of mechanics, electrical technology, physics or related fields. Assists in various allied functions as directed.

Designer

Under minimum supervision, prepares design solutions to a problem working from verbal statements or rough sketches. From general instructions, prepares final details or arranges final design. Applies a working knowledge of machine design and a practical knowledge of production methods to ensure most efficient design. Employs a full knowledge of the theory of drawing projection, and all required mathematics in application to design problems.

Drafter I

Under minimum supervision prepares detailed sub-assembly and assembly drawings from a design layout. Sets up arrangements of drawings and establishes the majority of dimensions. Works on complicated drawings requiring a thorough knowledge of drawing projection. May be required to draw schematic diagrams under general supervision. Required to work out problems in projections and sectioning, receiving supervision on complex problems only. Must have a working knowledge of mechanical and/or electrical drafting procedures and of shop practices. Must be proficient

in mathematics up to and including plane trigonometry and its application to drafting problems.

Drafter II

Under general supervision prepares details, detailed sub-assembly and assembly drawings from dimensioned sketches, layout, or specific instruction. May be required to do tracing. Must have a fundamental knowledge of drawing projections, as well as a general knowledge of machine shop practices and a working knowledge of mechanical or electrical drafting conventions.

Tracer

Under general supervision, prepares neat and accurate ink or pencil drawings of sketches and curves or graphs on bristol vellum and cloth. Arranges composition of work, size and placement of lettering and titles to conform to requirements of lantern slide, direct print or other reproduction processes. Must be proficient in use of Wrico and LeRoy lettering equipment.

Technical Illustrator I

Under minimum supervision, prepares illustrative material for technical and visual aids. Makes page layouts placing illustrations with respect to text. Renders in various media including airbrush and pen and ink. Retouches photographs for reproduction. Translates engineering drawings into true perspectives. Required to organize and lay out complete reports from detailed instructions.

Technical Illustrator II

Under minimum supervision, prepares illustrative material for technical and visual aids. Makes page layouts placing illustrations with respect to text. Renders in various media. May retouch photographs for reproduction and may translate engineering drawings into true perspectives. Assists in layout of complete reports.

Graphic Arts Technician I

Under minimum supervision, performs a wide variety of graphic arts functions requiring considerable knowledge of photography, photographic processing and offset printing. Performs pictorial, flat work, and specialized laboratory photography. Processes a wide variety of films, plates and other photographic material. Position requires a thorough knowledge of photographic processes, familiarity with various cameras, lenses, filters and emulsions. Printing assignments include processing of camera-ready copy, set up and operation of plate making equipment, operation of offset printing equipment and all post printing procedures necessary to assemble printed matter in the format requested. Responsible for preventive maintenance and routine servicing of equipment. May direct the work of junior personnel.

Graphic Arts Technician II

Under general supervision, performs a variety of graphic arts functions requiring a basic knowledge of photography, photographic processing and offset printing. Performs pictorial, flat work and specialized laboratory photography. Processes films, plates and other photographic materials. Position requires a basic knowledge of photographic processes, familiarity with various cameras, lenses, filters and emulsions. Printing assignments include processing of camera-ready copy, set up and operation of plate making equipment, operation of offset printing equipment and all post printing procedures necessary to assemble printed matter in the format requested. Performs preventive maintenance and routine servicing of equipment.

Graphic Arts Technician III

Under immediate supervision, performs routine graphic arts assignments requiring some knowledge of photography, photographic processing and offset printing. Normally is assigned tasks where procedures are well developed and standardized. Assists in preventive maintenance and routine servicing of equipment. Performs other duties as assigned.

Lead Computer Operator

Under minimum supervision, is responsible for the operation of electronic computers and auxiliary equipment. Coordinates, instructs and directs the work of other computer operators assigned to his shift. Must have complete familiarity with the logic and controls of computer equipment in addition to a basic understanding of programming. Duties require the exercise of considerable discretion in order to maintain proper and efficient computer operation. May assist in the diagnosis of computer and program malfunctions. May act for the Computer Operations Supervisor in his absence.

Advanced Computer Operator

Under minimum supervision, operates electronic computers and auxiliary equipment. Must have familiarity with the logic and controls of these machines. Duties require the exercise of considerable discretion in order to maintain proper and efficient computer operation. May assist in the diagnosis of computer malfunctions. May occasionally coordinate and direct the work of other computer operators.

Intermediate Computer Operator

Under general supervision, operates electronic computers and auxiliary equipment, following standard procedures in performing assigned duties. Duties require a general knowledge of the logic and controls of these machines.

Junior Computer Operator

Under immediate supervision, operates electronic computers and auxiliary equipment. Duties require some knowledge of the logic and controls of these machines. May assist in various allied functions as directed.

Computing Aide

Under minimum supervision, performs all types of calculations involving complex operations using desk calculator. Prepares data for submission to computers and processes more complex programs involving many different operations. Assists in the writing, correcting and maintaining of digital computer programs. Interpolates and interprets from functional tables, solves complex algebraic and trigonometric problems and compiles results into reports. Checks data and corrects errors. May coordinate, instruct and direct the work of junior personnel. Performs other technical tasks as required.

Technical Trainee II

Under general supervision, performs assignments of a technical nature under semi-standardized procedures and instructions. Work assignments normally require some discretion and resourcefulness on the part of the employee. Proficiency in basic technical skills in the relevant work area is required.

Technical Trainee I

Under close supervision, performs assignments of a technical nature under explicitly defined procedures, standards and instructions. Assignments normally provide a training situation where basic skills in the relevant technical area can be acquired.

SCHEDULE III

CLERICAL

Labor Grades and Yearly Wage Ranges

January 1991

<u>Labor Grade</u>	<u>Minimum</u>	<u>Midpoint</u>	<u>Maximum</u>
5-C	\$17,300	\$19,900	\$22,400
4-C	15,800	18,200	20,400
3-C	13,700	15,800	17,900
2-C	12,100	13,900	15,600
1-C	10,400	11,900	13,500

SCHEDULE III

CLERICAL

Classification and Grades

<u>Classification</u>	<u>Labor Grade</u>	<u>Description Page No.</u>
Secretary, Senior	4-C	III-3
Secretary A	3-C	III-3
Secretary	2-C	III-3
Typist	1-C	III-3
Clerk, Senior	4-C	III-3
Clerk	2-C	III-4
Clerk, Junior	1-C	III-4
Office Services Assistant	4-C	III-4
Accounting Clerk, Senior	5-C	III-4
Accounting Clerk A	3-C	III-4
Accounting Clerk B	2-C	III-5
Library Assistant	2-C	III-5
Receptionist	2-C	III-5
Telephone Operator	2-C	III-5
Stores Clerk I	4-C	III-5
Stores Clerk II	3-C	III-6
Programming Secretary/Librarian	4-C	III-6
Trainee	--	III-6

SCHEDULE III

CLERICAL

Summary Descriptions

Secretary, Senior

Required to take dictation and transcribe notes with above average speed and accuracy. Relieves principal of routine duties not requiring his attention, and interviews visitors or employees to determine whether their business requires his attention or should be referred to some other persons. Answers and composes correspondence and arranges interview appointments on own initiative. Gathers information from several sources and prepares reports in finished form requiring principal's signature only. Establishes and maintains filing system including all confidential material. Must be sufficiently familiar with Observatory and Divisional organization and policies to handle inquiries and correspondence intelligently in principal's absence.

Secretary A

Takes dictation and transcribes notes with above average speed and accuracy. Composes routine letters and memoranda at own discretion. Meets principal's visitors and ascertains their business. Assists principal in such matters as preparation of routine reports. Logs outgoing and incoming mail, noting those to be referred to principal and referring others to employees of Division, or filing on her own initiative. May maintain confidential employee records. Is expected to have a general knowledge of the functions of the Division, its staff and its relations with other Divisions.

Secretary B

Under general supervision takes notes, transcribes general office dictation and types correspondence, memoranda and reports. Prepares requisitions and vouchers, maintains files and routes mail within the office. May compose simple letters and memoranda of a routine nature. May work for one or more principals.

Typist

Under general supervision types forms, financial statements, manuscripts, statistical data. Required to proofread and perform routine clerical duties. Uses electric typewriters and word processing equipment with above average speed and accuracy.

Clerk, Senior

Under minimum supervision performs clerical duties either by working individually in a specialized field of business practice or by directing,

checking and coordinating the work of a group of clerks. Work requires analytical treatment and instruction includes only general policy and statement of objective. Typical duties include: solving clerical problems, tracing errors, or collecting data; designing special forms and establishing clerical office systems; assignments requiring intensive statistical preparation, such as coordination of reports or study of records.

Clerk

Performs clerical duties of a semi-routine nature requiring minimum supervision, where a definite objective is set up and the employee plans and arranges his own work referring only unusual cases to his supervisors. Typical duties include: Maintaining office files and records, preparing reports, gathering information from several sources, and coordinating such information in preparation of a statistical report. Duties may include typing correspondence and reports.

Clerk, Junior

Performs clerical duties of a routine nature requiring frequent instruction and close supervision. Typical duties include filing, typing, and preparation of simple reports. Position generally serves as a training classification and incumbents are expected to advance to the classification of Clerk within one year.

Office Services Assistant

Under minimum supervision, performs assigned administrative support functions in addition to normal secretarial duties. Such support functions may include: planning and preparation of cafeteria menus and coordination of same with cafeteria personnel; ordering of foodstuff and supplies; ordering of office supplies and coordinating equipment and supply shipments.

Accounting Clerk, Senior

Under minimum supervision, is responsible for semi-routine accounting duties involving an intensive knowledge of accounting practice and principles, such as maintaining the general ledger. Required to instruct and coordinate the work of several clerks of lower classifications. Duties require an analysis of problems in such fields as invoicing, costing, bookkeeping and making final disposition of such problems, where errors would be difficult to detect and may adversely affect outside (the Observatory) relationships.

Accounting Clerk A

Under minimum supervision performs semi-routine clerical duties in cost accounting, auditing, or bookkeeping, requiring an intensive knowledge in one phase of accounting. Typical duties include: reconciling vendor's invoices with Observatory records, resolving differences and processing invoices for payment, or costing inventories, using vendor's invoices or catalogs. Operates calculating machines incidental to principal duties. Coordinates the work of other clerks.

Accounting Clerk B

Under general supervision performs clerical duties involved in bookkeeping, auditing, payroll and cost accounting such as: proving trial balances, maintaining subsidiary bookkeeping records, compiling routine accounting reports and checking and reconciling vendor's accounts, where a knowledge of accounting procedures is required. May operate office machines.

Library Assistant

Under minimum supervision assists in providing various library services which require planning, initiative and judgment. Specialized knowledge of library work required for assisting in such activities as reference, acquisitions and magazines. Performs various clerical duties in ordering, sorting, locating books and information. May maintain special classified document files. May be required to type records and correspondence.

Receptionist

Receives, questions and directs visitors, business representatives or applicants to persons or offices as necessary. Determines the individual to whom callers should be referred. May be required to deliver messages, answer routine questions, write passes. May type, file or perform routine clerical duties. Contacts visitors and employees in person or by phone and makes arrangements for transportation.

Telephone Operator

Under general supervision, places incoming and outgoing calls including local, toll and long distance in the operation of multi-position switchboard. Must be familiar with Observatory organization, personnel, methods of locating individuals not listed and of contacting emergency personnel at all times. Maintains necessary records of toll charges and performs other related clerical duties as assigned.

Stores Clerk I

Under minimum supervision, receives, ships and routes, stores, sorts, identifies and issues supplies, parts, equipment, or other materials. May use drawings or other specifications to identify such materials. Checks condition, quality, quantity and otherwise verifies correctness of materials received. May operate power tools and motorized equipment pertinent to stores operation. Takes periodic physical inventory. Contacts Observatory personnel and other persons necessary to facilitate stores transactions. Loads and unloads materials from vehicles or other conveyances. May make minor alterations or adjustments - including minor assembly or disassembly - to materials stored or issued. May drive light vehicles and occasionally transport materials. Performs clerical procedures in connection with stores work.

Stores Clerk II

Under general supervision, receives, ships and routes, stores, sorts, identifies and issues supplies, parts, equipment, or other materials. May use drawings or other specifications to identify such materials. Checks condition, quality, quantity and otherwise verifies correctness of materials received. May operate power tools and motorized equipment pertinent to stores operations. Takes periodic physical inventory. Contacts Observatory personnel and other persons necessary to facilitate stores transactions. Loads and unloads materials from vehicles or other conveyances. May make minor alterations or adjustments - including minor assembly or disassembly - to materials stored or issued. May drive light vehicles and occasionally transport materials. Performs necessary clerical procedures in connection with stores work.

Programming Secretary/Librarian

Under minimum supervision implements and maintains, through usage of a computer and program production library system, all programs and associated information being produced by a programming group. Runs and retrieves all programs and their output for the programming group. Coordinates and maintains all information regarding the work of the programming group and associated scientific activities. Also serves as secretary to the programming group, performing all necessary clerical functions.

Trainee

May be hired at any rate which is within a range of 10% below the minimum rate for any particular classification. The classification Trainee, used in conjunction with a regular classification, may be used for persons who have the necessary relative qualifications and experience but who lack specific experience usually required only on the job itself. Trainees may be upgraded to the minimum rate for a classification at any time up to six months after hiring and after demonstrating that they are fully qualified to perform the duties of the classification satisfactorily.

SCHEDULE IV

MAINTENANCE CRAFTS & SERVICES

Labor Grades and Yearly Wage Ranges

January 1991

<u>Labor Grade</u>	<u>Minimum</u>	<u>Midpoint</u>	<u>Maximum</u>
5-M	\$20,000	\$25,200	\$30,000
4-M	17,800	21,200	24,600
3-M	16,000	19,200	22,400
2-M	14,100	16,600	21,400
1-M	10,400	14,700	18,700

SCHEDULE IV
 MAINTENANCE CRAFTS & SERVICES
 Classification and Grades

<u>Classification</u>	<u>Labor Grade</u>	<u>Description Page No.</u>
A/C - Plumbing Mechanic	5-M	IV-3
Auto Diesel Mechanic	5-M	IV-3
Equipment Mechanic	5-M	IV-3
Heavy Equipment Operator	5-M	IV-3
Maintenance Carpenter	5-M	IV-3
Maintenance Electrician	5-M	IV-4
Sr. Telescope Mechanic	5-M	IV-4
Telescope Mechanic I	4-M	IV-4
Plumber	4-M	IV-4
Telescope Mechanic II	3-M	IV-4
Maintenance Painter	3-M	IV-4
Helper	3-M	IV-5
Head Cook	3-M	IV-5
Truck Driver	2-M	IV-5
Building, Grounds & Utility Worker	2-M	IV-5
Special Services Assistant	2-M	IV-5
Janitor	1-M	IV-5
Laborer	1-M	IV-5
Security Guard	1-M	IV-6
Housekeeper/Foodhandler	1-M	IV-6
Maintenance Trainee	1-M	IV-6
Leadman	--	IV-6

SCHEDULE IV

MAINTENANCE CRAFTS & SERVICE

Summary Descriptions

A/C - Plumbing Mechanic

Under minimum supervision, constructs, installs, repairs and maintains, and operates refrigeration, air conditioners, ventilating and auxiliary and related equipment. In addition, performs other similar duties on all water, sewerage, gas, and heat distribution systems.

Auto-Diesel Mechanic

Under minimum supervision, performs required repairs, maintenance, servicing and incidental operation of gasoline and diesel engine driven vehicles such as automobiles, trucks, trailers and material handling equipment. Performs limited welding, brazing and painting and other body and fender repair work in order to maintain vehicles in operating order. Uses and maintains all hand and portable tools, shop machines and equipment necessary to perform assigned work.

Equipment Mechanic - Operator

Under minimum supervision, performs required maintenance, repairs, servicing and incidental operation of gasoline and diesel powered vehicles and equipment. Does limited welding, brazing and cutting. Performs simple design and layout work incidental to automotive and machinery modifications. Uses all hand precision and portable tools, shop machines and other equipment necessary to perform assigned work. Under general supervision operates all earth moving, material handling, road and ground maintenance, and similar equipment. May perform other duties as assigned.

Heavy Equipment Operator

Under minimum supervision, maintains, operates and services all material handling, earth moving, road and ground maintenance, and similar equipment. May perform other duties as assigned.

Maintenance Carpenter

Under minimum supervision, lays out, constructs, modifies and maintains buildings and component parts from construction drawings, rough sketches or verbal instructions. Works with wood, wood substitutes and combinations materials and flooring, roofing and wall materials. Uses hand, portable and fixed tools common to building construction trades. Installs cabinets, door frames, window glass, interior finishes, and hangs doors. May perform cabinetmaking duties as required.

Maintenance Electrician

Under minimum supervision, lays out, constructs, installs, maintains, repairs and operates (in accordance with the national electrical codes, or as otherwise directed) electrical systems, equipment, controls and related devices.

Senior Telescope Mechanic

Working under summary instructions and supervision, installs, services and evaluates mechanical, electrical and limited electronic components on all radio telescopes and related equipment. Serves in an advisory capacity in the planning, design and implementation of new equipment and procedures. Works from verbal or written instructions, manuals, drawings or sketches. Must be able to accomplish complex repairs and modifications to gear boxes and other mechanical assemblies in a safe and efficient manner, climbing high structures when necessary. Must have a working knowledge of machine shop, welding and electrical techniques and procedures.

Telescope Mechanic I

Under minimum supervision, repairs, maintains, and services radio telescope mechanical components. Perform limited servicing of electrical and electronics components. Works from verbal or written instructions, sketches and prints. Work may involve extensive climbing as necessary to inspect and repair the telescope structure. Must be knowledgeable in machine shop techniques, welding and limited electrical repairs. Maintains and operates shop equipment as required. Maintains tools in safe operating condition.

Plumber

Under minimum supervision lays out, constructs, installs, repairs and maintains water and gas distribution systems, related facilities and auxiliary equipment, and equipment utilizing water, gas and heat distribution services.

Telescope Mechanic II

Under general supervision, assists in the repair, maintenance, and servicing of radio telescope mechanical components. May perform limited servicing of electrical and electronics components. Works from verbal or written instructions, sketches and prints. Work may involve extensive climbing as necessary to inspect and repair the telescope structure. Must have general knowledge of machining, welding and limited electrical repairs. Maintains tools and equipment in safe operating condition.

Maintenance Painter

Under minimum supervision, performs wide variety of interior and exterior skilled painting operations on buildings, furniture and equipment. Prepares surface, removes paint, mixes paints and matches colors. Will use all methods of application as required. Must know use and application of paints, synthetics, bleaching materials, stains and similar products and

proper use and care of painting equipment. Required to rig staging and scaffolding.

Helper

Under general supervision, performs a variety of tasks in a craft which requires a substantial knowledge of a skill in that craft, although he need not possess the knowledge or skill expected of a journeyman. Duties will usually include handling minor assignments in the craft, with a minimum of supervision, and assisting one or more journeymen in more complex assignments.

Head Cook

Under minimum supervision, responsible for planning, preparation and serving of cafeteria style meals for employees and visitors. Plans menus, determines foodstuff requirements and orders same from suppliers. Oversees preparation, serving and clean-up of all meals. Performs other related duties as assigned.

Truck Driver

Drives and services any and all automotive vehicles under any conditions of usage. May be required to load and unload and perform necessary road maintenance. Performs other duties as assigned.

Building, Grounds & Utility Worker

Under general supervision, performs a variety of semi-skilled tasks common to maintenance and construction trades on buildings, roads and grounds. Uses various specialized tools and equipment such as tractors, concrete mixers and material moving equipment. Performs other duties as assigned.

Special Services Assistant

Under general supervision, performs various service duties associated with the collection and distribution of mail and the servicing and maintenance of Observatory motor vehicles. Is required to drive Observatory vehicles on routine and special runs. Performs other miscellaneous duties as assigned.

Janitor

Under general supervision, performs general cleaning and housekeeping duties in all Observatory buildings.

Laborer

Performs wide variety of manual labor tasks on roads, grounds or building maintenance. May perform unskilled tasks assisting mechanics. Operates such equipment as power mowers and pneumatic tools.

Security Guard

Under minimum supervision, controls entrances, exits and movement of individuals and vehicles within the Observatory site. Controls the removal of property from the Observatory site; patrols buildings and material storage locations as protection against unauthorized entry, fire, theft and sabotage. Is required to train and function as a firefighter and performs other police and fire protection duties within and without the Observatory site as directed. Must be prepared to perform emergency duty at any time.

Housekeeper/Foodhandler

Under general supervision, performs assigned duties in food preparation or housing.

Maintenance Trainee

Under immediate supervision, performs beginning level tasks, chiefly associated with maintenance activities, in facilities and/or technical areas. In addition may be assigned security duties.

Leadman

Under minimum supervision, will assist the foreman or supervisor in a semi-supervisory capacity. Is responsible for leading, directing and coordinating the work of a group of tradesmen such as carpenters, plumbers, machinists, painters and laborers. Required to show above-average proficiency in his occupation and will spend at least 50 percent of his time performing the functions of his occupation. May be paid up to 10 percent above the maximum rate for his classification.

140-Foot Radio Telescope Summary

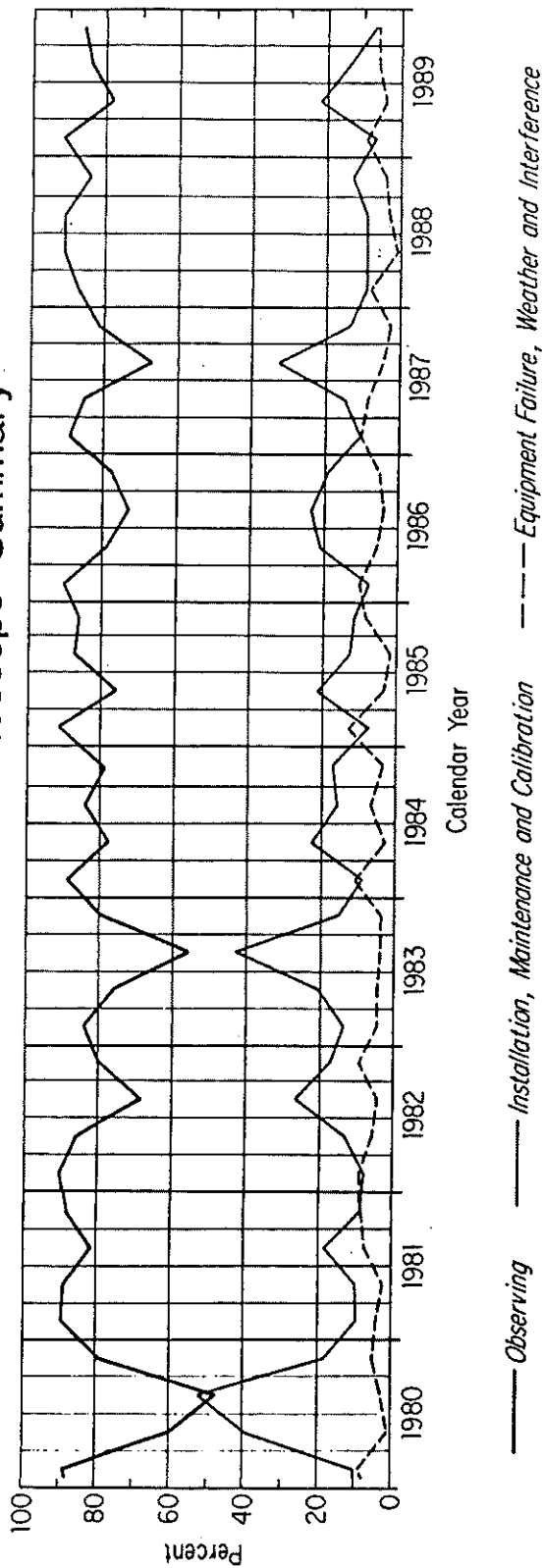


Fig. 4. This summary for each quarter of the calendar year shows the percentage of time the telescope was scheduled for observing; for routine calibration, maintenance, and installation of new experiments; and the percentage of time lost due to equipment failure, bad weather, and radio interference. Major improvements to the telescope system include: 1980 - installation of the Model IV autocorrelation receiver; 1982 - beam efficiency and pointing tests at 1.3 cm; 1983 - brake overhaul and installation of the second channel of the upconverter/maser receiver; 1987 - holographic surface tests and panel readjustments.

