

Table 23. Coal Mining Productivity by State, Mine Type, and Mine Production Range, 2019

(short tons produced per employee hour)

Coal-Producing State, Region ¹ and Mine Type	Mine Production Range (thousand short tons)							Total ²
	Above 1,000	Above 500 to 1,000	Above 200 to 500	Above 100 to 200	Above 50 to 100	Above 10 to 50	10 or Under	
Alabama	2.10	-	1.80	1.85	2.23	1.73	0.13	1.95
Underground	2.10	-	2.07	-	1.45	-	0.2	1.99
Surface	-	-	1.74	1.85	2.70	1.73	4.01	1.78
Alaska	-	5.14	-	-	-	-	-	5.14
Surface	-	5.14	-	-	-	-	-	5.14
Arizona	7.86	-	-	-	-	-	-	7.86
Surface	7.86	-	-	-	-	-	-	7.86
Colorado	5.00	3.28	-	-	-	-	-	4.87
Underground	5.35	3.28	-	-	-	-	-	5.12
Surface	4.31	-	-	-	-	-	-	4.31
Illinois	6.91	-	8.88	2.98	2.26	2.82	-	6.44
Underground	7.17	-	-	1.82	-	-	-	6.71
Surface	4.14	-	8.88	4.43	2.26	2.82	-	4.29
Indiana	4.63	3.49	4.32	3.33	-	-	-	4.38
Underground	4.41	-	-	-	-	-	-	4.11
Surface	4.95	3.49	4.32	3.33	-	-	-	4.74
Kentucky Total	4.05	2.52	2.36	1.73	1.82	1.39	0.75	2.52
Underground	4.05	2.52	1.73	1.14	1.62	0.83	0.15	2.57
Surface	3.94	-	3.24	3.23	2.24	1.69	0.80	2.35
Kentucky (East)	3.05	2.46	2.29	1.76	1.82	1.38	0.75	1.70
Underground	2.35	2.46	1.74	1.10	1.62	0.83	0.15	1.37
Surface	3.94	-	2.98	3.23	2.24	1.69	0.80	2.28
Kentucky (West)	4.21	2.66	2.74	1.44	-	1.57	-	3.59
Underground	4.21	2.66	1.66	1.44	-	-	-	3.59
Surface	-	-	4.94	-	-	1.57	-	3.59
Louisiana	3.38	-	-	2.75	-	-	-	3.29
Surface	3.38	-	-	2.75	-	-	-	3.29
Maryland	-	2.62	3.87	4.21	-	2.02	0.50	2.47
Underground	-	2.62	-	-	-	-	-	1.94
Surface	-	-	3.87	4.21	-	2.02	0.50	3.14
Mississippi	6.67	-	-	-	-	-	-	6.67
Surface	6.67	-	-	-	-	-	-	6.67
Missouri	-	-	-	6.41	-	-	-	6.41
Surface	-	-	-	6.41	-	-	-	6.41
Montana	13.39	-	11.72	-	-	-	-	13.29
Underground	11.42	-	-	-	-	-	-	11.42
Surface	14.02	-	11.72	-	-	-	-	13.87
New Mexico	7.56	-	-	-	-	-	-	7.56
Underground	7.19	-	-	-	-	-	-	7.19
Surface	7.70	-	-	-	-	-	-	7.70
North Dakota	11.23	-	7.59	-	-	-	-	11.16
Surface	11.23	-	7.59	-	-	-	-	11.16
Ohio	5.56	2.14	3.44	-	1.72	1.32	0.15	3.65
Underground	5.56	2.14	4.68	-	-	-	-	4.12
Surface	-	-	3.12	-	1.72	1.32	0.15	2.43
Oklahoma	-	-	-	1.89	-	2.02	1.10	1.91
Surface	-	-	-	1.89	-	2.02	1.10	1.91
Pennsylvania Total	6.06	4.27	2.90	2.19	1.84	2.08	0.94	4.14
Underground	6.06	4.27	2.41	1.71	1.53	2.66	0.61	4.94
Surface	-	-	3.81	2.52	2.01	2.05	1.05	1.79
Pennsylvania (Anthracite)	-	-	4.17	3.28	1.61	1.81	0.62	1.43
Underground	-	-	-	-	-	2.09	0.63	0.55
Surface	-	-	4.17	3.28	1.61	1.79	0.62	1.49
Pennsylvania (Bituminous)	6.06	4.27	2.53	2.03	1.91	2.27	1.43	4.62
Underground	6.06	4.27	2.41	1.71	1.53	3.13	0.23	4.99
Surface	-	-	3.15	2.31	2.26	2.23	1.46	2.16

Coal-Producing State, Region ¹ and Mine Type	Mine Production Range (thousand short tons)							Total ²
	Above 1,000	Above 500 to 1,000	Above 200 to 500	Above 100 to 200	Above 50 to 100	Above 10 to 50	10 or Under	
Tennessee	-	-	1.91	-	2.49	13.12	-	1.60
Underground	-	-	1.91	-	-	-	-	1.51
Surface	-	-	-	-	2.49	13.12	-	1.90
Texas	6.86	9.64	-	3.58	-	-	-	6.89
Surface	6.86	9.64	-	3.58	-	-	-	6.89
Utah	5.17	3.90	2.80	-	-	-	-	4.46
Underground	5.17	3.90	2.81	-	-	-	-	4.58
Surface	-	-	2.78	-	-	-	-	1.74
Virginia	3.01	2.28	2.01	2.25	1.46	0.95	0.86	2.07
Underground	3.01	-	1.60	1.80	1.44	0.93	0.10	2.14
Surface	-	2.28	2.56	2.43	1.52	0.97	1.29	1.92
West Virginia Total	4.21	2.49	1.99	1.86	2.16	1.18	1.35	2.83
Underground	4.20	2.12	1.57	1.29	1.43	1.20	-	2.79
Surface	4.27	3.71	2.89	2.95	2.77	1.17	1.35	2.95
West Virginia (Northern)	5.04	-	2.12	-	1.26	5.61	1.53	4.67
Underground	5.04	-	1.17	-	1.26	-	-	4.73
Surface	-	-	4.22	-	-	5.61	1.53	2.49
West Virginia (Southern)	2.85	2.49	1.98	1.86	2.24	1.13	1.32	2.02
Underground	1.97	2.12	1.60	1.29	1.47	1.20	-	1.55
Surface	4.27	3.71	2.78	2.95	2.77	1.09	1.32	2.97
Wyoming	25.30	-	-	-	-	-	-	25.30
Underground	8.59	-	-	-	-	-	-	8.59
Surface	25.70	-	-	-	-	-	-	25.70
Appalachia Total	4.13	2.61	2.21	1.93	1.88	1.42	0.71	2.79
Underground	4.12	2.42	1.76	1.30	1.55	1.04	0.24	2.91
Surface	4.22	3.40	2.91	2.64	2.29	1.58	0.91	2.44
Appalachia Central	2.91	2.48	2.03	1.86	1.89	1.18	0.88	1.95
Underground	2.37	2.17	1.63	1.24	1.57	0.97	0.12	1.61
Surface	4.22	3.40	2.78	2.92	2.40	1.30	0.99	2.64
Appalachia Northern	5.46	3.19	2.91	2.25	1.79	2.09	0.79	4.27
Underground	5.46	3.19	2.28	1.71	1.49	2.66	0.61	4.73
Surface	-	-	3.64	2.61	1.98	2.06	0.84	2.01
Appalachia Southern	2.10	-	1.80	1.85	2.23	1.73	0.13	1.95
Underground	2.10	-	2.07	-	1.45	-	0.2	1.99
Surface	-	-	1.74	1.85	2.70	1.73	4.01	1.78
Interior Region Total	5.56	3.97	4.03	2.77	2.26	2.24	0.5	5.12
Underground	5.46	2.66	1.66	1.61	-	-	-	4.92
Surface	5.76	5.30	5.57	3.38	2.26	2.24	0.5	5.52
Illinois Basin	5.35	3.00	4.03	2.63	2.26	2.36	-	4.86
Underground	5.46	2.66	1.66	1.61	-	-	-	4.92
Surface	4.81	3.49	5.57	3.76	2.26	2.36	-	4.61
Other Interior	6.49	9.64	-	3.04	-	2.02	1.10	6.35
Surface	6.49	9.64	-	3.04	-	2.02	1.10	6.35
Western Region Total	16.50	4.05	3.82	-	-	-	-	15.76
Underground	6.31	3.67	2.81	-	-	-	-	5.78
Surface	19.58	5.14	5.67	-	-	-	-	19.23
Powder River Basin	25.75	-	-	-	-	-	-	25.71
Surface	25.75	-	-	-	-	-	-	25.71
Uinta Basin	5.08	3.90	2.81	-	-	-	-	4.72
Underground	5.24	3.90	2.81	-	-	-	-	4.84
Surface	4.31	-	-	-	-	-	-	4.05
Other Western	9.03	4.18	5.67	-	-	-	-	8.70
Underground	9.31	3.28	-	-	-	-	-	8.55
Surface	8.96	5.14	5.67	-	-	-	-	8.74
East of Mississippi River	4.60	2.64	2.28	1.98	1.89	1.44	0.70	3.27
Underground	4.58	2.43	1.76	1.32	1.55	1.04	0.24	3.39
Surface	4.69	3.41	3.07	2.72	2.29	1.59	0.89	2.91
West of Mississippi River	15.14	4.70	3.82	3.04	-	2.02	1.10	14.43
Underground	6.31	3.67	2.81	-	-	-	-	5.78
Surface	17.34	6.65	5.67	3.04	-	2.02	1.10	16.89
U.S. Subtotal	8.34	2.84	2.33	2.02	1.89	1.44	0.70	5.95

Mine Production Range (thousand short tons)

Coal-Producing State, Region ¹ and Mine Type	Mine Production Range (thousand short tons)							Total ²
	Above 1,000	Above 500 to 1,000	Above 200 to 500	Above 100 to 200	Above 50 to 100	Above 10 to 50	10 or Under	
Underground	4.77	2.53	1.79	1.32	1.55	1.04	0.24	3.60
Surface	14.58	3.89	3.14	2.74	2.29	1.60	0.89	9.88
Refuse Recovery	-	-	-	12.31	5.68	2.32	0.12	4.36
U.S. Total	8.34	2.84	2.33	2.04	1.93	1.47	0.69	5.94

- = No data reported.

¹ For a definition of coal producing regions, see the Glossary.

² Includes all employees at preparation plants and tipples not co-located with a mine.

Notes: Productivity is calculated by dividing total coal production by the total labor hours worked by all employees engaged in production, preparation, processing, development, maintenance, repair shop, or yard work at mining operations, including office workers. Excludes preparation plants with less than 5,000 employee hours during the year, which are not required to provide data.

Sources: U.S. Energy Information Administration Form EIA-7A, 'Annual Survey of Coal Production and Preparation,' and U.S. Department of Labor, Mine Safety and Health Administration Form 7000-2, 'Quarterly Mine Employment and Coal Production Report.'