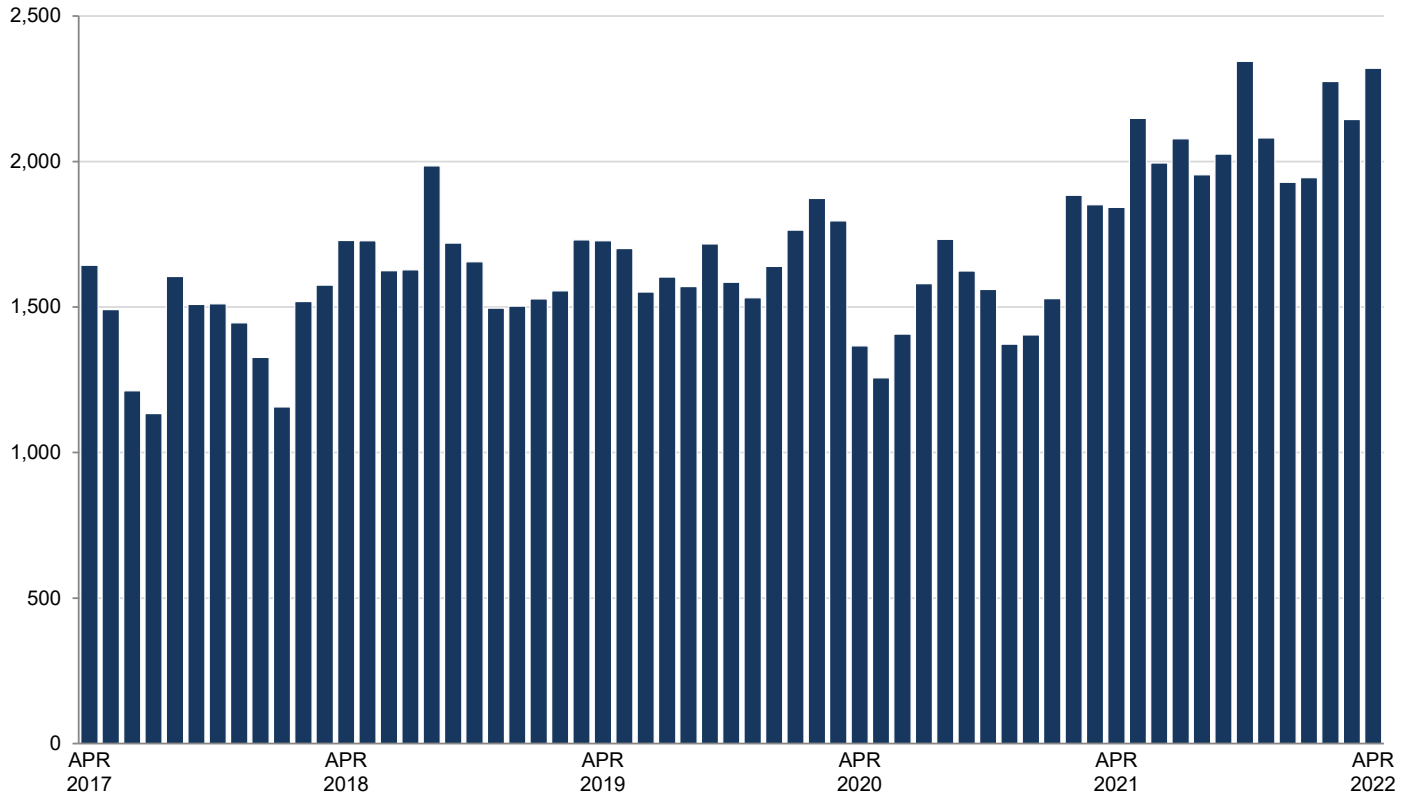


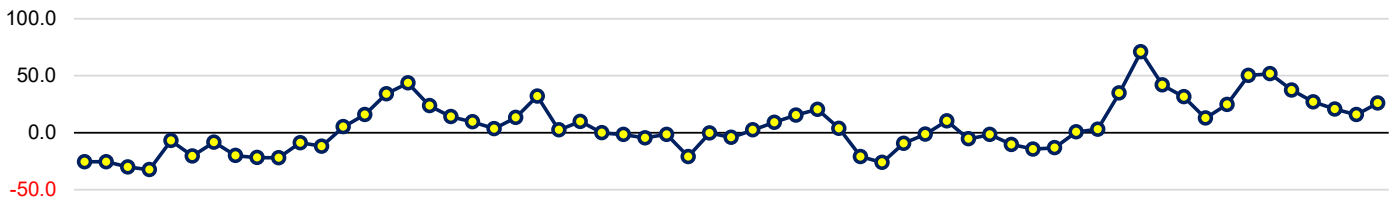
# APRIL 2022 ONLINE JOB OPENINGS REPORT

REGION 4 JOB OPENINGS

[ALL JOB OPENINGS]



## YEAR-OVER-YEAR PERCENT CHANGE IN JOB OPENINGS



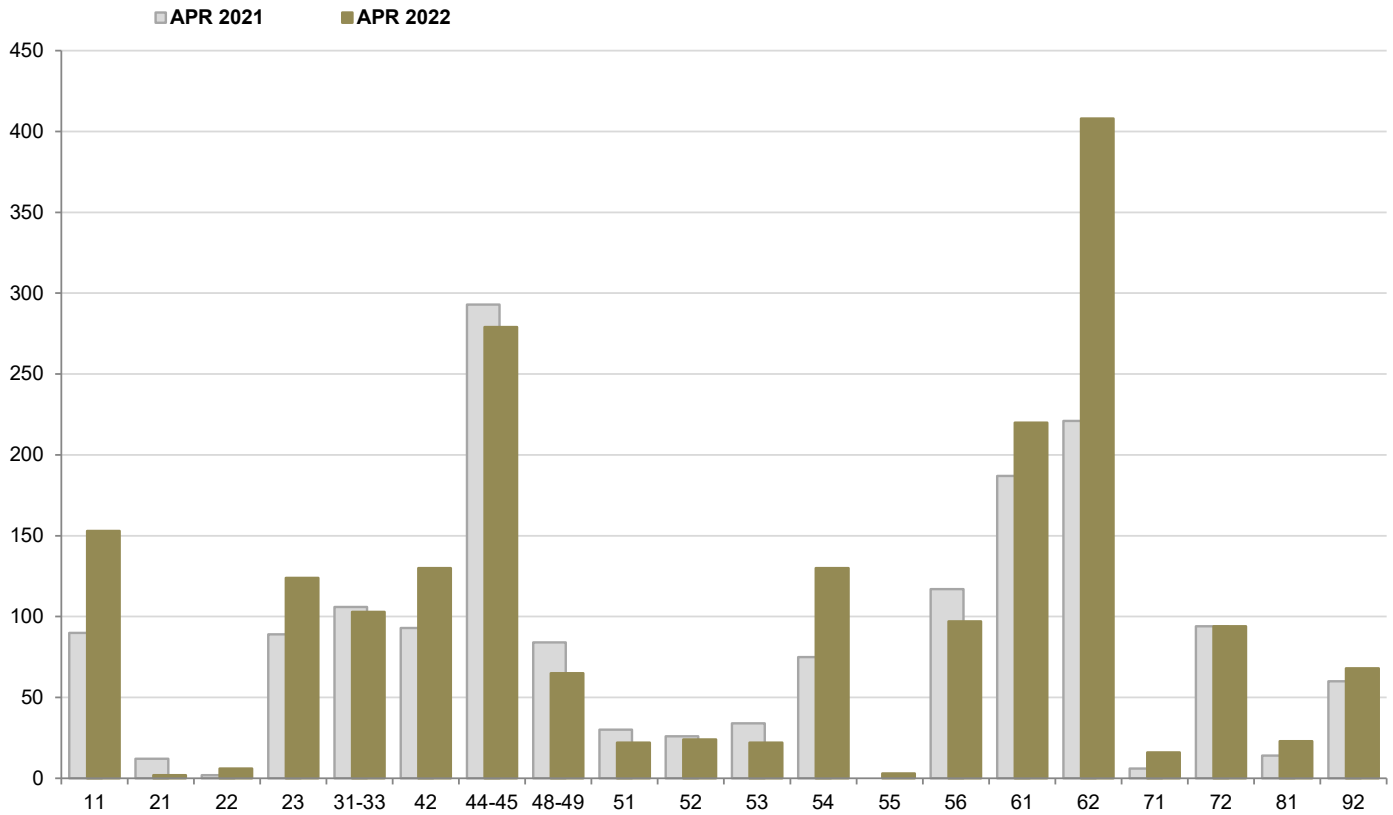
RECENT TREND	JOB OPENINGS	M/M # CHG	M/M % CHG	Y/Y # CHG	Y/Y % CHG	12 MO MOV AVG	M/M # CHG	M/M % CHG	Y/Y # CHG	Y/Y % CHG
NOV 2020	1,372	-188	-12.1	-160	-10.4	1,581	-13	-0.8	-28	-1.7
DEC 2020	1,404	+32	+2.3	-236	-14.4	1,561	-20	-1.3	-59	-3.6
JAN 2021	1,529	+125	+8.9	-235	-13.3	1,542	-19	-1.2	-98	-6.0
FEB 2021	1,884	+355	+23.2	+11	+0.6	1,543	+1	+0.1	-123	-7.4
MAR 2021	1,851	-33	-1.8	+55	+3.1	1,547	+4	+0.3	-125	-7.5
APR 2021	1,842	-9	-0.5	+476	+34.8	1,587	+40	+2.6	-55	-3.3
MAY 2021	2,148	+306	+16.6	+891	+70.9	1,661	+74	+4.7	+56	+3.5
JUN 2021	1,995	-153	-7.1	+588	+41.8	1,710	+49	+3.0	+117	+7.3
JUL 2021	2,078	+83	+4.2	+498	+31.5	1,752	+42	+2.5	+161	+10.1
AUG 2021	1,954	-124	-6.0	+221	+12.8	1,770	+18	+1.0	+166	+10.3
SEP 2021	2,026	+72	+3.7	+402	+24.8	1,804	+34	+1.9	+208	+13.0
OCT 2021	2,344	+318	+15.7	+784	+50.3	1,869	+65	+3.6	+275	+17.3
NOV 2021	2,081	-263	-11.2	+709	+51.7	1,928	+59	+3.2	+347	+21.9
DEC 2021	1,929	-152	-7.3	+525	+37.4	1,972	+44	+2.3	+411	+26.3
JAN 2022	1,944	+15	+0.8	+415	+27.1	2,006	+34	+1.7	+464	+30.1
FEB 2022	2,275	+331	+17.0	+391	+20.8	2,039	+33	+1.6	+496	+32.1
MAR 2022	2,144	-131	-5.8	+293	+15.8	2,063	+24	+1.2	+516	+33.4
<b>APR 2022</b>	<b>2,320</b>	<b>+176</b>	<b>+8.2</b>	<b>+478</b>	<b>+26.0</b>	<b>2,103</b>	<b>+40</b>	<b>+1.9</b>	<b>+516</b>	<b>+32.5</b>

[Data are not seasonally adjusted and subject to revision. Dashes (---) indicate data not available.]

# APRIL 2022 ONLINE JOB OPENINGS REPORT

## REGION 4 JOB OPENINGS BY INDUSTRY

[ALL JOB OPENINGS]



[NAICS CODE] INDUSTRY	APR 2021	MAR 2022	APR 2022	M/M # CHG	M/M % CHG	Y/Y # CHG	Y/Y % CHG
[11] Agriculture, Forestry, Fishing and Hunting	90	266	153	-113	-42.5	+63	+70.0
[21] Mining, Quarrying, and Oil and Gas Extraction	12	10	2	-8	-80.0	-10	-83.3
[22] Utilities	2	4	6	+2	+50.0	+4	+200.0
[23] Construction	89	103	124	+21	+20.4	+35	+39.3
[31-33] Manufacturing	106	84	103	+19	+22.6	-3	-2.8
[42] Wholesale Trade	93	123	130	+7	+5.7	+37	+39.8
[44-45] Retail Trade	293	238	279	+41	+17.2	-14	-4.8
[48-49] Transportation and Warehousing	84	49	65	+16	+32.7	-19	-22.6
[51] Information	30	22	22	0	0.0	-8	-26.7
[52] Finance and Insurance	26	15	24	+9	+60.0	-2	-7.7
[53] Real Estate and Rental and Leasing	34	31	22	-9	-29.0	-12	-35.3
[54] Professional and Technical Services	75	107	130	+23	+21.5	+55	+73.3
[55] Management of Companies and Enterprises	0	0	3	+3	---	+3	---
[56] Administrative and Waste Services	117	71	97	+26	+36.6	-20	-17.1
[61] Educational Services	187	152	220	+68	+44.7	+33	+17.6
[62] Health Care and Social Assistance	221	435	408	-27	-6.2	+187	+84.6
[71] Arts, Entertainment, and Recreation	6	16	16	0	0.0	+10	+166.7
[72] Accommodation and Food Services	94	116	94	-22	-19.0	0	0.0
[81] Other Services (except Public Administration)	14	13	23	+10	+76.9	+9	+64.3
[92] Public Administration	60	41	68	+27	+65.9	+8	+13.3
Unclassified	209	248	331	+83	+33.5	+122	+58.4
<b>TOTAL</b>	<b>1,842</b>	<b>2,144</b>	<b>2,320</b>	<b>+176</b>	<b>+8.2</b>	<b>+478</b>	<b>+26.0</b>

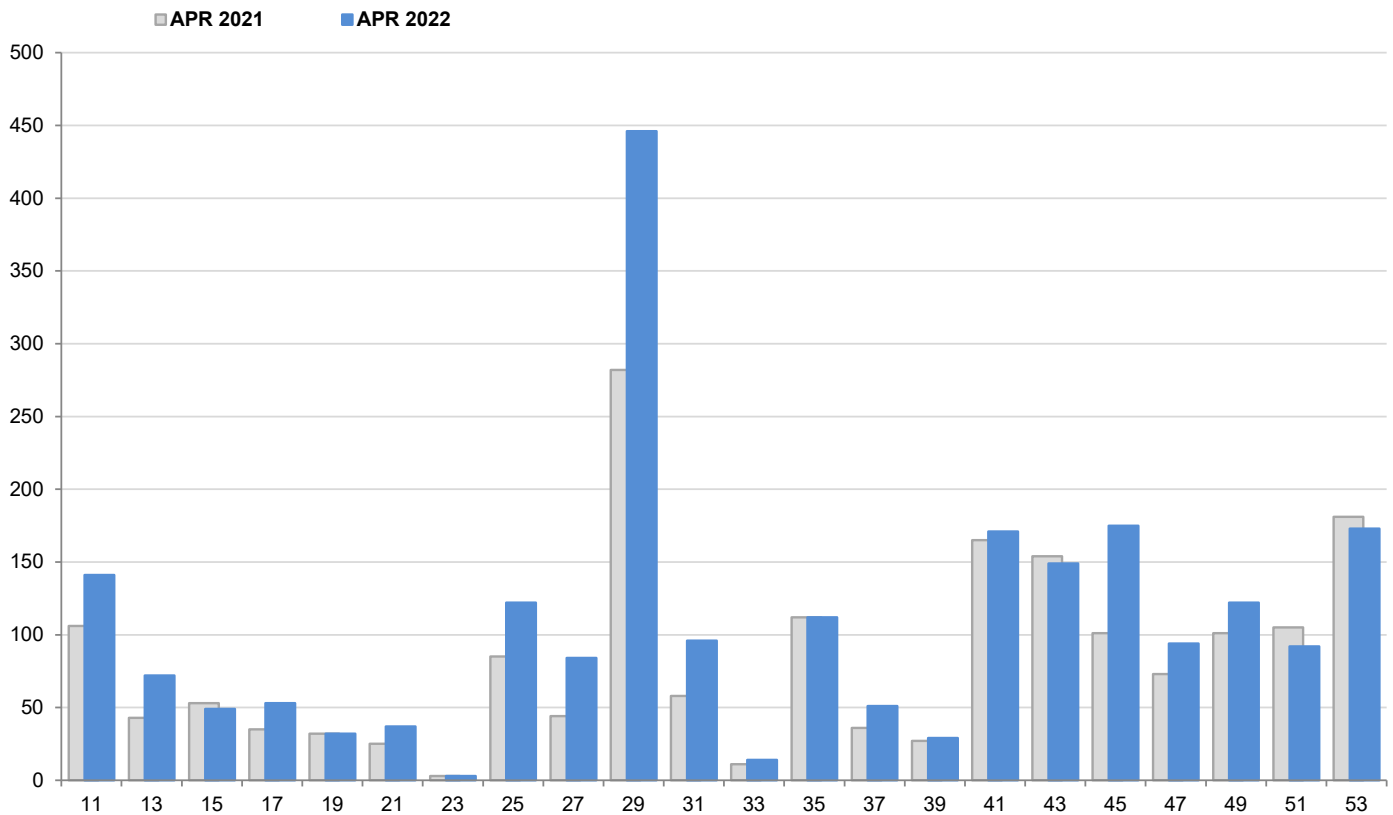
**What is the difference between an industry and an occupation?** The main business activity of the employer determines the industry of both the employer and its employees. Employees may perform different types of work for the same employer but still belong to the same industry. The type of work an employee does determines the occupation of the employee. For example, an accountant working at a hospital belongs to the Health Care and Social Assistance industry (main function of the employer) and the Business and Financial Operations occupation group (main function of the employee).

[Data are not seasonally adjusted and subject to revision. Dashes (---) indicate data not available.]

# APRIL 2022 ONLINE JOB OPENINGS REPORT

## REGION 4 JOB OPENINGS BY OCCUPATION GROUP

[ALL JOB OPENINGS]



[SOC CODE] OCCUPATION GROUP	APR 2021	MAR 2022	APR 2022	M/M # CHG	M/M % CHG	Y/Y # CHG	Y/Y % CHG
[11] Management	106	92	141	+49	+53.3	+35	+33.0
[13] Business and Financial Operations	43	54	72	+18	+33.3	+29	+67.4
[15] Computer and Mathematical	53	32	49	+17	+53.1	-4	-7.5
[17] Architecture and Engineering	35	72	53	-19	-26.4	+18	+51.4
[19] Life, Physical, and Social Science	32	29	32	+3	+10.3	0	0.0
[21] Community and Social Service	25	41	37	-4	-9.8	+12	+48.0
[23] Legal	3	0	3	+3	---	0	0.0
[25] Educational Instruction and Library	85	68	122	+54	+79.4	+37	+43.5
[27] Arts, Design, Entertainment, Sports, and Media	44	70	84	+14	+20.0	+40	+90.9
[29] Healthcare Practitioners and Technical	282	374	446	+72	+19.3	+164	+58.2
[31] Healthcare Support	58	144	96	-48	-33.3	+38	+65.5
[33] Protective Service	11	16	14	-2	-12.5	+3	+27.3
[35] Food Preparation and Serving Related	112	127	112	-15	-11.8	0	0.0
[37] Building and Grounds Cleaning and Maintenance	36	34	51	+17	+50.0	+15	+41.7
[39] Personal Care and Service	27	21	29	+8	+38.1	+2	+7.4
[41] Sales and Related	165	153	171	+18	+11.8	+6	+3.6
[43] Office and Administrative Support	154	104	149	+45	+43.3	-5	-3.2
[45] Farming, Fishing, and Forestry	101	294	175	-119	-40.5	+74	+73.3
[47] Construction and Extraction	73	81	94	+13	+16.0	+21	+28.8
[49] Installation, Maintenance, and Repair	101	130	122	-8	-6.2	+21	+20.8
[51] Production	105	66	92	+26	+39.4	-13	-12.4
[53] Transportation and Material Moving	181	138	173	+35	+25.4	-8	-4.4
[55] Military Specific	3	2	2	0	0.0	-1	-33.3
Unclassified	7	2	1	-1	-50.0	-6	-85.7
<b>TOTAL</b>	<b>1,842</b>	<b>2,144</b>	<b>2,320</b>	<b>+176</b>	<b>+8.2</b>	<b>+478</b>	<b>+26.0</b>

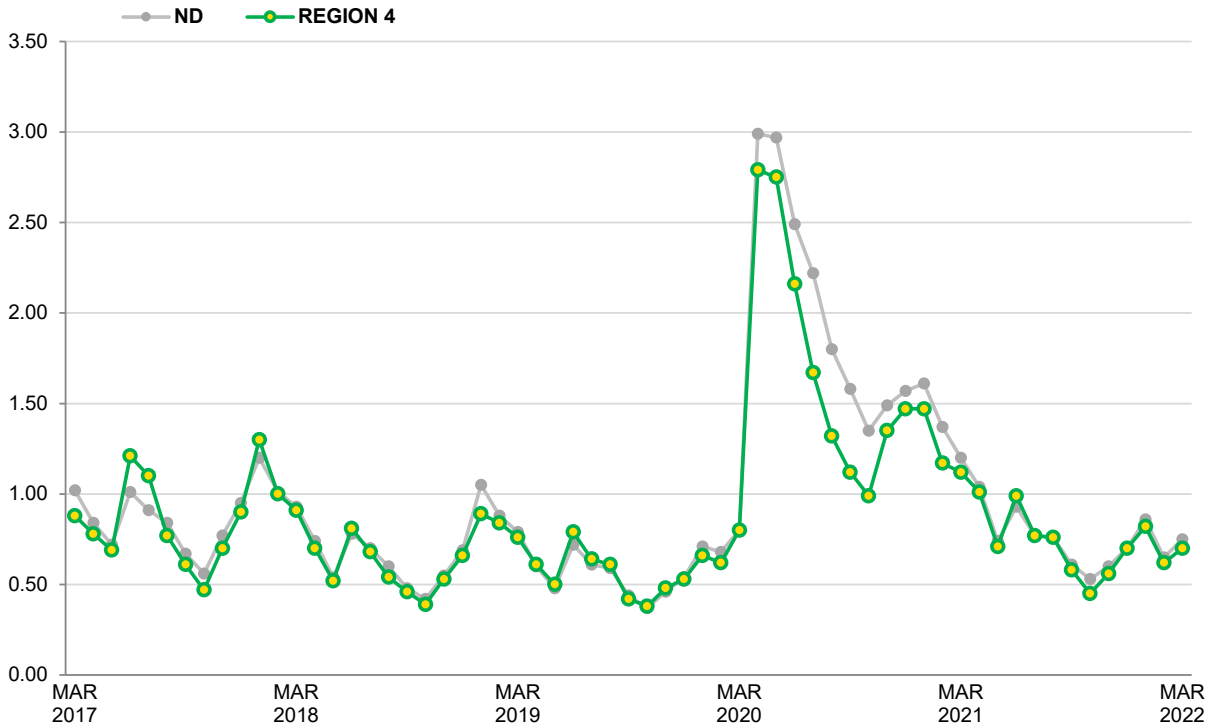
[Data are not seasonally adjusted and subject to revision. Dashes (---) indicate data not available.]

# APRIL 2022 ONLINE JOB OPENINGS REPORT

## REGION 4 UNEMPLOYED PER JOB OPENING

[ALL JOB OPENINGS]

Unemployed per job opening is a rate of the number of unemployed persons divided by job openings. A rate less than one indicates more job openings than local labor supply; a rate greater than one indicates more local labor supply than job openings. The latest month available for regional data is March 2022.

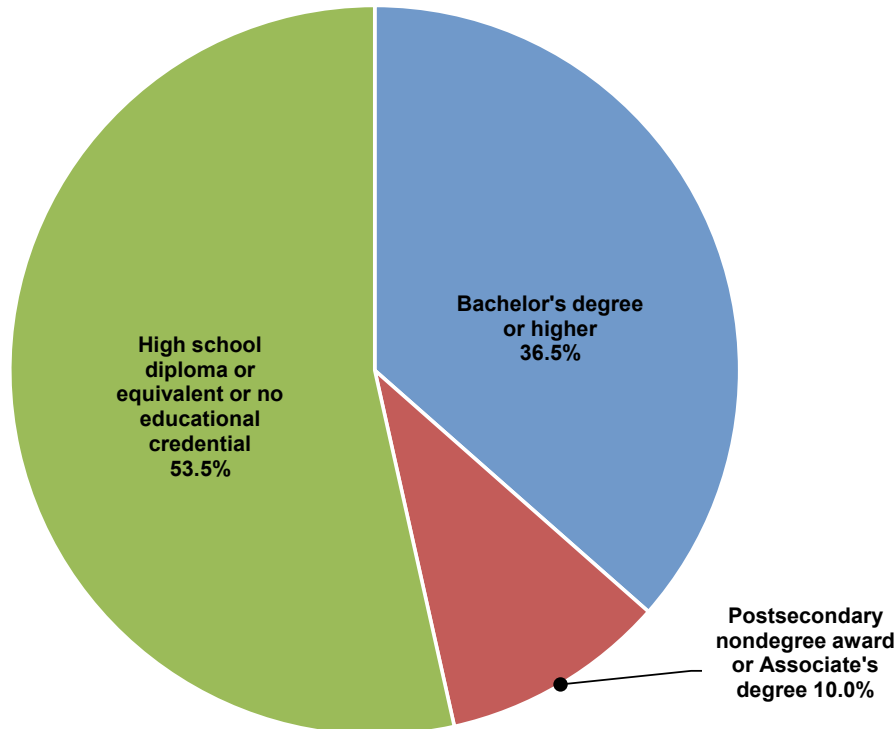


REGION 4	
MAR 2022	0.70
LAST MONTH	0.62
LAST YEAR	1.12
NORTH DAKOTA	
MAR 2022	0.75
LAST MONTH	0.65
LAST YEAR	1.20

## REGION 4 DISTRIBUTION OF JOB OPENINGS BY TYPICAL ENTRY-LEVEL EDUCATION

[ALL JOB OPENINGS]

Typical entry-level education describes the level of education that most workers need to enter an occupation or occupational group, and takes into consideration advertised education requirement preferences. Keep in mind, an opening's typical entry-level education assignment may differ from employers' advertised education requirements, though most match. Mismatches commonly occur due to either missing education requirements from the employer's job ad or education inflation where an employer advertises for more education than is typically needed for an occupation. Using the typical entry-level education framework provides for consistency across occupations regardless of an employer's advertised preference.



APR 2022	
TOTAL	2,320
DOC OR PROF	48
MASTER'S	60
BACHELOR'S	736
ASSOCIATE'S	61
POSTSEC AWARD	171
HIGH SCHOOL	770
NO EDU CRED	471
UNASSIGNED	3

[Unassigned openings excluded from pie chart calculations]

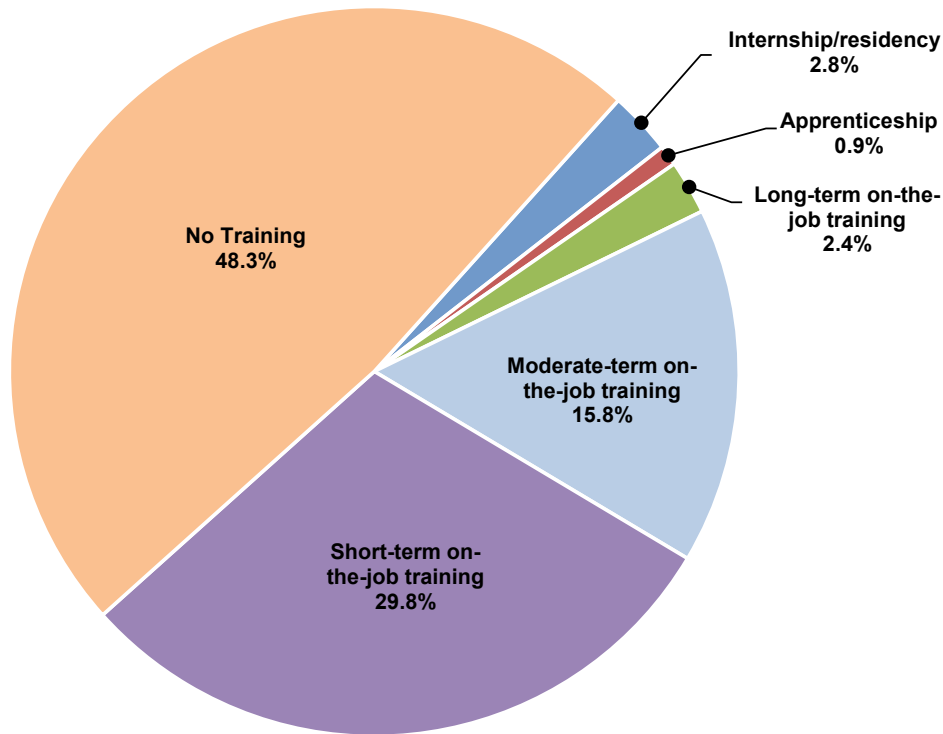
[Data are not seasonally adjusted and subject to revision. Dashes (---) indicate data not available.]

# APRIL 2022 ONLINE JOB OPENINGS REPORT

## REGION 4 DISTRIBUTION OF JOB OPENINGS BY TYPICAL TRAINING

[ALL JOB OPENINGS]

Typical training describes any additional training or preparation that is typically needed, once employed, to attain competency in the skills needed in an occupation or occupational group.



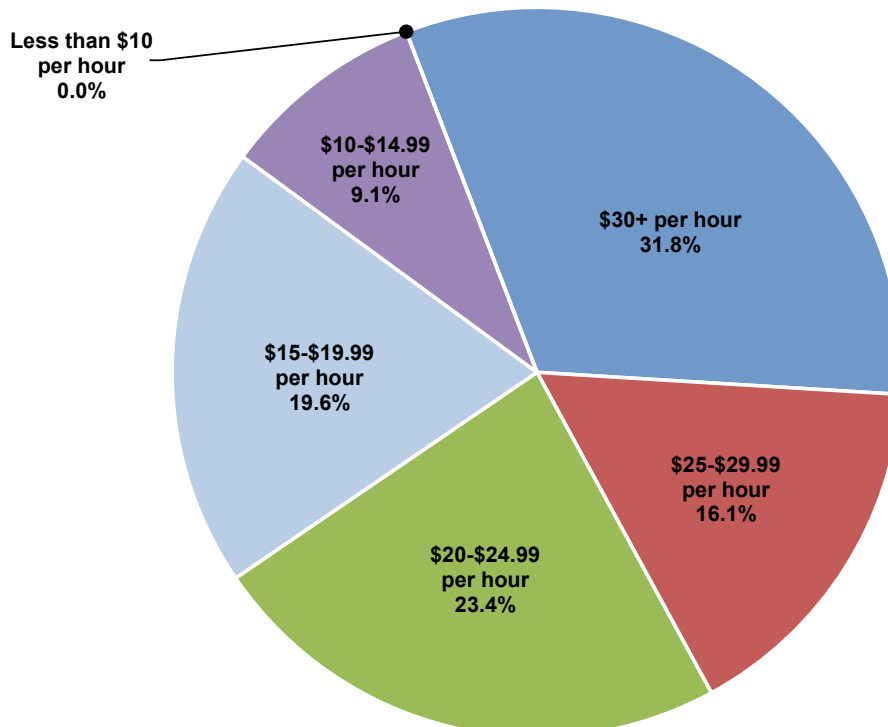
APR 2022
<b>TOTAL</b>
2,320
<b>INTERN/RES</b>
65
<b>APPRENTICESHIP</b>
21
<b>LT OJT</b>
56
<b>MT OJT</b>
366
<b>ST OJT</b>
690
<b>NO TRAINING</b>
1,119
<b>UNASSIGNED</b>
3

[Unassigned openings excluded from pie chart calculations]

## REGION 4 DISTRIBUTION OF JOB OPENINGS BY TYPICAL AVERAGE WAGE

[ALL JOB OPENINGS]

Most employers don't post wages for openings in job ads. Instead, we use typical average wages paid to workers already employed in specific occupations or occupational groups as a proxy to estimate the wage distribution of job openings. Typical average wages are from the latest Occupational Employment and Wage Statistics (OEWS) survey and should not be interpreted as a hiring wage since OEWS data are not exclusive to new hires. The estimated typical average wage of Region 4 job openings with an assigned occupational code is \$27.28 per hour.



APR 2022
<b>TOTAL</b>
2,320
<b>\$30+</b>
737
<b>\$25-\$29.99</b>
372
<b>\$20-\$24.99</b>
542
<b>\$15-\$19.99</b>
454
<b>\$10-\$14.99</b>
210
<b>LESS THAN \$10</b>
0
<b>UNASSIGNED</b>
5

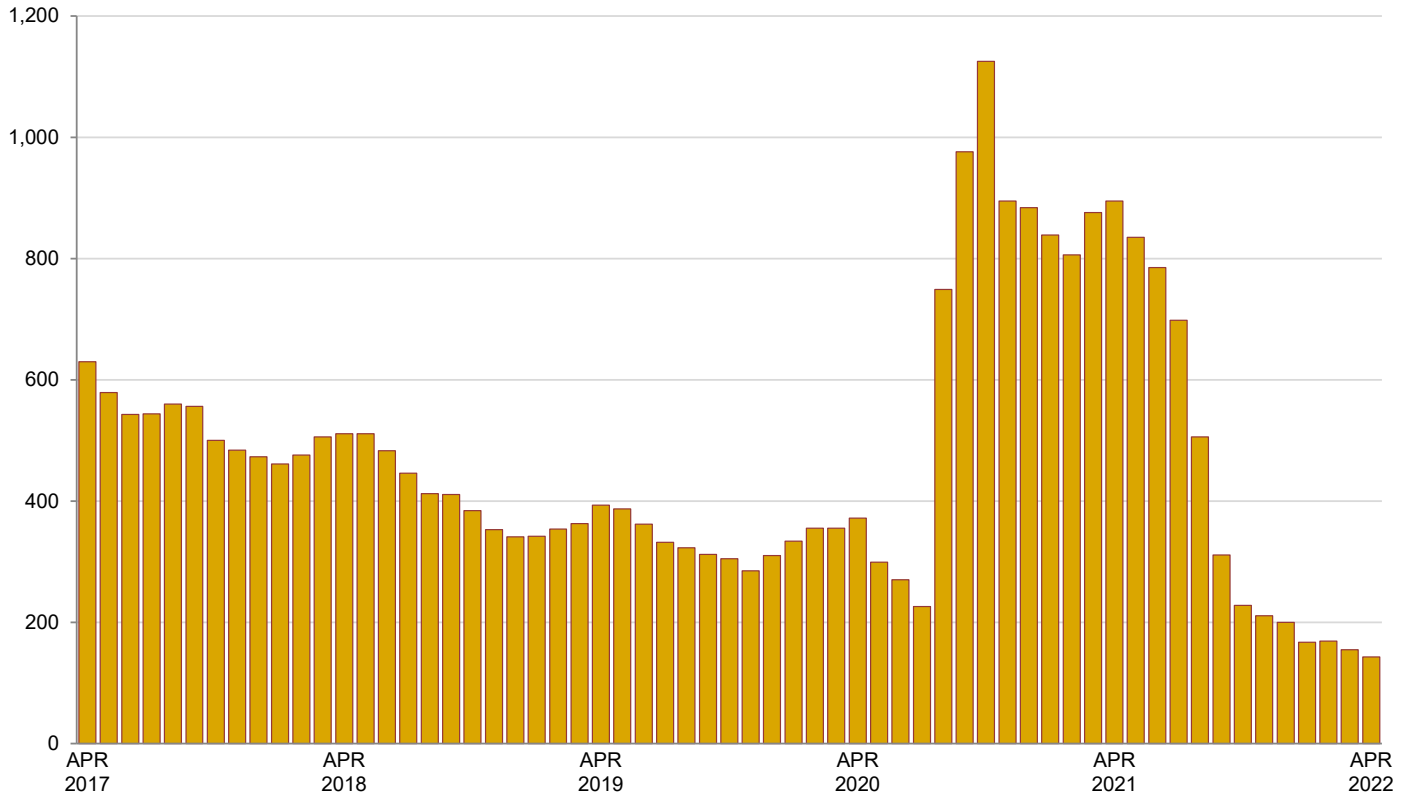
[Unassigned openings excluded from pie chart calculations]

[Data are not seasonally adjusted and subject to revision. Dashes (---) indicate data not available.]

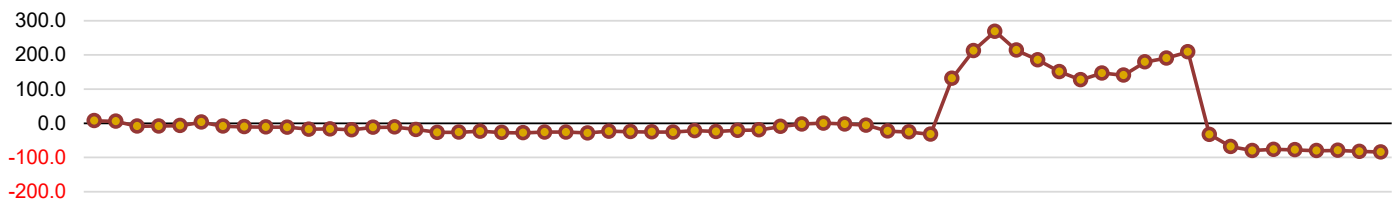
# APRIL 2022 ONLINE JOB OPENINGS REPORT

REGION 4 ACTIVE RÉSUMÉS

[IN-STATE ACTIVE RÉSUMÉS]



## YEAR-OVER-YEAR PERCENT CHANGE IN ACTIVE RÉSUMÉS



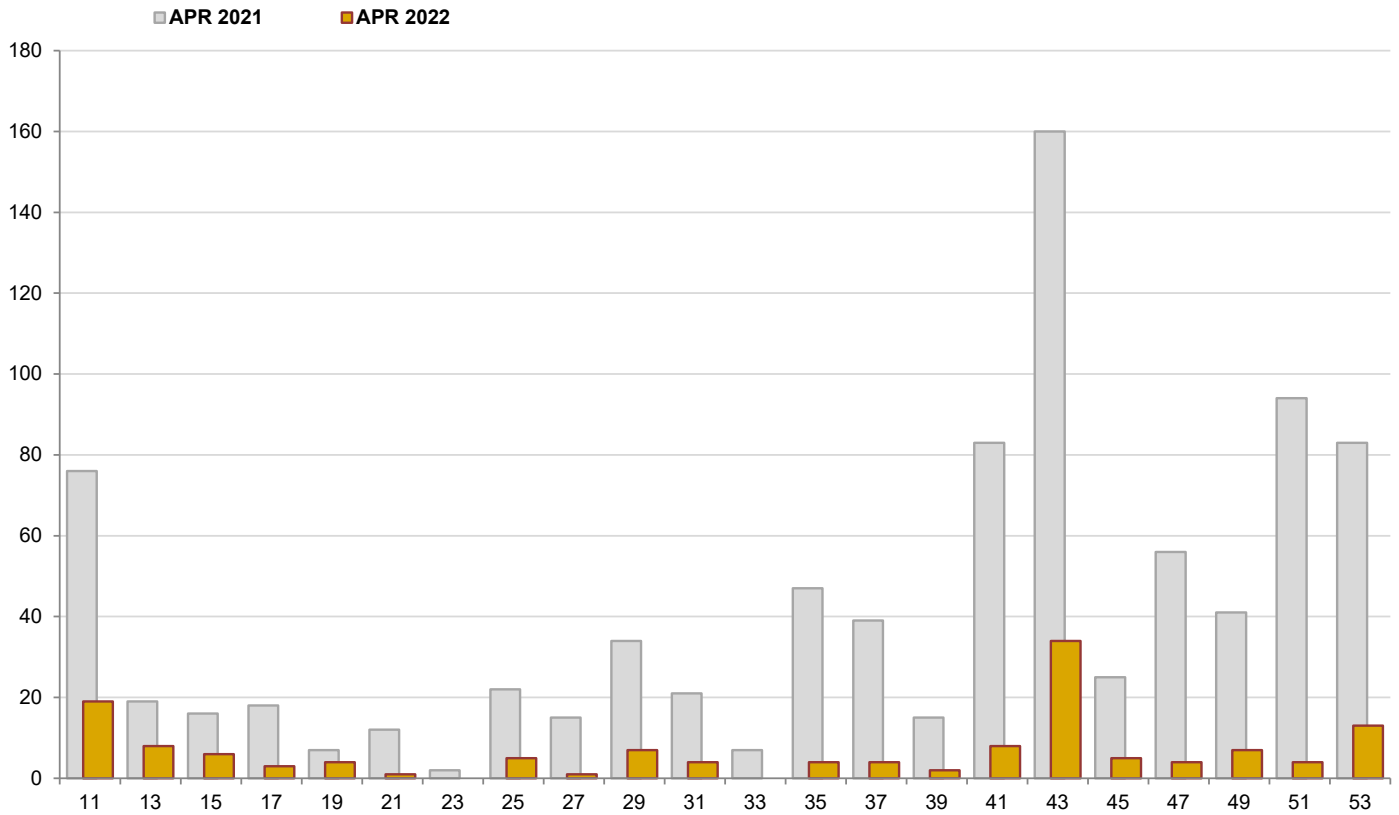
RECENT TREND	ACTIVE RÉSUMÉS	M/M # CHG	M/M % CHG	Y/Y # CHG	Y/Y % CHG	12 MO MOV AVG	M/M # CHG	M/M % CHG	Y/Y # CHG	Y/Y % CHG
NOV 2020	895	-230	-20.4	+610	+214.0	522	+51	+10.8	+180	+52.6
DEC 2020	884	-11	-1.2	+574	+185.2	570	+48	+9.2	+231	+68.1
JAN 2021	839	-45	-5.1	+505	+151.2	612	+42	+7.4	+274	+81.1
FEB 2021	806	-33	-3.9	+451	+127.0	650	+38	+6.2	+312	+92.3
MAR 2021	876	+70	+8.7	+521	+146.8	693	+43	+6.6	+355	+105.0
APR 2021	895	+19	+2.2	+523	+140.6	737	+44	+6.3	+401	+119.3
MAY 2021	835	-60	-6.7	+536	+179.3	781	+44	+6.0	+452	+137.4
JUN 2021	785	-50	-6.0	+515	+190.7	824	+43	+5.5	+503	+156.7
JUL 2021	698	-87	-11.1	+472	+208.8	864	+40	+4.9	+552	+176.9
AUG 2021	506	-192	-27.5	-243	-32.4	843	-21	-2.4	+495	+142.2
SEP 2021	311	-195	-38.5	-665	-68.1	788	-55	-6.5	+385	+95.5
OCT 2021	228	-83	-26.7	-897	-79.7	713	-75	-9.5	+242	+51.4
NOV 2021	211	-17	-7.5	-684	-76.4	656	-57	-8.0	+134	+25.7
DEC 2021	200	-11	-5.2	-684	-77.4	599	-57	-8.7	+29	+5.1
JAN 2022	167	-33	-16.5	-672	-80.1	543	-56	-9.3	-69	-11.3
FEB 2022	169	+2	+1.2	-637	-79.0	490	-53	-9.8	-160	-24.6
MAR 2022	155	-14	-8.3	-721	-82.3	430	-60	-12.2	-263	-38.0
<b>APR 2022</b>	<b>143</b>	<b>-12</b>	<b>-7.7</b>	<b>-752</b>	<b>-84.0</b>	<b>367</b>	<b>-63</b>	<b>-14.7</b>	<b>-370</b>	<b>-50.2</b>

[Data are not seasonally adjusted and subject to revision. Dashes (---) indicate data not available.]

# APRIL 2022 ONLINE JOB OPENINGS REPORT

## REGION 4 ACTIVE RÉSUMÉS BY OCCUPATION GROUP

[IN-STATE ACTIVE RÉSUMÉS]



[SOC CODE] OCCUPATION GROUP	APR 2021	MAR 2022	APR 2022	M/M # CHG	M/M % CHG	Y/Y # CHG	Y/Y % CHG
[11] Management	76	17	19	+2	+11.8	-57	-75.0
[13] Business and Financial Operations	19	6	8	+2	+33.3	-11	-57.9
[15] Computer and Mathematical	16	3	6	+3	+100.0	-10	-62.5
[17] Architecture and Engineering	18	3	3	0	0.0	-15	-83.3
[19] Life, Physical, and Social Science	7	4	4	0	0.0	-3	-42.9
[21] Community and Social Service	12	0	1	+1	---	-11	-91.7
[23] Legal	2	0	0	0	0.0	-2	-100.0
[25] Educational Instruction and Library	22	7	5	-2	-28.6	-17	-77.3
[27] Arts, Design, Entertainment, Sports, and Media	15	2	1	-1	-50.0	-14	-93.3
[29] Healthcare Practitioners and Technical	34	7	7	0	0.0	-27	-79.4
[31] Healthcare Support	21	3	4	+1	+33.3	-17	-81.0
[33] Protective Service	7	0	0	0	0.0	-7	-100.0
[35] Food Preparation and Serving Related	47	6	4	-2	-33.3	-43	-91.5
[37] Building and Grounds Cleaning and Maintenance	39	4	4	0	0.0	-35	-89.7
[39] Personal Care and Service	15	2	2	0	0.0	-13	-86.7
[41] Sales and Related	83	13	8	-5	-38.5	-75	-90.4
[43] Office and Administrative Support	160	38	34	-4	-10.5	-126	-78.8
[45] Farming, Fishing, and Forestry	25	4	5	+1	+25.0	-20	-80.0
[47] Construction and Extraction	56	5	4	-1	-20.0	-52	-92.9
[49] Installation, Maintenance, and Repair	41	8	7	-1	-12.5	-34	-82.9
[51] Production	94	8	4	-4	-50.0	-90	-95.7
[53] Transportation and Material Moving	83	15	13	-2	-13.3	-70	-84.3
[55] Military Specific	2	0	0	0	0.0	-2	-100.0
Unclassified	1	0	0	0	0.0	-1	-100.0
<b>TOTAL</b>	<b>895</b>	<b>155</b>	<b>143</b>	<b>-12</b>	<b>-7.7</b>	<b>-752</b>	<b>-84.0</b>

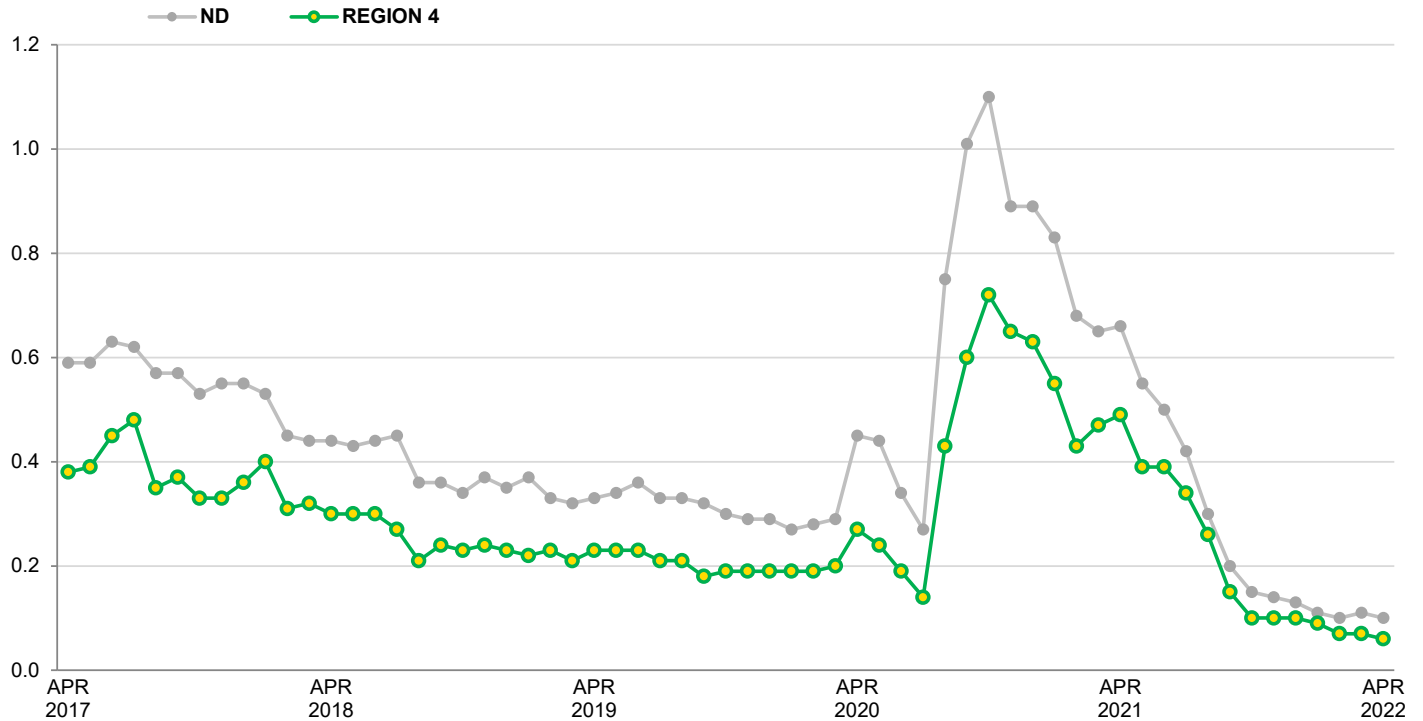
[Data are not seasonally adjusted and subject to revision. Dashes (---) indicate data not available.]

# APRIL 2022 ONLINE JOB OPENINGS REPORT

## REGION 4 ACTIVE RÉSUMÉS PER JOB OPENING

[IN-STATE ACTIVE RÉSUMÉS]

Active résumés per job opening is a rate of the number of in-state active résumés divided by job openings. Out-of-state résumés were excluded from this calculation. A rate less than one indicates more job openings than in-state active résumés; a rate greater than one indicates more in-state active résumés than job openings.



[SOC CODE] OCCUPATION GROUP	APR 2021	MAR 2022	APR 2022
[11] Management	0.72	0.18	0.13
[13] Business and Financial Operations	0.44	0.11	0.11
[15] Computer and Mathematical	0.30	0.09	0.12
[17] Architecture and Engineering	0.51	0.04	0.06
[19] Life, Physical, and Social Science	0.22	0.14	0.13
[21] Community and Social Service	0.48	0.00	0.03
[23] Legal	0.67	---	0.00
[25] Educational Instruction and Library	0.26	0.10	0.04
[27] Arts, Design, Entertainment, Sports, and Media	0.34	0.03	0.01
[29] Healthcare Practitioners and Technical	0.12	0.02	0.02
[31] Healthcare Support	0.36	0.02	0.04
[33] Protective Service	0.64	0.00	0.00
[35] Food Preparation and Serving Related	0.42	0.05	0.04
[37] Building and Grounds Cleaning and Maintenance	1.08	0.12	0.08
[39] Personal Care and Service	0.56	0.10	0.07
[41] Sales and Related	0.50	0.08	0.05
[43] Office and Administrative Support	1.04	0.37	0.23
[45] Farming, Fishing, and Forestry	0.25	0.01	0.03
[47] Construction and Extraction	0.77	0.06	0.04
[49] Installation, Maintenance, and Repair	0.41	0.06	0.06
[51] Production	0.90	0.12	0.04
[53] Transportation and Material Moving	0.46	0.11	0.08
<b>REGION 4</b>	<b>0.49</b>	<b>0.07</b>	<b>0.06</b>
<b>NORTH DAKOTA</b>	<b>0.66</b>	<b>0.11</b>	<b>0.10</b>

[Data are not seasonally adjusted and subject to revision. Dashes (---) indicate data not available.]



# APRIL 2022 ONLINE JOB OPENINGS REPORT

## OCCUPATION GROUPS AND REGION 4 AVERAGE WAGES

2021 AVG HRLY WAGE (\$)	[SOC CODE] OCCUPATION GROUP Sample Occupations
47.23	<b>[11] MANAGEMENT</b> Managers, Education Administrators, Farmers and Ranchers, Human Resource Managers
34.84	<b>[13] BUSINESS AND FINANCIAL OPERATIONS</b> Accountants, Auditors, Loan Officers, Tax Preparers
33.21	<b>[15] COMPUTER AND MATHEMATICAL</b> Computer Programmers, Computer and Network Administrators, Web Developers, Statisticians
37.48	<b>[17] ARCHITECTURE AND ENGINEERING</b> Engineers, Drafters, Architects, Surveyors
36.14	<b>[19] LIFE, PHYSICAL, AND SOCIAL SCIENCE</b> Biologists, Chemists, Economists
26.29	<b>[21] COMMUNITY AND SOCIAL SERVICE</b> Social Workers, Clergy, Counselors, Social and Human Service Assistants
42.91	<b>[23] LEGAL</b> Lawyers, Court Reporters, Judges, Magistrate Judges, Magistrates, Paralegal and Legal Assistants
27.79	<b>[25] EDUCATIONAL INSTRUCTION AND LIBRARY</b> Elementary School Teachers, Secondary School Teachers, Special Education Teachers, Librarians
23.32	<b>[27] ARTS, DESIGN, ENTERTAINMENT, SPORTS, AND MEDIA</b> Musicians and Singers, Photographers, Reporters and Correspondents, Umpires, Referees
36.73	<b>[29] HEALTHCARE PRACTITIONERS AND TECHNICAL</b> Physicians and Surgeons, Dentists, Pharmacists, Registered Nurses, EMTs and Paramedics, Chiropractors
17.38	<b>[31] HEALTHCARE SUPPORT</b> Home Health Aides, Medical Assistants, Medical Transcriptionists, Nursing Aides and Orderlies
28.65	<b>[33] PROTECTIVE SERVICE</b> Correctional Officers, Firefighters, Police and Sheriff's Patrol Officers, Lifeguards
13.99	<b>[35] FOOD PREPARATION AND SERVING RELATED</b> Cooks, Bartenders, Waiters and Waitresses, Counter Attendants, Dishwashers
16.46	<b>[37] BUILDING AND GROUNDS CLEANING AND MAINTENANCE</b> Janitors and Cleaners, Landscaping and Groundskeeping Workers, Maids and Housekeeping Cleaners
14.64	<b>[39] PERSONAL CARE AND SERVICE</b> Childcare Workers, Hairdressers, Hairstylists, Fitness Trainers, Personal and Home Care Aides
19.01	<b>[41] SALES AND RELATED</b> Cashiers, Retail Salespersons, Insurance Sales Agents, Telemarketers
20.14	<b>[43] OFFICE AND ADMINISTRATIVE SUPPORT</b> Secretaries and Administrative Assistants, Office Clerks, Receptionists, Tellers
18.64	<b>[45] FARMING, FISHING, AND FORESTRY</b> Farmworkers and Laborers, Graders and Sorters of Agricultural Products, Hunters and Trappers
25.74	<b>[47] CONSTRUCTION AND EXTRACTION</b> Carpenters, Electricians, Plumbers, Roofers, Oil and Gas Roustabouts
25.50	<b>[49] INSTALLATION, MAINTENANCE, AND REPAIR</b> Automotive Body Repairers, Mechanics, Electrical Power-Line Installers, Wind Turbine Service Technicians
21.01	<b>[51] PRODUCTION</b> Assemblers and Fabricators, Machinists, Tool and Die Makers, Welders, Cutters, Solderers, Brazers
21.12	<b>[53] TRANSPORTATION AND MATERIAL MOVING</b> Airline Pilots, Bus Drivers, Truck Drivers, Industrial Truck and Tractor Operators, Packers and Packagers
---	<b>[55] MILITARY SPECIFIC OCCUPATIONS</b> Aircrew Officers, Infantry, Radar and Sonar Technicians, Special Forces

[Dashes (---) indicate data not available.]

## NOTES

### BACKGROUND

The Online Job Openings Report (OJOR) is a monthly summary of North Dakota job openings and active résumés and provides a timely overview of the latest supply/demand dynamic. The report involves the collection, processing, and dissemination of open and available online job openings posted by employers and active online résumés posted by job candidates. Job openings by industry and occupational groups and active résumés by occupational groups are published at statewide and regional levels. County data are only published at aggregate total levels. Additionally, supply/demand calculations for various geographies and occupational groups are available. The OJOR is generally published the first working Wednesday of the month following the reference month (i.e. January data published the first working Wednesday in February), though exceptions may occur.

### METHODOLOGY AND COVERAGE

The Job Service North Dakota online labor exchange system is the underlying source for the OJOR. The data are a combination of local openings brought into the system either internally or externally. An internal job opening is submitted directly to the labor exchange system by either local office staff or authorized local employers. An external job opening is 'spidered' into the system from outside online job sites including corporate, educational institution, newspaper, government, private job board, and recruiter sites. Coverage is limited to jobs posted online. Job openings advertised strictly through word-of-mouth, radio, television, local print-only newspapers, outdoor signage, or any other non-online means are not included. Keep in mind, online job openings and active résumés are self-reported by the employer and job seeker, respectively, so accuracy cannot necessarily be guaranteed. Every effort is made to ensure the OJOR is constructed using deduplicated data. The deduplication process involves the systematic analysis of key fields of each opening, such as company name, job title/description, and location, against all openings, flagging potential duplicate matches. Active résumés are deduplicated against the user name and occupational code fields. An analyst reviews and eliminates legitimate duplicates.

The OJOR is not subject to the typical sampling error and non-response error components associated with most statistical surveys. Non-sampling error sources would include population under-coverage due to missing a portion of the targeted population (e.g. a large Internet job board), and over-coverage due to the inability to fully eliminate duplicate job openings. Additional potential sources of non-sampling error would include occupational and/or geographic coding errors which would affect the proper classification of individual job openings.

Industry coding is done at the 2-digit level of the latest North American Industry Classification System (NAICS). Every month, an analyst reviews and updates a master employer listing of businesses with job openings. If the employer cannot be coded to a 2-digit level, it is designated as 'unclassified.' It should be noted that every five years or so the NAICS goes through a federal review process where codes are added, deleted, or modified.

Occupational coding is done at the 6-digit level of the latest Standard Occupational Classification (SOC) system. If a job opening cannot be coded at the 6-digit level, then every effort is made to code it to a 2-digit occupational group. If the opening cannot be coded to either, it is designated as 'unclassified.' It should be noted that every ten years or so the SOC system goes through a federal review process where codes are added, deleted, or modified.

The geographic coding for an internal opening is determined by information submitted directly to the labor exchange system by either local office staff or authorized local employers. An external opening is coded against location information provided in the original posting, if available.

### TERMS AND CONCEPTS

**ACTIVE RÉSUMÉS.** Active résumés are all online résumés that have been created or otherwise modified during the reference period. This figure includes résumés posted no more than 90 days prior but still active during the reference period, as well as new résumés. Active résumés may include those created by out-of-state candidates. Candidates may post multiple online résumés so active résumés should not be interpreted as an individual candidate count. Active résumés are not necessarily an indicator of unemployment since candidates posting résumés may or may not be unemployed.

**ACTIVE RÉSUMÉS PER JOB OPENING.** North Dakota's state-level and substate rates of active résumés per job opening are calculated by taking the number of in-state active résumés and dividing by job openings. In order to get a more localized measure of potential labor supply, only in-state active résumés (i.e. résumés tied to a North Dakota address) were used to calculate this rate; out-of-state active résumés are excluded from this calculation. A rate less than one indicates more job openings than in-state active résumés; a rate greater than one indicates more in-state active résumés than job openings.

**INDUSTRY DATA.** Industries are based on the latest NAICS. Employers are coded to the 2-digit NAICS level whenever possible.

# APRIL 2022 ONLINE JOB OPENINGS REPORT

## NOTES

### TERMS AND CONCEPTS cont'd

**JOB OPENINGS.** Job openings include all open and available online openings during the reference period. This figure may include openings posted no more than 90 days prior but still active during the reference period, as well as new openings.

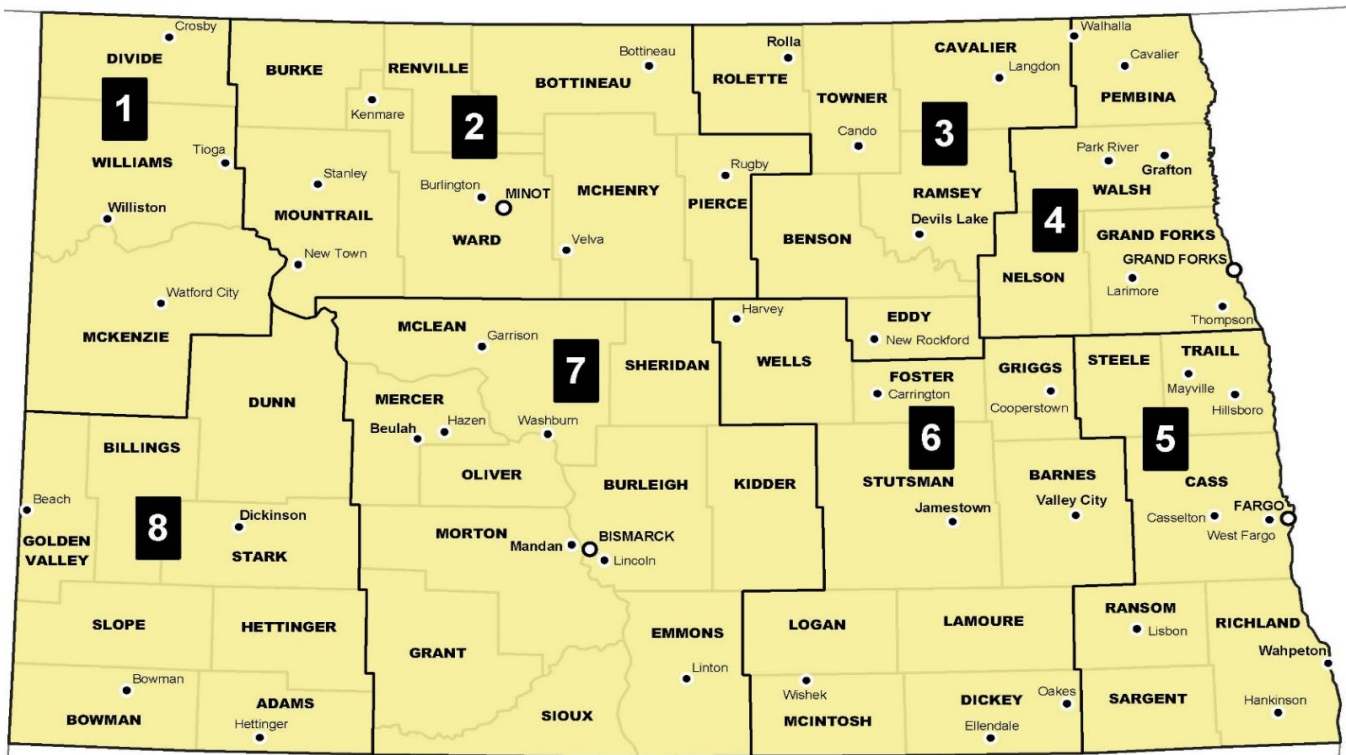
**JOB OPENINGS RATE.** The job openings rate is the percentage of all jobs in the economy open and available and North Dakota's is calculated by taking the number of job openings (unfilled jobs) divided by total nonfarm employment (filled jobs) from the Current Employment Statistics (CES) program plus job openings. The rate of unfilled jobs is an important measure of the unmet demand for labor, which paints a more complete picture of the state's labor market than solely looking at the unemployment rate, a measure of the excess supply of labor. A higher rate is an indicator of increased demand from employers resulting in more opportunities for job seekers. The U.S. rate is calculated using data from the Job Openings and Labor Turnover Survey (JOLTS) and CES program. U.S. job openings typically lag two months, therefore the most recent rate will lag two months.

**OCCUPATIONAL DATA.** Occupational groups are based on the latest SOC system. Openings and résumés are coded to the 6-digit SOC level whenever possible. Data are aggregated to the major occupational group level.

**REFERENCE PERIOD.** The OJOR collects data using a mid-month reference period (the week that includes the 12th of the month), which provides consistency when incorporating data from U.S. Bureau of Labor Statistics (BLS) sources.

**REGIONAL DATA.** The eight North Dakota regions are made up of groupings of counties around a regional city center that provides a majority of the services and exhibits the greatest economic influence. While the regional reports are not as comprehensive as the statewide report, they do provide some local detail not otherwise available. Job openings data are geographically coded based on worksite location. Active résumés are geographically coded based on the residential address of the candidate.

Below is a geographic outline of North Dakota's eight regions.



**TYPICAL ENTRY-LEVEL EDUCATION.** Typical entry-level education describes the level of education that most workers need to enter an occupation or occupational group, and takes into consideration advertised education requirement preferences. The Labor Market Information Center is able to assign a typical entry-level education to most job openings, but some are tagged as 'unassigned' due to missing or incomplete occupational codes. Keep in mind, an opening's typical entry-level education assignment may differ from employers' advertised education requirements, though most match. Mismatches commonly occur due to either missing education requirements from the employer's job ad or education inflation where an employer advertises for more education than is typically needed for an occupation. Using the typical entry-level education framework provides for consistency across occupations regardless of an employer's advertised preference. For instance, all janitor openings are coded with the same typical entry-level education (no educational credential) regardless if one out of ten employers has a preference for a candidate with a Bachelor's degree.

## NOTES

### TERMS AND CONCEPTS cont'd

The typical entry-level education categories are:

- Doctoral or professional degree: Completion of a doctoral degree (Ph.D.) usually requires at least 3 years of full-time academic work beyond a bachelor's degree. Completion of a professional degree usually requires at least 3 years of full-time academic study beyond a bachelor's degree.
- Master's degree: Completion of this degree usually requires 1 or 2 years of full-time academic study beyond a bachelor's degree.
- Bachelor's degree: Completion of this degree generally requires at least 4 years, but not more than 5 years, of full-time academic study beyond high school.
- Associate's degree: Completion of this degree usually requires at least 2 years but not more than 4 years of full-time academic study beyond high school.
- Postsecondary nondegree award: These programs lead to a certificate or other award, but not a degree. The certificate is awarded by the educational institution and is the result of completing formal postsecondary schooling. Certification, issued by a professional organization or certifying body, is not included here. Some postsecondary nondegree award programs last only a few weeks, while others may last 1 to 2 years.
- High school diploma or equivalent: This category indicates the completion of high school or an equivalent program resulting in the award of a high school diploma or an equivalent, such as the General Education Development (GED) credential.
- No formal educational credential: This category signifies that a formal credential issued by an educational institution, such as a high school diploma or postsecondary certificate, is not typically needed for entry into the occupation.

**TYPICAL TRAINING.** Typical training describes any additional training or preparation that is typically needed, once employed, to attain competency in the skills needed in an occupation or occupational group. Training is occupation-specific rather than job-specific; therefore, skills learned can be transferred to another job in the same occupation. The Labor Market Information Center is able to assign a typical training category to most job openings, but some are tagged as 'unassigned' due to missing or incomplete occupational codes. Keep in mind, an opening's typical training assignment may differ from employers' advertised training requirements, though most match. Mismatches commonly occur due to either missing training requirements from the employer's job ad or where an employer advertises for more training than is typically needed for an occupation. Using the typical training framework provides for consistency across occupations regardless of an employer's advertised preference. For instance, all janitor openings are coded with the same typical training (short-term on-the-job training) regardless if one out of ten employers has a preference for long-term on-the-job training.

The typical training categories are:

- Internship/residency: An internship or residency is a formal period of training during which individuals work under the supervision of experienced workers in a professional setting, such as a hospital. Internships and residencies occur after the completion of a formal postsecondary degree program and generally are required for state licensure or certification in fields including medicine, counseling, and architecture. During an internship or residency, trainees may be restricted from independently performing all of the functions of the occupation.
- Apprenticeship: An apprenticeship is a formal relationship between a worker and sponsor that consists of a combination of on-the-job training and related occupation-specific technical instruction in which the worker learns the practical and theoretical aspects of an occupation. Apprenticeship programs are sponsored by individual employers, joint employer-and-labor groups, and employer associations. The typical apprenticeship program provides at least 144 hours of occupation-specific technical instruction and 2,000 hours of on-the-job training per year, over a 3- to 5-year period.
- Long-term on-the-job training: More than 12 months of on-the-job training or, alternatively, combined work experience and formal classroom instruction, is needed for workers to develop the skills to attain competency. Training is occupation-specific rather than job-specific; therefore, skills learned can be transferred to another job in the same occupation. This category also includes employer-sponsored training programs. Such programs include those offered by fire academies and schools for air traffic controllers. In other occupations—nuclear power reactor operators, for example—trainees take formal courses, often provided at the jobsite, to prepare for the required licensing exams. Also included in this category are occupations in which workers typically need to possess a natural ability or talent—including musicians and singers, athletes, dancers, photographers, and actors—and that ability or talent must be cultivated over several years, sometimes in a nonwork setting. This category excludes apprenticeships.
- Moderate-term on-the-job training: More than 1 month and up to 12 months of combined on-the-job experience and informal training is needed for workers to develop the skills needed to attain competency. Training is occupation-specific rather than job-specific; therefore, skills learned can be transferred to another job in the same occupation. This category also includes employer-sponsored training programs.
- Short-term on-the-job training: The skills needed for a worker to attain competency in an occupation can be acquired during 1 month or less of on-the-job experience and informal training. Training is occupation-specific rather than job-specific; therefore, skills learned can be transferred to another job in the same occupation. This category also includes employer-sponsored training programs.
- No training: There is no additional occupation-specific training or preparation typically required to attain competency in the occupation.

## NOTES

### TERMS AND CONCEPTS cont'd

**UNEMPLOYED PER JOB OPENING.** North Dakota's state-level and substate rates of unemployed per job opening are calculated by taking the number of unemployed persons from the Local Area Unemployment Statistics (LAUS) program and dividing by job openings. A rate less than one indicates more job openings than local labor supply; a rate greater than one indicates more local labor supply than job openings. North Dakota unemployment data typically lag one month, therefore the most recent rates will lag one month. The U.S. rate is calculated using data from the JOLTS and the Current Population Survey (CPS) from the BLS. U.S. job openings typically lag two months, therefore the most recent rate will lag two months.

**UNEMPLOYMENT DATA.** The unemployment data used in this report come from the CPS and LAUS programs. Both programs provide data on the unemployed and are used to calculate the rate of unemployed per job opening. The unemployed are defined as those 16 years of age and older who were unemployed but actively seeking and available for work within the last month.

**WAGE DATA.** The wage data are the latest available from the Occupational Employment and Wage Statistics (OEWS) program. OEWS wage data provide a point-in-time snapshot of wage levels for workers already employed in more than 800 SOC occupations or occupational groups. In this report, average hourly wages should not be interpreted as an advertised hiring wage since most employers don't post wages in job ads. Instead, OEWS wages are used as a proxy to estimate the wage distribution of job openings.

### DATA INTERPRETATION

While the top-line numbers get the most attention, the emphasis in interpreting the data should focus on the trend over time. Since the data are not seasonally adjusted, the most appropriate comparison for any month should be the same month one year earlier.

Job openings data reflect a relative demand for labor. Job openings include all open and available online openings. It should not be assumed that the published job openings number is the entirety of the job openings market. There is a segment of the job openings market that relies solely on means other than online to recruit workers. Those openings are not captured in the OJOR.

Active résumés data reflect a relative supply of labor. Active résumés include all online résumés that have been created or otherwise modified by job seekers with a desire to work in North Dakota. Therefore, a segment of active résumés belong to out-of-state candidates. Candidates may post multiple online résumés so active résumés should not be interpreted as an individual candidate count. Active résumés are not necessarily an indicator of unemployment since candidates posting résumés may or may not be unemployed. It should not be assumed that the published active résumés number is the entirety of the potential labor supply. Excluded from the active résumés count are unemployed individuals who have not created an online résumé or, similarly, casual job seekers who browse job openings but do not create an online résumé.

Supply/demand calculations are used to reconcile the relationship between labor market demand (e.g. job openings) and labor market supply (e.g. active résumés, unemployed). The results highlight the relative slack in the labor market for occupational groups and select geographies. Supply/demand rates (e.g. active résumés per job opening, unemployed persons per job opening) with a result less than one indicate a greater need for workers in an occupational group or area. In other words, there's not enough supply (workers) to keep up with demand (job openings). The opposite is true when supply/demand rates exceed one. Of course, such an analysis only provides a general idea of where excess demand exists; it does not necessarily indicate a match if a candidate doesn't have the education, skills, or experience to get hired. Additionally, caution should be exercised when interpreting supply/demand calculations for small occupational groups and geographies, which exhibit much more volatility and may skew a user's interpretation of the labor market situation. Extremely high or low calculations could be masking a relatively small labor market supply/demand dynamic.

In conjunction with other pieces of labor market information (e.g. projections, wages, skill requirements, etc.), OJOR data can be used by students, educators, and counselors to explore potential career interests. Job seekers can use the data to help focus job searches and highlight occupational groups and/or geographic areas with the greatest opportunities or toughest competition. The business community, economic developers, and policy makers can use the data to track trends in the labor market, potentially highlighting labor imbalances. This can be especially helpful if a business is looking to expand or relocate. Economic developers and policy makers can use the data to gauge the general health of the economy and look for opportunities to maximize labor market supply and demand.

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