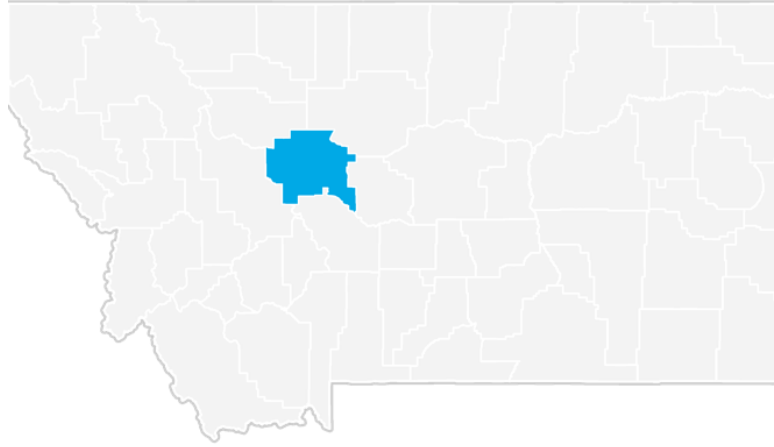




PREPARED FOR
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IMPACT OF COVID-19

ON INDUSTRIES OF THE GREAT FALLS REGION, MONTANA

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1. Background

Since March 2020, the COVID-19 pandemic has affected every community and industry in the United States, including the Great Falls region,¹ which includes a diverse mix of home-grown businesses and national brands across food/bio/agricultural processing, steel fabrication, energy, Air Force, logistics, and back office/call center operations.² In December 2020, Chmura Economics & Analytics (Chmura)³ completed an analysis of the impact of COVID-19 on Great Falls regional industries.⁴ That report summarized the pandemic's impact on regional industries in 2020 and outlined the potential recovery path for the area.

Since then, there have been significant changes in the pandemic's trajectory, government policies, and the development and distribution of vaccines. Considering the importance of these factors on the economic recovery, the Great Falls Development Authority (GFDA)⁵ needs an updated analysis of the COVID-19 impact in the region. Chmura was again retained for this study.

Chmura's analysis of the pandemic's impact on the regional economy and its recovery incorporates anticipated industry changes, as well as the latest government policy actions. For this report, Chmura first evaluated the impact of COVID-19 on Great Falls industries from the second quarter of 2020 through the third quarter of 2021, where national and regional employment data are available.⁶ Chmura projected the employment recovery for regional industries in 2022 and 2023. In addition to the employment impact of COVID-19 on regional industries, Chmura also discusses other effects of the pandemic on regional businesses, including supply chain disruptions, labor shortages, and business closures.

¹ The city of Great Falls, which is situated on the Missouri River in North Central Montana, is the county seat of Cascade County and the principal city of the Great Falls metropolitan statistical area (MSA). The study region is defined as the Great Falls MSA, which includes Cascade County. The study region is also referred to as the Great Falls region in this report.

² Source: Great Falls Development Authority website at <https://expandtomt.growgreatfallsmontana.org/>.

³ Chmura provides economic software, consulting, and data so our clients can make informed decisions that benefit their communities. Our PhD economists, data scientists, and strategic planners guide clients through their local labor market. Over the past 22 years, we have served hundreds of clients nationwide with thoroughness, accuracy, and objectivity.

⁴ Source: Economic Impact of COVID-19 on the Great Falls Region, Montana, by Chmura Economics & Analytics, December 2020.

⁵ The Great Falls Development Authority (GFDA) is a public/private economic development partnership with the mission to grow and diversify the Great Falls regional economy, create higher wage career opportunities, and improve market competitiveness. Source: Great Falls Development Authority website at <https://expandtomt.growgreatfallsmontana.org/>.

⁶ Regional data are only available through the second quarter of 2021 via Chmura's JobsEQ platform, but national data are available through the third quarter of 2021.

2. Impact of COVID-19 on Regional Industries

This section analyzes the impact of the COVID-19 pandemic on the employment and gross domestic product (GDP) of the industries in the Great Falls region. The impact period is from the second quarter of 2020 through the third quarter of 2021. Data from the *New York Times* indicate that since 2020, there have been two significant waves of COVID-19 infections in Montana (Figure 2.1). The first wave started in the fall of 2020 and continued through the first months of 2021. The second wave started in the third quarter of 2021 but trended down in November and December of 2021.⁷ At

Figure 2.1: Daily COVID-19 Cases in Montana Experienced Small Spike from Omicron



Source: *New York Times*

the beginning of 2022, many parts of the country have experienced a significant spike in new COVID-19 cases due to the highly infectious Omicron variant, but Montana only experienced a relatively small spike as of January 2, 2021.

2.1. Government Policies in 2021

Chmura's 2020 report summarizes federal, state, and local policies in 2020. Key policies affecting the regional economy include the federal Coronavirus Aid, Relief, and Economic Security (CARES) Act, and subsequent legislations designed to financially support households and businesses. COVID-19 state policies affecting the Great Falls region include the stay-at-home directive issued in March 2020, and phased reopening starting in April 2020. There were additional statewide business restrictions in the fourth quarter of 2020 due to the surge of infections in Montana.⁸ In the next few paragraphs, Chmura focuses on new policy measures implemented in 2021.

In 2021, the key factors affecting the pandemic trajectory and economic recovery are vaccine deployment and new virus variants. In December 2020, both Pfizer-BioNTech and Moderna applied for, and were granted, emergency use authorizations for their vaccines by the United States Food and Drug Administration (FDA).⁹ In March 2021, a third vaccine developed by Johnson & Johnson was also approved by the FDA for emergency use.¹⁰ Later in 2021, the FDA authorized vaccine use for children five years and older, and booster shots for all adults.¹¹

The latest data show that as of December 30, 2021, Montana had administered 1.3 million vaccine doses. There were 539,150 Montanans who are fully vaccinated, accounting for 53% of the eligible population. Cascade County, which makes up the Great Falls MSA, has administered 87,023 doses of vaccine, with 48% of its population fully vaccinated.¹² The

⁷ Source: <https://www.nytimes.com/interactive/2021/us/montana-covid-cases.html>.

⁸ For more details of those policies, please see Chmura's 2020 report, *Economic Impact of COVID-19 on the Great Falls Region, Montana*.

⁹ Source: <https://www.nytimes.com/interactive/2020/science/coronavirus-vaccine-tracker.html>.

¹⁰ Source: <https://www.fda.gov/news-events/press-announcements/fda-issues-emergency-use-authorization-third-covid-19-vaccine>.

¹¹ Source: <https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines#news>.

¹² Source: <https://montana.maps.arcgis.com/apps/MapSeries/index.html?appid=7c34f3412536439491adcc2103421d4b>.

vaccination rates of both Montana and the Great Falls region are lower than the national average. For the United States, 62% of its population was fully vaccinated as of December 30, 2021.¹³

Throughout 2021, the State of Montana enacted various COVID-related policies; the main objective was to remove government restrictions on business operations. With the winter surge in late 2020, then-Governor Bullock issued a directive to implement certain business restrictions in the state. Under that order, restaurants, bars, and casinos were to operate at 50% capacity and were to close no later than 10:00 PM; public gatherings were limited to 25 people when social distancing was not possible; and face coverings were required in all regions regardless of infection levels.¹⁴ In January 2021, newly elected Governor Gianforte issued a state-of-emergency proclamation, which removed the restrictions imposed by the Bullock administration.¹⁵ In February, Governor Gianforte ended the statewide mask mandate, originally implemented by Governor Bullock in November 2020.¹⁶ On April 12, 2021, Governor Gianforte issued an executive order concerning “vaccine passports,” which prohibited state government entities from requiring proof of vaccination in order to access state services or facilities.¹⁷

In September 2021, the Biden administration announced a plan for all companies with more than 100 workers to mandate either vaccinations or weekly testing of their employees as well as a mandate for all healthcare workers to be vaccinated.¹⁸ Montana subsequently joined several states in filing lawsuits to stop both mandates. In November 2021, a federal district judge in Montana granted the state’s request to stay the federal vaccine mandate for healthcare workers, which would have gone into effect on December 6, 2021. This meant that Montana would not require healthcare workers to be vaccinated. The prospects of the Biden administration’s vaccine mandates are uncertain, as there are several lawsuits pending further legal review.¹⁹

For regional policies, Cascade County enacted a mask mandate and capacity restrictions throughout the majority of 2020 and into early 2021. By mid-March 2021, Cascade County lifted both restrictions. Despite lifting the mask mandate, the county still recommends wearing masks in public.²⁰

2.2. COVID-19 Impact on Major Industries

COVID-19 has impacted all industries in the Great Falls region. In Spring 2020, the statewide stay-at-home order and associated business restrictions resulted in sharp declines in employment in the second quarter of 2020. Though the regional economy started to recover, the winter 2020 surge of infections disrupted this recovery. Business restrictions in Montana were removed in 2021, but another wave of infections, a labor shortage, and supply chain disruptions continue to affect a wide range of businesses in Montana and the Great Falls region.

At the beginning of the COVID-19 pandemic, total employment in the Great Falls region totaled 38,062 during the first quarter of 2020.²¹ Based on the two-digit North American Industry Classification System (NAICS), the largest sector in the region was health care and social assistance, employing 7,203 workers. The next-largest sectors in the region were retail

¹³ Source: <https://www.beckershospitalreview.com/public-health/states-ranked-by-percentage-of-population-vaccinated-march-15.html>.

¹⁴ Source: https://covid19.mt.gov/_docs/2020-11-17_Directive-on-Group-Size-and-Capacity-FINAL.pdf.

¹⁵ Source: <https://www.huschblackwell.com/montana-state-by-state-covid-19-guidance>.

¹⁶ Ibid.

¹⁷ Source: <https://www.huschblackwell.com/montana-state-by-state-covid-19-guidance>.

¹⁸ Source: <https://www.nytimes.com/2021/09/09/us/politics/biden-mandates-vaccines.html>.

¹⁹ Source: <https://dojmt.gov/federal-judge-grants-montanas-request-for-injunction-on-cms-vaccine-mandate/>.

²⁰ Source: <https://www.cascadecountymt.gov/180/COVID-19>.

²¹ This employment number is based on place of work, not place of residence. This number is seasonally adjusted.

(4,990 workers), accommodation and food services (4,040), and education (2,661). Tourism is an important sector in the Great Falls region, evidenced by sizeable employment in accommodation and food services as well as the retail industry.

Table 2.1 summarizes the employment impact of the COVID-19 pandemic in the Great Falls region for industries at the two-digit NAICS level from the second quarter of 2020 to the third quarter of 2021. In the second quarter of 2020, 3,470 jobs in the region were lost, equivalent to a 9.1% decline from the previous quarter. It is also estimated that during April 2020, when the stay-at-home order was in effect for most of the month, as many as 4,333 jobs based in the region were lost—approximately 11.4% of the regional workforce.

Table 2.1: Employment Impact from COVID-19 in the Great Falls Region

Two-Digit NAICS Industry	2020-Q2 Job Change	2020-Q3 Job Change	2020-Q4 Job Change	2021-Q1 Job Change	2021-Q2 Job Change	2021-Q3 Job Change	Total Job Changes
Accommodation and Food Services	-1,118	569	87	-12	223	-249	-500
Administrative and Support and Waste Management and Remediation Services	-351	58	31	79	8	17	-158
Agriculture, Forestry, Fishing and Hunting	50	44	-5	-51	75	-2	112
Arts, Entertainment, and Recreation	-319	162	65	-2	36	-46	-106
Construction	27	130	-44	23	128	0	264
Educational Services	-259	-488	579	-74	33	-22	-232
Finance and Insurance	-41	-13	-25	-4	29	1	-54
Health Care and Social Assistance	-538	277	81	-119	-109	14	-394
Information	-29	-31	-1	-19	2	2	-77
Management of Companies and Enterprises	-7	6	7	-16	-3	0	-13
Manufacturing	-25	48	43	-76	31	6	27
Mining, Quarrying, and Oil and Gas Extraction	0	0	5	-3	0	0	2
Other Services (except Public Administration)	-186	87	21	-23	94	24	18
Professional, Scientific, and Technical Services	-114	8	-13	-19	35	13	-90
Public Administration	91	163	-268	-69	147	26	91
Real Estate and Rental and Leasing	-41	4	18	-10	9	6	-13
Retail Trade	-368	248	115	56	-16	27	62
Transportation and Warehousing	-208	93	37	8	-2	15	-57
Unclassified	2	1	-4	3	-1	0	1
Utilities	-3	-5	0	-1	-1	0	-9
Wholesale Trade	-33	19	21	-4	45	6	53
Total	-3,470	1,378	751	-332	765	-164	-1,072

Source: Chmura and JobsEQ by Chmura

In the Great Falls region, the sector with the greatest employment decline is accommodation and food services, with a loss of 1,118 jobs in the second quarter of 2020. The health care and social assistance sector declined by 538 jobs, while the retail sector lost 368 jobs. Other industries such as administrative and support and waste management and remediation services (down 351 jobs); arts, entertainment, and recreation (-319); and educational services (-259) also fell by a significant number of jobs in this quarter.

On the other hand, some industries experienced limited job losses in the second quarter of 2020, with certain industries gaining jobs despite the pandemic. For example, construction; agriculture, forestry, fishing and hunting; and public administration added jobs. However, this does not mean these industries were unaffected by the pandemic. For example, due to a time lag, employment in public administration declined in the fourth quarter of 2020, as the pandemic's impact on government revenue started to materialize. Construction and agriculture—industries in which a large percentage of employees work outdoors—were not severely impacted by the stay-at-home order in the initial stage of the pandemic, but they began to experience negative effects in late 2020 and 2021.

As the state and region entered different phases of reopening, the Great Falls region experienced a robust recovery in the third quarter of 2020. Available data show that the region added 1,378 jobs in this quarter, led by job gains in accommodation and food services (569 new jobs); health care and social assistance (+277); and retail (+248).

Table 2.2: Estimated GDP Impact from COVID-19 in the Great Falls Region (Million)

Two-Digit NAICS Industry	2020-Q2 GDP Change	2020-Q3 GDP Change	2020-Q4 GDP Change	2021-Q1 GDP Change	2021-Q2 GDP Change	2021-Q3 GDP Change	Total GDP Changes
Accommodation and Food Services	-\$8.3	\$4.1	\$0.4	-\$0.1	\$1.7	-\$1.8	-\$4.0
Administrative and Support and Waste Management and Remediation Services	-\$3.7	\$0.6	-\$0.6	\$2.0	-\$0.2	\$0.2	-\$1.7
Agriculture, Forestry, Fishing and Hunting	\$1.7	\$0.9	-\$1.0	-\$1.1	\$2.7	\$0.0	\$3.2
Arts, Entertainment, and Recreation	-\$2.5	\$1.2	\$0.5	\$0.1	\$0.2	-\$0.4	-\$0.9
Construction	\$0.1	\$2.6	-\$0.8	-\$0.7	\$2.5	\$0.0	\$3.6
Educational Services	-\$3.7	-\$6.8	\$7.9	-\$2.0	\$0.4	-\$0.3	-\$4.6
Finance and Insurance	-\$1.2	-\$0.6	-\$1.0	\$0.5	\$1.2	\$0.1	-\$1.0
Health Care and Social Assistance	-\$6.1	\$4.7	\$0.6	-\$2.1	-\$2.6	\$0.3	-\$5.2
Information	-\$1.7	-\$1.4	\$0.0	-\$0.9	-\$0.1	\$0.0	-\$4.0
Management of Companies and Enterprises	-\$0.2	\$0.2	\$0.2	-\$0.4	-\$0.1	\$0.0	-\$0.4
Manufacturing	\$0.3	\$0.4	\$1.6	-\$2.1	\$1.2	\$0.2	\$1.5
Mining, Quarrying, and Oil and Gas Extraction	\$0.0	\$0.0	\$0.1	-\$0.1	\$0.0	\$0.0	\$0.0
Other Services (except Public Administration)	-\$2.4	\$1.1	\$0.2	-\$0.3	\$1.3	\$0.3	\$0.2
Professional, Scientific, and Technical Services	-\$2.2	\$0.5	-\$0.5	-\$0.9	\$1.1	\$0.3	-\$1.7
Public Administration	\$2.6	\$3.9	-\$6.8	-\$1.7	\$3.9	\$0.7	\$2.6
Real Estate and Rental and Leasing	-\$5.3	-\$0.1	\$4.3	-\$2.2	\$1.6	\$0.9	-\$0.7
Retail Trade	-\$4.0	\$2.5	\$1.0	\$0.8	\$0.5	\$0.3	\$1.0
Transportation and Warehousing	-\$6.0	\$2.0	-\$0.3	-\$0.3	\$0.6	\$0.2	-\$3.8
Unclassified	\$0.0	\$0.0	-\$0.1	\$0.1	\$0.0	\$0.0	\$0.0
Utilities	-\$0.1	-\$0.4	\$0.0	\$0.2	-\$0.1	\$0.0	-\$0.6
Wholesale Trade	-\$1.1	\$0.1	\$0.9	\$0.0	\$1.7	\$0.2	\$1.7
Total	-\$44.0	\$15.5	\$6.4	-\$11.3	\$17.4	\$1.2	-\$14.8

Source: Chmura and JobsEQ by Chmura

Similar to many regions across the nation, the winter months of 2020 and early 2021 brought an increase in COVID-19 cases in Montana and the Great Falls region. In November 2020, then-Governor Bullock required food service and entertainment businesses to again limit their capacities and operating hours. The strong employment recovery experienced in the third quarter of 2020 slowed, and the region added 751 jobs in the fourth quarter of 2020. Economic conditions further deteriorated in the first quarter of 2021 when the Great Falls region lost 332 jobs.

In the spring of 2021, as vaccines became widely available, infections declined in Montana and the Great Falls region, and the economic recovery accelerated. In the second quarter of 2021, the region added 765 jobs. However, the COVID-19 Delta variant spread quickly over the summer and another wave of infections hit the state in the third quarter of 2021. This once again disrupted then economic recovery, causing the region to lose 164 jobs in this quarter, with the accommodation and food service industry declining by 249 jobs. By the fourth quarter of 2021, the regional employment was still 1,072 below the level of the first quarter of 2020.

With regard to the impact on GDP, Table 2.2 summarizes changes in regional GDP for industries at the two-digit NAICS level from the second quarter of 2020 to the third quarter of 2021. In the second quarter of 2020, the 3,470 jobs lost represents a decline of \$44.0 million in regional GDP. In contrast, consistent with the employment gains that occurred when state and regional businesses began reopening, the Great Falls region experienced a robust recovery in the third quarter of 2020 resulting in an increase of \$15.5 million in GDP. GDP changes in other quarters followed the similar trajectories of employment changes. By the fourth quarter of 2021, the region's GDP was still 14.8 million below the level of the first quarter of 2020.

2.3. Industries Most Impacted by COVID-19

Chmura analyzed employment in industries at the more detailed three-digit NAICS level that were impacted the most by COVID-19. The 20 most-impacted industries, based on job losses in the second quarter of 2020, are shown in Table 2.3.²²

The initial impact of the COVID-19 pandemic disproportionately affected many industries requiring customer-facing interaction. For example, food services and drinking places lost 894 jobs in the second quarter of 2020, or 27% of the pre-pandemic regional workforce in that industry. Other hospitality and tourism-related industries in the top 20 are amusement, gambling, and recreation; and accommodation. In addition, administrative and support services lost 345 jobs, or 17% of the regional workforce. Employment contracted by an estimated 306 in regional social assistance industries. Other healthcare-related industries with significant job losses were ambulatory health care services, hospitals, and nursing and residential care facilities. Also on the top 20 list were multiple retail industries including clothing and clothing accessories stores; sporting goods, hobby, musical instrument, and book stores; gasoline stations; and furniture and home furnishings stores.

In the third quarter of 2020, some of the industries hit hardest by the pandemic experienced a robust recovery, with strong job gains in food services and drinking places (473 new jobs); and amusement, gambling, and recreation (151 new jobs). There were also widespread job gains in multiple retail and health care industries, but employment in regional educational service industries continued to decline in this quarter.

In the fourth quarter of 2020, the employment recovery in food services and amusement industries slowed due to a surge in COVID-19 cases. There were also job losses in some retail stores and hospitals, but there was strong expansion in education services. The first quarter of 2021 saw more industries in education and health care losing jobs, resulting in overall job losses for the region.

²² The Appendix presents employment changes during the pandemic for each three-digit NAICS industry.

Table 2.3: Twenty Industries Impacted Most by COVID-19 in the Great Falls Region (Employment)

Three-Digit NAICS Industry	2020-Q2 Job Change	2020-Q3 Job Change	2020-Q4 Job Change	2021-Q1 Job Change	2021-Q2 Job Change	2021-Q3 Job Change	Total Job Change
Food Services and Drinking Places	-894	473	131	0	166	-227	-353
Administrative and Support Services	-345	52	60	45	13	16	-158
Social Assistance	-306	86	93	-8	40	9	-87
Amusement, Gambling, and Recreation Industries	-284	151	54	-10	31	-42	-100
Educational Services	-259	-488	579	-74	33	-22	-232
Accommodation	-224	96	-43	-11	57	-22	-147
Clothing and Clothing Accessories Stores	-123	80	-1	9	-7	5	-37
Ambulatory Health Care Services	-116	116	51	-42	101	10	119
Professional, Scientific, and Technical Services	-114	8	-13	-19	35	13	-90
Support Activities for Transportation	-85	27	-6	4	-1	4	-57
Personal and Laundry Services	-82	57	-16	-6	46	10	8
Sporting Goods, Hobby, Musical Instrument, and Book Stores	-82	51	12	13	-23	5	-24
Hospitals	-70	68	-19	-22	-253	3	-292
Transit and Ground Passenger Transportation	-67	17	21	13	3	3	-10
Religious, Grantmaking, Civic, Professional, and Similar Organizations	-62	13	30	-11	15	7	-8
Miscellaneous Store Retailers	-59	29	-1	-2	1	3	-29
Nursing and Residential Care Facilities	-46	7	-44	-47	3	-7	-134
Repair and Maintenance	-37	18	10	-2	30	7	27
Gasoline Stations	-35	36	-33	12	3	4	-14
Furniture and Home Furnishings Stores	-32	6	1	13	16	0	4
Total	-3,324	903	864	-146	308	-222	-1,617

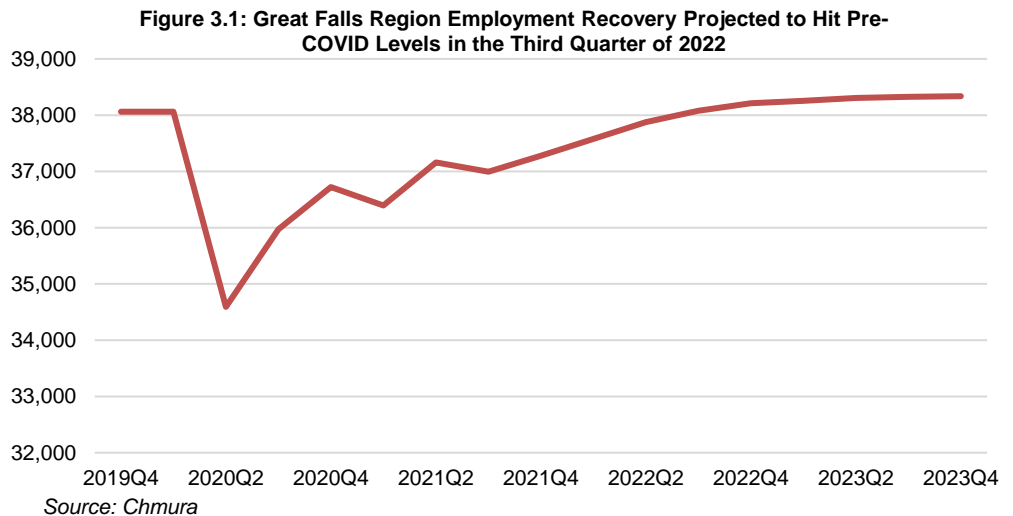
Source: Chmura and JobsEQ by Chmura

In the second quarter of 2021, low infections in the region led to job gains in both food services and accommodations. But another COVID-19 wave led to more job losses in those industries in the third quarter of 2021. It is expected that regional industries may experience more economic gains and losses if the COVID-19 pandemic surges in the regional with new variants.

3. Projected Recovery of Great Falls Industries

Industries began recovering at various paces in 2020 even before vaccines were ready for distribution. In industries that require fewer person-to-person interactions, such as manufacturing and construction, jobs were quicker to recover. Industries such as finance and insurance; and professional and business services could also expect relatively fast recoveries, as they are able to maintain their operations via remote work.²³ In contrast, employment in industries such as hospitality, food service, entertainment, and personal services were on a slower recovery path. Now that vaccines are widely available, business operations can still be affected due to vaccine hesitancy and breakthrough infections.²⁴

From a long-term perspective, there will be some permanent changes in national and regional economies after the pandemic. Some studies predict the retail industry will be permanently changed. A McKinsey report concludes the COVID-19 pandemic has accelerated the trend of consumers choosing e-commerce over traditional brick-and-mortar establishments.²⁵ Some of the behaviors that consumers developed during the pandemic will persist and affect retail and food service



businesses in the future. On the positive side, the trend toward e-commerce is projected to benefit transportation and logistics industries in the long term. In addition, McKinsey researchers believe there will be long-term benefits for the U.S. manufacturing industry because some manufacturers will likely move back to the United States, to be closer to consumer markets.

Chmura’s recovery analysis assumes that

- COVID-19 will become endemic in 2022. During an endemic, the virus will continue to circulate. But with immunity through vaccination and/or prior infection, combined with the new treatment method,²⁶ the risk of hospitalization and death will be significantly reduced,
- variant strains of the virus will not require the manufacture of new vaccines, and
- the state government will not implement any business restriction measures such as capacity limits.

²³ Source: <https://www.inquirer.com/business/recovery-economy-zandi-moodys-virus-covid-19-jobs-prediction-20200423.html>.

²⁴ Vaccines cannot fully prevent infection. Breakthrough infections are those that occur in vaccinated individuals.

²⁵ Source: McKinsey, at <https://www.mckinsey.com/business-functions/organization/our-insights/to-emerge-stronger-from-the-covid-19-crisis-companies-should-start-reskilling-their-workforces-now#:~:text=To%20emerge%20stronger%20from%20the,start%20reskilling%20their%20workforces%20now&text=Adapting%20employees%20skills%20and%20roles,to%20building%20operating%20model%20resilience>.

²⁶ For example, on December 22, 2021, FDA approved the first oral antiviral treatment of COVID-19, developed by Pfizer. Source:

<https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-authorizes-first-oral-antiviral-treatment-covid-19>

Figure 3.1 and Table 3.1 present the actual and projected employment recovery for the Great Falls region from 2019 to 2023.²⁷ For overall regional employment, the lowest level is in the second quarter of 2020. In that quarter, regional job totals were at 90.8% of the pre-pandemic level of the fourth quarter of 2019.²⁸ The regional economy experienced a robust recovery in the third quarter of 2020, which continued at a slower pace in the fourth quarter of 2020. By the fourth quarter of 2020, the region recovered 61.4% of lost jobs, with total employment reaching 36,723.

Table 3.1: Projected Employment by Industry in the Great Falls Region

Two-Digit NAICS Industry	2019Q4	2020Q2	2020Q4	2021Q4	2022Q4	2023Q4
Accommodation and Food Services	3,976	2,922	3,578	3,572	3,818	3,833
Administrative and Support and Waste Management and Remediation Services	2,134	1,737	1,826	1,971	2,031	2,037
Agriculture, Forestry, Fishing and Hunting	549	572	611	630	628	625
Arts, Entertainment, and Recreation	1,076	702	928	939	993	993
Construction	2,543	2,624	2,710	2,872	2,882	2,885
Educational Services	2,752	2,402	2,493	2,439	2,612	2,657
Finance and Insurance	1,706	1,649	1,612	1,648	1,648	1,648
Health Care and Social Assistance	7,174	6,666	7,023	6,836	6,961	7,045
Information	410	286	255	239	243	242
Management of Companies and Enterprises	197	199	212	195	205	206
Manufacturing	1,195	1,172	1,263	1,239	1,269	1,263
Mining, Quarrying, and Oil and Gas Extraction	7	4	9	6	7	7
Other Services (except Public Administration)	1,716	1,552	1,660	1,757	1,763	1,768
Professional, Scientific, and Technical Services	1,407	1,358	1,353	1,411	1,420	1,430
Public Administration	2,664	2,779	2,675	2,759	2,756	2,753
Real Estate and Rental and Leasing	511	455	478	493	497	496
Retail Trade	4,942	4,622	4,984	5,006	5,127	5,102
Transportation and Warehousing	1,492	1,314	1,443	1,512	1,515	1,518
Unclassified	1	11	8	10	10	10
Utilities	187	184	179	177	179	177
Wholesale Trade	1,421	1,383	1,423	1,477	1,524	1,518
Regional Total	38,062	34,592	36,723	37,189	38,089	38,214

Source: Chmura and JobsEQ by Chmura

In the spring of 2021, vaccination began to help the recovery, but the Delta variant led to another wave of infections. As a result, regional employment alternated between growth and contraction in the second and third quarters of 2021. In the fourth quarter of 2021, the region is expected to recover 74.9% of lost jobs, with total employment reaching 37,189.

On the assumption that the virus is becoming endemic, Chmura estimates that the regional economy will continue on a path of steady recovery in 2022. The region is expected to reach its pre-pandemic employment level in the fourth quarter of 2022.

²⁷ In Figure 3.1 and Table 3.1, employment data before the fourth quarter of 2021 represent actual data.

²⁸ Job losses started in March, during the first quarter of 2020.

Afterward, the regional economy is expected to resume its pre-pandemic growth path. The emergence of the Omicron variant introduces some uncertainty that could delay the regional employment recovery; but to date, the rise of Omicron in Montano has been mild relative to the nation.

4. Other Business Impacts

While data provided in Section 2 show the employment changes of Great Falls regional industries during the COVID-19 pandemic, they do not capture all challenges faced by businesses in the area. The pandemic has created supply chain disruptions and labor shortages which have affected businesses in the country, state, and the region. While pinpointing the impact of each of those challenges in the Great Falls region is beyond the scope of this study, this section qualitatively discusses other business impacts of the pandemic, drawn from other applicable studies around the country.

4.1. Supply Chain Disruptions

COVID-19 caused major disruptions to many supply chain networks.²⁹ At the time of this report, the supply chain disruption has emerged as a major threat to the nation's economic recovery. Aiming to improve the situation, President Biden issued an executive order in February 2021 to strengthen supply chains. Federal agencies such as the Department of Commerce and the Department of Energy were tasked with assessing the risks and vulnerabilities facing supply chains, as well as how to strengthen them.³⁰ As the holiday shopping season approached, some supply chain problems have improved. Ports are unloading cargo more rapidly than in previous months. Major retailers expect to meet consumers' holiday demands, according to executives.³¹ Despite these positive developments, the supply chain is not expected to immediately return to its pre-pandemic capacity in the near future.

In the early stage of the pandemic, many states enacted stay-at-home policies. This caused many businesses, including those in manufacturing and transportation, to shut down or limit their operations. This, coupled with increased consumer demand, resulted in stores across the country running out of items such as toilet paper, masks, and hand sanitizer.

A study published by the Capgemini Research Institute in late 2020 illustrated the widespread supply chain issues. It found that of 1,000 organizations surveyed, 80% reported negative impacts to their supply chain due to the pandemic. These organizations included retail, consumer products, manufacturing, and life sciences. An estimated 74% suffered from material shortages, 74% experienced delayed shipments and longer lead times, and 69% experienced difficulties in rapidly scaling up and down production. Over half (55%) of the organizations required three to six months to resolve disruptions in their supply chains—most of these in retail and manufacturing. As a result of the problems created by the pandemic, 57% of organizations began to invest in improvements to supply chain resilience.³²

As the economy continues to recover throughout 2021, supply chain issues remain a major concern for many businesses. Since many U.S. manufactured goods are imported, production issues elsewhere affect retailers and manufacturers in the United States. For example, China plays an important role in the global supply chain, acting as a chief supplier for components and finished products for many countries. In the fall of 2021, China began to experience power outages and shortages, which slowed production. The country also limited the number of factories operating at one time, which affected available goods that can be shipped to the United States. This chain of events coincided with the Christmas shopping season.³³

Issues with the global transportation network can also cause disruptions to supply chains. In the fall of 2021, several ports in the United States reported long delays in unloading container ships. In October, the Port of Los Angeles experienced

²⁹ In today's economy, a firm's supply chain usually involves the production of goods and services in the United States and abroad, including a multimodal transportation network of ocean liners, rail, truck, or air transportation.

³⁰ Source: <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/02/24/executive-order-on-americas-supply-chains/>.

³¹ Source: <https://www.washingtonpost.com/opinions/2021/12/02/those-supply-chains-are-straightening-out-so-is-bidens-rhetoric/>.

³² Source: https://www.capgemini.com/wp-content/uploads/2020/11/Fast-forward_Report.pdf.

³³ Source: <https://www.cnbc.com/2021/11/10/big-business-bosses-are-warning-that-supply-chain-issues-and-inflation-are-here-to-stay.html>.

such severe delays that it began to operate 24 hours a day to resolve the issues.³⁴ Similarly, ports on the east coast, such as the Port of Savannah, the third-largest container port in the United States, also experienced heavy bottlenecks as ships became stuck in the harbor, unable to unload their cargo.³⁵

In the United States, a labor shortage in the transportation sector continues to cause disruptions to the supply chain. A lack of labor on both the east and west coast is one reason ports have experienced severe delays. Truck driver shortages means that it takes longer for stores to get deliveries of new goods. This leads to higher shipping costs, which in turn leads to higher prices, contributing to inflation.³⁶

4.2. Labor Shortages

Immediately after the pandemic first hit the United States, unemployment levels skyrocketed to 14.4% in April 2020 in the nation and 12.5% in the Great Falls region.³⁷ Office workers were able to adapt to remote working conditions; however, many employees, especially those in service-heavy industries, found themselves out of work. Even as industries were deemed essential and remained open, some workers were concerned about health and thus voluntarily remained out of the work force. As of November 2021, unemployment rates have fallen to 4.2% in the nation and 2.0% for the Great Falls region.³⁸ Although conditions have improved in 2021, firms are running into a new problem: finding enough labor.

The Society for Human Resource Management (SHRM) surveyed 1,200 employers in August of 2021; and of those surveyed, around 90% of employers struggled to fill positions over the summer. Nearly three-quarters of employers (73%) said there were fewer applicants for the “hard-to-fill” positions. These hardest-to-fill positions were hourly, entry-level, or mid-level non-managerial positions. Manufacturing, hospitality, food, and leisure industries had the hardest time filling hourly and entry-level jobs. Finally, around 70% of businesses attributed expanded unemployment benefits as the cause of their hiring troubles.³⁹ Although expanded benefits have ended as of September 2021, a labor shortage has persisted throughout October and November 2021.

It appears that pandemic-related health concerns are the main drivers of the labor shortage. Many older workers chose early retirement and exited the work force completely. Data from the Bureau of Labor Statistics show that compared with February 2020, the overall labor force participation rate declined from 63.3% to 60.8%. The participation rate for workers 55 years and above declined from 40.3% to 38.4%. Of all 2.4 million workers who left the workforce, 875,000 were age 55 and above. In all other age groups, the labor force participation declined, but disproportionately so for older workers.⁴⁰

Fear of the virus likely keeps workers in other age groups from participating in the labor force. Even though vaccines are widely available, concerns remain about both their efficacy and side effects. In August 2021, 5.6 million people blamed the pandemic for their current unemployment. There were 1.5 million people who claimed the pandemic kept them from seeking employment. Cases of the Delta variant, which were more contagious than the initial COVID variant, surged in August 2021 and may be partly responsible for the labor shortage.⁴¹ With the emerging Omicron variant, such concerns may continue.

³⁴ Source: <https://www.natlawreview.com/article/how-covid-19-impacting-global-supply-chains-how-companies-can-cope>.

³⁵ Source: <https://www.cnbc.com/2021/11/10/big-business-bosses-are-warning-that-supply-chain-issues-and-inflation-are-here-to-stay.html>.

³⁶ Source: <https://www.cnbc.com/2021/09/28/companies-need-more-workers-to-help-resolve-supply-chain-problems.html>.

³⁷ Source: JobsEQ by Chmura.

³⁸ Ibid.

³⁹ Source: https://advocacy.shrm.org/wp-content/uploads/2021/07/SHRM-Research_The_Employment_Picture_Comes_Into_Focus.pdf?_ga=2.57233961.2099013469.1639513356-504230055.1638806041.

⁴⁰ Source: Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/categories/32442>.

⁴¹ Source: <https://www.businessinsider.com/pandemic-not-unemployment-keeps-workers-home-jobs-report-2021-9>.

The pandemic also caused issues regarding childcare. With most school-aged children in the nation switching to a remote-learning format, many parents needed to stay at home during the remote learning, which could also be an additional reason for the labor shortage. Data have shown that when comparing labor force participation rates, recovery for women was slower than for men. In the months that followed February 2020, the number of men in the labor force declined by 903,000 while the number of women declined by 1.5 million as of November 2021.⁴² The labor force participation rate for men was 69.2% in February 2020 and fell to 67.8% in November 2021.⁴³ The labor force participation rate for women was 57.8% in February 2020 and fell to 56.2% in November 2021.⁴⁴ As of the second quarter of 2021, female employment has recovered an estimated 62% of jobs lost, five percentage points below the 67% recovered by men.⁴⁵ This suggests that childcare concerns were likely shouldered by women.

Finally, vaccine mandates may have also caused some workers to leave the workforce. Though federal mandates by the Biden administration were suspended by court challenges, many private businesses implemented their own vaccine mandates. In an October survey conducted by the Kaiser Family Foundation, one in four workers (25%) said their employers required them to get a COVID-19 vaccine, up 16 percentage points since June. More than a third (37%) of unvaccinated workers (5% of adults overall) say they would leave their job if their employer required them to get a vaccine or get tested weekly. Still, while about a quarter of all adults say they know someone who has left a job because of a vaccine requirement, just 5% of unvaccinated workers (1% of all adults) say they have personally done so.⁴⁶

It seems that most individuals are apprehensive about health risks of the virus, thus multiple strategies can be used to entice them back into the workforce. Businesses should continue their work-from-home options when feasible. Preventive measures such as getting vaccinated and wearing a mask may also help alleviate concerns. Money can also be a powerful motivation. In November 2021, the U.S. Chamber of Commerce surveyed over 500 Americans who had lost their jobs because of the pandemic but haven't returned to full-time work. When asked about what could incentivize them to return to the labor force, the majority indicated they would prefer monetary incentives, such as hiring bonuses.⁴⁷

4.3. Business Costs

Businesses are facing higher costs from the COVID-19 pandemic because of supply chain disruptions, labor shortages, and ensuing inflation.

A common assessment of business costs is the producer pricing index (PPI), which measures the price of supplies and services faced by businesses. This is different from the consumer price index (CPI), which measures the price faced by consumers. In November 2021, the PPI for finished products was 13.6% higher than one year prior. The PPI was 12.6% in October and 11.7% in September, compared with the same month in 2020. In a historical perspective, the last time the monthly PPI increased over 10% was in 1981.

There are several reasons for rising business costs. Supply chain disruptions have led to low inventories and higher freight costs.⁴⁸ For manufacturers and retailers, the cost of maritime shipping containers has risen drastically since the onset of the pandemic. The United Nations Conference on Trade and Development (UNCTAD) predicts that high maritime container

⁴² Source: Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/categories/32442>.

⁴³ Source: Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/LNS11300001>.

⁴⁴ Source: Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/LNS11300002>.

⁴⁵ Source: Employment recovery estimates were calculated by Chmura using the Census Bureau's Quarterly Workforce Indicators (QWI) dataset.

⁴⁶ Source: Kaiser Family Foundation, <https://www.kff.org/coronavirus-covid-19/poll-finding/kff-covid-19-vaccine-monitor-october-2021/>.

⁴⁷ Source: <https://www.uschamber.com/workforce/new-updated-poll-the-covid-19-unemployed>.

⁴⁸ Source: <https://www.businessinsider.com/pce-inflation-october-price-growth-supply-chain-energy-crisis-economy-2021-11>.

costs will elevate global import prices, which could rise 11%. High maritime shipping costs have forced some companies to raise their prices, while others are looking for alternatives, such as air freight. For those companies that still rely on ships to transport their goods, delays at U.S. ports in the second half of 2021 may lead to future inventory shortages, which may also lead to higher business costs. There are uncertainties related to where supply chain disruption will ease. Some analysts predict the port delays will end as soon as February 2022⁴⁹ while others expect shortages into 2023.⁵⁰

Another contribution to higher business costs is the pressure to increase employee wages. Businesses across the country are struggling to find workers due to the labor shortage. To attract new hires and retain current ones, some businesses have opted to increase wages. Better benefits, which can improve an employee's feelings about their job, will also increase business costs.⁵¹ In addition, the acceleration in inflation also prompts businesses to raise employee wages.

Unfortunately, higher costs may lead to price increases of business products and services, which may generate pressure to increase wages again, forming a vicious cycle. Recently, the Federal Reserve has announced their efforts to contain inflation in 2022, but it will take at least few quarters for those policies to take effect.⁵²

4.4. Business Closures

The COVID-19 pandemic has had a widespread effect on many businesses, leading some to close. Based on a recent study of business exits conducted by the Federal Reserve Board, 600,000 businesses in the United States close permanently in a typical year.⁵³ During the pandemic, an estimated 500,000 establishments closed during the first quarter of 2020, and more than 700,000 closed during the second quarter of 2020. Many of those closures were temporary because of the stay-at-home policies implemented by many states. Many of those businesses are expected to recover.⁵⁴ A more recent survey conducted by the Federal Reserve in April 2021, estimates that the pandemic led to an additional 200,000 permanent business closures—about a quarter to a third higher than the normal level.⁵⁵

While overall business closures may not be as bad as expected, some industries were hit harder than others. At the start of the pandemic, the Federal Reserve Bank of Philadelphia found that the six hardest-hit industries were retail trade (except grocery and pharmacy); transportation; employment services; travel arrangements; arts, entertainment, and recreation; and accommodation and food services.⁵⁶ Another study by the U.S. Small Business Administration found similar results.⁵⁷

Government programs helped many businesses stay afloat or reopen. On March 27, 2020, the U.S. Congress passed—and President Trump signed into law—the Coronavirus Aid, Relief, and Economic Security (CARES) Act. This law included the Paycheck Protection Program (PPP) that allocated \$349 billion in loans to small businesses to help them continue to pay their employees.⁵⁸ In April 2020, Congress passed, and then-President Trump signed, another piece of legislation that injected \$310 billion to replenish the PPP program.⁵⁹ Those policies allowed many businesses to keep their employees, thus moderating the effects of the COVID-19 pandemic on the economy. The latest data from the Small Business Administration shows that the Paycheck Protection Program (PPP) provided \$800 billion to an estimated 11.8 million

⁴⁹ Source: <https://www.cnbc.com/2021/11/19/surging-shipping-costs-to-drive-consumer-price-inflation-unctad-says.html>.

⁵⁰ For example, please see <https://www.foxbusiness.com/economy/us-port-delays-holidays-determine-if-supply-chain-crisis-extends-2023-says-expert>

⁵¹ Source: <https://spectrumnews1.com/wi/milwaukee/news/2021/09/23/as-truck-driver-shortage-continues--new-drivers-met-with-opportunities->.

⁵² Source: <https://www.federalreserve.gov/newsevents/pressreleases/monetary20211215a.htm>.

⁵³ Source: <https://www.businessinsider.com/small-business-closures-pandemic-less-expected-past-year-fed-survey-2021-4>.

⁵⁴ Source: <https://www.federalreserve.gov/econres/feds/files/2020089r1pap.pdf>.

⁵⁵ Source: <https://www.businessinsider.com/small-business-closures-pandemic-less-expected-past-year-fed-survey-2021-4>.

⁵⁶ Source: <https://www.philadelphiafed.org/community-development/housing-and-neighborhoods/what-small-businesses-will-be-impacted-by-covid-19>.

⁵⁷ Source: <https://cdn.advocacy.sba.gov/wp-content/uploads/2021/03/02112318/COVID-19-Impact-On-Small-Business.pdf>.

⁵⁸ Source: <https://www.washingtonpost.com/business/2020/03/25/trump-senate-coronavirus-economic-stimulus-2-trillion/>.

⁵⁹ Source: <https://www.marketwatch.com/story/house-set-to-pass-bill-that-replenishes-coronavirus-aid-program-for-small-businesses-2020-04-23>.

borrowers in the country.⁶⁰ In addition, multiple rounds of pandemic relief payment to American households generated consumer demand, which in turn helped local businesses. Compared with the first half of 2020, the wave of business closure has subsided, and businesses are faced with other more pressing challenges such as inflation and the labor shortage.

In summary, at the end of 2021, severe risks for businesses in the nation and the Great Falls region include prolonged supply chain disruptions, labor shortages, and rising inflation. The recent introduction of the COVID-19 Omicron variant to the United States may once again impact business growth.⁶¹

⁶⁰ Source: Small Business Administration, https://www.sba.gov/sites/default/files/2021-06/PPP_Report_Public_210531-508.pdf.

⁶¹ Source: <https://hbr.org/2021/12/the-omicron-variant-how-companies-should-respond>.

Appendix: Detailed Industry Employment Impact

Table A1: Employment Impact by COVID-19 in the Great Falls Region by Three-digit NAICS Industry

Three-Digit NAICS Code	Industry Description	2020-Q2 Job Change	2020-Q3 job Change	2020-Q4 Job Change	2021-Q1 Job Change	2021-Q2 Job Change	2021-Q3 Job Change	Total Job Changes
111	Crop Production	32	15	-29	-4	87	-1	101
112	Animal Production and Aquaculture	16	22	31	-59	-8	-1	1
113	Forestry and Logging	0	0	0	0	0	0	0
114	Fishing, Hunting and Trapping	-1	0	1	0	1	0	1
115	Support Activities for Agriculture and Forestry	3	7	-8	11	-5	0	8
211	Oil and Gas Extraction	0	0	0	0	0	0	0
212	Mining (except Oil and Gas)	1	0	5	-3	0	0	3
213	Support Activities for Mining	0	0	0	0	0	0	-1
221	Utilities	-3	-5	0	-1	-1	0	-9
236	Construction of Buildings	-18	32	28	214	3	2	262
237	Heavy and Civil Engineering Construction	-4	37	-35	-149	54	-6	-103
238	Specialty Trade Contractors	49	60	-37	-42	72	4	106
311	Food Manufacturing	-12	10	24	-51	6	2	-22
312	Beverage and Tobacco Product Manufacturing	0	6	-7	3	5	0	7
313	Textile Mills	0	0	0	0	0	0	0
314	Textile Product Mills	-1	0	0	6	0	0	6
315	Apparel Manufacturing	0	0	0	0	0	0	0
316	Leather and Allied Product Manufacturing	-2	0	0	2	1	0	2
321	Wood Product Manufacturing	1	5	7	0	2	0	15
322	Paper Manufacturing	0	0	0	0	0	0	0
323	Printing and Related Support Activities	-23	10	5	-3	3	0	-8
324	Petroleum and Coal Products Manufacturing	4	-1	3	-1	3	0	8
325	Chemical Manufacturing	-1	-1	0	0	0	0	-2
326	Plastics and Rubber Products Manufacturing	0	0	0	0	0	0	0
327	Nonmetallic Mineral Product Manufacturing	-1	0	-4	2	2	0	0
331	Primary Metal Manufacturing	0	0	0	0	0	0	0
332	Fabricated Metal Product Manufacturing	12	1	7	-9	5	2	19
333	Machinery Manufacturing	0	2	2	0	0	0	4
334	Computer and Electronic Product Manufacturing	-2	1	0	1	0	0	0
335	Electrical Equipment, Appliance, and Component Manufacturing	0	0	0	0	0	0	0
336	Transportation Equipment Manufacturing	0	0	0	15	-1	0	14
337	Furniture and Related Product Manufacturing	-5	-3	8	-5	1	1	-3
339	Miscellaneous Manufacturing	3	17	-3	-34	3	0	-13
423	Merchant Wholesalers, Durable Goods	-1	-4	4	-4	28	3	26

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Three-Digit NAICS Code	Industry Description	2020-Q2 Job Change	2020-Q3 job Change	2020-Q4 Job Change	2021-Q1 Job Change	2021-Q2 Job Change	2021-Q3 Job Change	Total Job Changes
424	Merchant Wholesalers, Nondurable Goods	-23	25	14	-2	15	2	31
425	Wholesale Electronic Markets and Agents and Brokers	-9	-2	3	2	2	0	-5
441	Motor Vehicle and Parts Dealers	-32	20	-15	9	22	1	5
442	Furniture and Home Furnishings Stores	-32	6	1	13	16	0	4
443	Electronics and Appliance Stores	-25	5	7	-2	8	2	-5
444	Building Material and Garden Equipment and Supplies Dealers	34	-1	-36	2	29	-2	27
445	Food and Beverage Stores	19	9	7	7	-23	-1	18
446	Health and Personal Care Stores	-8	26	5	-13	5	1	16
447	Gasoline Stations	-35	36	-33	12	3	4	-14
448	Clothing and Clothing Accessories Stores	-123	80	-1	9	-7	5	-37
451	Sporting Goods, Hobby, Musical Instrument, and Book Stores	-82	51	12	13	-23	5	-24
452	General Merchandise Stores	-15	-26	177	6	-52	5	93
453	Miscellaneous Store Retailers	-59	29	-1	-2	1	3	-29
454	Nonstore Retailers	-10	13	-7	3	5	3	7
481	Air Transportation	-27	16	7	2	6	1	5
482	Rail Transportation	-10	-3	-7	1	3	-1	-17
483	Water Transportation	0	0	0	0	0	0	0
484	Truck Transportation	0	9	-10	11	14	2	26
485	Transit and Ground Passenger Transportation	-67	17	21	13	3	3	-10
486	Pipeline Transportation	-12	8	2	-11	0	0	-13
487	Scenic and Sightseeing Transportation	-12	0	0	3	2	0	-7
488	Support Activities for Transportation	-85	27	-6	4	-1	4	-57
491	Postal Service	2	-1	-5	-3	7	0	1
492	Couriers and Messengers	0	19	37	-12	-33	4	14
493	Warehousing and Storage	1	0	-1	0	-1	1	0
511	Publishing Industries (except Internet)	-11	-14	-3	-6	0	0	-34
512	Motion Picture and Sound Recording Industries	3	-12	1	-2	5	2	-3
515	Broadcasting (except Internet)	-18	-6	1	-2	-3	0	-28
517	Telecommunications	-2	3	4	-15	-1	-1	-12
518	Data Processing, Hosting, and Related Services	-1	1	-3	3	0	0	0
519	Other Information Services	-1	-3	0	3	1	0	0
522	Credit Intermediation and Related Activities	-18	-4	-12	-7	5	0	-35
523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	-3	-8	-7	22	15	2	20
524	Insurance Carriers and Related Activities	-20	-1	-6	-20	9	-1	-38
525	Funds, Trusts, and Other Financial Vehicles	0	0	0	0	0	0	0
531	Real Estate	-16	-5	15	-5	5	3	-2

Table A1: Employment Impact by COVID-19 in the Great Falls Region by Three-digit NAICS Industry

Three-Digit NAICS Code	Industry Description	2020-Q2 Job Change	2020-Q3 job Change	2020-Q4 Job Change	2021-Q1 Job Change	2021-Q2 Job Change	2021-Q3 Job Change	Total Job Changes
532	Rental and Leasing Services	-25	9	3	-4	4	2	-10
541	Professional, Scientific, and Technical Services	-114	8	-13	-19	35	13	-90
551	Management of Companies and Enterprises	-7	6	7	-16	-3	0	-13
561	Administrative and Support Services	-345	52	60	45	13	16	-158
562	Waste Management and Remediation Services	-6	5	-29	34	-5	1	0
611	Educational Services	-259	-488	579	-74	33	-22	-232
621	Ambulatory Health Care Services	-116	116	51	-42	101	10	119
622	Hospitals	-70	68	-19	-22	-253	3	-292
623	Nursing and Residential Care Facilities	-46	7	-44	-47	3	-7	-134
624	Social Assistance	-306	86	93	-8	40	9	-87
711	Performing Arts, Spectator Sports, and Related Industries	-15	12	2	9	3	-1	10
712	Museums, Historical Sites, and Similar Institutions	-20	-1	9	-2	2	-4	-15
713	Amusement, Gambling, and Recreation Industries	-284	151	54	-10	31	-42	-100
721	Accommodation	-224	96	-43	-11	57	-22	-147
722	Food Services and Drinking Places	-894	473	131	0	166	-227	-353
811	Repair and Maintenance	-37	18	10	-2	30	7	27
812	Personal and Laundry Services	-82	57	-16	-6	46	10	8
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	-62	13	30	-11	15	7	-8
814	Private Households	-5	-1	-2	-4	3	0	-8
921	Executive, Legislative, and Other General Government Support	-31	63	-52	-27	22	10	-15
922	Justice, Public Order, and Safety Activities	-2	12	-11	-4	4	2	2
923	Administration of Human Resource Programs	0	14	-11	-4	1	2	2
924	Administration of Environmental Quality Programs	36	50	-59	-9	20	3	41
926	Administration of Economic Programs	3	93	-93	-16	6	1	-5
928	National Security and International Affairs	84	-69	-42	-9	93	10	68
999	Unclassified	2	1	-4	3	-1	0	1
Total	Total	-3,470	1,378	751	-332	765	-164	-1,072

Source: Chmura and JobsEQ by Chmura